



**The Safer Affordable Fuel-Efficient (SAFE)
Vehicles Rule for Model Year 2021 – 2026
Passenger Cars and Light Trucks**

Final Environmental Impact Statement

Appendices

March 2020

Docket No. NHTSA-2017-0069



U.S. Department of Transportation
**National Highway Traffic Safety
Administration**



APPENDIX A

Air Quality Nonattainment Area Results

**Final Environmental Impact Statement for the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for
Model Year 2021–2026 Passenger Cars and Light Trucks**

Table A-1. Changes in Emissions from U.S. Passenger Cars and Light Trucks by Nonattainment or Maintenance Area and Alternative, Direct and Indirect Impacts--Particulate Matter (PM2.5), 2025

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Ada County; Boise, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.08	-0.08	-0.07	-0.07	-0.05	-0.05	-0.04
Adams, Denver, and Boulder Counties; Denver Metropolitan Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	2.51	2.43	2.23	2.20	1.57	1.16	1.18
Ajo, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Albuquerque Area, NM	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.08	-0.08	-0.07	-0.07	-0.05	-0.05	-0.04
Allegan County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.08	0.07	0.07	0.07	0.05	0.03	0.04
Allegheny County Air Basin: Hazelwood Monitor, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.07	0.07	0.07	0.07	0.05	0.03	0.03
Allegheny County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.39	0.38	0.35	0.34	0.25	0.16	0.18
Allegheny County; The Area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.08	0.08	0.07	0.07	0.05	0.04	0.04
Allegheny, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.17	0.16	0.15	0.15	0.10	0.08	0.08
Allentown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-0.07	-0.07	-0.06	-0.06	-0.04	-0.05	-0.03
Allentown-Bethlehem-Easton, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-0.07	-0.07	-0.06	-0.06	-0.04	-0.05	-0.03
Alton Township, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	1.62	1.57	1.43	1.41	1.01	0.77	0.75
Amador County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.13	0.12	0.11	0.11	0.08	0.06	0.06
Anchorage Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	-0.03	-0.03	-0.02	-0.02	-0.02	-0.02	-0.01
Anchorage; Eagle River, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Anne Arundel County and Baltimore County, MD	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.02	-0.02	-0.01	-0.01	0.00	-0.03	0.00

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
AQCR 012: Portions of Grant County, NM	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
AQCR 109-Millinocket, ME	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington Counties (Minneapolis-St. Paul), MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	1.86	1.81	1.66	1.65	1.18	0.82	0.88	0.88
AQCR 237: Brown County: Green Bay Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
AQCR 238: Marathon County: Rothschild Subcity Area, Rib Mountain, Weston, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.04	-0.03	-0.03	-0.03	-0.02	-0.02	-0.02	-0.02
AQCR 238: Oneida County: Rhinelander Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
AQCR 239: Milwaukee County: Milwaukee Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.05	-0.05	-0.04	-0.04	-0.02	-0.04	-0.04	-0.02
AQCR 240: Dane County: Madison Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.07	-0.07	-0.06	-0.06	-0.04	-0.05	-0.03	-0.03
Archuleta County; Pagosa Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.38	0.36	0.33	0.33	0.23	0.18	0.17	0.17
Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.16	0.15	0.14	0.14	0.10	0.08	0.07	0.07
Aroostock County; City of Presque Isle, ME	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Atlanta, GA	Ozone (2008 8-hour)	Maintenance, Moderate	100	0	-1.45	-1.38	-1.25	-1.20	-0.85	-0.81	-0.64	-0.64
Atlanta, GA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-1.14	-1.08	-0.98	-0.94	-0.66	-0.64	-0.51	-0.51
Atlantic City Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
Bakersfield Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	0.71	0.69	0.63	0.62	0.44	0.33	0.33	0.33

Notes:

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NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

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Baltimore Area, MD	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01
Baltimore, MD	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	-0.17	-0.15	-0.13	-0.12	-0.08	-0.14	-0.06
Baltimore, MD	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	-0.18	-0.16	-0.14	-0.12	-0.08	-0.14	-0.07
Baton Rouge, LA	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	25.64	24.78	22.69	22.32	15.92	12.13	11.94
Beaver, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benton County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
Berrien County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.04	0.04	0.04	0.04	0.03	0.01	0.02
Billings Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	2.30	2.22	2.04	2.00	1.43	1.09	1.07
Billings, MT	SO ₂ (2010 1-hour)	Maintenance, --	100	0	2.32	2.24	2.05	2.02	1.44	1.10	1.08
Birmingham, AL	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.66	0.64	0.59	0.58	0.42	0.29	0.31
Boise-Northern Ada County Area, ID	CO (1971 8-hour)	Maintenance, --	100	0	-0.08	-0.08	-0.07	-0.07	-0.05	-0.05	-0.04
Bonner County; The Sandpoint Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Boston Area, MA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.27	0.27	0.25	0.25	0.18	0.12	0.13
Boyd County (part), KY	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	2.52	2.43	2.23	2.19	1.56	1.19	1.17
Brooke; Follansbee Area, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Burlington Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Butte County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.01	0.00	0.00	0.00	0.00	-0.01	0.00
Calaveras County, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.13	0.12	0.11	0.11	0.08	0.06	0.06
Calaveras County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.13	0.12	0.11	0.11	0.08	0.06	0.06

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Campbell-Clermont Counties, KY-OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01
Canton-Massillon, OH	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	1.17	1.13	1.04	1.02	0.73	0.55	0.55	0.55
Central New Hampshire, NH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.05	-0.05	-0.04	-0.04	-0.03	-0.03	-0.02	-0.02
Central Steptoe Valley, NV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Charleston, WV	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.24	0.24	0.22	0.22	0.15	0.11	0.12	0.12
Charlotte Area, NC	CO (1971 8-hour)	Maintenance, --	100	0	-0.40	-0.38	-0.35	-0.33	-0.23	-0.22	-0.18	-0.18
Charlotte-Rock Hill, NC-SC	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-0.70	-0.66	-0.60	-0.58	-0.41	-0.39	-0.31	-0.31
Chicago, IL-IN-WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	16.83	16.29	14.93	14.71	10.51	7.84	7.87	7.87
Chicago-Naperville, IL-IN-WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	16.73	16.19	14.84	14.63	10.45	7.78	7.82	7.82
Chico (Butte County), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	-0.01	0.00	0.00	0.00	0.00	-0.01	0.00	0.00
Chico Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01	-0.01
Chico, CA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-0.03	-0.02	-0.02	-0.02	-0.01	-0.02	-0.01	-0.01
Cincinnati, OH-KY	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.21	-0.20	-0.18	-0.16	-0.11	-0.14	-0.09	-0.09
Cincinnati, OH-KY-IN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-0.20	-0.19	-0.17	-0.15	-0.11	-0.14	-0.08	-0.08
Clark County; Las Vegas Planning Area, NV	PM10 (1987 24-hour)	Maintenance, Serious	100	0	-0.20	-0.19	-0.17	-0.16	-0.11	-0.14	-0.08	-0.08
Cleveland Area, OH	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.03	-0.02	-0.02	-0.01	-0.01	-0.04	-0.01	-0.01
Cleveland, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.15	1.12	1.03	1.03	0.74	0.48	0.55	0.55
Cleveland, OH	PM2.5 (2012 Annual)	Maintenance, Moderate	100	0	0.28	0.27	0.25	0.25	0.18	0.10	0.14	0.14
Cleveland-Akron-Lorain, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	1.41	1.37	1.26	1.25	0.90	0.61	0.67	0.67

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Cleveland-Akron-Lorain, OH	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	1.17	1.14	1.05	1.05	0.75	0.50	0.56
Cochise County; Paul Spur/Douglas Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
Colorado Springs Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.07	0.07	0.06	0.07	0.05	0.02	0.03
Columbus, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-0.40	-0.37	-0.34	-0.32	-0.23	-0.23	-0.17
Columbus, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.44	-0.41	-0.37	-0.36	-0.25	-0.25	-0.19
Cook County; Lyons Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.60	0.58	0.53	0.52	0.37	0.28	0.28
Cook County; Southeast Chicago, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	13.79	13.32	12.19	12.00	8.56	6.53	6.42
Coshocton County; Franklin Township, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coso Junction, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.08	1.04	0.96	0.94	0.67	0.51	0.50
Cuyahoga County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.23	-0.22	-0.20	-0.19	-0.13	-0.13	-0.10
Cuyahoga County, OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.03	-0.02	-0.02	-0.01	-0.01	-0.04	-0.01
Dallas-Fort Worth, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-0.01	0.02	0.03	0.07	0.06	-0.17	0.04
Dallas-Fort Worth, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.01	0.04	0.05	0.09	0.08	-0.15	0.05
Delaware County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	10.13	9.79	8.96	8.82	6.29	4.79	4.72
Denver Metro/North Front Range, CO	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	2.79	2.71	2.49	2.47	1.77	1.25	1.32
Denver-Boulder Area, CO	CO (1971 8-hour)	Maintenance, Serious	100	0	2.55	2.48	2.27	2.25	1.61	1.15	1.20
Denver-Boulder-Greeley-Ft Collins-Loveland, CO	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	2.79	2.71	2.49	2.47	1.77	1.25	1.32
Detroit Area, MI	CO (1971 8-hour)	Maintenance, --	100	0	0.49	0.48	0.44	0.44	0.32	0.20	0.24
Detroit, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.98	1.93	1.77	1.77	1.27	0.84	0.94

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Detroit, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.59	0.57	0.52	0.51	0.37	0.27	0.28
Detroit-Ann Arbor, MI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	1.97	1.93	1.77	1.76	1.27	0.84	0.94
Doña Ana County (Sunland Park Area), NM	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.02	0.99	0.91	0.89	0.64	0.49	0.48
Doña Ana County; Anthony, NM	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	1.03	0.99	0.91	0.89	0.64	0.49	0.48
Door County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Douglas, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.01	-0.01	0.00	0.00	0.00	0.00	0.00
Dukes County, MA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Duluth Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.72	0.69	0.63	0.62	0.44	0.34	0.33
East Chicago Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	13.24	12.79	11.71	11.52	8.22	6.27	6.16
East Helena Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
East Kern County Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	0.97	0.93	0.86	0.84	0.60	0.46	0.45
El Paso County, TX	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.90	0.87	0.80	0.79	0.57	0.42	0.42
El Paso, TX	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	1.02	0.99	0.90	0.89	0.63	0.48	0.48
Eugene-Springfield Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	-0.05	-0.05	-0.05	-0.04	-0.03	-0.03	-0.02
Evangeline Parish (Partial), LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fairbanks Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	0.05	0.05	0.05	0.04	0.03	0.02	0.02
Fairbanks, AK	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	0.05	0.05	0.04	0.04	0.03	0.02	0.02
Flathead County; Columbia Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flathead County; Kalispell and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Flathead County; Whitefish and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fort Collins Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
Freehold Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Freestone and Anderson Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.05	0.05	0.05	0.05	0.03	0.02	0.02	0.02
Fremont County; Canon City Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.14	0.14	0.12	0.12	0.09	0.07	0.07	0.07
Fresno Area, CA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	0.12	0.12	0.11	0.11	0.08	0.05	0.05	0.06
Grants Pass Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00	0.00
Great Falls Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	0.23	0.22	0.20	0.20	0.14	0.11	0.11	0.11
Greater Connecticut, CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	-0.32	-0.31	-0.28	-0.27	-0.19	-0.19	-0.19	-0.14
Greater Connecticut, CT	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	-0.32	-0.31	-0.28	-0.27	-0.19	-0.19	-0.19	-0.14
Greeley Area, CO	CO (1971 8-hour)	Maintenance, --	100	0	2.82	2.72	2.49	2.46	1.75	1.33	1.33	1.31
Hancock and Brooke Counties (Part); The City of Weirton, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01
Hancock County (Part) The City of Weirton, including Butler and Clay: Magisterial Districts, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.12	0.11	0.10	0.10	0.07	0.05	0.05	0.05
Harrisburg-Lebanon-Carlisle-York, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-0.10	-0.09	-0.08	-0.07	-0.05	-0.07	-0.07	-0.04
Hartford-New Britain-Middletown Area, CT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.26	-0.25	-0.22	-0.21	-0.15	-0.14	-0.14	-0.11
Hayden, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.06	0.05	0.05	0.05	0.03	0.03	0.03	0.03
Hayden, AZ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.06	0.05	0.05	0.05	0.03	0.03	0.03	0.03

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

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NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Hayden, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.06	0.05	0.05	0.05	0.05	0.03	0.03	0.03
Hillsborough County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.21	0.21	0.19	0.19	0.19	0.13	0.10	0.10
Hillsborough-Polk County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.22	0.21	0.19	0.19	0.19	0.14	0.10	0.10
Houston-Galveston-Brazoria, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	57.48	55.56	50.88	50.08	50.08	35.74	27.10	26.79
Houston-Galveston-Brazoria, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	57.44	55.52	50.84	50.04	50.04	35.71	27.09	26.77
Humphreys County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00	0.00
Huntington, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00
Imperial County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.33	0.32	0.29	0.29	0.29	0.21	0.15	0.15
Imperial County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.33	0.32	0.29	0.29	0.29	0.21	0.15	0.15
Imperial County, CA	PM _{2.5} (2006 24-hour)	Nonattainment, Moderate	100	0	0.07	0.07	0.06	0.06	0.06	0.05	0.03	0.03
Imperial County, CA	PM _{2.5} (2012 Annual)	Nonattainment, Moderate	100	0	0.07	0.07	0.06	0.06	0.06	0.05	0.03	0.03
Imperial County; Imperial Valley Planning Area, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Serious	70	0	0.33	0.32	0.29	0.29	0.29	0.21	0.15	0.16
Indian Wells, CA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	1.05	1.01	0.93	0.91	0.91	0.65	0.50	0.49
Indiana, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.45	0.43	0.39	0.39	0.39	0.28	0.21	0.21
Indianapolis Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Indianapolis, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.13	-0.12	-0.11	-0.11	-0.11	-0.08	-0.07	-0.06
Inyo County; Owens Valley Planning Area, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Serious	70	0	0.39	0.38	0.35	0.34	0.34	0.24	0.19	0.18
Jackson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.07	0.07	0.07	0.07	0.06	0.05	0.03	0.03
Jackson County; Medford-Ashland (including White City), OR	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	-0.04	-0.04	-0.03	-0.03	-0.03	-0.02	-0.02	-0.02

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Jamestown, NY	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.96	0.93	0.85	0.84	0.60	0.45	0.45
Jefferson County, KY	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Jefferson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
Jefferson County; (part) Steubenville & Mingo Junction, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Jefferson County; (part), OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Johnstown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.21	0.20	0.19	0.18	0.13	0.10	0.10
Josephine County; Grants Pass, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
Juneau; Mendenhall Valley Area, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kern County (Eastern Kern), CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	8.01	7.74	7.09	6.97	4.97	3.79	3.73
Kern County (Eastern Kern), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	8.01	7.74	7.09	6.97	4.97	3.79	3.73
King County; Kent, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
King County; Seattle, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Klamath County; Klamath Falls, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Klamath Falls Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Klamath Falls, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Knoxville, TN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-0.16	-0.16	-0.14	-0.13	-0.09	-0.10	-0.07
Knoxville-Sevierville-La Follette, TN	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-0.13	-0.12	-0.11	-0.10	-0.07	-0.08	-0.05
La Porte County; (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.39	0.38	0.35	0.34	0.24	0.18	0.18
Lake County (part); Lakeview, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Lake County, OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	-0.06	-0.06	-0.05	-0.05	-0.03	-0.03	-0.03
Lake County: (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	14.09	13.61	12.46	12.26	8.75	6.67	6.56
Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	14.12	13.64	12.49	12.29	8.77	6.69	6.57
Lake County; Polson, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake County; Ronan, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake Tahoe Nevada Area, NV	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake Tahoe North Shore Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	0.02	0.02	0.01	0.01	0.01	0.01	0.01
Lake Tahoe South Shore Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lancaster, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-0.07	-0.06	-0.06	-0.05	-0.04	-0.04	-0.03
Lancaster, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-0.07	-0.06	-0.06	-0.05	-0.04	-0.04	-0.03
Lane County (part); Oakridge, OR	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lane County; Eugene/Springfield, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.05	-0.05	-0.05	-0.04	-0.03	-0.03	-0.02
Las Vegas Area, NV	CO (1971 8-hour)	Maintenance, Serious	100	0	-0.20	-0.19	-0.17	-0.16	-0.11	-0.14	-0.08
Las Vegas, NV	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.20	-0.19	-0.17	-0.16	-0.11	-0.14	-0.08
LaSalle County; Oglesby, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.07	0.07	0.06	0.06	0.04	0.03	0.03
Laurel Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	2.32	2.24	2.05	2.02	1.44	1.10	1.08
Lebanon County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
Lemont, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	4.18	4.04	3.70	3.64	2.59	1.98	1.94

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Liberty-Clairton, PA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.08	0.08	0.07	0.07	0.05	0.04	0.04
Lincoln County; Libby and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Logan, UT-ID	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	-0.03	-0.03	-0.03	-0.02	-0.02	-0.02	-0.01
Longmont Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.50	0.48	0.44	0.43	0.31	0.23	0.23
Lorain County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Los Angeles, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	22.42	21.72	19.92	19.66	14.06	10.30	10.52
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	8.53	8.24	7.55	7.43	5.30	4.02	3.97
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	8.53	8.24	7.55	7.43	5.30	4.02	3.97
Los Angeles-South Coast Air Basin Area, CA	CO (1971 8-hour)	Maintenance, Serious	100	0	22.40	21.71	19.90	19.65	14.05	10.29	10.51
Los Angeles-South Coast Air Basin Area, CA	NO ₂ (1971 Annual)	Maintenance, --	100	0	22.40	21.71	19.90	19.65	14.05	10.29	10.51
Los Angeles-South Coast Air Basin, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	22.43	21.73	19.93	19.67	14.07	10.31	10.52
Los Angeles-South Coast Air Basin, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	22.42	21.72	19.92	19.66	14.06	10.30	10.52
Los Angeles-South Coast Air Basin, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	22.42	21.72	19.92	19.66	14.06	10.30	10.52
Louisville, KY-IN	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.26	-0.24	-0.22	-0.21	-0.15	-0.15	-0.11
Lowell Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	0.00	-0.01	0.00
Lucas County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	1.96	1.90	1.74	1.71	1.22	0.92	0.92
Madison County; Granite City Township and Nameoki Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.64	1.59	1.45	1.43	1.02	0.78	0.77
Manchester Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	-0.03	-0.03	-0.02	-0.02	-0.02	-0.02	-0.01

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Manitowoc County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Maricopa and Pinal Counties; Phoenix Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	-0.88	-0.83	-0.75	-0.72	-0.51	-0.49	-0.39	
Marion County: Lawrence, Washington, and Warrant Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.11	-0.11	-0.10	-0.09	-0.06	-0.06	-0.05	
Mariposa County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mariposa County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Marshall, WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	1.34	1.29	1.18	1.16	0.83	0.63	0.62	
Medford Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01	
Memphis Area, TN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.90	0.87	0.80	0.79	0.57	0.41	0.42	
Memphis, TN-MS-AR	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.83	0.81	0.74	0.73	0.53	0.37	0.39	
Miami, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.05	0.05	0.05	0.05	0.03	0.02	0.02	
Miami, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Miami, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.05	0.05	0.05	0.05	0.03	0.02	0.02	
Milwaukee-Racine, WI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-0.17	-0.16	-0.14	-0.13	-0.09	-0.10	-0.07	
Minneapolis-St. Paul Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	1.84	1.79	1.64	1.63	1.17	0.80	0.87	
Missoula Area, MT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.22	0.22	0.20	0.20	0.14	0.10	0.10	
Missoula county; Missoula and Vicinity, MT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.22	0.22	0.20	0.20	0.14	0.10	0.10	
Modesto Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.01	

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Mohave County (part); Bullhead City, AZ	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02	0.02
Mono County; Mammoth Lake Planning Area, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Mono County; Mono Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Morenci, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morgan County, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
Morongo Band of Mission Indians	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	0.16	0.16	0.14	0.14	0.14	0.10	0.08	0.08
Morongo Band of Mission Indians, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	0.16	0.16	0.14	0.14	0.14	0.10	0.08	0.08
Morristown Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.05	0.05	0.05	0.05	0.05	0.03	0.03	0.03
Muscatine County; (part), IA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Muscatine, IA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Muskegon County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.03	-0.03	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01
Muskingum River, OH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nashua Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
Nassau County, FL	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nevada County (Western part), CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nevada County (Western part), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
New Haven County, CT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.01	-0.01	0.00	0.00	0.00	0.00	0.00	0.00
New Haven-Meriden-Waterbury Area, CT	CO (1971 8-hour)	Maintenance, --	100	0	-0.21	-0.20	-0.18	-0.17	-0.17	-0.12	-0.12	-0.09
New Manchester-Grant Magisterial District in Hancock County, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
New York County, NY	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.03	0.03	0.03	0.03	0.03	0.02	0.01	0.01
New York, NY-NJ-CT	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-1.01	-0.92	-0.82	-0.75	-0.75	-0.51	-0.75	-0.40
New York-N. New Jersey-Long Island Area, NY-NJ-CT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	0.39	0.40	0.38	0.41	0.31	0.03	0.03	0.22
New York-N. New Jersey-Long Island, NY-NJ-CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	-0.91	-0.83	-0.74	-0.66	-0.66	-0.45	-0.70	-0.36
New York-Northern New Jersey-Long Island, NY-NJ-CT	Ozone (2015 8-hour)	Nonattainment, Moderate	50	0	-0.91	-0.83	-0.73	-0.66	-0.66	-0.45	-0.70	-0.36
NJ Portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.05	0.05	0.05	0.04	0.03	0.03	0.02	0.02
Nogales, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
Northern Milwaukee/Ozaukee Shoreline, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.06	0.06	0.05	0.05	0.05	0.04	0.03	0.03
Northern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.84	0.82	0.75	0.75	0.75	0.54	0.37	0.40
Oakridge, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ogden Area, UT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Ogden Area, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Olmsted County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01
Olmsted; City of Rochester, MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.27	0.26	0.24	0.23	0.23	0.17	0.13	0.12
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.27	0.26	0.24	0.23	0.23	0.17	0.13	0.12
Pekin, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Penns Grove Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Peoria County: Hollis Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.03	0.03	0.03	0.03	0.03	0.02	0.01	0.01
Peoria County: Peoria, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.01
Perth Amboy Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.27	0.26	0.24	0.23	0.23	0.17	0.13	0.12
Philadelphia-Camden County Area, PA-NJ	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	8.40	8.12	7.43	7.31	7.31	5.22	3.96	3.91
Philadelphia-Wilmington, PA-NJ-DE	PM _{2.5} (2006 24-hour)	Maintenance, Moderate for PA and DE; Subject to Former Subpart 1 for NJ	100	0	9.91	9.59	8.79	8.67	8.67	6.19	4.60	4.64
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	9.84	9.53	8.74	8.62	8.62	6.16	4.54	4.61
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	9.84	9.53	8.74	8.62	8.62	6.16	4.54	4.61
Phoenix Area, AZ	CO (1971 8-hour)	Maintenance, Serious	100	0	-0.84	-0.80	-0.72	-0.70	-0.70	-0.49	-0.48	-0.37
Phoenix-Mesa, AZ	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-0.88	-0.84	-0.76	-0.73	-0.73	-0.51	-0.50	-0.39
Phoenix-Mesa, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.91	-0.86	-0.78	-0.75	-0.75	-0.53	-0.51	-0.40
Pierce County; Tacoma, WA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.21	0.20	0.19	0.18	0.18	0.13	0.10	0.10
Pima County; Ajo Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pima County; Rillito Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.04	0.04	0.04	0.04	0.04	0.03	0.02	0.02
Pinal and Gila Counties; Payson, AZ	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pinal County (part); West Pinal, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
Pitkin County; Aspen, CO	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.62	0.60	0.55	0.54	0.54	0.38	0.29	0.29
Pittsburgh Area, PA	CO (1971 8-hour)	Maintenance, --	100	0	0.05	0.05	0.05	0.05	0.05	0.03	0.02	0.02

Notes:

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Pittsburgh-Beaver Valley, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	2.38	2.31	2.12	2.09	1.50	1.09	1.12
Pittsburgh-Beaver Valley, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	2.22	2.15	1.97	1.95	1.39	1.01	1.04
Plumas County, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Polk County, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.01	-0.01	0.00	0.00	0.00	0.00	0.00
Portland Area: Portland Metro Service District Boundary, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.29	-0.28	-0.25	-0.24	-0.17	-0.16	-0.13
Power-Bannock Counties; Fort Hall Indian Reservation, ID	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Power-Bannock Counties; Portneuf Valley Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.02	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01
Provo Area, UT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
Provo, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	0.65	0.63	0.58	0.57	0.41	0.30	0.30
Prowers County; Lamar, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Raleigh-Durham Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.52	0.51	0.47	0.47	0.34	0.21	0.25
Ramsey County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	2.16	2.09	1.91	1.88	1.34	1.02	1.01
Reading, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-0.04	-0.03	-0.03	-0.03	-0.02	-0.02	-0.01
Reno Area, NV	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.08	-0.07	-0.07	-0.07	-0.05	-0.04	-0.03
Rhineland, WI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
Riverside County (Coachella Valley), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	0.37	0.36	0.33	0.33	0.23	0.17	0.17
Riverside County (Coachella Valley), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	0.37	0.36	0.33	0.33	0.23	0.17	0.17
Riverside County; Coachella Valley Planning Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	0.35	0.34	0.31	0.31	0.22	0.15	0.17

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Riverside, Los Angeles, Orange, and San Bernardino Counties; South Coast Air Basin, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	22.45	21.75	19.95	19.69	14.08	10.32	10.53
Rosebud County; Lame Deer, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Routt County (part); Steamboat Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	2.77	2.68	2.45	2.41	1.72	1.31	1.29
Rusk and Panola Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.09	0.09	0.08	0.08	0.06	0.04	0.04
Sacramento Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.90	0.88	0.80	0.80	0.57	0.40	0.43
Sacramento County, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	12.01	11.60	10.63	10.46	7.46	5.66	5.59
Sacramento Metro, CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	11.85	11.46	10.49	10.33	7.38	5.57	5.53
Sacramento Metro, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	11.85	11.46	10.49	10.33	7.38	5.57	5.53
Sacramento, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	11.86	11.47	10.50	10.34	7.38	5.57	5.53
Salem Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	-0.06	-0.05	-0.05	-0.05	-0.03	-0.03	-0.03
Salt Lake City Area, UT	CO (1971 8-hour)	Maintenance, --	100	0	1.18	1.14	1.04	1.03	0.73	0.55	0.55
Salt Lake City, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	0.83	0.80	0.74	0.73	0.53	0.36	0.39
Salt Lake County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.98	0.95	0.87	0.86	0.62	0.44	0.46
Salt Lake County, UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.98	0.95	0.87	0.86	0.62	0.44	0.46
San Antonio, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.15	-0.13	-0.12	-0.11	-0.07	-0.11	-0.06
San Bernardino County (part); excluding Searles Valley Planning Area and South Coast Air Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	8.07	7.80	7.14	7.03	5.02	3.81	3.76
San Diego Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.49	-0.46	-0.41	-0.39	-0.27	-0.30	-0.21

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
San Diego County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-0.38	-0.35	-0.32	-0.30	-0.21	-0.25	-0.16
San Diego County, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	-0.38	-0.35	-0.31	-0.29	-0.20	-0.25	-0.16
San Francisco Bay Area, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	11.05	10.70	9.81	9.68	6.92	5.10	5.18
San Francisco Bay Area, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	11.05	10.70	9.81	9.68	6.92	5.10	5.18
San Francisco Bay Area, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	11.03	10.69	9.80	9.67	6.91	5.09	5.17
San Francisco-Oakland-San Jose Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	11.03	10.68	9.79	9.66	6.90	5.10	5.17
San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	18.87	18.25	16.71	16.46	11.75	8.86	8.80
San Joaquin Valley, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	18.87	18.25	16.71	16.46	11.75	8.86	8.80
San Joaquin Valley, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	18.87	18.25	16.71	16.46	11.75	8.86	8.80
San Joaquin Valley, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	18.75	18.13	16.61	16.36	11.68	8.81	8.75
San Joaquin Valley, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	18.75	18.13	16.61	16.36	11.68	8.81	8.75
San Luis Obispo (Eastern part), CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.04	1.00	0.92	0.90	0.64	0.49	0.48
San Luis Obispo (Eastern San Luis Obispo), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	1.04	1.00	0.92	0.90	0.64	0.49	0.48
San Manuel, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.05	0.05	0.05	0.05	0.03	0.03	0.03
San Miguel County; Telluride, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.02	0.02	0.01	0.01	0.01	0.01	0.01
Sanders County (part); Thompson Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Santa Cruz County; Nogales Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
Seaford, DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-0.04	-0.04	-0.04	-0.03	-0.02	-0.02	-0.02

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Seattle-Tacoma Area, WA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	-0.50	-0.47	-0.43	-0.41	-0.29	-0.30	-0.22
Seattle-Tacoma, WA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.09	0.09	0.09	0.09	0.06	0.04	0.05
Sheboygan County, WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Sheboygan County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Sheridan County; City of Sheridan, WY	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.06	0.06	0.05	0.05	0.04	0.03	0.03
Shoshone County (part); excluding Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.01	-0.01	0.00	0.00	0.00	0.00	0.00
Shoshone County; City of Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Silver Bow County; Butte, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
Somerville Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Southern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.65	0.63	0.58	0.57	0.41	0.30	0.30
Southwest Indiana, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.04	0.03	0.03	0.03	0.02	0.02	0.02
Spokane Area, WA	CO (1971 8-hour)	Maintenance, Serious	100	0	-0.07	-0.07	-0.06	-0.06	-0.04	-0.04	-0.03
Spokane County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.07	-0.07	-0.06	-0.06	-0.04	-0.04	-0.03
Springfield Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
St. Bernard Parish, LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	9.10	8.79	8.05	7.91	5.65	4.31	4.23
St. Clair, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.12	0.11	0.10	0.10	0.07	0.05	0.05
St. Louis Area, MO	CO (1971 8-hour)	Maintenance, --	100	0	1.59	1.53	1.41	1.39	0.99	0.74	0.74
St. Louis, MO-IL	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.40	1.36	1.25	1.24	0.89	0.62	0.66
St. Louis-St. Charles-Farmington, MO-IL	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	1.39	1.36	1.25	1.24	0.89	0.61	0.66

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Steubenville, OH-WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.11	0.11	0.10	0.10	0.07	0.05	0.05
Steubenville-Weirton, OH-WV	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stockton Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	-0.01	0.00
Sullivan County, TN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sutter Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Syracuse Area; Onondaga County, NY	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.09	-0.09	-0.08	-0.07	-0.05	-0.05	-0.04
Tazewell County: Groveland Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.01	-0.01	0.00	0.00	0.00	0.00	0.00
Terre Haute, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.05	0.05	0.04	0.04	0.03	0.02	0.02
Thurston County; Cities of Olympia, Tumwater, and Lacey, WA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
Titus County, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Toms River Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tooele County (part), UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.77	0.74	0.68	0.67	0.48	0.36	0.36
Trenton Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
Trona, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	1.06	1.02	0.93	0.92	0.66	0.50	0.49
Tucson Area, AZ	CO (1971 8-hour)	Maintenance, --	100	0	-0.18	-0.17	-0.15	-0.15	-0.10	-0.10	-0.08
Tuolumne County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.07	0.07	0.06	0.06	0.04	0.03	0.03
Tuscan Buttes, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tuscan Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Uinta Basin, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.86	0.83	0.76	0.75	0.53	0.41	0.40
Union County; LaGrande, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Upper Green River Basin Area, WY	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.88	0.85	0.78	0.77	0.55	0.42	0.41
Utah County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	1.02	0.99	0.90	0.89	0.64	0.47	0.48
Vancouver Area: Clark County (part), WA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.07	-0.07	-0.06	-0.06	-0.04	-0.04	-0.03
Ventura County, CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	7.69	7.44	6.81	6.70	4.78	3.63	3.59
Ventura County, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	7.69	7.44	6.81	6.70	4.78	3.63	3.59
Vermillion County; Part of Clinton Township, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.06	0.06	0.06	0.06	0.04	0.03	0.03
Vigo County, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.08	0.08	0.07	0.07	0.05	0.03	0.04
Walla Walla County; Wallula, WA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Waltham Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Warren County: Conewago Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.75	0.73	0.66	0.65	0.47	0.36	0.35
Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.76	0.74	0.68	0.67	0.47	0.36	0.36
Warren, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.77	0.74	0.68	0.67	0.48	0.36	0.36
Washington Area, DC-MD-VA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.03	-0.03	-0.03	-0.02	-0.01	-0.03	-0.01
Washington, DC-MD-VA	Ozone (2008 8-hour)	Nonattainment (DC) Maintenance (MD, VA), Marginal	50	0	-1.01	-0.96	-0.87	-0.83	-0.58	-0.59	-0.44
Washington, DC-MD-VA	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	-1.01	-0.96	-0.87	-0.83	-0.58	-0.59	-0.44
Washoe County; Reno Planning Area, NV	PM10 (1987 24-hour)	Maintenance, Serious	100	0	-0.08	-0.08	-0.07	-0.07	-0.05	-0.04	-0.04

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
Wayne County; (part), MI	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.63	0.61	0.56	0.55	0.39	0.30	0.29	
West Central Pinal County, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02	
West Silver Valley, ID	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Williamson County, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	
Winston-Salem Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.08	-0.07	-0.07	-0.06	-0.04	-0.04	-0.03	
Worcester Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	-0.03	-0.03	-0.02	-0.02	-0.02	-0.02	-0.01	
Yakima Area, WA	CO (1971 8-hour)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00	
Yakima County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01	
Yuba City-Marysville, CA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.05	0.05	0.05	0.05	0.03	0.02	0.02	
Yuma County; Yuma Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.07	0.07	0.07	0.07	0.05	0.03	0.04	
Yuma, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.09	0.09	0.08	0.08	0.06	0.04	0.04	

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

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Table A-2. Changes in Emissions from U.S. Passenger Cars and Light Trucks by Nonattainment or Maintenance Area and Alternative, Direct and Indirect Impacts--Particulate Matter (PM2.5), 2035

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Ada County; Boise, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.04	0.04	0.04	0.05	0.04	0.02	0.04
Adams, Denver, and Boulder Counties; Denver Metropolitan Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	8.13	7.94	7.26	6.92	5.48	3.89	3.69
Ajo, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Albuquerque Area, NM	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.27	0.27	0.26	0.26	0.21	0.14	0.16
Allegan County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.26	0.25	0.23	0.22	0.18	0.12	0.12
Allegheny County Air Basin: Hazelwood Monitor, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.26	0.26	0.23	0.22	0.18	0.13	0.12
Allegheny County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	1.77	1.73	1.60	1.54	1.22	0.86	0.84
Allegheny County; The Area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.24	0.23	0.21	0.20	0.16	0.11	0.11
Allegheny, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.54	0.52	0.48	0.46	0.36	0.26	0.24
Allentown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.22	0.22	0.21	0.21	0.17	0.12	0.13
Allentown-Bethlehem-Easton, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.29	0.29	0.27	0.27	0.22	0.15	0.16
Alton Township, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	4.50	4.39	4.00	3.79	3.00	2.14	1.99
Amador County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.40	0.39	0.36	0.34	0.27	0.19	0.18
Anchorage Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Anchorage; Eagle River, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Anne Arundel County and Baltimore County, MD	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.79	0.78	0.73	0.72	0.57	0.40	0.41

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
AQCR 012: Portions of Grant County, NM	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AQCR 109-Millinocket, ME	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.13	0.13	0.12	0.12	0.09	0.07	0.07	0.07
AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington Counties (Minneapolis-St. Paul), MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	7.47	7.32	6.72	6.45	5.11	3.61	3.48	3.48
AQCR 237: Brown County: Green Bay Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02	0.02
AQCR 238: Marathon County: Rothschild Subcity Area, Rib Mountain, Weston, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.03	0.03	0.03	0.04	0.03	0.02	0.02	0.02
AQCR 238: Oneida County: Rhinelander Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AQCR 239: Milwaukee County: Milwaukee Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.33	0.33	0.31	0.31	0.25	0.17	0.18	0.18
AQCR 240: Dane County: Madison Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.21	0.21	0.20	0.21	0.17	0.11	0.12	0.12
Archuleta County; Pagosa Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.06	1.03	0.94	0.89	0.70	0.50	0.47	0.47
Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.44	0.43	0.39	0.37	0.30	0.21	0.20	0.20
Aroostock County; City of Presque Isle, ME	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02
Atlanta, GA	Ozone (2008 8-hour)	Maintenance, Moderate	100	0	0.39	0.44	0.51	0.62	0.52	0.30	0.50	0.50
Atlanta, GA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.35	0.39	0.43	0.52	0.44	0.26	0.41	0.41
Atlantic City Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bakersfield Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	2.28	2.23	2.04	1.94	1.54	1.09	1.04	1.04

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Baltimore Area, MD	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.08	0.08	0.07	0.07	0.05	0.04	0.04
Baltimore, MD	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	1.68	1.67	1.57	1.56	1.25	0.86	0.90
Baltimore, MD	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	1.68	1.67	1.57	1.56	1.25	0.86	0.90
Baton Rouge, LA	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	71.80	69.99	63.79	60.50	47.83	34.10	31.87
Beaver, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benton County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Berrien County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.28	0.27	0.25	0.25	0.20	0.14	0.14
Billings Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	6.44	6.28	5.72	5.43	4.29	3.06	2.86
Billings, MT	SO ₂ (2010 1-hour)	Maintenance, --	100	0	6.44	6.28	5.72	5.42	4.29	3.06	2.85
Birmingham, AL	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	2.70	2.64	2.43	2.33	1.85	1.30	1.26
Boise-Northern Ada County Area, ID	CO (1971 8-hour)	Maintenance, --	100	0	0.04	0.04	0.04	0.05	0.04	0.02	0.04
Bonner County; The Sandpoint Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Boston Area, MA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	1.22	1.20	1.10	1.06	0.84	0.59	0.58
Boyd County (part), KY	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	6.99	6.82	6.21	5.89	4.66	3.32	3.10
Brooke; Follansbee Area, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Burlington Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Butte County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.14	0.13	0.13	0.12	0.10	0.07	0.07
Calaveras County, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.39	0.38	0.35	0.33	0.26	0.19	0.18
Calaveras County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.39	0.38	0.35	0.33	0.26	0.19	0.18

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Campbell-Clermont Counties, KY-OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.07	0.07	0.06	0.06	0.05	0.03	0.03
Canton-Massillon, OH	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	3.51	3.42	3.13	2.97	2.35	1.67	1.57
Central New Hampshire, NH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.02	0.01	0.01	0.01
Central Steptoe Valley, NV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Charleston, WV	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.92	0.90	0.83	0.79	0.63	0.44	0.43
Charlotte Area, NC	CO (1971 8-hour)	Maintenance, --	100	0	0.06	0.07	0.09	0.13	0.11	0.06	0.11
Charlotte-Rock Hill, NC-SC	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.24	0.26	0.29	0.34	0.29	0.17	0.26
Chicago, IL-IN-WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	51.59	50.35	45.99	43.76	34.63	24.62	23.22
Chicago-Naperville, IL-IN-WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	51.72	50.48	46.13	43.90	34.74	24.69	23.31
Chico (Butte County), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.14	0.13	0.13	0.12	0.10	0.07	0.07
Chico Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Chico, CA	PM _{2.5} (2006 24-hour)	Maintenance, Moderate	100	0	0.08	0.08	0.07	0.07	0.06	0.04	0.04
Cincinnati, OH-KY	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.96	0.96	0.91	0.91	0.73	0.50	0.54
Cincinnati, OH-KY-IN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	1.07	1.06	1.01	1.01	0.81	0.55	0.59
Clark County; Las Vegas Planning Area, NV	PM ₁₀ (1987 24-hour)	Maintenance, Serious	100	0	0.89	0.89	0.84	0.85	0.68	0.46	0.50
Cleveland Area, OH	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.79	0.78	0.73	0.72	0.57	0.40	0.41
Cleveland, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	5.29	5.18	4.77	4.59	3.64	2.57	2.50
Cleveland, OH	PM _{2.5} (2012 Annual)	Maintenance, Moderate	100	0	1.84	1.80	1.67	1.62	1.29	0.90	0.89
Cleveland-Akron-Lorain, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	6.09	5.97	5.49	5.27	4.18	2.95	2.86

Notes:

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Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
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Cleveland-Akron-Lorain, OH	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	5.28	5.18	4.76	4.58	3.64	2.56	2.49
Cochise County; Paul Spur/Douglas Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Colorado Springs Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.60	0.59	0.55	0.53	0.43	0.30	0.30
Columbus, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.42	0.43	0.42	0.45	0.37	0.24	0.30
Columbus, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.21	0.23	0.24	0.27	0.22	0.14	0.20
Cook County; Lyons Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.72	1.67	1.53	1.45	1.15	0.82	0.76
Cook County; Southeast Chicago, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	38.32	37.35	34.04	32.27	25.51	18.19	16.99
Coshocton County; Franklin Township, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Coso Junction, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	3.00	2.92	2.66	2.53	2.00	1.42	1.33
Cuyahoga County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.04	0.05	0.06	0.08	0.07	0.04	0.07
Cuyahoga County, OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.79	0.78	0.73	0.72	0.57	0.40	0.41
Dallas-Fort Worth, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	5.73	5.66	5.29	5.20	4.15	2.87	2.96
Dallas-Fort Worth, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	5.72	5.65	5.28	5.19	4.14	2.87	2.95
Delaware County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	28.38	27.67	25.22	23.92	18.91	13.48	12.60
Denver Metro/North Front Range, CO	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	10.32	10.09	9.25	8.85	7.02	4.96	4.76
Denver-Boulder Area, CO	CO (1971 8-hour)	Maintenance, Serious	100	0	9.08	8.87	8.13	7.77	6.16	4.36	4.17
Denver-Boulder-Greeley-Ft Collins-Loveland, CO	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	10.32	10.09	9.25	8.85	7.02	4.96	4.76
Detroit Area, MI	CO (1971 8-hour)	Maintenance, --	100	0	2.55	2.51	2.31	2.23	1.77	1.24	1.22
Detroit, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	8.92	8.74	8.05	7.74	6.14	4.33	4.20

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Detroit, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	1.80	1.75	1.60	1.52	1.21	0.86	0.81
Detroit-Ann Arbor, MI	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	8.92	8.75	8.05	7.74	6.14	4.33	4.21
Doña Ana County (Sunland Park Area), NM	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	2.85	2.78	2.53	2.40	1.90	1.35	1.27
Doña Ana County; Anthony, NM	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	2.85	2.78	2.53	2.40	1.90	1.35	1.26
Door County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.03	0.03	0.02	0.02	0.02	0.01	0.01
Douglas, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dukes County, MA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Duluth Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	2.05	2.00	1.83	1.73	1.37	0.98	0.92
East Chicago Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	36.73	35.80	32.63	30.93	24.45	17.44	16.28
East Helena Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
East Kern County Area, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Serious	70	0	2.71	2.64	2.40	2.28	1.80	1.28	1.20
El Paso County, TX	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	2.88	2.82	2.58	2.45	1.94	1.38	1.31
El Paso, TX	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	2.85	2.78	2.54	2.40	1.90	1.36	1.27
Eugene-Springfield Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.02	0.01	0.01	0.01
Evangeline Parish (Partial), LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Fairbanks Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	0.15	0.15	0.14	0.13	0.10	0.07	0.07
Fairbanks, AK	PM _{2.5} (2006 24-hour)	Nonattainment, Serious	70	0	0.15	0.15	0.14	0.13	0.10	0.07	0.07
Flathead County; Columbia Falls and Vicinity, MT	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flathead County; Kalispell and Vicinity, MT	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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Flathead County; Whitefish and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fort Collins Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.07	0.07	0.07	0.07	0.07	0.05	0.04	0.04
Freehold Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Freestone and Anderson Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.16	0.15	0.14	0.13	0.11	0.07	0.07	0.07
Fremont County; Canon City Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.41	0.40	0.37	0.35	0.28	0.20	0.20	0.19
Fresno Area, CA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	0.73	0.72	0.66	0.64	0.51	0.36	0.36	0.35
Grants Pass Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Great Falls Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	0.63	0.61	0.56	0.53	0.42	0.30	0.30	0.28
Greater Connecticut, CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	0.26	0.27	0.27	0.29	0.24	0.15	0.15	0.20
Greater Connecticut, CT	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	0.26	0.27	0.27	0.29	0.24	0.15	0.15	0.20
Greeley Area, CO	CO (1971 8-hour)	Maintenance, --	100	0	8.05	7.85	7.16	6.79	5.37	3.83	3.83	3.58
Hancock and Brooke Counties (Part); The City of Weirton, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.06	0.06	0.05	0.05	0.04	0.03	0.03	0.03
Hancock County (Part) The City of Weirton, including Butler and Clay: Magisterial Districts, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.33	0.32	0.29	0.28	0.22	0.16	0.16	0.15
Harrisburg-Lebanon-Carlisle-York, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.53	0.53	0.50	0.50	0.40	0.27	0.27	0.29
Hartford-New Britain-Middletown Area, CT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.08	0.09	0.10	0.12	0.10	0.06	0.06	0.09
Hayden, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.16	0.15	0.14	0.13	0.11	0.08	0.08	0.07
Hayden, AZ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.16	0.15	0.14	0.13	0.11	0.08	0.08	0.07

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Hayden, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.16	0.15	0.14	0.13	0.11	0.08	0.07
Hillsborough County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.60	0.59	0.54	0.51	0.40	0.29	0.27
Hillsborough-Polk County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.61	0.59	0.54	0.51	0.41	0.29	0.27
Houston-Galveston-Brazoria, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	164.38	160.29	146.17	138.73	109.71	78.16	73.21
Houston-Galveston-Brazoria, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	164.15	160.06	145.96	138.53	109.55	78.04	73.10
Humphreys County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huntington, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Imperial County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	1.06	1.04	0.95	0.90	0.72	0.51	0.48
Imperial County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.06	1.04	0.95	0.90	0.72	0.51	0.48
Imperial County, CA	PM _{2.5} (2006 24-hour)	Nonattainment, Moderate	100	0	0.32	0.31	0.29	0.27	0.22	0.15	0.15
Imperial County, CA	PM _{2.5} (2012 Annual)	Nonattainment, Moderate	100	0	0.32	0.31	0.29	0.27	0.22	0.15	0.15
Imperial County; Imperial Valley Planning Area, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Serious	70	0	1.06	1.04	0.95	0.90	0.71	0.51	0.48
Indian Wells, CA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	2.94	2.86	2.61	2.47	1.96	1.39	1.30
Indiana, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	1.30	1.27	1.16	1.10	0.87	0.62	0.58
Indianapolis Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Indianapolis, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.04	0.05	0.05	0.06	0.05	0.03	0.05
Inyo County; Owens Valley Planning Area, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Serious	70	0	1.09	1.06	0.97	0.92	0.73	0.52	0.48
Jackson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.23	0.23	0.21	0.20	0.16	0.11	0.11
Jackson County; Medford-Ashland (including White City), OR	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Jamestown, NY	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	2.77	2.71	2.47	2.34	1.85	1.32	1.24
Jefferson County, KY	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.03	0.03	0.02	0.02	0.02	0.01	0.01
Jefferson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jefferson County; (part) Steubenville & Mingo Junction, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.06	0.06	0.06	0.05	0.04	0.03	0.03
Jefferson County; (part), OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Johnstown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.67	0.66	0.60	0.57	0.45	0.32	0.30
Josephine County; Grants Pass, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Juneau; Mendenhall Valley Area, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kern County (Eastern Kern), CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	22.30	21.74	19.81	18.78	14.85	10.59	9.89
Kern County (Eastern Kern), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	22.30	21.74	19.81	18.78	14.85	10.59	9.89
King County; Kent, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
King County; Seattle, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Klamath County; Klamath Falls, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.01
Klamath Falls Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.01
Klamath Falls, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.01
Knoxville, TN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.16	0.16	0.16	0.17	0.14	0.09	0.11
Knoxville-Sevierville-La Follette, TN	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.38	0.38	0.37	0.37	0.30	0.20	0.22
La Porte County; (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	1.13	1.10	1.01	0.96	0.76	0.54	0.50
Lake County (part); Lakeview, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Lake County, OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.03	0.02	0.01	0.02
Lake County: (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	39.33	38.34	34.94	33.13	26.20	18.68	17.45	17.45
Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	39.32	38.33	34.93	33.12	26.18	18.67	17.44	17.44
Lake County; Polson, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake County; Ronan, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake Tahoe Nevada Area, NV	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Lake Tahoe North Shore Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	0.05	0.05	0.05	0.05	0.05	0.04	0.03	0.02
Lake Tahoe South Shore Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.04	0.04	0.04	0.04	0.04	0.03	0.02	0.02
Lancaster, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.17	0.17	0.16	0.17	0.17	0.13	0.09	0.10
Lancaster, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.17	0.17	0.16	0.17	0.17	0.13	0.09	0.10
Lane County (part); Oakridge, OR	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lane County; Eugene/Springfield, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.02	0.01	0.01	0.01
Las Vegas Area, NV	CO (1971 8-hour)	Maintenance, Serious	100	0	0.89	0.89	0.84	0.85	0.85	0.68	0.46	0.50
Las Vegas, NV	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.89	0.89	0.84	0.85	0.85	0.68	0.46	0.50
LaSalle County; Oglesby, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.22	0.22	0.20	0.19	0.19	0.15	0.11	0.10
Laurel Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	6.44	6.28	5.72	5.42	5.42	4.29	3.06	2.85
Lebanon County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.02
Lemont, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	11.70	11.41	10.40	9.86	9.86	7.80	5.56	5.19

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
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Liberty-Clairton, PA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.24	0.23	0.21	0.20	0.16	0.11	0.11
Lincoln County; Libby and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Logan, UT-ID	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.01	0.01	0.01	0.01	0.00	0.01
Longmont Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	1.44	1.41	1.28	1.22	0.96	0.69	0.64
Lorain County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Los Angeles, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	73.76	72.04	65.92	62.86	49.77	35.32	33.53
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	24.36	23.75	21.66	20.56	16.26	11.58	10.85
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	24.36	23.75	21.66	20.56	16.26	11.58	10.85
Los Angeles-South Coast Air Basin Area, CA	CO (1971 8-hour)	Maintenance, Serious	100	0	73.71	72.00	65.87	62.82	49.74	35.29	33.51
Los Angeles-South Coast Air Basin Area, CA	NO ₂ (1971 Annual)	Maintenance, --	100	0	73.71	72.00	65.88	62.82	49.74	35.29	33.51
Los Angeles-South Coast Air Basin, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	73.79	72.08	65.95	62.89	49.80	35.33	33.54
Los Angeles-South Coast Air Basin, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	73.75	72.04	65.91	62.85	49.77	35.31	33.52
Los Angeles-South Coast Air Basin, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	73.76	72.04	65.92	62.86	49.77	35.32	33.53
Louisville, KY-IN	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.21	0.22	0.22	0.24	0.20	0.13	0.16
Lowell Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02
Lucas County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	5.71	5.57	5.08	4.83	3.82	2.72	2.55
Madison County; Granite City Township and Nameoki Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	4.60	4.48	4.08	3.87	3.06	2.18	2.04
Manchester Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.01	0.01	0.01	0.00	0.01

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				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Manitowoc County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.05	0.05	0.05	0.05	0.04	0.03	0.03
Maricopa and Pinal Counties; Phoenix Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	0.40	0.43	0.46	0.52	0.43	0.27	0.38
Marion County: Lawrence, Washington, and Warrant Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.06	0.06	0.06	0.07	0.06	0.04	0.05
Mariposa County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01
Mariposa County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01
Marshall, WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	3.72	3.63	3.30	3.13	2.48	1.77	1.65
Medford Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.01	0.01	0.00	0.01
Memphis Area, TN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	3.21	3.14	2.88	2.75	2.18	1.54	1.48
Memphis, TN-MS-AR	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	3.23	3.16	2.90	2.78	2.21	1.56	1.50
Miami, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.16	0.15	0.14	0.13	0.11	0.08	0.07
Miami, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Miami, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.16	0.15	0.14	0.13	0.11	0.08	0.07
Milwaukee-Racine, WI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.45	0.45	0.44	0.44	0.36	0.24	0.27
Minneapolis-St. Paul Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	7.48	7.32	6.73	6.46	5.12	3.61	3.49
Missoula Area, MT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.68	0.66	0.60	0.57	0.45	0.32	0.30
Missoula county; Missoula and Vicinity, MT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.68	0.66	0.60	0.57	0.45	0.32	0.30
Modesto Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.18	0.18	0.17	0.16	0.13	0.09	0.09

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NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Mohave County (part); Bullhead City, AZ	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.15	0.15	0.14	0.13	0.10	0.07	0.07
Mono County; Mammoth Lake Planning Area, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.06	0.06	0.06	0.05	0.04	0.03	0.03
Mono County; Mono Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.06	0.06	0.06	0.05	0.04	0.03	0.03
Morenci, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morgan County, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morongo Band of Mission Indians	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	0.45	0.44	0.40	0.38	0.30	0.22	0.20
Morongo Band of Mission Indians, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	0.45	0.44	0.40	0.38	0.30	0.22	0.20
Morristown Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.16	0.16	0.15	0.14	0.11	0.08	0.07
Muscatine County; (part), IA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Muscatine, IA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Muskegon County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.05	0.05	0.05	0.05	0.04	0.03	0.03
Muskingum River, OH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nashua Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	0.04	0.04	0.03	0.03	0.03	0.02	0.02
Nassau County, FL	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nevada County (Western part), CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.08	0.08	0.07	0.07	0.06	0.04	0.04
Nevada County (Western part), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	0.08	0.08	0.07	0.07	0.06	0.04	0.04
New Haven County, CT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
New Haven-Meriden-Waterbury Area, CT	CO (1971 8-hour)	Maintenance, --	100	0	0.03	0.04	0.05	0.07	0.06	0.03	0.06
New Manchester-Grant Magisterial District in Hancock County, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.06	0.05	0.05	0.05	0.04	0.03	0.02

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
New York County, NY	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.34	0.33	0.31	0.30	0.24	0.17	0.17
New York, NY-NJ-CT	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	7.01	6.97	6.58	6.55	5.25	3.59	3.82
New York-N. New Jersey-Long Island Area, NY-NJ-CT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	6.47	6.38	5.93	5.80	4.62	3.21	3.26
New York-N. New Jersey-Long Island, NY-NJ-CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	7.08	7.03	6.63	6.60	5.28	3.62	3.84
New York-Northern New Jersey-Long Island, NY-NJ-CT	Ozone (2015 8-hour)	Nonattainment, Moderate	50	0	7.08	7.03	6.63	6.60	5.28	3.62	3.84
NJ Portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.16	0.16	0.15	0.14	0.11	0.08	0.07
Nogales, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Northern Milwaukee/Ozaukee Shoreline, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.21	0.21	0.19	0.18	0.15	0.10	0.10
Northern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	3.47	3.40	3.13	3.00	2.38	1.68	1.62
Oakridge, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ogden Area, UT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.01	0.01	0.01	0.00	0.00
Ogden Area, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.01	0.01	0.01	0.00	0.00
Olmsted County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.09	0.09	0.08	0.08	0.06	0.04	0.04
Olmsted; City of Rochester, MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.09	0.09	0.08	0.08	0.07	0.05	0.05
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.74	0.72	0.66	0.63	0.50	0.35	0.33
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.74	0.72	0.66	0.63	0.50	0.35	0.33
Pekin, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.09	0.08	0.08	0.07	0.06	0.04	0.04

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Penns Grove Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.03	0.03	0.03	0.03	0.03	0.02	0.01	0.01
Peoria County: Hollis Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.09	0.08	0.08	0.08	0.07	0.06	0.04	0.04
Peoria County: Peoria, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.11	0.11	0.10	0.10	0.10	0.08	0.05	0.05
Perth Amboy Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.77	0.75	0.69	0.65	0.65	0.52	0.37	0.35
Philadelphia-Camden County Area, PA-NJ	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	24.03	23.43	21.37	20.28	20.28	16.04	11.43	10.70
Philadelphia-Wilmington, PA-NJ-DE	PM2.5 (2006 24-hour)	Maintenance, Moderate for PA and DE; Subject to Former Subpart 1 for NJ	100	0	30.89	30.15	27.55	26.23	26.23	20.76	14.75	13.93
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	31.80	31.06	28.41	27.07	27.07	21.43	15.22	14.42
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	31.80	31.06	28.41	27.07	27.07	21.43	15.22	14.42
Phoenix Area, AZ	CO (1971 8-hour)	Maintenance, Serious	100	0	0.39	0.42	0.45	0.51	0.51	0.42	0.26	0.37
Phoenix-Mesa, AZ	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.40	0.43	0.46	0.53	0.53	0.44	0.27	0.39
Phoenix-Mesa, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.41	0.44	0.47	0.54	0.54	0.44	0.27	0.39
Pierce County; Tacoma, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.59	0.58	0.52	0.50	0.50	0.39	0.28	0.26
Pima County; Ajo Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pima County; Rillito Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.16	0.16	0.14	0.14	0.14	0.11	0.08	0.07
Pinal and Gila Counties; Payson, AZ	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pinal County (part); West Pinal, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.17	0.17	0.16	0.16	0.16	0.13	0.09	0.09
Pitkin County; Aspen, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.73	1.69	1.54	1.46	1.46	1.15	0.82	0.77
Pittsburgh Area, PA	CO (1971 8-hour)	Maintenance, --	100	0	0.32	0.31	0.29	0.28	0.28	0.22	0.16	0.15

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Pittsburgh-Beaver Valley, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	8.09	7.91	7.24	6.91	5.47	3.88	3.70
Pittsburgh-Beaver Valley, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	7.51	7.34	6.72	6.41	5.08	3.60	3.43
Plumas County, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.06	0.06	0.05	0.05	0.04	0.03	0.03
Polk County, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.01	0.01	0.01	0.00	0.00	0.00
Portland Area: Portland Metro Service District Boundary, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.09	0.10	0.11	0.14	0.11	0.07	0.11
Power-Bannock Counties; Fort Hall Indian Reservation, ID	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Power-Bannock Counties; Portneuf Valley Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.01
Provo Area, UT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.01
Provo, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	2.16	2.11	1.93	1.84	1.46	1.03	0.98
Prowers County; Lamar, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Raleigh-Durham Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	2.74	2.69	2.48	2.40	1.90	1.34	1.31
Ramsey County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	6.00	5.85	5.33	5.05	3.99	2.85	2.66
Reading, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.18	0.18	0.17	0.17	0.13	0.09	0.10
Reno Area, NV	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.01	0.02	0.02	0.03	0.02	0.01	0.02
Rhineland, WI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Riverside County (Coachella Valley), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	1.37	1.34	1.23	1.18	0.93	0.66	0.63
Riverside County (Coachella Valley), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	1.37	1.34	1.23	1.18	0.93	0.66	0.63
Riverside County; Coachella Valley Planning Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	1.37	1.34	1.23	1.18	0.94	0.66	0.64

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Riverside, Los Angeles, Orange, and San Bernardino Counties; South Coast Air Basin, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	73.79	72.07	65.94	62.88	49.79	35.33	33.54
Rosebud County; Lame Deer, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Routt County (part); Steamboat Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	7.72	7.52	6.85	6.50	5.14	3.66	3.42
Rusk and Panola Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.26	0.25	0.23	0.22	0.17	0.12	0.11
Sacramento Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	3.53	3.46	3.18	3.04	2.41	1.71	1.64
Sacramento County, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	34.27	33.42	30.47	28.92	22.87	16.29	15.26
Sacramento Metro, CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	34.56	33.71	30.76	29.21	23.11	16.45	15.44
Sacramento Metro, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	34.56	33.71	30.76	29.21	23.11	16.45	15.44
Sacramento, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	34.56	33.71	30.75	29.21	23.10	16.45	15.44
Salem Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.02	0.02	0.01	0.02
Salt Lake City Area, UT	CO (1971 8-hour)	Maintenance, --	100	0	3.40	3.31	3.02	2.87	2.27	1.62	1.52
Salt Lake City, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	3.48	3.41	3.13	3.01	2.38	1.68	1.63
Salt Lake County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	3.44	3.36	3.08	2.94	2.33	1.65	1.58
Salt Lake County, UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	3.44	3.36	3.08	2.94	2.33	1.65	1.58
San Antonio, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.92	0.91	0.86	0.86	0.69	0.47	0.50
San Bernardino County (part); excluding Searles Valley Planning Area and South Coast Air Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	22.86	22.29	20.32	19.28	15.24	10.86	10.17
San Diego Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	1.08	1.08	1.05	1.07	0.86	0.58	0.66

Notes:

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Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
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San Diego County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	1.39	1.39	1.32	1.33	1.07	0.72	0.79
San Diego County, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	1.39	1.39	1.32	1.33	1.07	0.72	0.79
San Francisco Bay Area, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	35.52	34.69	31.72	30.23	23.93	16.99	16.10
San Francisco Bay Area, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	35.52	34.69	31.72	30.23	23.93	16.99	16.10
San Francisco Bay Area, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	35.53	34.69	31.73	30.24	23.94	16.99	16.10
San Francisco-Oakland-San Jose Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	35.10	34.27	31.33	29.85	23.63	16.78	15.88
San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	55.21	53.85	49.14	46.68	36.92	26.28	24.68
San Joaquin Valley, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	55.21	53.85	49.14	46.68	36.92	26.28	24.68
San Joaquin Valley, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	55.21	53.85	49.14	46.68	36.92	26.28	24.68
San Joaquin Valley, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	54.88	53.53	48.85	46.40	36.70	26.13	24.53
San Joaquin Valley, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	54.88	53.53	48.85	46.40	36.70	26.13	24.53
San Luis Obispo (Eastern part), CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	2.88	2.81	2.56	2.43	1.92	1.37	1.28
San Luis Obispo (Eastern San Luis Obispo), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	2.88	2.81	2.56	2.43	1.92	1.37	1.28
San Manuel, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.16	0.15	0.14	0.13	0.11	0.08	0.07
San Miguel County; Telluride, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.05	0.05	0.05	0.04	0.03	0.02	0.02
Sanders County (part); Thompson Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Santa Cruz County; Nogales Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Seaford, DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.07	0.07	0.07	0.07	0.06	0.04	0.04

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Seattle-Tacoma Area, WA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	0.69	0.71	0.69	0.72	0.59	0.39	0.46
Seattle-Tacoma, WA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.61	0.60	0.55	0.53	0.42	0.30	0.29
Sheboygan County, WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.09	0.09	0.08	0.08	0.06	0.04	0.04
Sheboygan County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.06	0.06	0.05	0.05	0.04	0.03	0.03
Sheridan County; City of Sheridan, WY	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.17	0.17	0.15	0.15	0.12	0.08	0.08
Shoshone County (part); excluding Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Shoshone County; City of Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Silver Bow County; Butte, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Somerville Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Southern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	2.16	2.11	1.93	1.84	1.46	1.03	0.98
Southwest Indiana, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.10	0.10	0.09	0.09	0.07	0.05	0.05
Spokane Area, WA	CO (1971 8-hour)	Maintenance, Serious	100	0	0.01	0.02	0.02	0.03	0.02	0.01	0.02
Spokane County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.02	0.02	0.03	0.02	0.01	0.02
Springfield Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.03	0.03	0.03	0.03	0.03	0.02	0.02
St. Bernard Parish, LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	25.26	24.62	22.43	21.27	16.81	11.99	11.19
St. Clair, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.36	0.35	0.32	0.30	0.24	0.17	0.16
St. Louis Area, MO	CO (1971 8-hour)	Maintenance, --	100	0	4.91	4.79	4.37	4.16	3.29	2.34	2.21
St. Louis, MO-IL	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	5.41	5.29	4.86	4.65	3.69	2.61	2.51
St. Louis-St. Charles-Farmington, MO-IL	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	5.62	5.50	5.05	4.85	3.84	2.71	2.62

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Steubenville, OH-WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.35	0.34	0.31	0.30	0.23	0.17	0.16
Steubenville-Weirton, OH-WV	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.09	0.09	0.09	0.08	0.07	0.05	0.05
Stockton Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.23	0.23	0.22	0.21	0.17	0.12	0.12
Sullivan County, TN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Sutter Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.00	0.00	0.00	0.00
Syracuse Area; Onondaga County, NY	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.07	0.07	0.08	0.08	0.07	0.04	0.06
Tazewell County: Groveland Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Terre Haute, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.19	0.19	0.17	0.16	0.13	0.09	0.09
Thurston County; Cities of Olympia, Tumwater, and Lacey, WA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.01	0.01	0.01	0.00	0.01
Titus County, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Toms River Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tooele County (part), UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	2.13	2.08	1.89	1.79	1.42	1.01	0.94
Trenton Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.01
Trona, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	2.93	2.86	2.61	2.47	1.95	1.39	1.30
Tucson Area, AZ	CO (1971 8-hour)	Maintenance, --	100	0	0.19	0.20	0.20	0.21	0.17	0.11	0.14
Tuolumne County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.24	0.23	0.21	0.20	0.16	0.11	0.11
Tuscan Buttes, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tuscan Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Uinta Basin, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	2.41	2.35	2.15	2.03	1.61	1.15	1.07
Union County; LaGrande, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Upper Green River Basin Area, WY	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	2.46	2.40	2.19	2.08	1.64	1.17	1.09
Utah County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	3.19	3.11	2.84	2.71	2.14	1.52	1.44
Vancouver Area: Clark County (part), WA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.02	0.02	0.02	0.03	0.02	0.01	0.02
Ventura County, CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	21.96	21.41	19.52	18.53	14.65	10.44	9.78
Ventura County, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	21.96	21.41	19.52	18.53	14.65	10.44	9.78
Vermillion County; Part of Clinton Township, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.19	0.18	0.17	0.16	0.13	0.09	0.08
Vigo County, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.32	0.31	0.29	0.27	0.22	0.15	0.15
Walla Walla County; Wallula, WA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Waltham Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.04	0.04	0.03	0.03	0.03	0.02	0.02
Warren County: Conewago Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	2.09	2.04	1.86	1.76	1.39	0.99	0.93
Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	2.13	2.08	1.90	1.80	1.42	1.01	0.95
Warren, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	2.15	2.10	1.91	1.81	1.43	1.02	0.95
Washington Area, DC-MD-VA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.47	0.46	0.43	0.43	0.34	0.24	0.25
Washington, DC-MD-VA	Ozone (2008 8-hour)	Nonattainment (DC) Maintenance (MD, VA), Marginal	50	0	1.15	1.18	1.16	1.23	1.00	0.65	0.80
Washington, DC-MD-VA	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	1.15	1.18	1.16	1.23	1.00	0.65	0.80
Washoe County; Reno Planning Area, NV	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.01	0.01	0.02	0.03	0.02	0.01	0.02

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Wayne County; (part), MI	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.79	1.74	1.59	1.51	1.19	0.85	0.79	
West Central Pinal County, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.16	0.16	0.14	0.14	0.11	0.08	0.07	
West Silver Valley, ID	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Williamson County, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.09	0.09	0.08	0.08	0.06	0.04	0.04	
Winston-Salem Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.08	0.08	0.08	0.08	0.07	0.04	0.05	
Worcester Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.06	0.06	0.06	0.06	0.05	0.03	0.04	
Yakima Area, WA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Yakima County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.01	0.01	0.01	0.00	0.01	
Yuba City-Marysville, CA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.28	0.28	0.26	0.25	0.20	0.14	0.14	
Yuma County; Yuma Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.32	0.31	0.28	0.27	0.22	0.15	0.15	
Yuma, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.31	0.31	0.28	0.27	0.21	0.15	0.14	

Notes:

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Table A-3. Changes in Emissions from U.S. Passenger Cars and Light Trucks by Nonattainment or Maintenance Area and Alternative, Direct and Indirect Impacts--Particulate Matter (PM2.5), 2050

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Ada County; Boise, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.69	0.65	0.63	0.63	0.48	0.35	0.32
Adams, Denver, and Boulder Counties; Denver Metropolitan Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	10.90	10.50	9.71	9.19	7.02	5.30	4.15
Ajo, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Albuquerque Area, NM	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	1.49	1.42	1.36	1.34	1.03	0.75	0.67
Allegan County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.38	0.36	0.34	0.32	0.25	0.18	0.15
Allegheny County Air Basin: Hazelwood Monitor, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.40	0.38	0.35	0.34	0.26	0.19	0.15
Allegheny County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	3.44	3.30	3.10	2.98	2.29	1.69	1.41
Allegheny County; The Area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.27	0.26	0.23	0.22	0.17	0.13	0.10
Allegheny, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.71	0.68	0.63	0.60	0.46	0.34	0.27
Allentown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	1.23	1.17	1.13	1.11	0.85	0.62	0.55
Allentown-Bethlehem-Easton, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	1.45	1.39	1.33	1.31	1.01	0.73	0.65
Alton Township, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	4.49	4.35	3.95	3.67	2.79	2.15	1.57
Amador County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.51	0.49	0.46	0.43	0.33	0.25	0.19
Anchorage Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	0.21	0.20	0.20	0.19	0.15	0.11	0.10
Anchorage; Eagle River, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Anne Arundel County and Baltimore County, MD	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	2.81	2.68	2.56	2.50	1.92	1.40	1.23

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
AQCR 012: Portions of Grant County, NM	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.08	0.08	0.07	0.07	0.06	0.04	0.04
AQCR 109-Millinocket, ME	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.41	0.39	0.37	0.36	0.28	0.20	0.18
AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington Counties (Minneapolis-St. Paul), MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	12.98	12.47	11.67	11.16	8.56	6.37	5.22
AQCR 237: Brown County: Green Bay Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.06	0.05	0.05	0.05	0.04	0.03	0.02
AQCR 238: Marathon County: Rothschild Subcity Area, Rib Mountain, Weston, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.35	0.33	0.32	0.32	0.25	0.18	0.16
AQCR 238: Oneida County: Rhinelander Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.11	0.10	0.10	0.10	0.08	0.06	0.05
AQCR 239: Milwaukee County: Milwaukee Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	1.46	1.39	1.33	1.30	1.00	0.73	0.65
AQCR 240: Dane County: Madison Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	1.20	1.14	1.10	1.08	0.83	0.60	0.54
Archuleta County; Pagosa Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.09	1.05	0.96	0.89	0.68	0.52	0.39
Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.45	0.44	0.40	0.37	0.28	0.22	0.16
Aroostock County; City of Presque Isle, ME	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.05	0.05	0.04	0.04	0.03	0.02	0.02
Atlanta, GA	Ozone (2008 8-hour)	Maintenance, Moderate	100	0	10.94	10.41	10.11	10.01	7.73	5.53	5.12
Atlanta, GA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	8.71	8.29	8.05	7.96	6.15	4.40	4.07
Atlantic City Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.07	0.06	0.06	0.06	0.05	0.03	0.03
Bakersfield Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	3.05	2.93	2.71	2.57	1.96	1.48	1.16

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Baltimore Area, MD	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.10	0.09	0.09	0.08	0.06	0.05	0.04
Baltimore, MD	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	6.81	6.50	6.22	6.08	4.68	3.40	3.01
Baltimore, MD	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	6.85	6.54	6.26	6.12	4.72	3.42	3.03
Baton Rouge, LA	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	73.23	70.79	64.41	59.98	45.65	35.15	25.79
Beaver, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.03	0.03	0.03	0.03	0.02	0.01	0.01
Benton County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02
Berrien County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.68	0.65	0.62	0.60	0.46	0.34	0.29
Billings Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	6.57	6.35	5.78	5.38	4.10	3.15	2.31
Billings, MT	SO ₂ (2010 1-hour)	Maintenance, --	100	0	6.43	6.22	5.65	5.25	4.00	3.08	2.25
Birmingham, AL	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	4.77	4.58	4.29	4.11	3.15	2.34	1.92
Boise-Northern Ada County Area, ID	CO (1971 8-hour)	Maintenance, --	100	0	0.69	0.65	0.63	0.63	0.48	0.35	0.32
Bonner County; The Sandpoint Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01
Boston Area, MA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	2.33	2.23	2.09	2.01	1.54	1.14	0.95
Boyd County (part), KY	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	6.98	6.75	6.14	5.71	4.34	3.35	2.44
Brooke; Follansbee Area, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Burlington Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01
Butte County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.49	0.47	0.45	0.44	0.34	0.25	0.22
Calaveras County, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.49	0.47	0.43	0.41	0.31	0.24	0.18
Calaveras County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.49	0.47	0.43	0.41	0.31	0.24	0.18

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Campbell-Clermont Counties, KY-OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.13	0.13	0.12	0.11	0.09	0.06	0.05
Canton-Massillon, OH	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	4.12	3.97	3.65	3.43	2.61	1.99	1.51
Central New Hampshire, NH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.35	0.33	0.33	0.32	0.25	0.18	0.17
Central Steptoe Valley, NV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02
Charleston, WV	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	1.50	1.44	1.35	1.29	0.98	0.74	0.60
Charlotte Area, NC	CO (1971 8-hour)	Maintenance, --	100	0	2.85	2.71	2.64	2.61	2.02	1.44	1.34
Charlotte-Rock Hill, NC-SC	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	5.43	5.17	5.02	4.96	3.84	2.74	2.54
Chicago, IL-IN-WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	63.14	60.87	56.02	52.76	40.27	30.58	23.50
Chicago-Naperville, IL-IN-WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	64.28	61.96	57.07	53.79	41.07	31.16	24.02
Chico (Butte County), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.49	0.47	0.45	0.44	0.34	0.25	0.22
Chico Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.15	0.14	0.14	0.13	0.10	0.07	0.07
Chico, CA	PM _{2.5} (2006 24-hour)	Maintenance, Moderate	100	0	0.43	0.41	0.39	0.38	0.30	0.21	0.19
Cincinnati, OH-KY	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	4.68	4.47	4.29	4.20	3.24	2.34	2.09
Cincinnati, OH-KY-IN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	4.95	4.73	4.54	4.44	3.42	2.48	2.21
Clark County; Las Vegas Planning Area, NV	PM ₁₀ (1987 24-hour)	Maintenance, Serious	100	0	4.36	4.16	3.99	3.91	3.01	2.18	1.95
Cleveland Area, OH	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	2.83	2.70	2.58	2.52	1.94	1.41	1.24
Cleveland, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	10.30	9.88	9.29	8.92	6.85	5.07	4.22
Cleveland, OH	PM _{2.5} (2012 Annual)	Maintenance, Moderate	100	0	4.39	4.20	3.97	3.84	2.95	2.17	1.85
Cleveland-Akron-Lorain, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	11.30	10.85	10.18	9.76	7.49	5.56	4.59

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Cleveland-Akron-Lorain, OH	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	10.14	9.72	9.13	8.77	6.73	4.99	4.14
Cochise County; Paul Spur/Douglas Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.05	0.05	0.04	0.04	0.03	0.02	0.02
Colorado Springs Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	1.59	1.52	1.44	1.39	1.07	0.79	0.67
Columbus, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	4.03	3.84	3.71	3.66	2.83	2.03	1.85
Columbus, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	3.60	3.43	3.32	3.28	2.54	1.82	1.67
Cook County; Lyons Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.84	1.78	1.62	1.52	1.16	0.89	0.66
Cook County; Southeast Chicago, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	38.42	37.15	33.77	31.40	23.89	18.43	13.45
Coshocton County; Franklin Township, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Coso Junction, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	3.00	2.90	2.63	2.45	1.86	1.44	1.05
Cuyahoga County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	1.66	1.58	1.54	1.52	1.18	0.84	0.78
Cuyahoga County, OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	2.83	2.70	2.58	2.52	1.94	1.41	1.24
Dallas-Fort Worth, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	19.45	18.58	17.73	17.28	13.30	9.69	8.48
Dallas-Fort Worth, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	19.28	18.43	17.58	17.12	13.18	9.61	8.40
Delaware County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	28.99	28.03	25.50	23.75	18.08	13.92	10.22
Denver Metro/North Front Range, CO	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	16.41	15.77	14.70	14.02	10.74	8.03	6.49
Denver-Boulder Area, CO	CO (1971 8-hour)	Maintenance, Serious	100	0	13.83	13.29	12.37	11.78	9.01	6.76	5.42
Denver-Boulder-Greeley-Ft Collins-Loveland, CO	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	16.41	15.77	14.70	14.02	10.74	8.03	6.49
Detroit Area, MI	CO (1971 8-hour)	Maintenance, --	100	0	5.41	5.18	4.88	4.71	3.61	2.67	2.24
Detroit, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	17.11	16.42	15.42	14.81	11.36	8.42	6.99

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
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Detroit, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	2.19	2.11	1.94	1.83	1.39	1.06	0.81
Detroit-Ann Arbor, MI	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	17.14	16.44	15.44	14.83	11.38	8.44	7.00
Doña Ana County (Sunland Park Area), NM	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	2.88	2.78	2.53	2.35	1.79	1.38	1.01
Doña Ana County; Anthony, NM	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	2.86	2.76	2.51	2.34	1.78	1.37	1.00
Door County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.03	0.03	0.02	0.02	0.02	0.01	0.01
Douglas, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02
Dukes County, MA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Duluth Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	2.22	2.14	1.96	1.83	1.39	1.07	0.80
East Chicago Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	36.68	35.47	32.23	29.97	22.80	17.59	12.83
East Helena Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
East Kern County Area, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Serious	70	0	2.76	2.66	2.42	2.26	1.72	1.32	0.97
El Paso County, TX	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	3.79	3.65	3.37	3.18	2.43	1.84	1.43
El Paso, TX	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	2.90	2.80	2.55	2.38	1.81	1.39	1.02
Eugene-Springfield Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	0.37	0.36	0.35	0.34	0.26	0.19	0.18
Evangeline Parish (Partial), LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Fairbanks Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	0.17	0.17	0.15	0.14	0.11	0.08	0.06
Fairbanks, AK	PM _{2.5} (2006 24-hour)	Nonattainment, Serious	70	0	0.20	0.19	0.18	0.17	0.13	0.10	0.07
Flathead County; Columbia Falls and Vicinity, MT	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Flathead County; Kalispell and Vicinity, MT	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.06	0.06	0.05	0.05	0.04	0.03	0.03

Notes:

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				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Flathead County; Whitefish and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Fort Collins Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.32	0.31	0.30	0.29	0.22	0.16	0.14	0.14
Freehold Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Freestone and Anderson Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.18	0.17	0.16	0.15	0.11	0.09	0.07	0.07
Fremont County; Canon City Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.48	0.46	0.42	0.40	0.30	0.23	0.18	0.18
Fresno Area, CA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	1.69	1.61	1.53	1.47	1.13	0.83	0.71	0.71
Grants Pass Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.06	0.05	0.05	0.05	0.04	0.03	0.03	0.03
Great Falls Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	0.63	0.61	0.55	0.52	0.39	0.30	0.22	0.22
Greater Connecticut, CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	3.02	2.87	2.78	2.75	2.12	1.52	1.39	1.39
Greater Connecticut, CT	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	3.02	2.88	2.78	2.75	2.12	1.52	1.39	1.39
Greeley Area, CO	CO (1971 8-hour)	Maintenance, --	100	0	8.59	8.29	7.57	7.07	5.39	4.13	3.07	3.07
Hancock and Brooke Counties (Part); The City of Weirton, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.08	0.08	0.08	0.07	0.05	0.04	0.03	0.03
Hancock County (Part) The City of Weirton, including Butler and Clay: Magisterial Districts, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.35	0.34	0.31	0.29	0.22	0.17	0.13	0.13
Harrisburg-Lebanon-Carlisle-York, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	2.44	2.33	2.23	2.19	1.69	1.22	1.09	1.09
Hartford-New Britain-Middletown Area, CT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	1.98	1.88	1.83	1.81	1.40	1.00	0.92	0.92
Hayden, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.17	0.16	0.15	0.14	0.11	0.08	0.06	0.06
Hayden, AZ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.16	0.16	0.14	0.13	0.10	0.08	0.06	0.06

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Hayden, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.16	0.16	0.14	0.13	0.10	0.08	0.06
Hillsborough County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.63	0.61	0.56	0.52	0.40	0.30	0.22
Hillsborough-Polk County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.61	0.59	0.54	0.50	0.38	0.29	0.21
Houston-Galveston-Brazoria, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	175.77	169.78	154.98	144.76	110.27	84.58	62.88
Houston-Galveston-Brazoria, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	175.23	169.27	154.49	144.29	109.91	84.32	62.66
Humphreys County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02
Huntington, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.06	0.06	0.06	0.06	0.05	0.03	0.03
Imperial County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	1.40	1.35	1.25	1.18	0.90	0.68	0.53
Imperial County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.40	1.35	1.25	1.18	0.90	0.68	0.53
Imperial County, CA	PM _{2.5} (2006 24-hour)	Nonattainment, Moderate	100	0	0.61	0.58	0.55	0.52	0.40	0.30	0.25
Imperial County, CA	PM _{2.5} (2012 Annual)	Nonattainment, Moderate	100	0	0.61	0.58	0.55	0.52	0.40	0.30	0.25
Imperial County; Imperial Valley Planning Area, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Serious	70	0	1.40	1.34	1.24	1.17	0.90	0.68	0.53
Indian Wells, CA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	3.00	2.90	2.64	2.46	1.87	1.44	1.06
Indiana, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	1.45	1.40	1.28	1.20	0.92	0.70	0.53
Indianapolis Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Indianapolis, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	1.01	0.96	0.93	0.92	0.71	0.51	0.47
Inyo County; Owens Valley Planning Area, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Serious	70	0	1.10	1.07	0.97	0.90	0.69	0.53	0.39
Jackson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.31	0.30	0.28	0.26	0.20	0.15	0.12
Jackson County; Medford-Ashland (including White City), OR	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.26	0.25	0.24	0.24	0.19	0.13	0.12

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Jamestown, NY	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	3.02	2.92	2.66	2.49	1.90	1.45	1.09
Jefferson County, KY	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.03	0.03	0.02	0.02	0.02	0.01	0.01
Jefferson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.08	0.08	0.07	0.07	0.06	0.04	0.04
Jefferson County; (part) Steubenville & Mingo Junction, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.15	0.14	0.14	0.13	0.10	0.07	0.06
Jefferson County; (part), OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.02	0.01	0.01	0.01	0.01	0.01	0.01
Johnstown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.89	0.85	0.79	0.75	0.57	0.43	0.34
Josephine County; Grants Pass, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.05	0.05	0.05	0.05	0.04	0.03	0.03
Juneau; Mendenhall Valley Area, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Kern County (Eastern Kern), CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	22.43	21.69	19.72	18.34	13.96	10.76	7.86
Kern County (Eastern Kern), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	22.43	21.69	19.72	18.34	13.96	10.76	7.86
King County; Kent, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.03	0.03	0.03	0.03	0.02	0.02	0.02
King County; Seattle, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01
Klamath County; Klamath Falls, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.10	0.09	0.09	0.09	0.07	0.05	0.05
Klamath Falls Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.10	0.09	0.09	0.09	0.07	0.05	0.05
Klamath Falls, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.11	0.11	0.10	0.10	0.08	0.06	0.05
Knoxville, TN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	1.62	1.54	1.49	1.47	1.14	0.82	0.75
Knoxville-Sevierville-La Follette, TN	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	2.14	2.04	1.97	1.93	1.49	1.08	0.97
La Porte County; (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	1.23	1.19	1.09	1.02	0.78	0.59	0.44
Lake County (part); Lakeview, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Lake County, OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.45	0.43	0.42	0.41	0.32	0.23	0.21
Lake County: (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	39.83	38.51	35.02	32.59	24.80	19.11	13.99
Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.07	0.07	0.07	0.07	0.05	0.04	0.03
Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	39.59	38.28	34.80	32.37	24.63	18.99	13.88
Lake County; Polson, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake County; Ronan, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake Tahoe Nevada Area, NV	CO (1971 8-hour)	Maintenance, --	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02
Lake Tahoe North Shore Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	0.08	0.07	0.07	0.06	0.05	0.04	0.03
Lake Tahoe South Shore Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.11	0.10	0.10	0.09	0.07	0.05	0.05
Lancaster, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	1.01	0.96	0.93	0.91	0.70	0.51	0.46
Lancaster, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	1.01	0.96	0.93	0.91	0.70	0.51	0.46
Lane County (part); Oakridge, OR	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lane County; Eugene/Springfield, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.37	0.36	0.35	0.34	0.26	0.19	0.18
Las Vegas Area, NV	CO (1971 8-hour)	Maintenance, Serious	100	0	4.36	4.16	3.99	3.91	3.01	2.18	1.95
Las Vegas, NV	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	4.36	4.16	3.99	3.91	3.01	2.18	1.95
LaSalle County; Oglesby, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.29	0.27	0.25	0.24	0.18	0.14	0.11
Laurel Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	6.43	6.22	5.65	5.25	4.00	3.08	2.25
Lebanon County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.25	0.24	0.23	0.23	0.18	0.13	0.12
Lemont, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	11.95	11.55	10.51	9.79	7.45	5.74	4.21

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Liberty-Clairton, PA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.27	0.26	0.23	0.22	0.17	0.13	0.10
Lincoln County; Libby and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Logan, UT-ID	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.21	0.20	0.19	0.19	0.15	0.11	0.10
Longmont Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	1.58	1.52	1.39	1.30	0.99	0.76	0.57
Lorain County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.09	0.09	0.08	0.08	0.06	0.05	0.04
Los Angeles, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	101.16	97.38	90.17	85.42	65.30	49.24	38.74
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	25.97	25.08	22.89	21.38	16.28	12.49	9.28
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	25.97	25.08	22.89	21.38	16.28	12.49	9.28
Los Angeles-South Coast Air Basin Area, CA	CO (1971 8-hour)	Maintenance, Serious	100	0	101.13	97.34	90.14	85.39	65.28	49.22	38.73
Los Angeles-South Coast Air Basin Area, CA	NO ₂ (1971 Annual)	Maintenance, --	100	0	101.13	97.34	90.14	85.39	65.28	49.22	38.73
Los Angeles-South Coast Air Basin, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	101.20	97.42	90.21	85.45	65.33	49.25	38.75
Los Angeles-South Coast Air Basin, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	101.15	97.36	90.15	85.40	65.29	49.23	38.73
Los Angeles-South Coast Air Basin, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	101.16	97.38	90.17	85.42	65.30	49.24	38.74
Louisville, KY-IN	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	2.42	2.31	2.23	2.20	1.70	1.22	1.12
Lowell Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.19	0.18	0.17	0.17	0.13	0.09	0.08
Lucas County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	6.33	6.12	5.60	5.24	3.99	3.05	2.29
Madison County; Granite City Township and Nameoki Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	4.67	4.51	4.10	3.82	2.91	2.24	1.64
Manchester Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	0.19	0.18	0.18	0.18	0.14	0.10	0.09

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Manitowoc County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.14	0.13	0.12	0.12	0.09	0.07	0.06
Maricopa and Pinal Counties; Phoenix Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	7.16	6.81	6.60	6.53	5.04	3.61	3.33
Marion County: Lawrence, Washington, and Warrant Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.93	0.89	0.86	0.85	0.66	0.47	0.43
Mariposa County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.10	0.10	0.09	0.09	0.07	0.05	0.04
Mariposa County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.10	0.10	0.09	0.09	0.07	0.05	0.04
Marshall, WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	3.74	3.61	3.28	3.05	2.32	1.79	1.31
Medford Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.14	0.13	0.13	0.13	0.10	0.07	0.07
Memphis Area, TN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	4.92	4.73	4.40	4.19	3.21	2.41	1.93
Memphis, TN-MS-AR	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	5.45	5.23	4.89	4.68	3.58	2.67	2.18
Miami, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.18	0.18	0.16	0.15	0.12	0.09	0.07
Miami, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.03	0.03	0.02	0.02	0.02	0.01	0.01
Miami, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.18	0.18	0.16	0.15	0.12	0.09	0.07
Milwaukee-Racine, WI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	2.64	2.52	2.42	2.38	1.84	1.33	1.19
Minneapolis-St. Paul Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	13.15	12.63	11.82	11.32	8.68	6.46	5.30
Missoula Area, MT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.81	0.78	0.72	0.68	0.52	0.39	0.30
Missoula county; Missoula and Vicinity, MT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.81	0.78	0.72	0.68	0.52	0.39	0.30
Modesto Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.54	0.52	0.49	0.48	0.37	0.27	0.23

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Mohave County (part); Bullhead City, AZ	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.25	0.24	0.23	0.22	0.17	0.12	0.10
Mono County; Mammoth Lake Planning Area, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.11	0.11	0.10	0.10	0.08	0.06	0.05
Mono County; Mono Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.07	0.07	0.06	0.06	0.05	0.03	0.03
Morenci, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Morgan County, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.06	0.06	0.05	0.05	0.04	0.03	0.03
Morongo Band of Mission Indians	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	0.46	0.44	0.40	0.37	0.28	0.22	0.16
Morongo Band of Mission Indians, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	0.46	0.44	0.40	0.37	0.28	0.22	0.16
Morristown Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.20	0.19	0.18	0.17	0.13	0.10	0.07
Muscatine County; (part), IA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.03	0.02	0.02	0.02	0.02	0.01	0.01
Muscatine, IA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02
Muskegon County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.34	0.33	0.32	0.31	0.24	0.17	0.16
Muskingum River, OH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Nashua Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	0.18	0.18	0.17	0.16	0.13	0.09	0.08
Nassau County, FL	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Nevada County (Western part), CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.29	0.28	0.27	0.26	0.20	0.15	0.13
Nevada County (Western part), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	0.29	0.28	0.27	0.26	0.20	0.15	0.13
New Haven County, CT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02
New Haven-Meriden-Waterbury Area, CT	CO (1971 8-hour)	Maintenance, --	100	0	1.49	1.42	1.38	1.37	1.06	0.75	0.70
New Manchester-Grant Magisterial District in Hancock County, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.06	0.06	0.06	0.05	0.04	0.03	0.02

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Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
New York County, NY	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.95	0.91	0.87	0.84	0.65	0.47	0.41
New York, NY-NJ-CT	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	30.44	29.05	27.84	27.23	20.98	15.22	13.51
New York-N. New Jersey-Long Island Area, NY-NJ-CT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	19.32	18.48	17.58	17.08	13.14	9.61	8.33
New York-N. New Jersey-Long Island, NY-NJ-CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	30.03	28.66	27.46	26.85	20.69	15.01	13.31
New York-Northern New Jersey-Long Island, NY-NJ-CT	Ozone (2015 8-hour)	Nonattainment, Moderate	50	0	30.01	28.65	27.44	26.83	20.68	15.00	13.30
NJ Portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.22	0.21	0.20	0.19	0.14	0.11	0.08
Nogales, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.06	0.06	0.05	0.05	0.04	0.03	0.03
Northern Milwaukee/Ozaukee Shoreline, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.33	0.32	0.30	0.28	0.22	0.16	0.13
Northern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	6.17	5.93	5.55	5.32	4.07	3.03	2.49
Oakridge, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Ogden Area, UT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.11	0.10	0.10	0.10	0.08	0.05	0.05
Ogden Area, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.11	0.10	0.10	0.10	0.08	0.05	0.05
Olmsted County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.14	0.13	0.12	0.12	0.09	0.07	0.05
Olmsted; City of Rochester, MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.27	0.26	0.25	0.24	0.18	0.13	0.12
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.74	0.72	0.65	0.61	0.46	0.36	0.26
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.74	0.72	0.65	0.61	0.46	0.36	0.26
Pekin, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.16	0.15	0.15	0.14	0.11	0.08	0.07

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Penns Grove Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.03	0.03	0.03	0.03	0.03	0.02	0.01	0.01
Peoria County: Hollis Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.09	0.09	0.08	0.07	0.06	0.04	0.04	0.03
Peoria County: Peoria, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.28	0.27	0.25	0.25	0.19	0.14	0.14	0.12
Perth Amboy Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.86	0.83	0.76	0.71	0.54	0.41	0.41	0.31
Philadelphia-Camden County Area, PA-NJ	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	25.74	24.87	22.70	21.21	16.15	12.39	12.39	9.22
Philadelphia-Wilmington, PA-NJ-DE	PM _{2.5} (2006 24-hour)	Maintenance, Moderate for PA and DE; Subject to Former Subpart 1 for NJ	100	0	38.90	37.49	34.56	32.59	24.89	18.87	18.87	14.59
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	42.49	40.91	37.83	35.79	27.35	20.66	20.66	16.17
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	42.48	40.91	37.83	35.79	27.35	20.65	20.65	16.17
Phoenix Area, AZ	CO (1971 8-hour)	Maintenance, Serious	100	0	6.92	6.58	6.38	6.31	4.87	3.49	3.49	3.22
Phoenix-Mesa, AZ	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	7.20	6.85	6.64	6.56	5.07	3.63	3.63	3.35
Phoenix-Mesa, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	7.38	7.02	6.81	6.73	5.20	3.72	3.72	3.43
Pierce County; Tacoma, WA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.60	0.58	0.52	0.49	0.37	0.29	0.29	0.21
Pima County; Ajo Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pima County; Rillito Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.26	0.25	0.23	0.22	0.17	0.13	0.13	0.10
Pinal and Gila Counties; Payson, AZ	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02
Pinal County (part); West Pinal, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.66	0.63	0.60	0.59	0.45	0.33	0.33	0.29
Pitkin County; Aspen, CO	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	1.77	1.71	1.56	1.45	1.11	0.85	0.85	0.63
Pittsburgh Area, PA	CO (1971 8-hour)	Maintenance, --	100	0	0.74	0.71	0.67	0.65	0.50	0.37	0.37	0.31

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Pittsburgh-Beaver Valley, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	11.63	11.19	10.39	9.86	7.54	5.67	4.50
Pittsburgh-Beaver Valley, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	10.74	10.33	9.59	9.10	6.96	5.23	4.15
Plumas County, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.07	0.07	0.06	0.06	0.04	0.03	0.03
Polk County, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.05	0.05	0.05	0.05	0.04	0.03	0.02
Portland Area: Portland Metro Service District Boundary, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	2.24	2.13	2.07	2.05	1.58	1.13	1.05
Power-Bannock Counties; Fort Hall Indian Reservation, ID	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Power-Bannock Counties; Portneuf Valley Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.13	0.13	0.12	0.12	0.09	0.07	0.06
Provo Area, UT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	0.17	0.16	0.16	0.16	0.12	0.09	0.08
Provo, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	3.00	2.89	2.68	2.54	1.94	1.46	1.15
Prowers County; Lamar, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.03	0.02	0.02	0.02	0.02	0.01	0.01
Raleigh-Durham Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	5.86	5.62	5.30	5.11	3.92	2.89	2.43
Ramsey County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	5.99	5.80	5.27	4.90	3.73	2.87	2.10
Reading, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.84	0.80	0.77	0.75	0.58	0.42	0.38
Reno Area, NV	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.56	0.53	0.52	0.51	0.40	0.28	0.26
Rhineland, WI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.05	0.05	0.05	0.05	0.04	0.03	0.03
Riverside County (Coachella Valley), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	2.19	2.11	1.97	1.88	1.44	1.07	0.87
Riverside County (Coachella Valley), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	2.19	2.11	1.97	1.88	1.44	1.07	0.87
Riverside County; Coachella Valley Planning Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	2.34	2.25	2.10	2.01	1.54	1.15	0.94

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Riverside, Los Angeles, Orange, and San Bernardino Counties; South Coast Air Basin, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	101.07	97.29	90.08	85.33	65.23	49.19	38.69
Rosebud County; Lame Deer, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Routt County (part); Steamboat Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	7.75	7.49	6.81	6.34	4.82	3.72	2.72
Rusk and Panola Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.26	0.25	0.23	0.21	0.16	0.13	0.09
Sacramento Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	6.00	5.76	5.39	5.15	3.95	2.94	2.40
Sacramento County, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	36.50	35.26	32.18	30.05	22.89	17.56	13.04
Sacramento Metro, CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	38.52	37.18	34.03	31.87	24.29	18.58	13.96
Sacramento Metro, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	38.52	37.18	34.03	31.87	24.29	18.58	13.96
Sacramento, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	38.43	37.10	33.95	31.79	24.23	18.53	13.92
Salem Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	0.40	0.38	0.37	0.37	0.28	0.20	0.19
Salt Lake City Area, UT	CO (1971 8-hour)	Maintenance, --	100	0	3.71	3.58	3.27	3.06	2.33	1.79	1.33
Salt Lake City, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	6.30	6.05	5.67	5.44	4.17	3.10	2.55
Salt Lake County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	5.16	4.96	4.62	4.39	3.36	2.52	2.02
Salt Lake County, UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	5.16	4.97	4.62	4.39	3.36	2.52	2.02
San Antonio, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	4.07	3.88	3.72	3.64	2.81	2.03	1.81
San Bernardino County (part); excluding Searles Valley Planning Area and South Coast Air Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	23.91	23.10	21.06	19.64	14.96	11.49	8.49
San Diego Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	6.88	6.56	6.32	6.21	4.79	3.45	3.12

Notes:

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Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
San Diego County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	7.22	6.88	6.61	6.49	5.00	3.62	3.24
San Diego County, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	7.20	6.87	6.60	6.47	4.99	3.61	3.23
San Francisco Bay Area, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	47.07	45.32	41.90	39.62	30.27	22.87	17.88
San Francisco Bay Area, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	47.05	45.31	41.88	39.60	30.26	22.87	17.87
San Francisco Bay Area, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	47.17	45.42	41.99	39.71	30.35	22.93	17.92
San Francisco-Oakland-San Jose Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	45.74	44.05	40.68	38.44	29.37	22.21	17.30
San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	61.91	59.75	54.71	51.25	39.07	29.86	22.47
San Joaquin Valley, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	61.91	59.75	54.71	51.25	39.07	29.86	22.47
San Joaquin Valley, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	61.91	59.75	54.71	51.26	39.07	29.86	22.47
San Joaquin Valley, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	61.58	59.43	54.42	50.99	38.87	29.70	22.36
San Joaquin Valley, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	61.58	59.43	54.42	50.99	38.87	29.70	22.36
San Luis Obispo (Eastern part), CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	2.89	2.79	2.54	2.36	1.80	1.38	1.01
San Luis Obispo (Eastern San Luis Obispo), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	2.89	2.79	2.54	2.36	1.80	1.38	1.01
San Manuel, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.18	0.17	0.16	0.15	0.11	0.09	0.06
San Miguel County; Telluride, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.07	0.06	0.06	0.06	0.04	0.03	0.03
Sanders County (part); Thompson Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Santa Cruz County; Nogales Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.06	0.06	0.06	0.06	0.04	0.03	0.03
Seaford, DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.50	0.48	0.46	0.45	0.35	0.25	0.23

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Seattle-Tacoma Area, WA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	5.68	5.41	5.22	5.14	3.97	2.85	2.59
Seattle-Tacoma, WA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	1.43	1.37	1.29	1.25	0.96	0.71	0.60
Sheboygan County, WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.27	0.25	0.24	0.24	0.18	0.13	0.11
Sheboygan County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.15	0.14	0.13	0.13	0.10	0.07	0.06
Sheridan County; City of Sheridan, WY	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.21	0.20	0.19	0.17	0.13	0.10	0.08
Shoshone County (part); excluding Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02
Shoshone County; City of Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Silver Bow County; Butte, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02
Somerville Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01
Southern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	3.00	2.89	2.68	2.54	1.94	1.46	1.15
Southwest Indiana, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.12	0.11	0.10	0.10	0.07	0.06	0.04
Spokane Area, WA	CO (1971 8-hour)	Maintenance, Serious	100	0	0.52	0.50	0.48	0.48	0.37	0.26	0.24
Spokane County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.53	0.51	0.49	0.49	0.38	0.27	0.25
Springfield Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.26	0.25	0.24	0.24	0.18	0.13	0.12
St. Bernard Parish, LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	25.25	24.41	22.18	20.63	15.69	12.11	8.83
St. Clair, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.44	0.43	0.39	0.37	0.28	0.21	0.16
St. Louis Area, MO	CO (1971 8-hour)	Maintenance, --	100	0	6.10	5.88	5.42	5.11	3.90	2.96	2.28
St. Louis, MO-IL	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	9.05	8.70	8.13	7.77	5.95	4.44	3.61
St. Louis-St. Charles-Farmington, MO-IL	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	9.79	9.40	8.80	8.42	6.45	4.81	3.93

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NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Steubenville, OH-WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.45	0.43	0.40	0.38	0.29	0.22	0.17
Steubenville-Weirton, OH-WV	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.29	0.28	0.27	0.26	0.20	0.15	0.13
Stockton Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.82	0.78	0.75	0.73	0.56	0.41	0.36
Sullivan County, TN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.05	0.05	0.05	0.05	0.04	0.03	0.02
Sutter Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.00	0.00	0.00	0.00
Syracuse Area; Onondaga County, NY	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.85	0.81	0.78	0.77	0.60	0.43	0.39
Tazewell County: Groveland Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.04	0.04	0.03	0.03	0.03	0.02	0.02
Terre Haute, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.31	0.30	0.28	0.27	0.20	0.15	0.12
Thurston County; Cities of Olympia, Tumwater, and Lacey, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.17	0.16	0.16	0.15	0.12	0.08	0.08
Titus County, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Toms River Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Tooele County (part), UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	2.13	2.06	1.87	1.74	1.33	1.02	0.75
Trenton Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.15	0.14	0.14	0.14	0.11	0.08	0.07
Trona, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	2.93	2.84	2.58	2.40	1.82	1.41	1.03
Tucson Area, AZ	CO (1971 8-hour)	Maintenance, --	100	0	1.83	1.75	1.69	1.66	1.28	0.92	0.84
Tuolumne County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.36	0.34	0.32	0.30	0.23	0.17	0.14
Tuscan Buttes, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tuscan Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Uinta Basin, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	2.49	2.41	2.19	2.04	1.55	1.20	0.88
Union County; LaGrande, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.03	0.03	0.02	0.02	0.02	0.01	0.01
Upper Green River Basin Area, WY	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	2.51	2.43	2.21	2.05	1.56	1.20	0.88
Utah County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	4.03	3.89	3.58	3.38	2.58	1.96	1.51
Vancouver Area: Clark County (part), WA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.52	0.50	0.48	0.48	0.37	0.26	0.24
Ventura County, CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	23.37	22.58	20.60	19.24	14.65	11.24	8.35
Ventura County, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	23.37	22.57	20.60	19.24	14.65	11.24	8.35
Vermillion County; Part of Clinton Township, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.22	0.21	0.19	0.18	0.14	0.10	0.08
Vigo County, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.56	0.54	0.50	0.48	0.37	0.27	0.22
Walla Walla County; Wallula, WA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Waltham Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.12	0.11	0.11	0.11	0.08	0.06	0.05
Warren County: Conewago Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	2.09	2.02	1.84	1.71	1.30	1.00	0.73
Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	2.16	2.09	1.90	1.77	1.35	1.04	0.76
Warren, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	2.18	2.11	1.92	1.79	1.36	1.05	0.77
Washington Area, DC-MD-VA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	1.80	1.72	1.65	1.61	1.24	0.90	0.79
Washington, DC-MD-VA	Ozone (2008 8-hour)	Nonattainment (DC) Maintenance (MD, VA), Marginal	50	0	10.61	10.10	9.76	9.62	7.43	5.34	4.87
Washington, DC-MD-VA	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	10.61	10.11	9.77	9.62	7.43	5.34	4.87
Washoe County; Reno Planning Area, NV	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.57	0.54	0.52	0.52	0.40	0.29	0.27

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.12	0.12	0.11	0.11	0.08	0.06	0.05
Wayne County; (part), MI	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.88	1.81	1.65	1.54	1.17	0.90	0.67
West Central Pinal County, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.26	0.25	0.23	0.22	0.17	0.13	0.10
West Silver Valley, ID	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01
Williamson County, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.24	0.23	0.22	0.22	0.17	0.12	0.10
Winston-Salem Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.76	0.73	0.70	0.69	0.54	0.39	0.35
Worcester Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.38	0.36	0.35	0.34	0.26	0.19	0.17
Yakima Area, WA	CO (1971 8-hour)	Maintenance, --	100	0	0.05	0.04	0.04	0.04	0.03	0.02	0.02
Yakima County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.16	0.15	0.15	0.15	0.11	0.08	0.07
Yuba City-Marysville, CA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.62	0.59	0.56	0.54	0.41	0.31	0.26
Yuma County; Yuma Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.57	0.55	0.52	0.49	0.38	0.28	0.23
Yuma, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.45	0.43	0.40	0.38	0.29	0.22	0.17

Notes:

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NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Table A-4. Changes in Emissions from U.S. Passenger Cars and Light Trucks by Nonattainment or Maintenance Area and Alternative, Direct and Indirect Impacts--Sulfur Oxides (SO₂), 2025

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Ada County; Boise, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.18	0.18	0.16	0.16	0.09	0.12	0.05
Adams, Denver, and Boulder Counties; Denver Metropolitan Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.45	-0.70	-1.17	-1.26	-0.21	-2.63	0.82
Ajo, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Albuquerque Area, NM	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.28	0.25	0.20	0.19	0.14	0.05	0.13
Allegan County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.03	0.03	0.02	0.02	0.02	0.01	0.01
Allegheny County Air Basin: Hazelwood Monitor, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.03	-0.04	-0.07	-0.07	-0.01	-0.15	0.04
Allegheny County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.08	-0.01	-0.18	-0.21	0.05	-0.69	0.33
Allegheny County; The Area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.06	-0.07	-0.10	-0.10	-0.03	-0.17	0.03
Allegheny, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.04	-0.06	-0.09	-0.10	-0.02	-0.20	0.06
Allentown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.22	0.19	0.15	0.14	0.11	0.02	0.12
Allentown-Bethlehem-Easton, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.19	0.15	0.08	0.07	0.10	-0.13	0.16
Alton Township, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-5.60	-6.59	-8.38	-8.72	-2.79	-14.23	2.65
Amador County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.03	0.02	0.02	0.02	0.01	0.01	0.01
Anchorage Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	0.06	0.05	0.05	0.05	0.03	0.03	0.02
Anchorage; Eagle River, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Anne Arundel County and Baltimore County, MD	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.49	0.46	0.38	0.37	0.26	0.18	0.21

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
AQCR 012: Portions of Grant County, NM	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
AQCR 109-Millinocket, ME	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.03	-0.05	-0.09	-0.10	-0.01	-0.22	0.07
AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington Counties (Minneapolis-St. Paul), MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.73	-1.19	-2.06	-2.23	-0.34	-4.78	1.55
AQCR 237: Brown County: Green Bay Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AQCR 238: Marathon County: Rothschild Subcity Area, Rib Mountain, Weston, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.04	0.03	0.01	0.01	0.02	-0.06	0.05
AQCR 238: Oneida County: Rhinelander Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.03	0.03	0.03	0.03	0.02	0.02	0.01
AQCR 239: Milwaukee County: Milwaukee Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.29	0.27	0.24	0.23	0.15	0.14	0.11
AQCR 240: Dane County: Madison Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.26	0.24	0.21	0.21	0.13	0.13	0.09
Archuleta County; Pagosa Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.17	-0.20	-0.26	-0.27	-0.08	-0.45	0.09
Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	-0.23	-0.27	-0.34	-0.36	-0.11	-0.59	0.11
Aroostock County; City of Presque Isle, ME	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	-0.01	-0.01	0.00	-0.01	0.00
Atlanta, GA	Ozone (2008 8-hour)	Maintenance, Moderate	100	0	2.99	2.88	2.61	2.56	1.54	1.99	0.88
Atlanta, GA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	2.37	2.28	2.07	2.03	1.22	1.58	0.70
Atlantic City Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Bakersfield Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	-0.01	-0.06	-0.15	-0.17	0.00	-0.44	0.17

Notes:

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Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Baltimore Area, MD	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.03	-0.03	-0.04	-0.05	-0.01	-0.08	0.02
Baltimore, MD	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	0.41	0.17	-0.29	-0.38	0.23	-1.68	0.92
Baltimore, MD	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	0.42	0.18	-0.28	-0.37	0.24	-1.67	0.93
Baton Rouge, LA	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-31.41	-37.06	-47.27	-49.21	-15.62	-80.65	15.22
Beaver, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Benton County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Berrien County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.11	0.11	0.10	0.09	0.06	0.07	0.03
Billings Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	-6.63	-7.82	-9.95	-10.36	-3.30	-16.93	3.17
Billings, MT	SO ₂ (2010 1-hour)	Maintenance, --	100	0	-6.67	-7.85	-9.99	-10.39	-3.32	-16.96	3.16
Birmingham, AL	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-0.59	-0.82	-1.25	-1.34	-0.28	-2.61	0.73
Boise-Northern Ada County Area, ID	CO (1971 8-hour)	Maintenance, --	100	0	0.18	0.18	0.16	0.16	0.09	0.12	0.05
Bonner County; The Sandpoint Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.00	0.00	0.00	0.00
Boston Area, MA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.14	0.09	0.01	-0.01	0.07	-0.24	0.18
Boyd County (part), KY	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.72	-0.85	-1.08	-1.12	-0.36	-1.83	0.34
Brooke; Follansbee Area, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Burlington Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Butte County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.09	0.09	0.08	0.07	0.05	0.05	0.03
Calaveras County, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.02	0.02	0.01	0.01	0.01	0.00	0.01
Calaveras County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.02	0.02	0.01	0.01	0.01	0.00	0.01

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Campbell-Clermont Counties, KY-OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	-0.01	-0.02	-0.03	-0.03	-0.01	-0.07	0.02
Canton-Massillon, OH	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-0.14	-0.20	-0.32	-0.34	-0.07	-0.68	0.20
Central New Hampshire, NH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.10	0.09	0.09	0.08	0.05	0.07	0.03
Central Steptoe Valley, NV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.00	0.01	0.00
Charleston, WV	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.16	0.15	0.13	0.13	0.08	0.09	0.05
Charlotte Area, NC	CO (1971 8-hour)	Maintenance, --	100	0	0.76	0.73	0.65	0.64	0.39	0.46	0.25
Charlotte-Rock Hill, NC-SC	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	1.29	1.21	1.02	0.98	0.67	0.52	0.52
Chicago, IL-IN-WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-31.70	-38.01	-49.48	-51.66	-15.72	-86.75	17.55
Chicago-Naperville, IL-IN-WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-31.44	-37.77	-49.28	-51.46	-15.58	-86.63	17.65
Chico (Butte County), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.09	0.09	0.08	0.07	0.05	0.05	0.03
Chico Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.04	0.04	0.03	0.03	0.02	0.03	0.01
Chico, CA	PM _{2.5} (2006 24-hour)	Maintenance, Moderate	100	0	0.09	0.09	0.08	0.08	0.05	0.05	0.03
Cincinnati, OH-KY	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.19	-0.45	-0.94	-1.03	-0.08	-2.45	0.90
Cincinnati, OH-KY-IN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-0.15	-0.41	-0.90	-1.00	-0.05	-2.43	0.91
Clark County; Las Vegas Planning Area, NV	PM ₁₀ (1987 24-hour)	Maintenance, Serious	100	0	0.97	0.94	0.85	0.83	0.50	0.64	0.29
Cleveland Area, OH	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.21	0.12	-0.05	-0.09	0.11	-0.56	0.35
Cleveland, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.67	0.48	0.11	0.04	0.36	-0.98	0.78
Cleveland, OH	PM _{2.5} (2012 Annual)	Maintenance, Moderate	100	0	0.30	0.20	0.00	-0.04	0.16	-0.59	0.41
Cleveland-Akron-Lorain, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.32	0.06	-0.45	-0.54	0.18	-1.97	0.99

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Cleveland-Akron-Lorain, OH	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.63	0.45	0.09	0.02	0.34	-0.97	0.76
Cochise County; Paul Spur/Douglas Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Colorado Springs Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.22	0.20	0.15	0.14	0.11	0.03	0.11
Columbus, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.78	0.70	0.53	0.50	0.41	0.06	0.42
Columbus, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.76	0.68	0.53	0.50	0.39	0.12	0.38
Cook County; Lyons Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.19	-0.23	-0.31	-0.32	-0.09	-0.55	0.12
Cook County; Southeast Chicago, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-14.69	-17.30	-22.01	-22.90	-7.31	-37.42	7.00
Coshocton County; Franklin Township, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.04	-0.04	-0.06	-0.06	-0.02	-0.10	0.02
Coso Junction, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.26	-0.30	-0.38	-0.40	-0.13	-0.65	0.12
Cuyahoga County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.27	0.22	0.11	0.10	0.14	-0.18	0.23
Cuyahoga County, OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.21	0.12	-0.05	-0.08	0.11	-0.56	0.35
Dallas-Fort Worth, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	1.82	1.32	0.31	0.12	0.97	-2.66	2.12
Dallas-Fort Worth, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.78	1.27	0.27	0.08	0.95	-2.69	2.11
Delaware County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	-6.08	-7.20	-9.22	-9.60	-3.02	-15.82	3.03
Denver Metro/North Front Range, CO	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.36	0.05	-0.55	-0.66	0.21	-2.34	1.16
Denver-Boulder Area, CO	CO (1971 8-hour)	Maintenance, Serious	100	0	0.12	-0.14	-0.66	-0.76	0.08	-2.22	0.98
Denver-Boulder-Greeley-Ft Collins-Loveland, CO	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.36	0.05	-0.55	-0.66	0.21	-2.34	1.16
Detroit Area, MI	CO (1971 8-hour)	Maintenance, --	100	0	0.59	0.52	0.37	0.35	0.31	-0.03	0.34
Detroit, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.09	-0.39	-1.31	-1.49	0.08	-4.13	1.74

Notes:

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NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Detroit, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.10	-0.15	-0.22	-0.24	-0.05	-0.47	0.13
Detroit-Ann Arbor, MI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.09	-0.38	-1.31	-1.48	0.09	-4.13	1.74
Doña Ana County (Sunland Park Area), NM	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.15	-0.18	-0.23	-0.24	-0.07	-0.39	0.08
Doña Ana County; Anthony, NM	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.15	-0.18	-0.23	-0.24	-0.08	-0.40	0.08
Door County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Douglas, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Dukes County, MA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Duluth Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.28	-0.34	-0.45	-0.47	-0.14	-0.80	0.17
East Chicago Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	-14.51	-17.07	-21.71	-22.59	-7.22	-36.88	6.88
East Helena Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
East Kern County Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	-0.24	-0.29	-0.37	-0.39	-0.12	-0.64	0.13
El Paso County, TX	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.10	0.06	-0.01	-0.02	0.05	-0.23	0.15
El Paso, TX	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.14	-0.17	-0.22	-0.23	-0.07	-0.39	0.08
Eugene-Springfield Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	0.10	0.10	0.09	0.09	0.05	0.07	0.03
Evangeline Parish (Partial), LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	-0.01	-0.01	0.00	-0.01	0.00
Fairbanks Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	-0.01	-0.01	-0.01	-0.02	0.00	-0.03	0.01
Fairbanks, AK	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	0.00	0.00	-0.01	-0.01	0.00	-0.03	0.01
Flathead County; Columbia Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flathead County; Kalispell and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.02	0.02	0.01	0.01	0.01	0.01	0.00

Notes:

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				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Flathead County; Whitefish and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fort Collins Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.06	0.06	0.05	0.05	0.03	0.03	0.02	0.02
Freehold Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
Freestone and Anderson Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.09	-0.10	-0.14	-0.14	-0.04	-0.24	0.05	0.05
Fremont County; Canon City Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.09	-0.11	-0.15	-0.15	-0.04	-0.26	0.06	0.06
Fresno Area, CA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	0.24	0.23	0.19	0.19	0.13	0.11	0.09	0.09
Grants Pass Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.02	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Great Falls Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	-0.04	-0.04	-0.06	-0.06	-0.02	-0.10	0.02	0.02
Greater Connecticut, CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	0.73	0.69	0.61	0.59	0.38	0.39	0.25	0.25
Greater Connecticut, CT	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	0.73	0.69	0.61	0.59	0.38	0.39	0.25	0.25
Greeley Area, CO	CO (1971 8-hour)	Maintenance, --	100	0	-1.51	-1.81	-2.36	-2.46	-0.75	-4.13	0.84	0.84
Hancock and Brooke Counties (Part); The City of Weirton, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.03	-0.04	-0.06	-0.06	-0.02	-0.10	0.02	0.02
Hancock County (Part) The City of Weirton, including Butler and Clay: Magisterial Districts, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.06	-0.07	-0.09	-0.09	-0.03	-0.16	0.03	0.03
Harrisburg-Lebanon-Carlisle-York, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.48	0.45	0.38	0.37	0.25	0.20	0.19	0.19
Hartford-New Britain-Middletown Area, CT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.53	0.51	0.46	0.45	0.27	0.34	0.16	0.16
Hayden, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	-0.01	-0.01	0.00	-0.01	0.00	0.00
Hayden, AZ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	-0.01	-0.01	0.00	-0.01	0.00	0.00

Notes:

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Hayden, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	-0.01	-0.01	0.00	-0.01	0.00
Hillsborough County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.04	-0.04	-0.06	-0.06	-0.02	-0.11	0.02
Hillsborough-Polk County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.05	-0.06	-0.08	-0.08	-0.03	-0.13	0.02
Houston-Galveston-Brazoria, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-36.37	-43.50	-56.48	-58.94	-18.04	-98.64	19.78
Houston-Galveston-Brazoria, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-36.43	-43.56	-56.52	-58.98	-18.07	-98.64	19.74
Humphreys County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Huntington, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Imperial County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.10	0.09	0.08	0.08	0.05	0.06	0.03
Imperial County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.10	0.09	0.08	0.08	0.05	0.06	0.03
Imperial County, CA	PM _{2.5} (2006 24-hour)	Nonattainment, Moderate	100	0	0.08	0.08	0.07	0.07	0.04	0.05	0.02
Imperial County, CA	PM _{2.5} (2012 Annual)	Nonattainment, Moderate	100	0	0.08	0.08	0.07	0.07	0.04	0.05	0.02
Imperial County; Imperial Valley Planning Area, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Serious	70	0	0.09	0.09	0.08	0.08	0.05	0.06	0.03
Indian Wells, CA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	-0.23	-0.28	-0.36	-0.37	-0.11	-0.62	0.12
Indiana, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.71	-0.85	-1.09	-1.14	-0.35	-1.89	0.37
Indianapolis Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Indianapolis, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.27	0.26	0.24	0.24	0.14	0.18	0.08
Inyo County; Owens Valley Planning Area, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Serious	70	0	-0.05	-0.06	-0.07	-0.08	-0.02	-0.13	0.03
Jackson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.01	-0.01	-0.03	-0.03	0.00	-0.06	0.02
Jackson County; Medford-Ashland (including White City), OR	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.07	0.07	0.06	0.06	0.04	0.05	0.02

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Jamestown, NY	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-2.48	-2.93	-3.75	-3.91	-1.23	-6.43	1.23
Jefferson County, KY	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jefferson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	-0.01	-0.02	-0.02	0.00	-0.05	0.02
Jefferson County; (part) Steubenville & Mingo Junction, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.02	-0.02	-0.04	-0.04	-0.01	-0.09	0.03
Jefferson County; (part), OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Johnstown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-0.41	-0.49	-0.65	-0.68	-0.20	-1.15	0.24
Josephine County; Grants Pass, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.02	0.01	0.01	0.01	0.01	0.01	0.00
Juneau; Mendenhall Valley Area, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kern County (Eastern Kern), CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	-5.15	-6.07	-7.73	-8.05	-2.56	-13.17	2.48
Kern County (Eastern Kern), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	-5.15	-6.07	-7.73	-8.05	-2.56	-13.17	2.48
King County; Kent, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.00	0.01	0.00
King County; Seattle, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Klamath County; Klamath Falls, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.03	0.02	0.02	0.02	0.01	0.02	0.01
Klamath Falls Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.03	0.02	0.02	0.02	0.01	0.02	0.01
Klamath Falls, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.03	0.03	0.03	0.02	0.02	0.02	0.01
Knoxville, TN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.38	0.36	0.31	0.31	0.20	0.20	0.14
Knoxville-Sevierville-La Follette, TN	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.46	0.43	0.38	0.37	0.24	0.23	0.17
La Porte County; (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.09	-0.11	-0.15	-0.16	-0.04	-0.28	0.06
Lake County (part); Lakeview, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Lake County, OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	-0.06	-0.09	-0.16	-0.17	-0.03	-0.37	0.12
Lake County: (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-14.69	-17.32	-22.08	-22.98	-7.31	-37.64	7.09
Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.02	0.01	0.01	0.01	0.01	0.00	0.01
Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-14.76	-17.39	-22.14	-23.04	-7.34	-37.68	7.07
Lake County; Polson, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake County; Ronan, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake Tahoe Nevada Area, NV	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Lake Tahoe North Shore Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Lake Tahoe South Shore Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Lancaster, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.20	0.19	0.15	0.15	0.10	0.07	0.09
Lancaster, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.20	0.19	0.15	0.15	0.10	0.07	0.09
Lane County (part); Oakridge, OR	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lane County; Eugene/Springfield, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.10	0.10	0.09	0.09	0.05	0.07	0.03
Las Vegas Area, NV	CO (1971 8-hour)	Maintenance, Serious	100	0	0.98	0.94	0.85	0.83	0.50	0.64	0.29
Las Vegas, NV	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.97	0.94	0.85	0.83	0.50	0.64	0.29
LaSalle County; Oglesby, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.07	-0.08	-0.11	-0.12	-0.03	-0.21	0.05
Laurel Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	-6.67	-7.85	-9.98	-10.39	-3.32	-16.96	3.16
Lebanon County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.04	0.03	0.02	0.01	0.02	-0.02	0.03
Lemont, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-20.03	-23.58	-30.01	-31.23	-9.96	-51.03	9.55

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Liberty-Clairton, PA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	-0.06	-0.07	-0.10	-0.10	-0.03	-0.17	0.03
Lincoln County; Libby and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Logan, UT-ID	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.06	0.06	0.05	0.05	0.03	0.04	0.02
Longmont Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.04	-0.06	-0.09	-0.09	-0.02	-0.18	0.05
Lorain County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.00	0.00	0.00	-0.02	0.01
Los Angeles, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	2.26	0.99	-1.48	-1.94	1.26	-8.89	4.92
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	-4.71	-5.64	-7.34	-7.66	-2.34	-12.85	2.59
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	-4.71	-5.64	-7.34	-7.66	-2.34	-12.85	2.59
Los Angeles-South Coast Air Basin Area, CA	CO (1971 8-hour)	Maintenance, Serious	100	0	2.26	1.00	-1.47	-1.93	1.26	-8.88	4.92
Los Angeles-South Coast Air Basin Area, CA	NO ₂ (1971 Annual)	Maintenance, --	100	0	2.26	1.00	-1.47	-1.93	1.26	-8.88	4.92
Los Angeles-South Coast Air Basin, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	2.26	1.00	-1.48	-1.94	1.26	-8.89	4.92
Los Angeles-South Coast Air Basin, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	2.25	0.99	-1.48	-1.94	1.26	-8.89	4.92
Los Angeles-South Coast Air Basin, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	2.26	0.99	-1.48	-1.94	1.26	-8.89	4.92
Louisville, KY-IN	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.62	0.59	0.54	0.53	0.32	0.40	0.19
Lowell Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.04	0.04	0.04	0.04	0.02	0.03	0.01
Lucas County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-1.81	-2.17	-2.82	-2.94	-0.90	-4.94	1.00
Madison County; Granite City Township and Nameoki Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-5.60	-6.60	-8.40	-8.74	-2.79	-14.28	2.67
Manchester Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	0.05	0.05	0.05	0.05	0.03	0.04	0.02

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Manitowoc County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Maricopa and Pinal Counties; Phoenix Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	1.90	1.83	1.65	1.62	0.98	1.25	0.57	
Marion County: Lawrence, Washington, and Warrant Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.25	0.24	0.22	0.21	0.13	0.16	0.07	
Mariposa County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01	
Mariposa County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01	
Marshall, WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-12.98	-15.28	-19.42	-20.21	-6.46	-33.00	6.15	
Medford Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.04	0.04	0.03	0.03	0.02	0.03	0.01	
Memphis Area, TN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.23	0.17	0.05	0.02	0.12	-0.32	0.26	
Memphis, TN-MS-AR	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.38	0.31	0.17	0.15	0.20	-0.22	0.31	
Miami, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	-0.01	0.00	
Miami, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00	
Miami, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	-0.01	0.00	
Milwaukee-Racine, WI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.59	0.56	0.50	0.49	0.31	0.34	0.20	
Minneapolis-St. Paul Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.69	-1.15	-2.03	-2.19	-0.31	-4.76	1.56	
Missoula Area, MT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.04	0.04	0.03	0.03	0.02	0.03	0.01	
Missoula county; Missoula and Vicinity, MT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.04	0.04	0.03	0.03	0.02	0.03	0.01	
Modesto Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.10	0.09	0.08	0.08	0.05	0.06	0.03	

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Mohave County (part); Bullhead City, AZ	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Mono County; Mammoth Lake Planning Area, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	-0.01	-0.01	0.00	-0.02	0.01	0.01
Mono County; Mono Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.01	-0.01	-0.02	-0.02	-0.01	-0.03	0.01	0.01
Morenci, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morgan County, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.00
Morongo Band of Mission Indians	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morongo Band of Mission Indians, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morristown Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Muscatine County; (part), IA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Muscatine, IA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.01	0.00
Muskegon County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.08	0.08	0.07	0.07	0.04	0.05	0.05	0.02
Muskingum River, OH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.05	-0.06	-0.08	-0.08	-0.03	-0.14	0.03	0.03
Nashua Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	0.04	0.04	0.04	0.04	0.02	0.03	0.03	0.01
Nassau County, FL	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nevada County (Western part), CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.06	0.06	0.05	0.05	0.03	0.03	0.03	0.02
Nevada County (Western part), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	0.06	0.06	0.05	0.05	0.03	0.04	0.04	0.02
New Haven County, CT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
New Haven-Meriden-Waterbury Area, CT	CO (1971 8-hour)	Maintenance, --	100	0	0.41	0.40	0.36	0.35	0.21	0.28	0.28	0.12
New Manchester-Grant Magisterial District in Hancock County, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.04	-0.05	-0.07	-0.07	-0.02	-0.12	0.02	0.02

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
New York County, NY	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.02	-0.01	-0.08	-0.09	0.01	-0.28	0.13
New York, NY-NJ-CT	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	5.69	5.28	4.38	4.21	2.94	2.01	2.40
New York-N. New Jersey-Long Island Area, NY-NJ-CT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	2.80	2.52	1.92	1.81	1.46	0.28	1.47
New York-N. New Jersey-Long Island, NY-NJ-CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	5.53	5.12	4.22	4.06	2.86	1.86	2.37
New York-Northern New Jersey-Long Island, NY-NJ-CT	Ozone (2015 8-hour)	Nonattainment, Moderate	50	0	5.52	5.12	4.22	4.06	2.86	1.86	2.37
NJ Portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.02	0.01	0.01	0.01	0.01	0.01	0.00
Nogales, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.02	0.02	0.01	0.01	0.01	0.01	0.00
Northern Milwaukee/Ozaukee Shoreline, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.03	0.03	0.02	0.02	0.02	0.01	0.01
Northern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-1.63	-2.08	-2.92	-3.08	-0.80	-5.58	1.36
Oakridge, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ogden Area, UT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.03	0.03	0.03	0.02	0.01	0.02	0.01
Ogden Area, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.03	0.03	0.03	0.02	0.01	0.02	0.01
Olmsted County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.01
Olmsted; City of Rochester, MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.05	0.04	0.04	0.04	0.02	0.02	0.02
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pekin, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.00	-0.01	-0.01	0.00	-0.03	0.01

Notes:

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				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Penns Grove Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Peoria County: Hollis Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.01	-0.02	-0.02	-0.02	-0.02	-0.01	-0.04	0.01
Peoria County: Peoria, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.03	0.02	0.01	0.01	0.01	0.01	-0.02	0.02
Perth Amboy Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	-0.24	-0.29	-0.38	-0.39	-0.39	-0.12	-0.66	0.13
Philadelphia-Camden County Area, PA-NJ	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-5.42	-6.48	-8.42	-8.78	-8.78	-2.69	-14.71	2.95
Philadelphia-Wilmington, PA-NJ-DE	PM _{2.5} (2006 24-hour)	Maintenance, Moderate for PA and DE; Subject to Former Subpart 1 for NJ	100	0	-4.43	-5.70	-8.05	-8.50	-8.50	-2.17	-15.55	3.86
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-3.95	-5.30	-7.80	-8.28	-8.28	-1.91	-15.74	4.21
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	-3.95	-5.30	-7.81	-8.28	-8.28	-1.91	-15.75	4.21
Phoenix Area, AZ	CO (1971 8-hour)	Maintenance, Serious	100	0	1.84	1.77	1.60	1.57	1.57	0.95	1.20	0.55
Phoenix-Mesa, AZ	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	1.91	1.84	1.66	1.63	1.63	0.98	1.25	0.57
Phoenix-Mesa, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.96	1.89	1.71	1.67	1.67	1.01	1.29	0.59
Pierce County; Tacoma, WA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	-0.01	-0.02	-0.02	-0.02	-0.02	-0.01	-0.04	0.01
Pima County; Ajo Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pima County; Rillito Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Pinal and Gila Counties; Payson, AZ	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.01	0.00
Pinal County (part); West Pinal, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.13	0.13	0.11	0.11	0.11	0.07	0.08	0.04
Pitkin County; Aspen, CO	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	-0.09	-0.10	-0.14	-0.14	-0.14	-0.04	-0.24	0.05
Pittsburgh Area, PA	CO (1971 8-hour)	Maintenance, --	100	0	0.05	0.03	0.00	0.00	0.00	0.03	-0.10	0.07

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

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NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Pittsburgh-Beaver Valley, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-13.29	-15.86	-20.52	-21.40	-6.60	-35.67	7.07
Pittsburgh-Beaver Valley, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-13.26	-15.81	-20.42	-21.29	-6.58	-35.43	6.99
Plumas County, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	-0.01	0.00
Polk County, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.01	-0.01	-0.02	-0.02	0.00	-0.04	0.01
Portland Area: Portland Metro Service District Boundary, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.60	0.58	0.52	0.51	0.31	0.38	0.18
Power-Bannock Counties; Fort Hall Indian Reservation, ID	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Power-Bannock Counties; Portneuf Valley Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.04	0.03	0.03	0.03	0.02	0.02	0.01
Provo Area, UT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	0.05	0.05	0.04	0.04	0.02	0.03	0.01
Provo, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	-1.79	-2.16	-2.83	-2.96	-0.89	-5.01	1.03
Prowers County; Lamar, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Raleigh-Durham Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.53	0.43	0.24	0.20	0.28	-0.32	0.43
Ramsey County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-2.16	-2.54	-3.23	-3.36	-1.07	-5.48	1.02
Reading, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.15	0.14	0.11	0.10	0.08	0.03	0.07
Reno Area, NV	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.16	0.15	0.14	0.13	0.08	0.10	0.05
Rhineland, WI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Riverside County (Coachella Valley), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	0.20	0.19	0.16	0.15	0.10	0.07	0.08
Riverside County (Coachella Valley), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	0.20	0.19	0.16	0.15	0.10	0.07	0.08
Riverside County; Coachella Valley Planning Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	0.24	0.22	0.18	0.18	0.12	0.09	0.10

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Riverside, Los Angeles, Orange, and San Bernardino Counties; South Coast Air Basin, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	2.22	0.96	-1.50	-1.97	1.24	-8.90	4.91
Rosebud County; Lame Deer, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Routt County (part); Steamboat Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-1.43	-1.68	-2.15	-2.23	-0.71	-3.66	0.69
Rusk and Panola Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	-0.01	0.00	-0.01	0.00
Sacramento Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-1.97	-2.47	-3.39	-3.56	-0.97	-6.32	1.47
Sacramento County, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-7.71	-9.21	-11.94	-12.46	-3.83	-20.82	4.15
Sacramento Metro, CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	-7.22	-8.74	-11.52	-12.04	-3.57	-20.50	4.30
Sacramento Metro, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	-7.22	-8.74	-11.52	-12.04	-3.57	-20.50	4.30
Sacramento, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	-7.25	-8.77	-11.54	-12.07	-3.59	-20.51	4.29
Salem Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	0.11	0.11	0.10	0.10	0.06	0.07	0.03
Salt Lake City Area, UT	CO (1971 8-hour)	Maintenance, --	100	0	-2.31	-2.74	-3.51	-3.66	-1.15	-6.03	1.16
Salt Lake City, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	-1.60	-2.05	-2.89	-3.04	-0.78	-5.56	1.37
Salt Lake County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-1.91	-2.35	-3.16	-3.31	-0.94	-5.77	1.28
Salt Lake County, UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	-1.91	-2.35	-3.16	-3.31	-0.94	-5.77	1.28
San Antonio, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.85	0.81	0.71	0.70	0.44	0.48	0.28
San Bernardino County (part); excluding Searles Valley Planning Area and South Coast Air Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-4.88	-5.81	-7.50	-7.82	-2.42	-13.00	2.55
San Diego Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	1.64	1.58	1.43	1.41	0.85	1.09	0.48

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
San Diego County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	1.65	1.59	1.44	1.41	0.85	1.10	0.49
San Diego County, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	1.64	1.58	1.43	1.41	0.85	1.09	0.49
San Francisco Bay Area, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	-5.09	-6.69	-9.66	-10.22	-2.47	-19.10	4.94
San Francisco Bay Area, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-5.09	-6.69	-9.66	-10.22	-2.48	-19.10	4.93
San Francisco Bay Area, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	-5.06	-6.66	-9.63	-10.20	-2.46	-19.08	4.94
San Francisco-Oakland-San Jose Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-5.33	-6.92	-9.87	-10.42	-2.60	-19.24	4.86
San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	-9.39	-11.46	-15.24	-15.96	-4.64	-27.47	5.93
San Joaquin Valley, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	-9.39	-11.46	-15.24	-15.96	-4.64	-27.47	5.93
San Joaquin Valley, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	-9.39	-11.46	-15.24	-15.96	-4.64	-27.47	5.93
San Joaquin Valley, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	-9.35	-11.41	-15.19	-15.90	-4.62	-27.37	5.91
San Joaquin Valley, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	-9.35	-11.41	-15.19	-15.90	-4.62	-27.37	5.91
San Luis Obispo (Eastern part), CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.59	-0.70	-0.89	-0.93	-0.30	-1.51	0.28
San Luis Obispo (Eastern San Luis Obispo), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	-0.59	-0.70	-0.89	-0.93	-0.30	-1.51	0.28
San Manuel, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	-0.01	0.00
San Miguel County; Telluride, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	-0.01	-0.01	0.00	-0.02	0.00
Sanders County (part); Thompson Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Santa Cruz County; Nogales Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.02	0.02	0.01	0.01	0.01	0.01	0.00
Seaford, DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.11	0.10	0.08	0.08	0.06	0.04	0.04

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Seattle-Tacoma Area, WA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	1.40	1.34	1.21	1.19	0.72	0.90	0.42
Seattle-Tacoma, WA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.22	0.21	0.18	0.18	0.11	0.12	0.08
Sheboygan County, WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.05	0.04	0.04	0.04	0.02	0.03	0.02
Sheboygan County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Sheridan County; City of Sheridan, WY	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Shoshone County (part); excluding Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Shoshone County; City of Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Silver Bow County; Butte, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Somerville Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Southern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-1.79	-2.16	-2.83	-2.96	-0.89	-5.01	1.03
Southwest Indiana, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Spokane Area, WA	CO (1971 8-hour)	Maintenance, Serious	100	0	0.14	0.14	0.13	0.12	0.07	0.10	0.04
Spokane County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.15	0.14	0.13	0.13	0.08	0.10	0.04
Springfield Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.06	0.05	0.05	0.04	0.03	0.02	0.02
St. Bernard Parish, LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-5.60	-6.59	-8.38	-8.72	-2.78	-14.24	2.66
St. Clair, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.00	0.00	0.01	-0.02	0.01
St. Louis Area, MO	CO (1971 8-hour)	Maintenance, --	100	0	-5.36	-6.38	-8.23	-8.58	-2.66	-14.26	2.80
St. Louis, MO-IL	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-4.73	-5.79	-7.72	-8.09	-2.34	-13.97	3.04
St. Louis-St. Charles-Farmington, MO-IL	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-4.60	-5.67	-7.62	-7.99	-2.27	-13.91	3.09

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Steubenville, OH-WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.04	-0.05	-0.08	-0.08	-0.02	-0.15	0.04
Steubenville-Weirton, OH-WV	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.00	-0.02	-0.04	-0.04	0.00	-0.12	0.05
Stockton Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.16	0.16	0.14	0.14	0.08	0.10	0.05
Sullivan County, TN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.01	-0.02	-0.02	-0.03	-0.01	-0.05	0.02
Sutter Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Syracuse Area; Onondaga County, NY	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.22	0.21	0.19	0.19	0.11	0.14	0.07
Tazewell County: Groveland Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.00	0.01	0.00
Terre Haute, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.03	0.03	0.03	0.03	0.02	0.02	0.01
Thurston County; Cities of Olympia, Tumwater, and Lacey, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.05	0.05	0.04	0.04	0.02	0.03	0.01
Titus County, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Toms River Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tooele County (part), UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	-2.03	-2.39	-3.04	-3.16	-1.01	-5.17	0.96
Trenton Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.04	0.04	0.04	0.04	0.02	0.03	0.01
Trona, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.25	-0.29	-0.37	-0.39	-0.12	-0.63	0.12
Tucson Area, AZ	CO (1971 8-hour)	Maintenance, --	100	0	0.46	0.44	0.40	0.39	0.24	0.30	0.14
Tuolumne County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.02	0.01	0.00	0.00	0.01	-0.02	0.02
Tuscan Buttes, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tuscan Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Uinta Basin, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.24	-0.29	-0.37	-0.39	-0.12	-0.65	0.13
Union County; LaGrande, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Upper Green River Basin Area, WY	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	-2.19	-2.58	-3.28	-3.42	-1.09	-5.59	1.05
Utah County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-1.87	-2.25	-2.94	-3.07	-0.92	-5.20	1.07
Vancouver Area: Clark County (part), WA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.14	0.14	0.12	0.12	0.07	0.09	0.04
Ventura County, CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	-4.83	-5.77	-7.48	-7.81	-2.40	-13.05	2.61
Ventura County, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	-4.83	-5.77	-7.48	-7.81	-2.40	-13.05	2.61
Vermillion County; Part of Clinton Township, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Vigo County, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.07	0.06	0.05	0.05	0.03	0.04	0.02
Walla Walla County; Wallula, WA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Waltham Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.01	0.02	0.01
Warren County: Conewago Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-2.19	-2.58	-3.28	-3.41	-1.09	-5.57	1.04
Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-2.18	-2.57	-3.27	-3.40	-1.09	-5.56	1.04
Warren, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-2.18	-2.57	-3.27	-3.40	-1.09	-5.56	1.04
Washington Area, DC-MD-VA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.27	0.23	0.16	0.15	0.14	-0.03	0.16
Washington, DC-MD-VA	Ozone (2008 8-hour)	Nonattainment (DC) Maintenance (MD, VA), Marginal	50	0	2.45	2.32	2.00	1.95	1.27	1.21	0.89
Washington, DC-MD-VA	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	2.45	2.32	2.00	1.95	1.27	1.21	0.90
Washoe County; Reno Planning Area, NV	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.16	0.15	0.14	0.13	0.08	0.10	0.05

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.03	0.03	0.02	0.02	0.01	0.02	0.01
Wayne County; (part), MI	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.19	-0.23	-0.30	-0.31	-0.09	-0.53	0.11
West Central Pinal County, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.02	0.02	0.02	0.01	0.01	0.00	0.01
West Silver Valley, ID	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Williamson County, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	-0.01	-0.01	0.01	-0.05	0.03
Winston-Salem Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.12	0.09	0.05	0.04	0.06	-0.07	0.10
Worcester Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.08	0.07	0.06	0.05	0.04	0.02	0.03
Yakima Area, WA	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Yakima County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.04	0.04	0.04	0.04	0.02	0.03	0.01
Yuba City-Marysville, CA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.09	0.08	0.07	0.07	0.05	0.05	0.03
Yuma County; Yuma Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.07	0.07	0.06	0.06	0.04	0.05	0.02
Yuma, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.04	0.04	0.03	0.03	0.02	0.03	0.01

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Table A-5. Changes in Emissions from U.S. Passenger Cars and Light Trucks by Nonattainment or Maintenance Area and Alternative, Direct and Indirect Impacts--Sulfur Oxides (SO₂), 2035

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Ada County; Boise, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.57	0.56	0.50	0.47	0.34	0.35	0.18
Adams, Denver, and Boulder Counties; Denver Metropolitan Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-11.82	-12.09	-11.08	-11.37	-7.84	-9.72	-4.29
Ajo, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Albuquerque Area, NM	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.28	0.25	0.20	0.14	0.12	0.03	0.06
Allegan County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.07	0.07	0.06	0.05	0.04	0.04	0.02
Allegheny County Air Basin: Hazelwood Monitor, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.67	-0.68	-0.62	-0.64	-0.44	-0.54	-0.24
Allegheny County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	-3.08	-3.18	-2.93	-3.06	-2.09	-2.68	-1.15
Allegheny County; The Area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.76	-0.77	-0.70	-0.71	-0.49	-0.60	-0.27
Allegheny, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.89	-0.91	-0.83	-0.85	-0.59	-0.73	-0.32
Allentown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.10	0.07	0.05	-0.01	0.01	-0.08	0.00
Allentown-Bethlehem-Easton, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-0.57	-0.62	-0.59	-0.66	-0.43	-0.64	-0.24
Alton Township, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-64.39	-65.29	-59.55	-60.33	-41.91	-50.53	-22.83
Amador County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.03	0.03	0.02	0.02	0.01	0.01	0.01
Anchorage Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	0.16	0.16	0.14	0.13	0.09	0.09	0.05
Anchorage; Eagle River, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Anne Arundel County and Baltimore County, MD	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.89	0.83	0.72	0.62	0.47	0.37	0.24

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
AQCR 012: Portions of Grant County, NM	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.07	0.07	0.06	0.06	0.04	0.04	0.02
AQCR 109-Millinocket, ME	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-1.00	-1.02	-0.94	-0.96	-0.66	-0.83	-0.36
AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington Counties (Minneapolis-St. Paul), MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-21.48	-21.97	-20.15	-20.71	-14.27	-17.74	-7.81
AQCR 237: Brown County: Green Bay Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.02	-0.02	-0.02	-0.02	-0.01	-0.02	-0.01
AQCR 238: Marathon County: Rothschild Subcity Area, Rib Mountain, Weston, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.25	-0.26	-0.24	-0.26	-0.18	-0.24	-0.10
AQCR 238: Oneida County: Rhinelander Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.10	0.09	0.08	0.08	0.06	0.06	0.03
AQCR 239: Milwaukee County: Milwaukee Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.67	0.64	0.56	0.51	0.37	0.34	0.20
AQCR 240: Dane County: Madison Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.64	0.61	0.54	0.49	0.36	0.34	0.19
Archuleta County; Pagosa Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-2.03	-2.06	-1.88	-1.90	-1.32	-1.60	-0.72
Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	-2.65	-2.69	-2.45	-2.49	-1.73	-2.08	-0.94
Aroostock County; City of Presque Isle, ME	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.06	-0.06	-0.06	-0.06	-0.04	-0.05	-0.02
Atlanta, GA	Ozone (2008 8-hour)	Maintenance, Moderate	100	0	9.33	9.09	8.09	7.63	5.52	5.63	2.93
Atlanta, GA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	7.40	7.21	6.42	6.05	4.37	4.47	2.32
Atlantic City Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.06	0.06	0.05	0.05	0.03	0.04	0.02
Bakersfield Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	-1.96	-2.02	-1.85	-1.92	-1.32	-1.66	-0.72

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Baltimore Area, MD	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.35	-0.36	-0.33	-0.33	-0.23	-0.28	-0.13
Baltimore, MD	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	-7.46	-7.75	-7.16	-7.53	-5.13	-6.68	-2.83
Baltimore, MD	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	-7.42	-7.71	-7.12	-7.50	-5.10	-6.65	-2.82
Baton Rouge, LA	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-364.91	-370.05	-337.58	-342.05	-237.57	-286.59	-129.46
Beaver, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Benton County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.04	0.04	0.03	0.03	0.02	0.02	0.01
Berrien County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.33	0.32	0.28	0.27	0.19	0.19	0.10
Billings Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	-76.63	-77.70	-70.88	-71.81	-49.88	-60.15	-27.18
Billings, MT	SO ₂ (2010 1-hour)	Maintenance, --	100	0	-76.75	-77.82	-70.99	-71.91	-49.95	-60.23	-27.22
Birmingham, AL	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-11.76	-12.00	-10.98	-11.24	-7.76	-9.56	-4.24
Boise-Northern Ada County Area, ID	CO (1971 8-hour)	Maintenance, --	100	0	0.57	0.56	0.50	0.47	0.34	0.35	0.18
Bonner County; The Sandpoint Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.02	0.02	0.01	0.01	0.01	0.01	0.01
Boston Area, MA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-1.05	-1.10	-1.03	-1.10	-0.74	-1.00	-0.41
Boyd County (part), KY	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-8.30	-8.41	-7.67	-7.77	-5.40	-6.51	-2.94
Brooke; Follansbee Area, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Burlington Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.02	0.02	0.01	0.01	0.01	0.01	0.01
Butte County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.22	0.21	0.19	0.17	0.12	0.12	0.07
Calaveras County, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.00	0.00	0.00	0.00
Calaveras County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.00	0.00	0.00	0.00

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Campbell-Clermont Counties, KY-OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	-0.30	-0.31	-0.28	-0.29	-0.20	-0.24	-0.11
Canton-Massillon, OH	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-3.06	-3.12	-2.86	-2.93	-2.02	-2.50	-1.11
Central New Hampshire, NH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.31	0.30	0.26	0.25	0.18	0.18	0.10
Central Steptoe Valley, NV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.03	0.03	0.02	0.02	0.02	0.02	0.01
Charleston, WV	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.43	0.42	0.37	0.34	0.25	0.25	0.13
Charlotte Area, NC	CO (1971 8-hour)	Maintenance, --	100	0	2.16	2.10	1.86	1.73	1.26	1.25	0.67
Charlotte-Rock Hill, NC-SC	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	2.53	2.38	2.07	1.82	1.37	1.15	0.71
Chicago, IL-IN-WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-392.18	-398.06	-363.32	-368.67	-255.85	-309.61	-139.49
Chicago-Naperville, IL-IN-WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-391.62	-397.52	-362.84	-368.24	-255.54	-309.33	-139.32
Chico (Butte County), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.22	0.21	0.19	0.17	0.12	0.12	0.07
Chico Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.12	0.12	0.11	0.10	0.07	0.07	0.04
Chico, CA	PM _{2.5} (2006 24-hour)	Maintenance, Moderate	100	0	0.26	0.25	0.22	0.20	0.15	0.15	0.08
Cincinnati, OH-KY	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-10.99	-11.28	-10.36	-10.69	-7.35	-9.22	-4.03
Cincinnati, OH-KY-IN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-10.89	-11.18	-10.27	-10.62	-7.30	-9.17	-4.00
Clark County; Las Vegas Planning Area, NV	PM ₁₀ (1987 24-hour)	Maintenance, Serious	100	0	2.99	2.91	2.59	2.44	1.77	1.79	0.94
Cleveland Area, OH	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-2.49	-2.60	-2.41	-2.55	-1.73	-2.28	-0.96
Cleveland, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-4.26	-4.50	-4.20	-4.53	-3.04	-4.15	-1.69
Cleveland, OH	PM _{2.5} (2012 Annual)	Maintenance, Moderate	100	0	-2.61	-2.74	-2.55	-2.72	-1.84	-2.46	-1.02
Cleveland-Akron-Lorain, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-8.73	-9.04	-8.34	-8.74	-5.96	-7.69	-3.29

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Cleveland-Akron-Lorain, OH	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-4.25	-4.48	-4.17	-4.49	-3.02	-4.11	-1.68
Cochise County; Paul Spur/Douglas Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.04	0.04	0.04	0.03	0.02	0.03	0.01
Colorado Springs Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.17	0.14	0.11	0.06	0.06	-0.02	0.03
Columbus, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.38	0.26	0.17	-0.03	0.06	-0.28	0.00
Columbus, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.65	0.53	0.42	0.25	0.24	-0.04	0.11
Cook County; Lyons Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-2.50	-2.54	-2.32	-2.35	-1.63	-1.98	-0.89
Cook County; Southeast Chicago, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-169.33	-171.69	-156.62	-158.66	-110.21	-132.90	-60.05
Coshocton County; Franklin Township, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.44	-0.44	-0.40	-0.41	-0.28	-0.34	-0.15
Coso Junction, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-2.96	-3.00	-2.74	-2.77	-1.92	-2.32	-1.05
Cuyahoga County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.76	-0.83	-0.79	-0.89	-0.58	-0.86	-0.33
Cuyahoga County, OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-2.49	-2.60	-2.41	-2.55	-1.73	-2.28	-0.96
Dallas-Fort Worth, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-11.61	-12.27	-11.44	-12.33	-8.29	-11.32	-4.61
Dallas-Fort Worth, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-11.76	-12.41	-11.57	-12.45	-8.37	-11.40	-4.66
Delaware County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	-71.55	-72.57	-66.21	-67.10	-46.60	-56.25	-25.39
Denver Metro/North Front Range, CO	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-10.41	-10.77	-9.94	-10.40	-7.10	-9.15	-3.91
Denver-Boulder Area, CO	CO (1971 8-hour)	Maintenance, Serious	100	0	-9.91	-10.22	-9.41	-9.79	-6.70	-8.54	-3.69
Denver-Boulder-Greeley-Ft Collins-Loveland, CO	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-10.41	-10.77	-9.94	-10.40	-7.10	-9.15	-3.91
Detroit Area, MI	CO (1971 8-hour)	Maintenance, --	100	0	-0.04	-0.15	-0.19	-0.34	-0.18	-0.49	-0.12
Detroit, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-18.44	-18.99	-17.47	-18.14	-12.43	-15.78	-6.83

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Detroit, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-2.12	-2.16	-1.98	-2.03	-1.40	-1.73	-0.77
Detroit-Ann Arbor, MI	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-18.42	-18.98	-17.46	-18.13	-12.43	-15.78	-6.83
Doña Ana County (Sunland Park Area), NM	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-1.78	-1.80	-1.64	-1.67	-1.16	-1.40	-0.63
Doña Ana County; Anthony, NM	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	-1.79	-1.82	-1.66	-1.68	-1.17	-1.41	-0.64
Door County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Douglas, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.03	0.03	0.03	0.03	0.02	0.02	0.01
Dukes County, MA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Duluth Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-3.62	-3.68	-3.36	-3.41	-2.37	-2.87	-1.29
East Chicago Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	-166.89	-169.21	-154.35	-156.36	-108.61	-130.96	-59.18
East Helena Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
East Kern County Area, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Serious	70	0	-2.90	-2.94	-2.69	-2.72	-1.89	-2.29	-1.03
El Paso County, TX	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	-1.00	-1.05	-0.97	-1.04	-0.70	-0.93	-0.39
El Paso, TX	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-1.75	-1.78	-1.63	-1.65	-1.14	-1.39	-0.62
Eugene-Springfield Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	0.32	0.32	0.28	0.27	0.19	0.20	0.10
Evangeline Parish (Partial), LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.04	-0.04	-0.04	-0.04	-0.03	-0.03	-0.01
Fairbanks Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	-0.14	-0.14	-0.13	-0.13	-0.09	-0.11	-0.05
Fairbanks, AK	PM _{2.5} (2006 24-hour)	Nonattainment, Serious	70	0	-0.11	-0.12	-0.11	-0.11	-0.08	-0.10	-0.04
Flathead County; Columbia Falls and Vicinity, MT	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Flathead County; Kalispell and Vicinity, MT	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.05	0.05	0.04	0.04	0.03	0.03	0.02

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Flathead County; Whitefish and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Fort Collins Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.14	0.14	0.12	0.11	0.08	0.07	0.04	0.04
Freehold Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01
Freestone and Anderson Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-1.07	-1.08	-0.99	-1.00	-0.70	-0.84	-0.38	-0.38
Fremont County; Canon City Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-1.19	-1.21	-1.11	-1.12	-0.78	-0.95	-0.42	-0.42
Fresno Area, CA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	0.53	0.50	0.44	0.39	0.29	0.26	0.15	0.15
Grants Pass Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.05	0.05	0.04	0.04	0.03	0.03	0.01	0.01
Great Falls Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	-0.44	-0.45	-0.41	-0.42	-0.29	-0.35	-0.16	-0.16
Greater Connecticut, CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	1.86	1.79	1.58	1.45	1.06	1.02	0.56	0.56
Greater Connecticut, CT	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	1.86	1.79	1.58	1.45	1.07	1.02	0.56	0.56
Greeley Area, CO	CO (1971 8-hour)	Maintenance, --	100	0	-18.67	-18.95	-17.30	-17.55	-12.18	-14.74	-6.64	-6.64
Hancock and Brooke Counties (Part); The City of Weirton, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.45	-0.46	-0.42	-0.42	-0.29	-0.36	-0.16	-0.16
Hancock County (Part) The City of Weirton, including Butler and Clay: Magisterial Districts, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.71	-0.72	-0.66	-0.66	-0.46	-0.56	-0.25	-0.25
Harrisburg-Lebanon-Carlisle-York, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.97	0.92	0.80	0.71	0.53	0.45	0.28	0.28
Hartford-New Britain-Middletown Area, CT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	1.59	1.55	1.38	1.29	0.94	0.95	0.50	0.50
Hayden, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.05	-0.05	-0.05	-0.05	-0.04	-0.04	-0.02	-0.02
Hayden, AZ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	-0.06	-0.06	-0.05	-0.05	-0.04	-0.05	-0.02	-0.02

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Hayden, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.06	-0.06	-0.05	-0.05	-0.04	-0.05	-0.02
Hillsborough County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.48	-0.49	-0.45	-0.45	-0.31	-0.38	-0.17
Hillsborough-Polk County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.59	-0.60	-0.55	-0.56	-0.39	-0.47	-0.21
Houston-Galveston-Brazoria, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-446.00	-452.63	-413.09	-419.10	-290.88	-351.85	-158.58
Houston-Galveston-Brazoria, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-446.03	-452.64	-413.10	-419.09	-290.88	-351.82	-158.57
Humphreys County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.04	0.04	0.03	0.03	0.02	0.02	0.01
Huntington, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.05	0.05	0.05	0.04	0.03	0.03	0.02
Imperial County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.29	0.29	0.26	0.24	0.17	0.18	0.09
Imperial County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.29	0.29	0.25	0.24	0.17	0.18	0.09
Imperial County, CA	PM _{2.5} (2006 24-hour)	Nonattainment, Moderate	100	0	0.26	0.25	0.22	0.21	0.15	0.15	0.08
Imperial County, CA	PM _{2.5} (2012 Annual)	Nonattainment, Moderate	100	0	0.26	0.25	0.22	0.21	0.15	0.15	0.08
Imperial County; Imperial Valley Planning Area, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Serious	70	0	0.29	0.28	0.25	0.24	0.17	0.17	0.09
Indian Wells, CA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	-2.82	-2.86	-2.61	-2.64	-1.84	-2.22	-1.00
Indiana, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-8.54	-8.66	-7.91	-8.02	-5.57	-6.73	-3.03
Indianapolis Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Indianapolis, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.86	0.83	0.74	0.70	0.51	0.52	0.27
Inyo County; Owens Valley Planning Area, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Serious	70	0	-0.58	-0.59	-0.54	-0.54	-0.38	-0.46	-0.21
Jackson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.27	-0.28	-0.25	-0.26	-0.18	-0.22	-0.10
Jackson County; Medford-Ashland (including White City), OR	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.23	0.22	0.20	0.19	0.13	0.14	0.07

Notes:

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Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Jamestown, NY	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-29.08	-29.50	-26.91	-27.28	-18.94	-22.86	-10.32
Jefferson County, KY	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jefferson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.21	-0.22	-0.20	-0.21	-0.14	-0.18	-0.08
Jefferson County; (part) Steubenville & Mingo Junction, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.39	-0.40	-0.37	-0.38	-0.26	-0.32	-0.14
Jefferson County; (part), OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Johnstown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-5.20	-5.28	-4.82	-4.89	-3.40	-4.11	-1.85
Josephine County; Grants Pass, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.05	0.05	0.04	0.04	0.03	0.03	0.01
Juneau; Mendenhall Valley Area, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Kern County (Eastern Kern), CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	-59.61	-60.45	-55.14	-55.87	-38.80	-46.80	-21.14
Kern County (Eastern Kern), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	-59.61	-60.45	-55.14	-55.87	-38.80	-46.80	-21.14
King County; Kent, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.03	0.03	0.02	0.02	0.02	0.02	0.01
King County; Seattle, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Klamath County; Klamath Falls, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.08	0.07	0.07	0.06	0.04	0.05	0.02
Klamath Falls Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.08	0.07	0.07	0.06	0.04	0.05	0.02
Klamath Falls, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.09	0.09	0.08	0.07	0.05	0.05	0.03
Knoxville, TN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.93	0.89	0.78	0.71	0.53	0.49	0.28
Knoxville-Sevierville-La Follette, TN	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	1.11	1.06	0.93	0.85	0.63	0.59	0.33
La Porte County; (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-1.25	-1.27	-1.16	-1.18	-0.82	-0.99	-0.45
Lake County (part); Lakeview, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.00	0.01	0.00

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NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Lake County, OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	-1.68	-1.72	-1.57	-1.62	-1.11	-1.39	-0.61
Lake County: (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-170.31	-172.70	-157.54	-159.62	-110.87	-133.73	-60.41
Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.02	0.02	0.01	0.01	0.01	0.00	0.00
Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-170.51	-172.89	-157.72	-159.78	-110.98	-133.85	-60.47
Lake County; Polson, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake County; Ronan, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake Tahoe Nevada Area, NV	CO (1971 8-hour)	Maintenance, --	100	0	0.03	0.03	0.03	0.02	0.02	0.02	0.01
Lake Tahoe North Shore Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Lake Tahoe South Shore Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.06	0.05	0.05	0.04	0.03	0.03	0.02
Lancaster, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.33	0.31	0.26	0.22	0.17	0.13	0.09
Lancaster, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.33	0.31	0.26	0.22	0.17	0.13	0.09
Lane County (part); Oakridge, OR	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lane County; Eugene/Springfield, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.32	0.32	0.28	0.27	0.19	0.20	0.10
Las Vegas Area, NV	CO (1971 8-hour)	Maintenance, Serious	100	0	3.00	2.92	2.60	2.44	1.77	1.80	0.94
Las Vegas, NV	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	2.99	2.91	2.59	2.44	1.77	1.79	0.94
LaSalle County; Oglesby, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.94	-0.96	-0.87	-0.89	-0.62	-0.75	-0.34
Laurel Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	-76.75	-77.82	-70.98	-71.91	-49.95	-60.23	-27.22
Lebanon County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	-0.10	-0.11	-0.10	-0.11	-0.07	-0.11	-0.04
Lemont, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-230.93	-234.15	-213.59	-216.38	-150.30	-181.25	-81.90

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Liberty-Clairton, PA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	-0.76	-0.77	-0.70	-0.71	-0.49	-0.60	-0.27
Lincoln County; Libby and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Logan, UT-ID	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.18	0.18	0.16	0.15	0.11	0.11	0.06
Longmont Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.80	-0.82	-0.75	-0.77	-0.53	-0.65	-0.29
Lorain County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.11	-0.11	-0.10	-0.11	-0.07	-0.10	-0.04
Los Angeles, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	-39.39	-40.92	-37.84	-39.82	-27.09	-35.33	-14.96
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	-58.10	-58.97	-53.82	-54.61	-37.90	-45.86	-20.66
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	-58.10	-58.97	-53.82	-54.61	-37.90	-45.86	-20.66
Los Angeles-South Coast Air Basin Area, CA	CO (1971 8-hour)	Maintenance, Serious	100	0	-39.34	-40.87	-37.79	-39.77	-27.06	-35.29	-14.94
Los Angeles-South Coast Air Basin Area, CA	NO ₂ (1971 Annual)	Maintenance, --	100	0	-39.34	-40.87	-37.79	-39.77	-27.06	-35.29	-14.94
Los Angeles-South Coast Air Basin, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	-39.38	-40.92	-37.83	-39.81	-27.09	-35.32	-14.96
Los Angeles-South Coast Air Basin, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	-39.39	-40.93	-37.84	-39.82	-27.10	-35.33	-14.96
Los Angeles-South Coast Air Basin, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	-39.39	-40.92	-37.84	-39.82	-27.09	-35.33	-14.96
Louisville, KY-IN	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.87	1.82	1.62	1.52	1.10	1.12	0.59
Lowell Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.13	0.13	0.11	0.11	0.08	0.08	0.04
Lucas County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-22.33	-22.66	-20.68	-20.99	-14.57	-17.62	-7.94
Madison County; Granite City Township and Nameoki Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-64.61	-65.52	-59.76	-60.55	-42.06	-50.71	-22.92
Manchester Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	0.17	0.16	0.14	0.14	0.10	0.10	0.05

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Manitowoc County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.06	0.06	0.06	0.05	0.04	0.04	0.02
Maricopa and Pinal Counties; Phoenix Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	5.85	5.69	5.06	4.76	3.45	3.51	1.83
Marion County: Lawrence, Washington, and Warrant Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.77	0.75	0.67	0.63	0.46	0.47	0.24
Mariposa County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.05	0.05	0.05	0.04	0.03	0.03	0.02
Mariposa County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.05	0.05	0.05	0.04	0.03	0.03	0.02
Marshall, WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-149.31	-151.39	-138.10	-139.89	-97.17	-117.17	-52.95
Medford Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.12	0.12	0.11	0.10	0.07	0.07	0.04
Memphis Area, TN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-1.39	-1.47	-1.38	-1.49	-1.00	-1.37	-0.56
Memphis, TN-MS-AR	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-0.94	-1.04	-0.99	-1.12	-0.73	-1.10	-0.42
Miami, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.04	-0.04	-0.04	-0.04	-0.03	-0.04	-0.01
Miami, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Miami, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.04	-0.04	-0.04	-0.04	-0.03	-0.03	-0.01
Milwaukee-Racine, WI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	1.61	1.55	1.38	1.28	0.93	0.91	0.49
Minneapolis-St. Paul Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-21.36	-21.86	-20.05	-20.62	-14.20	-17.67	-7.78
Missoula Area, MT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.12	0.12	0.10	0.10	0.07	0.07	0.04
Missoula county; Missoula and Vicinity, MT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.12	0.12	0.10	0.10	0.07	0.07	0.04
Modesto Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.27	0.26	0.23	0.22	0.16	0.16	0.08

Notes:

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Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Mohave County (part); Bullhead City, AZ	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.04	0.03	0.03	0.02	0.02	0.01	0.01
Mono County; Mammoth Lake Planning Area, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.11	-0.11	-0.10	-0.11	-0.07	-0.09	-0.04
Mono County; Mono Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.15	-0.15	-0.14	-0.14	-0.10	-0.12	-0.05
Morenci, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Morgan County, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.05	0.05	0.04	0.04	0.03	0.03	0.02
Morongo Band of Mission Indians	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morongo Band of Mission Indians, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morristown Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.03	0.03	0.03	0.02	0.02	0.02	0.01
Muscatine County; (part), IA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Muscatine, IA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Muskegon County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.26	0.25	0.22	0.21	0.15	0.15	0.08
Muskingum River, OH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.61	-0.62	-0.57	-0.57	-0.40	-0.48	-0.22
Nashua Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	0.13	0.13	0.11	0.11	0.08	0.08	0.04
Nassau County, FL	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Nevada County (Western part), CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.16	0.16	0.14	0.13	0.10	0.09	0.05
Nevada County (Western part), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	0.17	0.16	0.14	0.13	0.10	0.10	0.05
New Haven County, CT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.03	0.03	0.03	0.03	0.02	0.02	0.01
New Haven-Meriden-Waterbury Area, CT	CO (1971 8-hour)	Maintenance, --	100	0	1.29	1.26	1.12	1.06	0.76	0.78	0.41
New Manchester-Grant Magisterial District in Hancock County, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.53	-0.54	-0.49	-0.50	-0.35	-0.42	-0.19

Notes:

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				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
New York County, NY	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-1.24	-1.28	-1.18	-1.23	-0.84	-1.07	-0.46
New York, NY-NJ-CT	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	9.82	9.12	7.89	6.72	5.15	3.95	2.64
New York-N. New Jersey-Long Island Area, NY-NJ-CT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	1.68	1.24	0.89	0.21	0.41	-0.75	0.13
New York-N. New Jersey-Long Island, NY-NJ-CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	9.13	8.44	7.27	6.13	4.73	3.48	2.41
New York-Northern New Jersey-Long Island, NY-NJ-CT	Ozone (2015 8-hour)	Nonattainment, Moderate	50	0	9.11	8.41	7.25	6.11	4.71	3.47	2.40
NJ Portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.04	0.04	0.04	0.03	0.02	0.02	0.01
Nogales, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.05	0.05	0.04	0.04	0.03	0.03	0.02
Northern Milwaukee/Ozaukee Shoreline, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.07	0.07	0.06	0.05	0.04	0.04	0.02
Northern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-25.18	-25.63	-23.43	-23.88	-16.53	-20.19	-9.03
Oakridge, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ogden Area, UT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.09	0.09	0.08	0.07	0.05	0.05	0.03
Ogden Area, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.09	0.09	0.08	0.07	0.05	0.05	0.03
Olmsted County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
Olmsted; City of Rochester, MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.11	0.10	0.09	0.08	0.06	0.06	0.03
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
Pekin, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.12	-0.12	-0.11	-0.12	-0.08	-0.11	-0.04

Notes:

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Penns Grove Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Peoria County: Hollis Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.18	-0.18	-0.17	-0.17	-0.12	-0.14	-0.06	
Peoria County: Peoria, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.11	-0.11	-0.11	-0.12	-0.08	-0.11	-0.04	
Perth Amboy Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	-2.97	-3.01	-2.75	-2.79	-1.94	-2.34	-1.06	
Philadelphia-Camden County Area, PA-NJ	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-66.49	-67.48	-61.58	-62.48	-43.36	-52.46	-23.64	
Philadelphia-Wilmington, PA-NJ-DE	PM _{2.5} (2006 24-hour)	Maintenance, Moderate for PA and DE; Subject to Former Subpart 1 for NJ	100	0	-70.12	-71.38	-65.26	-66.55	-46.06	-56.32	-25.16	
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-70.92	-72.29	-66.14	-67.58	-46.72	-57.37	-25.54	
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	-70.92	-72.29	-66.14	-67.58	-46.73	-57.37	-25.54	
Phoenix Area, AZ	CO (1971 8-hour)	Maintenance, Serious	100	0	5.64	5.49	4.89	4.60	3.33	3.38	1.77	
Phoenix-Mesa, AZ	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	5.88	5.72	5.09	4.79	3.47	3.53	1.84	
Phoenix-Mesa, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	6.04	5.87	5.23	4.92	3.56	3.62	1.89	
Pierce County; Tacoma, WA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	-0.16	-0.17	-0.15	-0.15	-0.11	-0.13	-0.06	
Pima County; Ajo Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Pima County; Rillito Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.03	0.02	0.02	0.01	0.01	0.00	0.01	
Pinal and Gila Counties; Payson, AZ	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.03	0.03	0.02	0.02	0.02	0.02	0.01	
Pinal County (part); West Pinal, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.37	0.36	0.31	0.29	0.21	0.21	0.11	
Pitkin County; Aspen, CO	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	-1.10	-1.11	-1.02	-1.03	-0.72	-0.87	-0.39	
Pittsburgh Area, PA	CO (1971 8-hour)	Maintenance, --	100	0	-0.42	-0.45	-0.41	-0.44	-0.30	-0.40	-0.17	

Notes:

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NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Pittsburgh-Beaver Valley, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-161.32	-163.69	-149.38	-151.51	-105.17	-127.15	-57.33
Pittsburgh-Beaver Valley, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-160.22	-162.57	-148.35	-150.45	-104.44	-126.24	-56.93
Plumas County, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	-0.04	-0.04	-0.03	-0.03	-0.02	-0.03	-0.01
Polk County, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.18	-0.18	-0.17	-0.17	-0.12	-0.15	-0.06
Portland Area: Portland Metro Service District Boundary, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	1.78	1.73	1.54	1.44	1.05	1.05	0.55
Power-Bannock Counties; Fort Hall Indian Reservation, ID	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Power-Bannock Counties; Portneuf Valley Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.11	0.11	0.10	0.09	0.07	0.07	0.03
Provo Area, UT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	0.15	0.14	0.13	0.12	0.09	0.09	0.05
Provo, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	-22.64	-22.98	-20.98	-21.30	-14.78	-17.90	-8.06
Prowers County; Lamar, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Raleigh-Durham Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-1.35	-1.48	-1.41	-1.60	-1.05	-1.56	-0.59
Ramsey County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-24.81	-25.15	-22.95	-23.24	-16.15	-19.47	-8.80
Reading, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.15	0.12	0.10	0.07	0.06	0.01	0.03
Reno Area, NV	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.49	0.47	0.42	0.40	0.29	0.29	0.15
Rhineland, WI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.05	0.04	0.04	0.04	0.03	0.03	0.01
Riverside County (Coachella Valley), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	0.36	0.34	0.29	0.25	0.19	0.15	0.10
Riverside County (Coachella Valley), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	0.36	0.34	0.29	0.25	0.19	0.15	0.10
Riverside County; Coachella Valley Planning Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	0.43	0.40	0.35	0.30	0.23	0.18	0.12

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Riverside, Los Angeles, Orange, and San Bernardino Counties; South Coast Air Basin, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	-39.44	-40.97	-37.88	-39.86	-27.12	-35.35	-14.98
Rosebud County; Lame Deer, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Routt County (part); Steamboat Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-16.55	-16.78	-15.31	-15.51	-10.77	-13.00	-5.87
Rusk and Panola Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.04	-0.04	-0.04	-0.04	-0.03	-0.03	-0.02
Sacramento Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-28.54	-29.02	-26.52	-27.00	-18.70	-22.79	-10.21
Sacramento County, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-94.14	-95.53	-87.19	-88.44	-61.39	-74.24	-33.47
Sacramento Metro, CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	-92.63	-94.07	-85.88	-87.21	-60.50	-73.33	-32.99
Sacramento Metro, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	-92.63	-94.07	-85.88	-87.21	-60.50	-73.33	-32.99
Sacramento, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	-92.71	-94.14	-85.95	-87.28	-60.54	-73.38	-33.02
Salem Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	0.35	0.34	0.30	0.28	0.21	0.21	0.11
Salt Lake City Area, UT	CO (1971 8-hour)	Maintenance, --	100	0	-27.29	-27.69	-25.26	-25.61	-17.78	-21.47	-9.69
Salt Lake City, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	-25.07	-25.52	-23.33	-23.78	-16.46	-20.12	-8.99
Salt Lake County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-26.05	-26.47	-24.18	-24.58	-17.04	-20.71	-9.30
Salt Lake County, UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	-26.04	-26.47	-24.18	-24.58	-17.04	-20.71	-9.30
San Antonio, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	2.29	2.21	1.95	1.81	1.32	1.29	0.70
San Bernardino County (part); excluding Searles Valley Planning Area and South Coast Air Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-58.77	-59.63	-54.41	-55.18	-38.31	-46.29	-20.88
San Diego Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	5.11	4.98	4.43	4.18	3.02	3.08	1.60

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
San Diego County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	5.13	5.00	4.45	4.19	3.03	3.09	1.61
San Diego County, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	5.12	4.98	4.44	4.18	3.02	3.08	1.61
San Francisco Bay Area, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	-86.05	-87.66	-80.18	-81.85	-56.62	-69.39	-30.93
San Francisco Bay Area, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-86.07	-87.68	-80.19	-81.86	-56.63	-69.39	-30.94
San Francisco Bay Area, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	-85.96	-87.58	-80.10	-81.78	-56.56	-69.33	-30.90
San Francisco-Oakland-San Jose Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-86.74	-88.33	-80.77	-82.40	-57.02	-69.78	-31.14
San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	-124.07	-126.04	-115.10	-116.96	-81.11	-98.45	-44.24
San Joaquin Valley, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	-124.07	-126.04	-115.10	-116.96	-81.11	-98.45	-44.24
San Joaquin Valley, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	-124.07	-126.04	-115.10	-116.96	-81.11	-98.45	-44.24
San Joaquin Valley, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	-123.63	-125.60	-114.69	-116.55	-80.82	-98.10	-44.09
San Joaquin Valley, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	-123.63	-125.60	-114.69	-116.55	-80.82	-98.10	-44.09
San Luis Obispo (Eastern part), CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-6.84	-6.94	-6.33	-6.41	-4.45	-5.37	-2.43
San Luis Obispo (Eastern San Luis Obispo), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	-6.84	-6.94	-6.33	-6.41	-4.46	-5.37	-2.43
San Manuel, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.05	-0.05	-0.04	-0.04	-0.03	-0.04	-0.02
San Miguel County; Telluride, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.07	-0.07	-0.07	-0.07	-0.05	-0.06	-0.03
Sanders County (part); Thompson Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Santa Cruz County; Nogales Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.05	0.05	0.05	0.04	0.03	0.03	0.02
Seaford, DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.21	0.19	0.17	0.15	0.11	0.09	0.06

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Seattle-Tacoma Area, WA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	4.24	4.12	3.67	3.44	2.49	2.53	1.32
Seattle-Tacoma, WA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.56	0.54	0.47	0.44	0.32	0.31	0.17
Sheboygan County, WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.12	0.12	0.10	0.10	0.07	0.07	0.04
Sheboygan County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.05	0.04	0.04	0.03	0.02	0.02	0.01
Sheridan County; City of Sheridan, WY	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
Shoshone County (part); excluding Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.04	0.03	0.03	0.03	0.02	0.02	0.01
Shoshone County; City of Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Silver Bow County; Butte, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.04	0.04	0.03	0.03	0.02	0.02	0.01
Somerville Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Southern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-22.64	-22.98	-20.98	-21.30	-14.78	-17.90	-8.06
Southwest Indiana, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Spokane Area, WA	CO (1971 8-hour)	Maintenance, Serious	100	0	0.45	0.43	0.39	0.36	0.26	0.27	0.14
Spokane County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.45	0.44	0.39	0.37	0.27	0.27	0.14
Springfield Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.12	0.11	0.10	0.09	0.07	0.06	0.03
St. Bernard Parish, LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-64.45	-65.35	-59.61	-60.39	-41.95	-50.58	-22.86
St. Clair, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.09	-0.09	-0.09	-0.09	-0.06	-0.08	-0.03
St. Louis Area, MO	CO (1971 8-hour)	Maintenance, --	100	0	-64.47	-65.41	-59.69	-60.53	-42.02	-50.78	-22.91
St. Louis, MO-IL	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-63.09	-64.10	-58.54	-59.49	-41.25	-50.09	-22.50
St. Louis-St. Charles-Farmington, MO-IL	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-62.83	-63.86	-58.32	-59.31	-41.11	-49.97	-22.43

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Steubenville, OH-WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.70	-0.71	-0.65	-0.66	-0.46	-0.56	-0.25
Steubenville-Weirton, OH-WV	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-0.51	-0.53	-0.49	-0.50	-0.35	-0.44	-0.19
Stockton Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.49	0.47	0.42	0.40	0.29	0.29	0.15
Sullivan County, TN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.23	-0.24	-0.22	-0.22	-0.15	-0.19	-0.08
Sutter Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Syracuse Area; Onondaga County, NY	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.67	0.66	0.58	0.55	0.40	0.40	0.21
Tazewell County: Groveland Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Terre Haute, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.11	0.10	0.09	0.09	0.06	0.06	0.03
Thurston County; Cities of Olympia, Tumwater, and Lacey, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.15	0.14	0.13	0.12	0.09	0.09	0.05
Titus County, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Toms River Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tooele County (part), UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	-23.38	-23.71	-21.63	-21.91	-15.22	-18.35	-8.29
Trenton Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.13	0.12	0.11	0.10	0.08	0.08	0.04
Trona, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-2.87	-2.91	-2.66	-2.69	-1.87	-2.25	-1.02
Tucson Area, AZ	CO (1971 8-hour)	Maintenance, --	100	0	1.39	1.35	1.20	1.13	0.82	0.83	0.43
Tuolumne County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.10	-0.10	-0.09	-0.10	-0.07	-0.09	-0.04
Tuscan Buttes, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tuscan Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Uinta Basin, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-2.94	-2.98	-2.72	-2.76	-1.92	-2.32	-1.05
Union County; LaGrande, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Upper Green River Basin Area, WY	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	-25.30	-25.65	-23.40	-23.71	-16.47	-19.86	-8.97
Utah County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-23.49	-23.85	-21.77	-22.10	-15.33	-18.57	-8.36
Vancouver Area: Clark County (part), WA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.44	0.43	0.38	0.36	0.26	0.26	0.14
Ventura County, CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	-59.01	-59.88	-54.65	-55.44	-38.48	-46.53	-20.98
Ventura County, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	-59.01	-59.88	-54.65	-55.44	-38.48	-46.53	-20.98
Vermillion County; Part of Clinton Township, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Vigo County, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.18	0.17	0.15	0.14	0.10	0.10	0.05
Walla Walla County; Wallula, WA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Waltham Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.07	0.07	0.06	0.06	0.04	0.04	0.02
Warren County: Conewago Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-25.20	-25.55	-23.30	-23.61	-16.40	-19.77	-8.94
Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-25.18	-25.53	-23.29	-23.59	-16.39	-19.76	-8.93
Warren, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-25.17	-25.52	-23.28	-23.59	-16.38	-19.76	-8.93
Washington Area, DC-MD-VA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.10	-0.14	-0.16	-0.23	-0.13	-0.29	-0.08
Washington, DC-MD-VA	Ozone (2008 8-hour)	Nonattainment (DC) Maintenance (MD, VA), Marginal	50	0	5.78	5.52	4.86	4.41	3.26	3.02	1.71
Washington, DC-MD-VA	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	5.78	5.52	4.86	4.41	3.26	3.02	1.71
Washoe County; Reno Planning Area, NV	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.49	0.48	0.43	0.40	0.29	0.30	0.15

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.08	0.08	0.07	0.06	0.05	0.04	0.02
Wayne County; (part), MI	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-2.38	-2.42	-2.21	-2.24	-1.56	-1.88	-0.85
West Central Pinal County, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.02	0.02	0.02	0.01	0.01	0.00	0.00
West Silver Valley, ID	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Williamson County, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.23	-0.23	-0.22	-0.23	-0.15	-0.20	-0.09
Winston-Salem Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.31	-0.34	-0.32	-0.36	-0.24	-0.35	-0.13
Worcester Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.10	0.09	0.08	0.06	0.05	0.03	0.02
Yakima Area, WA	CO (1971 8-hour)	Maintenance, --	100	0	0.04	0.04	0.04	0.03	0.02	0.02	0.01
Yakima County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.14	0.13	0.12	0.11	0.08	0.08	0.04
Yuba City-Marysville, CA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.21	0.21	0.18	0.16	0.12	0.11	0.06
Yuma County; Yuma Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.23	0.22	0.20	0.19	0.14	0.14	0.07
Yuma, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.12	0.11	0.10	0.10	0.07	0.07	0.04

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Table A-6. Changes in Emissions from U.S. Passenger Cars and Light Trucks by Nonattainment or Maintenance Area and Alternative, Direct and Indirect Impacts--Sulfur Oxides (SO₂), 2050

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Ada County; Boise, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.97	0.94	0.86	0.81	0.60	0.49	0.33
Adams, Denver, and Boulder Counties; Denver Metropolitan Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-76.34	-72.97	-70.18	-68.27	-51.42	-36.14	-30.60
Ajo, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Albuquerque Area, NM	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-2.62	-2.50	-2.46	-2.44	-1.85	-1.20	-1.16
Allegan County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.02	-0.02	-0.02	-0.03	-0.02	0.00	-0.02
Allegheny County Air Basin: Hazelwood Monitor, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-4.22	-4.04	-3.88	-3.78	-2.84	-2.00	-1.69
Allegheny County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	-23.16	-22.14	-21.33	-20.78	-15.67	-10.93	-9.36
Allegheny County; The Area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-4.36	-4.16	-4.00	-3.88	-2.92	-2.07	-1.73
Allegheny, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-5.63	-5.38	-5.17	-5.03	-3.79	-2.67	-2.25
Allentown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-2.92	-2.79	-2.73	-2.69	-2.04	-1.35	-1.26
Allentown-Bethlehem-Easton, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-7.28	-6.96	-6.74	-6.59	-4.97	-3.41	-3.00
Alton Township, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-362.90	-346.98	-333.03	-323.44	-243.47	-172.34	-144.20
Amador County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.22	-0.21	-0.21	-0.21	-0.16	-0.10	-0.10
Anchorage Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	0.20	0.20	0.18	0.17	0.12	0.11	0.06
Anchorage; Eagle River, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Anne Arundel County and Baltimore County, MD	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-2.04	-1.93	-1.96	-1.98	-1.52	-0.89	-1.00

Notes:

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NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
AQCR 012: Portions of Grant County, NM	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.12	0.11	0.10	0.10	0.07	0.06	0.04
AQCR 109-Millinocket, ME	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-6.57	-6.28	-6.04	-5.88	-4.43	-3.11	-2.64
AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington Counties (Minneapolis-St. Paul), MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-140.25	-134.06	-128.96	-125.46	-94.51	-66.38	-56.25
AQCR 237: Brown County: Green Bay Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.16	-0.15	-0.15	-0.15	-0.11	-0.08	-0.07
AQCR 238: Marathon County: Rothschild Subcity Area, Rib Mountain, Weston, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-2.50	-2.38	-2.31	-2.25	-1.70	-1.17	-1.02
AQCR 238: Oneida County: Rhinelander Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.16	0.16	0.14	0.14	0.10	0.08	0.05
AQCR 239: Milwaukee County: Milwaukee Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.15	-0.13	-0.19	-0.22	-0.18	-0.02	-0.16
AQCR 240: Dane County: Madison Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.16	0.16	0.10	0.06	0.03	0.12	-0.03
Archuleta County; Pagosa Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-11.55	-11.04	-10.60	-10.30	-7.75	-5.48	-4.59
Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	-14.98	-14.32	-13.75	-13.35	-10.05	-7.11	-5.95
Aroostock County; City of Presque Isle, ME	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.41	-0.39	-0.38	-0.37	-0.28	-0.19	-0.16
Atlanta, GA	Ozone (2008 8-hour)	Maintenance, Moderate	100	0	15.92	15.29	14.13	13.32	9.89	7.99	5.33
Atlanta, GA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	12.62	12.13	11.20	10.56	7.84	6.34	4.23
Atlantic City Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.10	0.10	0.09	0.08	0.06	0.05	0.03
Bakersfield Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	-13.71	-13.11	-12.62	-12.28	-9.26	-6.48	-5.52

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Baltimore Area, MD	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-2.07	-1.98	-1.90	-1.85	-1.39	-0.98	-0.82
Baltimore, MD	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	-59.88	-57.22	-55.18	-53.79	-40.56	-28.23	-24.28
Baltimore, MD	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	-59.80	-57.14	-55.11	-53.72	-40.51	-28.19	-24.25
Baton Rouge, LA	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-2,062.08	-1,971.61	-1,892.40	-1,837.96	-1,383.56	-979.21	-819.52
Beaver, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.04	0.03	0.03	0.03	0.02	0.02	0.01
Benton County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.06	0.06	0.06	0.05	0.04	0.03	0.02
Berrien County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.45	0.44	0.40	0.37	0.27	0.23	0.14
Billings Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	-432.36	-413.39	-396.77	-385.35	-290.08	-205.32	-171.81
Billings, MT	SO ₂ (2010 1-hour)	Maintenance, --	100	0	-432.57	-413.60	-396.96	-385.53	-290.21	-205.43	-171.88
Birmingham, AL	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-73.52	-70.28	-67.56	-65.69	-49.48	-34.83	-29.41
Boise-Northern Ada County Area, ID	CO (1971 8-hour)	Maintenance, --	100	0	0.97	0.94	0.86	0.81	0.60	0.49	0.33
Bonner County; The Sandpoint Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Boston Area, MA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-9.77	-9.33	-9.01	-8.79	-6.63	-4.59	-3.98
Boyd County (part), KY	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-46.77	-44.72	-42.92	-41.69	-31.38	-22.21	-18.59
Brooke; Follansbee Area, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.03	-0.03	-0.03	-0.03	-0.02	-0.02	-0.01
Burlington Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.03	0.03	0.03	0.02	0.02	0.01	0.01
Butte County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	-0.02	-0.03	-0.03	0.01	-0.03
Calaveras County, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	-0.26	-0.25	-0.25	-0.24	-0.18	-0.12	-0.11
Calaveras County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.26	-0.25	-0.25	-0.24	-0.18	-0.12	-0.11

Notes:

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Appendix A Air Quality Nonattainment Area Results

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				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Campbell-Clermont Counties, KY-OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	-1.90	-1.82	-1.75	-1.70	-1.28	-0.90	-0.76
Canton-Massillon, OH	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-19.37	-18.51	-17.80	-17.31	-13.04	-9.17	-7.75
Central New Hampshire, NH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.52	0.50	0.46	0.43	0.32	0.26	0.17
Central Steptoe Valley, NV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.05	0.05	0.04	0.04	0.03	0.02	0.02
Charleston, WV	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.42	0.40	0.36	0.33	0.24	0.22	0.11
Charlotte Area, NC	CO (1971 8-hour)	Maintenance, --	100	0	2.49	2.40	2.16	1.99	1.46	1.30	0.72
Charlotte-Rock Hill, NC-SC	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-3.83	-3.62	-3.75	-3.84	-2.96	-1.61	-2.01
Chicago, IL-IN-WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-2,250.84	-2,152.03	-2,066.08	-2,007.03	-1,510.95	-1,068.44	-895.48
Chicago-Naperville, IL-IN-WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-2,251.15	-2,152.31	-2,066.41	-2,007.39	-1,511.24	-1,068.54	-895.70
Chico (Butte County), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	-0.02	-0.03	-0.03	0.01	-0.03
Chico Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.21	0.20	0.19	0.18	0.13	0.11	0.07
Chico, CA	PM _{2.5} (2006 24-hour)	Maintenance, Moderate	100	0	0.24	0.23	0.20	0.18	0.13	0.13	0.06
Cincinnati, OH-KY	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-74.88	-71.57	-68.88	-67.04	-50.51	-35.41	-30.10
Cincinnati, OH-KY-IN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-74.91	-71.60	-68.93	-67.09	-50.55	-35.42	-30.13
Clark County; Las Vegas Planning Area, NV	PM ₁₀ (1987 24-hour)	Maintenance, Serious	100	0	4.83	4.64	4.27	4.02	2.98	2.43	1.59
Cleveland Area, OH	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-21.14	-20.20	-19.50	-19.01	-14.34	-9.96	-8.59
Cleveland, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-41.52	-39.66	-38.33	-37.42	-28.23	-19.51	-16.97
Cleveland, OH	PM _{2.5} (2012 Annual)	Maintenance, Moderate	100	0	-23.61	-22.56	-21.78	-21.25	-16.03	-11.11	-9.62
Cleveland-Akron-Lorain, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-67.39	-64.40	-62.08	-60.49	-45.60	-31.79	-27.27

Notes:

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NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Cleveland-Akron-Lorain, OH	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-40.84	-39.01	-37.70	-36.80	-27.76	-19.20	-16.69
Cochise County; Paul Spur/Douglas Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.07	0.07	0.06	0.06	0.04	0.04	0.02
Colorado Springs Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-2.45	-2.33	-2.29	-2.26	-1.72	-1.12	-1.07
Columbus, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-10.43	-9.95	-9.74	-9.60	-7.27	-4.81	-4.49
Columbus, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-8.15	-7.77	-7.63	-7.54	-5.72	-3.73	-3.56
Cook County; Lyons Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-14.53	-13.90	-13.34	-12.96	-9.76	-6.90	-5.79
Cook County; Southeast Chicago, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-954.93	-913.04	-876.33	-851.10	-640.67	-453.49	-379.46
Coshocton County; Franklin Township, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-2.47	-2.36	-2.26	-2.20	-1.66	-1.17	-0.98
Coso Junction, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-16.67	-15.94	-15.30	-14.86	-11.19	-7.92	-6.62
Cuyahoga County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-9.94	-9.49	-9.19	-8.99	-6.79	-4.65	-4.10
Cuyahoga County, OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-21.14	-20.20	-19.49	-19.01	-14.34	-9.96	-8.59
Dallas-Fort Worth, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-113.22	-108.16	-104.53	-102.04	-76.99	-53.21	-46.29
Dallas-Fort Worth, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-113.46	-108.39	-104.74	-102.25	-77.14	-53.33	-46.37
Delaware County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	-405.56	-387.77	-372.21	-361.51	-272.14	-192.57	-161.21
Denver Metro/North Front Range, CO	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-79.93	-76.38	-73.63	-71.74	-54.08	-37.71	-32.34
Denver-Boulder Area, CO	CO (1971 8-hour)	Maintenance, Serious	100	0	-72.45	-69.24	-66.70	-64.97	-48.96	-34.21	-29.24
Denver-Boulder-Greeley-Ft Collins-Loveland, CO	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-79.93	-76.38	-73.63	-71.74	-54.08	-37.71	-32.34
Detroit Area, MI	CO (1971 8-hour)	Maintenance, --	100	0	-10.19	-9.72	-9.48	-9.31	-7.05	-4.72	-4.32
Detroit, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-132.46	-126.59	-121.93	-118.73	-89.48	-62.57	-53.41

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Detroit, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-13.31	-12.72	-12.23	-11.89	-8.96	-6.30	-5.32
Detroit-Ann Arbor, MI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-132.46	-126.59	-121.93	-118.73	-89.48	-62.57	-53.41
Doña Ana County (Sunland Park Area), NM	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-10.11	-9.66	-9.28	-9.01	-6.78	-4.80	-4.02
Doña Ana County; Anthony, NM	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-10.13	-9.69	-9.30	-9.03	-6.80	-4.81	-4.03
Door County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Douglas, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.06	0.06	0.05	0.05	0.04	0.03	0.02
Dukes County, MA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Duluth Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-21.00	-20.08	-19.28	-18.73	-14.10	-9.97	-8.36
East Chicago Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	-940.62	-899.36	-863.19	-838.33	-631.06	-446.70	-373.76
East Helena Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
East Kern County Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	-16.55	-15.83	-15.19	-14.76	-11.11	-7.86	-6.58
El Paso County, TX	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-8.80	-8.41	-8.12	-7.92	-5.97	-4.14	-3.58
El Paso, TX	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-10.07	-9.63	-9.24	-8.98	-6.76	-4.78	-4.01
Eugene-Springfield Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	0.55	0.53	0.49	0.46	0.34	0.28	0.18
Evangeline Parish (Partial), LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.22	-0.21	-0.21	-0.20	-0.15	-0.11	-0.09
Fairbanks Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	-0.84	-0.80	-0.77	-0.75	-0.56	-0.40	-0.33
Fairbanks, AK	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	-0.80	-0.76	-0.73	-0.72	-0.54	-0.38	-0.32
Flathead County; Columbia Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Flathead County; Kalispell and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.09	0.08	0.08	0.07	0.05	0.04	0.03

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Flathead County; Whitefish and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01
Fort Collins Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.07	-0.07	-0.08	-0.08	-0.08	-0.07	-0.02	-0.05
Freehold Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.01
Freestone and Anderson Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-6.09	-5.83	-5.59	-5.43	-4.09	-2.89	-2.89	-2.42
Fremont County; Canon City Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-6.94	-6.63	-6.37	-6.19	-4.66	-3.29	-3.29	-2.76
Fresno Area, CA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	-0.36	-0.34	-0.37	-0.40	-0.31	-0.13	-0.13	-0.23
Grants Pass Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.08	0.08	0.07	0.07	0.05	0.04	0.04	0.03
Great Falls Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	-2.51	-2.40	-2.30	-2.24	-1.68	-1.19	-1.19	-1.00
Greater Connecticut, CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	0.88	0.86	0.68	0.56	0.38	0.53	0.53	0.09
Greater Connecticut, CT	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	0.88	0.86	0.68	0.56	0.39	0.53	0.53	0.09
Greeley Area, CO	CO (1971 8-hour)	Maintenance, --	100	0	-107.14	-102.44	-98.35	-95.54	-71.92	-50.86	-50.86	-42.63
Hancock and Brooke Counties (Part); The City of Weirton, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-2.62	-2.51	-2.41	-2.34	-1.76	-1.24	-1.24	-1.04
Hancock County (Part) The City of Weirton, including Butler and Clay: Magisterial Districts, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-4.07	-3.89	-3.74	-3.63	-2.73	-1.93	-1.93	-1.62
Harrisburg-Lebanon-Carlisle-York, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-1.18	-1.11	-1.17	-1.21	-0.93	-0.48	-0.48	-0.65
Hartford-New Britain-Middletown Area, CT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	2.38	2.29	2.10	1.96	1.45	1.21	1.21	0.77
Hayden, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.33	-0.32	-0.31	-0.30	-0.23	-0.16	-0.16	-0.13
Hayden, AZ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	-0.34	-0.33	-0.31	-0.30	-0.23	-0.16	-0.16	-0.14

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Hayden, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.34	-0.33	-0.31	-0.30	-0.23	-0.16	-0.14
Hillsborough County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-2.81	-2.69	-2.58	-2.51	-1.89	-1.33	-1.12
Hillsborough-Polk County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-3.36	-3.21	-3.09	-3.00	-2.26	-1.60	-1.34
Houston-Galveston-Brazoria, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-2,554.37	-2,442.24	-2,344.63	-2,277.56	-1,714.60	-1,212.58	-1,016.09
Houston-Galveston-Brazoria, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-2,553.44	-2,441.35	-2,343.76	-2,276.70	-1,713.95	-1,212.15	-1,015.70
Humphreys County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.06	0.06	0.05	0.05	0.04	0.03	0.02
Huntington, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.09	0.09	0.08	0.08	0.06	0.05	0.03
Imperial County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.47	0.45	0.41	0.39	0.29	0.24	0.15
Imperial County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.47	0.45	0.41	0.39	0.29	0.24	0.15
Imperial County, CA	PM _{2.5} (2006 24-hour)	Nonattainment, Moderate	100	0	0.44	0.42	0.39	0.37	0.27	0.22	0.15
Imperial County, CA	PM _{2.5} (2012 Annual)	Nonattainment, Moderate	100	0	0.44	0.42	0.39	0.37	0.27	0.22	0.15
Imperial County; Imperial Valley Planning Area, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Serious	70	0	0.46	0.44	0.40	0.38	0.28	0.23	0.15
Indian Wells, CA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	-16.10	-15.40	-14.78	-14.36	-10.81	-7.64	-6.41
Indiana, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-48.66	-46.53	-44.66	-43.38	-32.66	-23.10	-19.35
Indianapolis Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Indianapolis, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	1.46	1.40	1.29	1.22	0.91	0.73	0.49
Inyo County; Owens Valley Planning Area, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Serious	70	0	-3.31	-3.17	-3.04	-2.95	-2.22	-1.57	-1.32
Jackson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-1.78	-1.70	-1.64	-1.59	-1.20	-0.84	-0.71
Jackson County; Medford-Ashland (including White City), OR	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.39	0.37	0.35	0.33	0.24	0.20	0.13

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Jamestown, NY	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-164.79	-157.56	-151.23	-146.89	-110.57	-78.25	-65.50
Jefferson County, KY	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jefferson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-1.47	-1.40	-1.35	-1.31	-0.99	-0.69	-0.59
Jefferson County; (part) Steubenville & Mingo Junction, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-2.52	-2.41	-2.32	-2.26	-1.70	-1.20	-1.01
Jefferson County; (part), OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.03	-0.03	-0.03	-0.02	-0.02	-0.01	-0.01
Johnstown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-30.05	-28.73	-27.59	-26.80	-20.18	-14.26	-11.96
Josephine County; Grants Pass, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.08	0.08	0.07	0.07	0.05	0.04	0.03
Juneau; Mendenhall Valley Area, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Kern County (Eastern Kern), CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	-336.57	-321.81	-308.87	-299.98	-225.82	-159.83	-133.75
Kern County (Eastern Kern), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	-336.57	-321.81	-308.87	-299.98	-225.82	-159.83	-133.75
King County; Kent, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.05	0.05	0.04	0.04	0.03	0.02	0.02
King County; Seattle, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.04	0.03	0.03	0.03	0.02	0.02	0.01
Klamath County; Klamath Falls, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.11	0.11	0.10	0.09	0.07	0.06	0.04
Klamath Falls Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.11	0.11	0.10	0.09	0.07	0.06	0.04
Klamath Falls, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.13	0.12	0.11	0.10	0.08	0.06	0.04
Knoxville, TN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.14	0.15	0.07	0.01	-0.01	0.13	-0.08
Knoxville-Sevierville-La Follette, TN	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.11	0.11	0.02	-0.05	-0.06	0.12	-0.12
La Porte County; (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-7.38	-7.06	-6.78	-6.59	-4.96	-3.50	-2.94
Lake County (part); Lakeview, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00

Notes:

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Lake County, OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	-10.96	-10.48	-10.08	-9.81	-7.39	-5.19	-4.40
Lake County: (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-961.84	-919.64	-882.69	-857.29	-645.34	-456.75	-382.25
Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.14	-0.14	-0.14	-0.13	-0.10	-0.07	-0.06
Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-962.16	-919.95	-882.97	-857.56	-645.54	-456.91	-382.35
Lake County; Polson, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Lake County; Ronan, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake Tahoe Nevada Area, NV	CO (1971 8-hour)	Maintenance, --	100	0	0.04	0.04	0.03	0.03	0.02	0.02	0.01
Lake Tahoe North Shore Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake Tahoe South Shore Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.08	0.08	0.07	0.07	0.05	0.04	0.03
Lancaster, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-1.05	-0.99	-1.00	-1.00	-0.77	-0.46	-0.50
Lancaster, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-1.05	-0.99	-1.00	-1.00	-0.76	-0.46	-0.50
Lane County (part); Oakridge, OR	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lane County; Eugene/Springfield, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.55	0.53	0.49	0.46	0.34	0.28	0.18
Las Vegas Area, NV	CO (1971 8-hour)	Maintenance, Serious	100	0	4.83	4.65	4.28	4.02	2.98	2.44	1.59
Las Vegas, NV	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	4.83	4.64	4.27	4.02	2.98	2.43	1.59
LaSalle County; Oglesby, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-5.53	-5.29	-5.08	-4.93	-3.71	-2.62	-2.20
Laurel Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	-432.57	-413.59	-396.96	-385.53	-290.21	-205.42	-171.88
Lebanon County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	-1.31	-1.25	-1.21	-1.18	-0.89	-0.61	-0.54
Lemont, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-1,302.41	-1,245.28	-1,195.21	-1,160.80	-873.80	-618.50	-517.54

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Liberty-Clairton, PA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	-4.36	-4.16	-4.00	-3.88	-2.92	-2.07	-1.73
Lincoln County; Libby and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.02	0.02	0.01	0.01	0.01	0.01	0.01
Logan, UT-ID	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.31	0.30	0.27	0.26	0.19	0.15	0.10
Longmont Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-5.01	-4.79	-4.61	-4.48	-3.37	-2.38	-2.01
Lorain County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.91	-0.87	-0.84	-0.82	-0.62	-0.43	-0.37
Los Angeles, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	-317.81	-303.68	-292.90	-285.52	-215.28	-149.80	-128.88
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	-333.22	-318.59	-305.87	-297.12	-223.68	-158.18	-132.56
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	-333.22	-318.59	-305.87	-297.12	-223.68	-158.18	-132.56
Los Angeles-South Coast Air Basin Area, CA	CO (1971 8-hour)	Maintenance, Serious	100	0	-317.55	-303.43	-292.67	-285.30	-215.11	-149.68	-128.78
Los Angeles-South Coast Air Basin Area, CA	NO ₂ (1971 Annual)	Maintenance, --	100	0	-317.56	-303.44	-292.67	-285.30	-215.11	-149.68	-128.78
Los Angeles-South Coast Air Basin, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	-317.79	-303.67	-292.89	-285.51	-215.27	-149.80	-128.88
Los Angeles-South Coast Air Basin, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	-317.80	-303.67	-292.90	-285.52	-215.28	-149.80	-128.88
Los Angeles-South Coast Air Basin, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	-317.81	-303.68	-292.90	-285.52	-215.28	-149.80	-128.88
Louisville, KY-IN	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	2.88	2.77	2.54	2.39	1.77	1.46	0.94
Lowell Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.22	0.21	0.19	0.18	0.13	0.11	0.07
Lucas County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-128.05	-122.43	-117.54	-114.18	-85.96	-60.79	-50.94
Madison County; Granite City Township and Nameoki Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-364.43	-348.44	-334.43	-324.81	-244.50	-173.06	-144.81
Manchester Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	0.28	0.27	0.25	0.24	0.18	0.14	0.10

Notes:

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NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Manitowoc County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.07	0.07	0.06	0.06	0.04	0.04	0.02
Maricopa and Pinal Counties; Phoenix Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	9.48	9.11	8.39	7.89	5.85	4.78	3.13
Marion County: Lawrence, Washington, and Warrant Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	1.31	1.26	1.16	1.10	0.81	0.66	0.44
Mariposa County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.04	0.04	0.03	0.03	0.02	0.02	0.01
Mariposa County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.04	0.04	0.03	0.03	0.02	0.02	0.01
Marshall, WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-841.59	-804.68	-772.31	-750.07	-564.62	-399.67	-334.41
Medford Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.21	0.20	0.19	0.18	0.13	0.11	0.07
Memphis Area, TN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-13.83	-13.21	-12.77	-12.46	-9.40	-6.50	-5.66
Memphis, TN-MS-AR	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-13.06	-12.48	-12.09	-11.83	-8.93	-6.11	-5.40
Miami, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.31	-0.30	-0.29	-0.28	-0.21	-0.15	-0.13
Miami, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.04	0.04	0.03	0.03	0.02	0.02	0.01
Miami, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.31	-0.30	-0.29	-0.28	-0.21	-0.15	-0.13
Milwaukee-Racine, WI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	1.46	1.41	1.24	1.12	0.82	0.78	0.37
Minneapolis-St. Paul Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-140.17	-133.98	-128.89	-125.40	-94.47	-66.34	-56.23
Missoula Area, MT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.20	0.20	0.18	0.17	0.13	0.10	0.07
Missoula county; Missoula and Vicinity, MT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.20	0.20	0.18	0.17	0.13	0.10	0.07
Modesto Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.29	0.28	0.25	0.23	0.17	0.15	0.08

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Mohave County (part); Bullhead City, AZ	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.15	-0.14	-0.14	-0.14	-0.14	-0.11	-0.07	-0.07
Mono County; Mammoth Lake Planning Area, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.80	-0.77	-0.74	-0.72	-0.72	-0.54	-0.38	-0.32
Mono County; Mono Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.87	-0.83	-0.79	-0.77	-0.77	-0.58	-0.41	-0.34
Morenci, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Morgan County, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.09	0.08	0.08	0.07	0.07	0.05	0.04	0.03
Morongo Band of Mission Indians	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	-0.04	-0.04	-0.04	-0.04	-0.04	-0.03	-0.02	-0.02
Morongo Band of Mission Indians, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	-0.04	-0.04	-0.04	-0.04	-0.04	-0.03	-0.02	-0.02
Morristown Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.05	0.05	0.04	0.04	0.04	0.03	0.03	0.02
Muscatine County; (part), IA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.01	0.00	-0.01	-0.01	-0.01	0.00	0.00	0.00
Muscatine, IA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.00
Muskegon County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.41	0.40	0.36	0.34	0.34	0.25	0.21	0.14
Muskingum River, OH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-3.48	-3.33	-3.20	-3.11	-3.11	-2.34	-1.65	-1.38
Nashua Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	0.21	0.21	0.19	0.18	0.18	0.13	0.11	0.07
Nassau County, FL	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Nevada County (Western part), CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.19	0.18	0.16	0.15	0.15	0.11	0.10	0.05
Nevada County (Western part), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	0.19	0.18	0.16	0.15	0.15	0.11	0.10	0.05
New Haven County, CT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.06	0.06	0.05	0.05	0.05	0.04	0.03	0.02
New Haven-Meriden-Waterbury Area, CT	CO (1971 8-hour)	Maintenance, --	100	0	2.20	2.12	1.95	1.84	1.84	1.37	1.11	0.74
New Manchester-Grant Magisterial District in Hancock County, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-3.03	-2.90	-2.78	-2.70	-2.70	-2.03	-1.44	-1.20

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
New York County, NY	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-9.15	-8.74	-8.42	-8.20	-6.18	-4.32	-3.69
New York, NY-NJ-CT	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-26.13	-24.83	-25.05	-25.23	-19.29	-11.46	-12.60
New York-N. New Jersey-Long Island Area, NY-NJ-CT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	-35.30	-33.66	-32.98	-32.52	-24.65	-16.24	-15.24
New York-N. New Jersey-Long Island, NY-NJ-CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	-28.37	-26.97	-27.08	-27.18	-20.75	-12.54	-13.44
New York-Northern New Jersey-Long Island, NY-NJ-CT	Ozone (2015 8-hour)	Nonattainment, Moderate	50	0	-28.45	-27.05	-27.16	-27.25	-20.81	-12.58	-13.47
NJ Portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.04	0.04	0.04	0.03	0.02	0.02	0.01
Nogales, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.09	0.08	0.08	0.07	0.05	0.04	0.03
Northern Milwaukee/Ozaukee Shoreline, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.02	-0.02	-0.02	-0.03	-0.02	0.00	-0.02
Northern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-151.32	-144.67	-138.99	-135.09	-101.72	-71.75	-60.38
Oakridge, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Ogden Area, UT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.15	0.15	0.14	0.13	0.10	0.08	0.05
Ogden Area, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.15	0.15	0.14	0.13	0.10	0.08	0.05
Olmsted County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.20	-0.19	-0.19	-0.19	-0.14	-0.09	-0.09
Olmsted; City of Rochester, MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.01	-0.01	-0.02	-0.03	-0.02	0.00	-0.02
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-0.05	-0.05	-0.05	-0.05	-0.04	-0.03	-0.02
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.05	-0.05	-0.05	-0.05	-0.04	-0.03	-0.02
Pekin, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.93	-0.89	-0.86	-0.84	-0.63	-0.44	-0.38

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				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Penns Grove Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Peoria County: Hollis Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-1.04	-0.99	-0.95	-0.93	-0.70	-0.49	-0.41	-0.41
Peoria County: Peoria, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-1.19	-1.14	-1.10	-1.08	-0.81	-0.56	-0.49	-0.49
Perth Amboy Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	-17.03	-16.29	-15.64	-15.19	-11.43	-8.09	-6.78	-6.78
Philadelphia-Camden County Area, PA-NJ	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-380.85	-364.13	-349.58	-339.58	-255.64	-180.79	-151.50	-151.50
Philadelphia-Wilmington, PA-NJ-DE	PM _{2.5} (2006 24-hour)	Maintenance, Moderate for PA and DE; Subject to Former Subpart 1 for NJ	100	0	-423.27	-404.64	-388.79	-377.90	-284.57	-200.68	-168.95	-168.95
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-437.07	-417.82	-401.58	-390.43	-294.03	-207.13	-174.69	-174.69
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	-437.07	-417.82	-401.58	-390.42	-294.03	-207.12	-174.68	-174.68
Phoenix Area, AZ	CO (1971 8-hour)	Maintenance, Serious	100	0	9.14	8.78	8.09	7.61	5.64	4.61	3.02	3.02
Phoenix-Mesa, AZ	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	9.53	9.16	8.44	7.94	5.89	4.80	3.15	3.15
Phoenix-Mesa, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	9.80	9.42	8.68	8.16	6.05	4.94	3.24	3.24
Pierce County; Tacoma, WA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	-0.95	-0.91	-0.87	-0.85	-0.64	-0.45	-0.38	-0.38
Pima County; Ajo Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pima County; Rillito Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	-0.20	-0.19	-0.19	-0.19	-0.14	-0.09	-0.09	-0.09
Pinal and Gila Counties; Payson, AZ	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.05	0.05	0.04	0.04	0.03	0.02	0.02	0.02
Pinal County (part); West Pinal, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.37	0.36	0.32	0.29	0.21	0.20	0.10	0.10
Pitkin County; Aspen, CO	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	-6.33	-6.06	-5.81	-5.65	-4.25	-3.01	-2.52	-2.52
Pittsburgh Area, PA	CO (1971 8-hour)	Maintenance, --	100	0	-3.88	-3.70	-3.58	-3.49	-2.63	-1.82	-1.58	-1.58

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Pittsburgh-Beaver Valley, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-921.52	-881.07	-845.82	-821.60	-618.51	-437.48	-366.50
Pittsburgh-Beaver Valley, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-914.26	-874.13	-839.14	-815.10	-613.62	-434.05	-363.59
Plumas County, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	-0.24	-0.23	-0.22	-0.21	-0.16	-0.11	-0.10
Polk County, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-1.16	-1.11	-1.06	-1.04	-0.78	-0.55	-0.46
Portland Area: Portland Metro Service District Boundary, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	2.56	2.47	2.25	2.11	1.56	1.30	0.82
Power-Bannock Counties; Fort Hall Indian Reservation, ID	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Power-Bannock Counties; Portneuf Valley Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.18	0.18	0.16	0.15	0.11	0.09	0.06
Provo Area, UT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	0.25	0.24	0.22	0.21	0.15	0.13	0.08
Provo, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	-130.54	-124.81	-119.83	-116.41	-87.64	-61.96	-51.95
Prowers County; Lamar, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Raleigh-Durham Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-18.50	-17.66	-17.12	-16.74	-12.64	-8.66	-7.64
Ramsey County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-139.84	-133.70	-128.33	-124.63	-93.82	-66.41	-55.57
Reading, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-1.49	-1.42	-1.39	-1.38	-1.05	-0.68	-0.65
Reno Area, NV	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.83	0.79	0.73	0.69	0.51	0.42	0.28
Rhineland, WI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.08	0.08	0.07	0.07	0.05	0.04	0.03
Riverside County (Coachella Valley), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	-0.83	-0.79	-0.80	-0.81	-0.62	-0.36	-0.41
Riverside County (Coachella Valley), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	-0.83	-0.79	-0.80	-0.81	-0.62	-0.36	-0.41
Riverside County; Coachella Valley Planning Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	-0.96	-0.91	-0.92	-0.93	-0.72	-0.42	-0.47

Notes:

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NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Riverside, Los Angeles, Orange, and San Bernardino Counties; South Coast Air Basin, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	-317.67	-303.55	-292.77	-285.39	-215.18	-149.75	-128.82
Rosebud County; Lame Deer, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Routt County (part); Steamboat Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-93.46	-89.36	-85.77	-83.30	-62.70	-44.38	-37.14
Rusk and Panola Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.26	-0.25	-0.24	-0.23	-0.17	-0.12	-0.10
Sacramento Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-169.44	-161.99	-155.61	-151.22	-113.86	-80.37	-67.56
Sacramento County, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-538.56	-514.92	-494.33	-480.18	-361.49	-255.67	-214.22
Sacramento Metro, CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	-536.08	-512.54	-492.13	-478.12	-359.96	-254.42	-213.39
Sacramento Metro, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	-536.08	-512.54	-492.13	-478.12	-359.96	-254.42	-213.39
Sacramento, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	-536.21	-512.66	-492.25	-478.23	-360.04	-254.48	-213.44
Salem Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	0.59	0.57	0.53	0.50	0.37	0.30	0.20
Salt Lake City Area, UT	CO (1971 8-hour)	Maintenance, --	100	0	-154.93	-148.13	-142.19	-138.10	-103.96	-73.56	-61.59
Salt Lake City, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	-151.13	-144.48	-138.82	-134.93	-101.60	-71.65	-60.32
Salt Lake County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-152.80	-146.08	-140.30	-136.32	-102.64	-72.49	-60.88
Salt Lake County, UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	-152.79	-146.08	-140.29	-136.32	-102.64	-72.49	-60.88
San Antonio, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.93	1.87	1.63	1.46	1.06	1.05	0.47
San Bernardino County (part); excluding Searles Valley Planning Area and South Coast Air Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-335.06	-320.36	-307.53	-298.71	-224.87	-159.07	-133.24
San Diego Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	8.63	8.29	7.65	7.21	5.35	4.33	2.88

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
San Diego County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	8.67	8.33	7.69	7.24	5.38	4.35	2.89
San Diego County, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	8.64	8.30	7.66	7.22	5.36	4.34	2.88
San Francisco Bay Area, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	-525.35	-502.23	-482.64	-469.18	-353.33	-249.01	-209.85
San Francisco Bay Area, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-525.38	-502.25	-482.66	-469.20	-353.34	-249.03	-209.86
San Francisco Bay Area, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	-525.20	-502.08	-482.50	-469.05	-353.23	-248.94	-209.80
San Francisco-Oakland-San Jose Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-526.11	-502.96	-483.29	-469.78	-353.77	-249.41	-210.06
San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	-722.93	-691.17	-663.73	-644.87	-485.52	-343.04	-287.90
San Joaquin Valley, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	-722.93	-691.17	-663.73	-644.87	-485.52	-343.04	-287.90
San Joaquin Valley, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	-722.93	-691.17	-663.73	-644.87	-485.52	-343.04	-287.90
San Joaquin Valley, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	-720.44	-688.79	-661.44	-642.66	-483.85	-341.86	-286.91
San Joaquin Valley, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	-720.44	-688.79	-661.44	-642.66	-483.85	-341.86	-286.91
San Luis Obispo (Eastern part), CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-38.61	-36.91	-35.43	-34.41	-25.90	-18.33	-15.34
San Luis Obispo (Eastern San Luis Obispo), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	-38.61	-36.91	-35.43	-34.41	-25.90	-18.33	-15.34
San Manuel, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.32	-0.31	-0.30	-0.29	-0.22	-0.15	-0.13
San Miguel County; Telluride, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.46	-0.44	-0.42	-0.41	-0.31	-0.22	-0.18
Sanders County (part); Thompson Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Santa Cruz County; Nogales Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.09	0.09	0.08	0.07	0.06	0.04	0.03
Seaford, DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-0.35	-0.33	-0.34	-0.35	-0.27	-0.15	-0.18

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Seattle-Tacoma Area, WA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	6.56	6.31	5.79	5.43	4.03	3.32	2.14
Seattle-Tacoma, WA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.28	0.28	0.22	0.18	0.13	0.17	0.03
Sheboygan County, WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.07	0.07	0.06	0.05	0.04	0.04	0.01
Sheboygan County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.06	-0.06	-0.06	-0.06	-0.05	-0.02	-0.03
Sheridan County; City of Sheridan, WY	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.17	-0.16	-0.16	-0.15	-0.12	-0.08	-0.07
Shoshone County (part); excluding Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.06	0.06	0.05	0.05	0.04	0.03	0.02
Shoshone County; City of Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Silver Bow County; Butte, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.06	0.06	0.06	0.05	0.04	0.03	0.02
Somerville Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.03	0.03	0.03	0.03	0.02	0.02	0.01
Southern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-130.54	-124.81	-119.83	-116.41	-87.64	-61.96	-51.95
Southwest Indiana, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.05	-0.05	-0.05	-0.04	-0.03	-0.02	-0.02
Spokane Area, WA	CO (1971 8-hour)	Maintenance, Serious	100	0	0.75	0.72	0.67	0.63	0.47	0.38	0.25
Spokane County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.77	0.74	0.68	0.64	0.47	0.38	0.26
Springfield Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	-0.14	-0.13	-0.14	-0.14	-0.11	-0.05	-0.08
St. Bernard Parish, LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-363.38	-347.44	-333.47	-323.87	-243.80	-172.57	-144.40
St. Clair, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.79	-0.75	-0.73	-0.71	-0.53	-0.37	-0.32
St. Louis Area, MO	CO (1971 8-hour)	Maintenance, --	100	0	-367.56	-351.43	-337.36	-327.69	-246.68	-174.50	-146.16
St. Louis, MO-IL	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-368.27	-352.09	-338.12	-328.52	-247.34	-174.74	-146.68
St. Louis-St. Charles-Farmington, MO-IL	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-368.65	-352.45	-338.49	-328.91	-247.64	-174.90	-146.88

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				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Steubenville, OH-WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-4.27	-4.08	-3.93	-3.82	-2.87	-2.03	-1.71
Steubenville-Weirton, OH-WV	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-3.60	-3.44	-3.32	-3.23	-2.43	-1.70	-1.45
Stockton Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.71	0.68	0.63	0.58	0.43	0.36	0.23
Sullivan County, TN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-1.48	-1.41	-1.36	-1.32	-0.99	-0.70	-0.59
Sutter Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Syracuse Area; Onondaga County, NY	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	1.10	1.06	0.98	0.92	0.68	0.56	0.37
Tazewell County: Groveland Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Terre Haute, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.17	0.17	0.15	0.15	0.11	0.09	0.06
Thurston County; Cities of Olympia, Tumwater, and Lacey, WA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.25	0.24	0.22	0.21	0.15	0.12	0.08
Titus County, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Toms River Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Tooele County (part), UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	-131.80	-126.02	-120.95	-117.47	-88.42	-62.59	-52.37
Trenton Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.22	0.21	0.19	0.18	0.13	0.11	0.07
Trona, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	-16.20	-15.49	-14.87	-14.44	-10.87	-7.69	-6.44
Tucson Area, AZ	CO (1971 8-hour)	Maintenance, --	100	0	2.13	2.05	1.88	1.76	1.30	1.08	0.69
Tuolumne County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.95	-0.91	-0.87	-0.85	-0.64	-0.45	-0.39
Tuscan Buttes, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tuscan Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Uinta Basin, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-16.84	-16.10	-15.46	-15.02	-11.31	-8.00	-6.70
Union County; LaGrande, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.04	0.04	0.03	0.03	0.02	0.02	0.01
Upper Green River Basin Area, WY	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	-142.75	-136.48	-131.00	-127.23	-95.77	-67.79	-56.73
Utah County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-135.35	-129.41	-124.25	-120.70	-90.87	-64.24	-53.86
Vancouver Area: Clark County (part), WA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.73	0.70	0.64	0.60	0.45	0.36	0.24
Ventura County, CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	-337.61	-322.79	-309.89	-301.02	-226.61	-160.27	-134.29
Ventura County, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	-337.61	-322.79	-309.89	-301.02	-226.61	-160.27	-134.29
Vermillion County; Part of Clinton Township, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.03	0.03	0.03	0.03	0.02	0.02	0.01
Vigo County, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.16	0.15	0.13	0.12	0.09	0.09	0.04
Walla Walla County; Wallula, WA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Waltham Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.12	0.11	0.10	0.10	0.07	0.06	0.04
Warren County: Conewago Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-142.04	-135.81	-130.35	-126.59	-95.29	-67.45	-56.44
Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-142.00	-135.77	-130.32	-126.56	-95.27	-67.44	-56.43
Warren, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-141.99	-135.76	-130.30	-126.55	-95.26	-67.43	-56.42
Washington Area, DC-MD-VA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-5.19	-4.96	-4.83	-4.74	-3.58	-2.41	-2.19
Washington, DC-MD-VA	Ozone (2008 8-hour)	Nonattainment (DC) Maintenance (MD, VA), Marginal	50	0	-0.32	-0.24	-0.72	-1.06	-0.92	0.23	-1.02
Washington, DC-MD-VA	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	-0.33	-0.25	-0.74	-1.08	-0.93	0.23	-1.03
Washoe County; Reno Planning Area, NV	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.84	0.80	0.74	0.70	0.52	0.42	0.28

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.08	0.08	0.07	0.06	0.05	0.04	0.02
Wayne County; (part), MI	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-13.75	-13.14	-12.62	-12.26	-9.23	-6.52	-5.47
West Central Pinal County, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	-0.20	-0.20	-0.19	-0.19	-0.14	-0.09	-0.09
West Silver Valley, ID	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.03	0.03	0.03	0.03	0.02	0.02	0.01
Williamson County, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-1.81	-1.73	-1.67	-1.63	-1.23	-0.85	-0.73
Winston-Salem Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-4.14	-3.95	-3.83	-3.74	-2.83	-1.94	-1.71
Worcester Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	-0.56	-0.54	-0.53	-0.53	-0.40	-0.25	-0.25
Yakima Area, WA	CO (1971 8-hour)	Maintenance, --	100	0	0.07	0.07	0.06	0.06	0.04	0.03	0.02
Yakima County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.23	0.23	0.21	0.20	0.15	0.12	0.08
Yuba City-Marysville, CA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.03	0.03	0.01	0.00	0.00	0.03	-0.02
Yuma County; Yuma Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.39	0.37	0.35	0.33	0.24	0.20	0.13
Yuma, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.20	0.19	0.18	0.17	0.12	0.10	0.07

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Table A-7. Changes in Emissions from U.S. Passenger Cars and Light Trucks by Nonattainment or Maintenance Area and Alternative, Direct and Indirect Impacts--Nitrogen Oxides (NO_x), 2025

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Ada County; Boise, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-4.13	-3.94	-3.69	-3.56	-2.58	-2.47	-1.89
Adams, Denver, and Boulder Counties; Denver Metropolitan Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	24.07	23.35	20.83	20.73	14.80	8.49	11.57
Ajo, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Albuquerque Area, NM	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-7.17	-6.84	-6.42	-6.19	-4.48	-4.37	-3.27
Allegan County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.03	0.04	0.02	0.03	0.02	-0.09	0.03
Allegheny County Air Basin: Hazelwood Monitor, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	1.09	1.06	0.94	0.94	0.67	0.38	0.52
Allegheny County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	4.37	4.31	3.66	3.76	2.65	0.49	2.20
Allegheny County; The Area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.73	1.67	1.52	1.49	1.07	0.77	0.82
Allegheny, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	4.26	4.12	3.72	3.67	2.63	1.79	2.02
Allentown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-5.68	-5.42	-5.09	-4.91	-3.55	-3.50	-2.59
Allentown-Bethlehem-Easton, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-6.22	-5.94	-5.59	-5.38	-3.89	-3.89	-2.83
Alton Township, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	35.60	34.31	31.24	30.70	22.04	16.27	16.76
Amador County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.46	-0.44	-0.42	-0.40	-0.29	-0.32	-0.21
Anchorage Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	-1.31	-1.25	-1.17	-1.13	-0.82	-0.78	-0.60
Anchorage; Eagle River, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.07	-0.07	-0.07	-0.06	-0.05	-0.04	-0.03
Anne Arundel County and Baltimore County, MD	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-12.92	-12.34	-11.55	-11.16	-8.07	-7.72	-5.91

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
AQCR 012: Portions of Grant County, NM	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.57	-0.54	-0.50	-0.49	-0.35	-0.33	-0.26
AQCR 109-Millinocket, ME	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-1.26	-1.20	-1.14	-1.09	-0.79	-0.82	-0.57
AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington Counties (Minneapolis-St. Paul), MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-16.49	-15.59	-15.06	-14.26	-10.40	-12.50	-7.29
AQCR 237: Brown County: Green Bay Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.89	0.86	0.78	0.76	0.55	0.39	0.42
AQCR 238: Marathon County: Rothschild Subcity Area, Rib Mountain, Weston, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-2.25	-2.15	-2.01	-1.94	-1.41	-1.32	-1.03
AQCR 238: Oneida County: Rhinelander Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.79	-0.75	-0.70	-0.68	-0.49	-0.46	-0.36
AQCR 239: Milwaukee County: Milwaukee Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-7.85	-7.50	-7.01	-6.77	-4.90	-4.60	-3.60
AQCR 240: Dane County: Madison Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-6.95	-6.64	-6.20	-6.00	-4.34	-4.06	-3.19
Archuleta County; Pagosa Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	43.26	41.70	37.97	37.31	26.78	19.74	20.37
Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	11.18	10.78	9.81	9.64	6.92	5.10	5.26
Aroostock County; City of Presque Isle, ME	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.03	-0.03	-0.03	-0.03	-0.02	-0.03	-0.01
Atlanta, GA	Ozone (2008 8-hour)	Maintenance, Moderate	100	0	-72.90	-69.69	-65.10	-62.94	-45.50	-42.80	-33.41
Atlanta, GA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-56.94	-54.42	-50.86	-49.16	-35.54	-33.54	-26.08
Atlantic City Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	-0.48	-0.46	-0.43	-0.42	-0.30	-0.28	-0.22
Bakersfield Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	-2.72	-2.58	-2.47	-2.35	-1.71	-1.93	-1.22

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Baltimore Area, MD	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.15	0.15	0.13	0.13	0.13	0.09	0.05	0.07
Baltimore, MD	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	-29.31	-27.98	-26.27	-25.32	-18.33	-18.01	-13.36	-13.36
Baltimore, MD	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	-29.63	-28.28	-26.56	-25.59	-18.53	-18.20	-13.50	-13.50
Baton Rouge, LA	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	116.81	112.67	102.35	100.72	72.27	51.96	55.13	55.13
Beaver, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.14	-0.13	-0.13	-0.12	-0.09	-0.09	-0.06	-0.06
Benton County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.31	-0.30	-0.28	-0.27	-0.19	-0.18	-0.14	-0.14
Berrien County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-2.19	-2.09	-1.97	-1.89	-1.37	-1.36	-1.00	-1.00
Billings Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	13.54	13.05	11.86	11.67	8.38	6.06	6.38	6.38
Billings, MT	SO ₂ (2010 1-hour)	Maintenance, --	100	0	14.56	14.03	12.78	12.56	9.02	6.65	6.86	6.86
Birmingham, AL	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-2.15	-1.96	-2.11	-1.87	-1.40	-2.86	-0.83	-0.83
Boise-Northern Ada County Area, ID	CO (1971 8-hour)	Maintenance, --	100	0	-4.12	-3.94	-3.69	-3.56	-2.58	-2.47	-1.89	-1.89
Bonner County; The Sandpoint Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.13	-0.13	-0.12	-0.11	-0.08	-0.08	-0.06	-0.06
Boston Area, MA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-7.10	-6.78	-6.35	-6.13	-4.43	-4.24	-3.25	-3.25
Boyd County (part), KY	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	17.82	17.18	15.64	15.37	11.03	8.14	8.39	8.39
Brooke; Follansbee Area, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.06	0.06	0.06	0.06	0.04	0.03	0.03	0.03
Burlington Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	-0.08	-0.08	-0.07	-0.07	-0.05	-0.05	-0.04	-0.04
Butte County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.28	0.29	0.21	0.24	0.16	-0.19	0.16	0.16
Calaveras County, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	-0.50	-0.48	-0.45	-0.43	-0.31	-0.32	-0.23	-0.23
Calaveras County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.50	-0.48	-0.45	-0.43	-0.31	-0.32	-0.23	-0.23

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				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Campbell-Clermont Counties, KY-OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.02	0.02	0.01	0.02	0.01	-0.05	0.01
Canton-Massillon, OH	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-0.21	-0.17	-0.25	-0.18	-0.15	-0.65	-0.05
Central New Hampshire, NH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-2.52	-2.41	-2.25	-2.18	-1.57	-1.46	-1.16
Central Steptoe Valley, NV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.23	-0.22	-0.21	-0.20	-0.15	-0.14	-0.11
Charleston, WV	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	13.94	13.47	12.17	12.02	8.61	5.85	6.61
Charlotte Area, NC	CO (1971 8-hour)	Maintenance, --	100	0	-20.32	-19.43	-18.13	-17.54	-12.68	-11.80	-9.33
Charlotte-Rock Hill, NC-SC	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-36.73	-35.12	-32.79	-31.71	-22.92	-21.46	-16.84
Chicago, IL-IN-WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	60.86	59.28	52.17	52.39	37.27	17.33	29.66
Chicago-Naperville, IL-IN-WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	54.10	52.83	46.14	46.56	33.06	13.34	26.56
Chico (Butte County), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.28	0.29	0.21	0.24	0.16	-0.19	0.16
Chico Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.96	-0.92	-0.86	-0.83	-0.60	-0.56	-0.44
Chico, CA	PM _{2.5} (2006 24-hour)	Maintenance, Moderate	100	0	0.03	0.05	-0.01	0.03	0.01	-0.30	0.05
Cincinnati, OH-KY	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-21.13	-20.17	-18.94	-18.25	-13.21	-13.00	-9.63
Cincinnati, OH-KY-IN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-22.29	-21.28	-19.98	-19.25	-13.94	-13.69	-10.16
Clark County; Las Vegas Planning Area, NV	PM ₁₀ (1987 24-hour)	Maintenance, Serious	100	0	-24.82	-23.73	-22.15	-21.43	-15.48	-14.46	-11.38
Cleveland Area, OH	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-14.26	-13.63	-12.73	-12.31	-8.90	-8.36	-6.53
Cleveland, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-31.29	-29.88	-27.99	-27.02	-19.54	-18.82	-14.29
Cleveland, OH	PM _{2.5} (2012 Annual)	Maintenance, Moderate	100	0	-17.22	-16.46	-15.38	-14.87	-10.75	-10.16	-7.89
Cleveland-Akron-Lorain, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-27.51	-26.23	-24.69	-23.76	-17.21	-17.27	-12.50

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Cleveland-Akron-Lorain, OH	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-30.09	-28.74	-26.93	-25.99	-18.80	-18.13	-13.75
Cochise County; Paul Spur/Douglas Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.34	-0.33	-0.30	-0.29	-0.21	-0.20	-0.16
Colorado Springs Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-5.81	-5.55	-5.20	-5.02	-3.63	-3.54	-2.65
Columbus, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-23.18	-22.15	-20.73	-20.02	-14.48	-13.85	-10.60
Columbus, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-21.95	-20.97	-19.62	-18.95	-13.70	-13.08	-10.04
Cook County; Lyons Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.79	0.77	0.68	0.68	0.49	0.24	0.38
Cook County; Southeast Chicago, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	100.41	96.78	88.11	86.59	62.16	45.73	47.29
Coshocton County; Franklin Township, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.05	0.04	0.04	0.04	0.03	0.02	0.02
Coso Junction, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	3.09	2.98	2.71	2.66	1.91	1.41	1.45
Cuyahoga County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-11.43	-10.93	-10.20	-9.87	-7.13	-6.68	-5.24
Cuyahoga County, OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-14.26	-13.64	-12.73	-12.31	-8.90	-8.36	-6.54
Dallas-Fort Worth, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-54.66	-51.94	-49.43	-47.24	-34.32	-37.33	-24.55
Dallas-Fort Worth, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-53.47	-50.80	-48.37	-46.21	-33.58	-36.64	-24.00
Delaware County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	52.35	50.50	45.88	45.14	32.39	23.32	24.71
Denver Metro/North Front Range, CO	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	10.98	10.92	8.99	9.43	6.59	-0.48	5.70
Denver-Boulder Area, CO	CO (1971 8-hour)	Maintenance, Serious	100	0	15.72	15.41	13.29	13.52	9.57	2.90	7.81
Denver-Boulder-Greeley-Ft Collins-Loveland, CO	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	10.98	10.92	8.99	9.43	6.59	-0.48	5.70
Detroit Area, MI	CO (1971 8-hour)	Maintenance, --	100	0	-13.74	-13.09	-12.37	-11.87	-8.61	-8.85	-6.22
Detroit, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-26.45	-25.05	-24.09	-22.87	-16.66	-19.47	-11.74

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Detroit, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	2.76	2.68	2.38	2.38	1.70	0.91	1.33
Detroit-Ann Arbor, MI	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-26.59	-25.18	-24.21	-22.99	-16.75	-19.55	-11.81
Doña Ana County (Sunland Park Area), NM	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	7.51	7.24	6.59	6.47	4.65	3.41	3.54
Doña Ana County; Anthony, NM	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	7.62	7.35	6.69	6.58	4.72	3.47	3.59
Door County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Douglas, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.28	-0.27	-0.25	-0.24	-0.18	-0.16	-0.13
Dukes County, MA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-0.10	-0.10	-0.09	-0.09	-0.07	-0.06	-0.05
Duluth Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	3.55	3.43	3.09	3.06	2.19	1.47	1.68
East Chicago Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	99.93	96.31	87.70	86.17	61.87	45.65	47.05
East Helena Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
East Kern County Area, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Serious	70	0	2.56	2.47	2.24	2.21	1.58	1.12	1.21
El Paso County, TX	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	1.80	1.79	1.49	1.55	1.08	0.01	0.93
El Paso, TX	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	7.37	7.10	6.46	6.35	4.56	3.32	3.47
Eugene-Springfield Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	-2.68	-2.57	-2.39	-2.32	-1.67	-1.56	-1.23
Evangeline Parish (Partial), LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.18	0.17	0.15	0.15	0.11	0.08	0.08
Fairbanks Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	1.56	1.50	1.36	1.34	0.96	0.69	0.73
Fairbanks, AK	PM _{2.5} (2006 24-hour)	Nonattainment, Serious	70	0	1.38	1.33	1.20	1.19	0.85	0.59	0.65
Flathead County; Columbia Falls and Vicinity, MT	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	-0.05	-0.04	-0.04	-0.04	-0.03	-0.03	-0.02
Flathead County; Kalispell and Vicinity, MT	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	-0.42	-0.41	-0.38	-0.37	-0.26	-0.25	-0.19

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Flathead County; Whitefish and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.09	-0.08	-0.08	-0.07	-0.05	-0.05	-0.04
Fort Collins Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-1.31	-1.25	-1.18	-1.13	-0.82	-0.83	-0.59
Freehold Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	-0.15	-0.15	-0.14	-0.13	-0.10	-0.09	-0.07
Freestone and Anderson Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	6.25	6.03	5.48	5.39	3.87	2.84	2.94
Fremont County; Canon City Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.44	0.43	0.38	0.38	0.27	0.14	0.21
Fresno Area, CA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	-6.11	-5.84	-5.46	-5.27	-3.81	-3.65	-2.79
Grants Pass Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.40	-0.38	-0.35	-0.34	-0.25	-0.23	-0.18
Great Falls Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	1.82	1.76	1.60	1.57	1.13	0.83	0.86
Greater Connecticut, CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	-19.56	-18.70	-17.46	-16.89	-12.21	-11.42	-8.97
Greater Connecticut, CT	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	-19.57	-18.72	-17.47	-16.90	-12.22	-11.43	-8.98
Greeley Area, CO	CO (1971 8-hour)	Maintenance, --	100	0	46.56	44.90	40.80	40.15	28.81	20.78	21.97
Hancock and Brooke Counties (Part); The City of Weirton, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.27	1.23	1.11	1.10	0.79	0.56	0.60
Hancock County (Part) The City of Weirton, including Butler and Clay: Magisterial Districts, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	4.69	4.52	4.12	4.05	2.90	2.12	2.21
Harrisburg-Lebanon-Carlisle-York, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-11.88	-11.34	-10.63	-10.26	-7.42	-7.15	-5.43
Hartford-New Britain-Middletown Area, CT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-13.61	-13.02	-12.15	-11.75	-8.49	-7.93	-6.24
Hayden, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.40	0.39	0.35	0.35	0.25	0.18	0.19
Hayden, AZ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.43	0.41	0.38	0.37	0.27	0.19	0.20

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Hayden, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.43	0.42	0.38	0.37	0.27	0.19	0.20
Hillsborough County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.49	0.47	0.43	0.42	0.30	0.20	0.23
Hillsborough-Polk County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.76	0.73	0.66	0.65	0.47	0.34	0.36
Houston-Galveston-Brazoria, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	321.41	310.41	280.84	277.08	198.59	136.34	152.32
Houston-Galveston-Brazoria, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	320.38	309.40	279.97	276.20	197.97	136.15	151.81
Humphreys County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.30	-0.28	-0.27	-0.26	-0.19	-0.17	-0.14
Huntington, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.43	-0.41	-0.38	-0.37	-0.27	-0.25	-0.20
Imperial County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-2.17	-2.07	-1.94	-1.87	-1.35	-1.30	-0.99
Imperial County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-2.17	-2.07	-1.94	-1.87	-1.35	-1.30	-0.99
Imperial County, CA	PM _{2.5} (2006 24-hour)	Nonattainment, Moderate	100	0	-2.10	-2.01	-1.87	-1.81	-1.31	-1.22	-0.96
Imperial County, CA	PM _{2.5} (2012 Annual)	Nonattainment, Moderate	100	0	-2.10	-2.01	-1.87	-1.81	-1.31	-1.22	-0.96
Imperial County; Imperial Valley Planning Area, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Serious	70	0	-2.12	-2.03	-1.90	-1.83	-1.33	-1.27	-0.97
Indian Wells, CA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	2.54	2.45	2.22	2.19	1.57	1.10	1.20
Indiana, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	36.60	35.28	32.10	31.56	22.65	16.59	17.24
Indianapolis Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Indianapolis, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-6.03	-5.76	-5.39	-5.20	-3.77	-3.63	-2.75
Inyo County; Owens Valley Planning Area, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Serious	70	0	0.51	0.50	0.45	0.44	0.32	0.22	0.24
Jackson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.27	0.27	0.23	0.23	0.17	0.06	0.13
Jackson County; Medford-Ashland (including White City), OR	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	-1.89	-1.81	-1.68	-1.63	-1.18	-1.09	-0.87

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Jamestown, NY	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	9.48	9.15	8.29	8.17	5.86	4.11	4.48
Jefferson County, KY	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jefferson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.53	-0.50	-0.47	-0.45	-0.33	-0.31	-0.24
Jefferson County; (part) Steubenville & Mingo Junction, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.81	0.78	0.70	0.69	0.50	0.29	0.39
Jefferson County; (part), OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.03	0.03	0.02	0.02	0.02	0.01	0.01
Johnstown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	22.30	21.50	19.55	19.23	13.80	10.00	10.52
Josephine County; Grants Pass, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.39	-0.38	-0.35	-0.34	-0.25	-0.23	-0.18
Juneau; Mendenhall Valley Area, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.10	-0.10	-0.09	-0.09	-0.06	-0.06	-0.05
Kern County (Eastern Kern), CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	50.15	48.34	43.99	43.24	31.04	22.76	23.62
Kern County (Eastern Kern), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	50.15	48.34	43.99	43.24	31.04	22.76	23.62
King County; Kent, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.23	-0.22	-0.21	-0.20	-0.15	-0.14	-0.11
King County; Seattle, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.17	-0.16	-0.15	-0.15	-0.11	-0.10	-0.08
Klamath County; Klamath Falls, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.64	-0.61	-0.57	-0.55	-0.40	-0.38	-0.29
Klamath Falls Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.64	-0.61	-0.57	-0.55	-0.40	-0.38	-0.29
Klamath Falls, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	-0.73	-0.70	-0.66	-0.63	-0.46	-0.43	-0.34
Knoxville, TN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-9.03	-8.63	-8.08	-7.80	-5.64	-5.44	-4.13
Knoxville-Sevierville-La Follette, TN	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-9.16	-8.73	-8.23	-7.91	-5.73	-5.77	-4.16
La Porte County; (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.26	0.25	0.21	0.22	0.15	0.02	0.13
Lake County (part); Lakeview, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.07	-0.07	-0.06	-0.06	-0.04	-0.04	-0.03

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Lake County, OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	-2.90	-2.77	-2.59	-2.50	-1.81	-1.72	-1.33
Lake County: (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	98.99	95.44	86.82	85.36	61.27	44.72	46.65
Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.49	-0.47	-0.44	-0.42	-0.31	-0.29	-0.22
Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	100.41	96.79	88.09	86.58	62.15	45.57	47.30
Lake County; Polson, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01
Lake County; Ronan, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Lake Tahoe Nevada Area, NV	CO (1971 8-hour)	Maintenance, --	100	0	-0.26	-0.25	-0.23	-0.23	-0.16	-0.15	-0.12
Lake Tahoe North Shore Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	-0.13	-0.12	-0.12	-0.11	-0.08	-0.08	-0.06
Lake Tahoe South Shore Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.46	-0.44	-0.41	-0.40	-0.29	-0.27	-0.21
Lancaster, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-5.65	-5.40	-5.05	-4.88	-3.53	-3.34	-2.59
Lancaster, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-5.65	-5.40	-5.05	-4.88	-3.53	-3.34	-2.59
Lane County (part); Oakridge, OR	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
Lane County; Eugene/Springfield, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-2.68	-2.57	-2.39	-2.32	-1.67	-1.56	-1.23
Las Vegas Area, NV	CO (1971 8-hour)	Maintenance, Serious	100	0	-24.84	-23.75	-22.17	-21.44	-15.50	-14.47	-11.39
Las Vegas, NV	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-24.82	-23.73	-22.15	-21.43	-15.48	-14.46	-11.38
LaSalle County; Oglesby, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.53	0.52	0.46	0.46	0.33	0.19	0.26
Laurel Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	14.54	14.02	12.76	12.54	9.00	6.64	6.85
Lebanon County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	-1.42	-1.36	-1.27	-1.23	-0.89	-0.85	-0.65
Lemont, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	33.07	31.89	29.00	28.52	20.47	14.87	15.59

Notes:

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NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Liberty-Clairton, PA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	1.73	1.67	1.52	1.49	1.07	0.77	0.82
Lincoln County; Libby and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.08	-0.08	-0.07	-0.07	-0.05	-0.05	-0.04
Logan, UT-ID	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	-1.49	-1.43	-1.33	-1.29	-0.93	-0.87	-0.69
Longmont Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	29.24	28.19	25.65	25.22	18.10	13.24	13.78
Lorain County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.53	-0.51	-0.48	-0.46	-0.33	-0.32	-0.24
Los Angeles, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	-138.81	-132.29	-124.75	-119.90	-86.89	-88.21	-62.97
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	40.25	38.88	35.15	34.70	24.86	16.90	19.09
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	40.25	38.88	35.15	34.70	24.86	16.90	19.09
Los Angeles-South Coast Air Basin Area, CA	CO (1971 8-hour)	Maintenance, Serious	100	0	-138.99	-132.47	-124.91	-120.06	-87.01	-88.30	-63.06
Los Angeles-South Coast Air Basin Area, CA	NO ₂ (1971 Annual)	Maintenance, --	100	0	-138.97	-132.46	-124.90	-120.05	-87.00	-88.29	-63.05
Los Angeles-South Coast Air Basin, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	-138.84	-132.33	-124.78	-119.93	-86.92	-88.23	-62.99
Los Angeles-South Coast Air Basin, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	-138.74	-132.23	-124.68	-119.84	-86.85	-88.17	-62.94
Los Angeles-South Coast Air Basin, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	-138.81	-132.29	-124.75	-119.90	-86.89	-88.21	-62.97
Louisville, KY-IN	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-14.82	-14.17	-13.24	-12.80	-9.25	-8.76	-6.79
Lowell Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	-0.91	-0.87	-0.82	-0.79	-0.57	-0.55	-0.42
Lucas County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	17.49	16.89	15.28	15.07	10.80	7.42	8.29
Madison County; Granite City Township and Nameoki Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	35.65	34.36	31.28	30.74	22.07	16.22	16.79
Manchester Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	-1.38	-1.32	-1.23	-1.19	-0.86	-0.80	-0.63

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Manitowoc County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.52	-0.50	-0.47	-0.45	-0.33	-0.31	-0.24
Maricopa and Pinal Counties; Phoenix Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	-48.25	-46.14	-43.06	-41.66	-30.11	-28.12	-22.13
Marion County: Lawrence, Washington, and Warrant Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-5.19	-4.95	-4.65	-4.48	-3.24	-3.16	-2.37
Mariposa County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-0.51	-0.49	-0.46	-0.44	-0.32	-0.30	-0.23
Mariposa County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.51	-0.49	-0.46	-0.44	-0.32	-0.30	-0.23
Marshall, WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	6.39	6.16	5.60	5.51	3.95	2.90	3.01
Medford Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-1.02	-0.97	-0.91	-0.88	-0.63	-0.59	-0.47
Memphis Area, TN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-6.30	-5.98	-5.71	-5.45	-3.96	-4.42	-2.82
Memphis, TN-MS-AR	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-9.58	-9.11	-8.64	-8.27	-6.01	-6.38	-4.32
Miami, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.29	0.28	0.25	0.25	0.18	0.11	0.14
Miami, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.19	-0.18	-0.17	-0.16	-0.12	-0.11	-0.09
Miami, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.29	0.28	0.25	0.25	0.18	0.11	0.14
Milwaukee-Racine, WI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-15.64	-14.96	-13.96	-13.50	-9.76	-9.12	-7.17
Minneapolis-St. Paul Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-17.66	-16.71	-16.10	-15.27	-11.13	-13.18	-7.82
Missoula Area, MT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.44	-0.42	-0.40	-0.38	-0.28	-0.32	-0.20
Missoula county; Missoula and Vicinity, MT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.45	-0.42	-0.41	-0.39	-0.28	-0.33	-0.20
Modesto Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-2.57	-2.45	-2.29	-2.22	-1.60	-1.49	-1.18

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Mohave County (part); Bullhead City, AZ	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.28	-0.27	-0.26	-0.24	-0.18	-0.22	-0.12
Mono County; Mammoth Lake Planning Area, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.04	0.05	0.03	0.04	0.03	-0.03	0.03
Mono County; Mono Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.36	0.35	0.31	0.31	0.22	0.16	0.17
Morenci, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.05	-0.04	-0.04	-0.04	-0.03	-0.03	-0.02
Morgan County, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.42	-0.41	-0.38	-0.37	-0.26	-0.25	-0.19
Morongo Band of Mission Indians	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	0.14	0.13	0.12	0.12	0.09	0.06	0.07
Morongo Band of Mission Indians, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	0.14	0.13	0.12	0.12	0.09	0.06	0.07
Morristown Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	-0.13	-0.12	-0.12	-0.11	-0.08	-0.09	-0.06
Muscatine County; (part), IA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.10	-0.10	-0.09	-0.09	-0.06	-0.06	-0.05
Muscatine, IA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.22	-0.21	-0.20	-0.19	-0.14	-0.13	-0.10
Muskegon County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-2.12	-2.03	-1.89	-1.83	-1.32	-1.23	-0.97
Muskingum River, OH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.03	-0.03	-0.03	-0.03	-0.02	-0.02	-0.01
Nashua Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	-0.91	-0.87	-0.81	-0.78	-0.57	-0.55	-0.41
Nassau County, FL	SO ₂ (2010 1-hour)	Maintenance, --	100	0	-0.09	-0.09	-0.08	-0.08	-0.06	-0.05	-0.04
Nevada County (Western part), CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-1.46	-1.40	-1.31	-1.26	-0.91	-0.86	-0.67
Nevada County (Western part), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	-1.47	-1.40	-1.31	-1.27	-0.92	-0.86	-0.67
New Haven County, CT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.26	-0.25	-0.23	-0.23	-0.16	-0.15	-0.12
New Haven-Meriden-Waterbury Area, CT	CO (1971 8-hour)	Maintenance, --	100	0	-10.01	-9.57	-8.94	-8.65	-6.25	-5.89	-4.59
New Manchester-Grant Magisterial District in Hancock County, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	1.32	1.28	1.16	1.14	0.82	0.60	0.62

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
New York County, NY	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-3.99	-3.81	-3.57	-3.44	-2.49	-2.38	-1.82
New York, NY-NJ-CT	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-144.87	-138.36	-129.63	-125.10	-90.51	-87.28	-66.18
New York-N. New Jersey-Long Island Area, NY-NJ-CT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	-72.06	-68.76	-64.61	-62.23	-45.06	-44.50	-32.81
New York-N. New Jersey-Long Island, NY-NJ-CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	-140.73	-134.39	-125.95	-121.52	-87.93	-84.95	-64.27
New York-Northern New Jersey-Long Island, NY-NJ-CT	Ozone (2015 8-hour)	Nonattainment, Moderate	50	0	-140.61	-134.28	-125.84	-121.42	-87.85	-84.89	-64.22
NJ Portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	-0.27	-0.25	-0.24	-0.23	-0.17	-0.17	-0.12
Nogales, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	-0.43	-0.41	-0.38	-0.37	-0.27	-0.25	-0.20
Northern Milwaukee/Ozaukee Shoreline, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.63	-0.60	-0.56	-0.54	-0.39	-0.39	-0.29
Northern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-5.87	-5.51	-5.44	-5.08	-3.73	-5.12	-2.53
Oakridge, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	-0.04	-0.04	-0.04	-0.04	-0.03	-0.02	-0.02
Ogden Area, UT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.75	-0.72	-0.67	-0.65	-0.47	-0.43	-0.34
Ogden Area, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.75	-0.72	-0.67	-0.65	-0.47	-0.43	-0.34
Olmsted County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.18	-0.17	-0.16	-0.15	-0.11	-0.13	-0.08
Olmsted; City of Rochester, MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.89	-0.85	-0.80	-0.77	-0.56	-0.57	-0.40
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.33	0.32	0.29	0.28	0.20	0.15	0.15
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.33	0.32	0.29	0.28	0.20	0.15	0.15
Pekin, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.19	-0.18	-0.17	-0.16	-0.12	-0.15	-0.08

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				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Penns Grove Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.56	0.54	0.50	0.49	0.35	0.26	0.27
Peoria County: Hollis Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.32	0.31	0.28	0.28	0.20	0.14	0.15
Peoria County: Peoria, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.80	-0.76	-0.72	-0.69	-0.50	-0.52	-0.36
Perth Amboy Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	2.98	2.88	2.61	2.57	1.84	1.29	1.41
Philadelphia-Camden County Area, PA-NJ	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	38.84	37.53	33.90	33.48	23.98	16.17	18.44
Philadelphia-Wilmington, PA-NJ-DE	PM _{2.5} (2006 24-hour)	Maintenance, Moderate for PA and DE; Subject to Former Subpart 1 for NJ	100	0	4.69	4.96	3.26	3.99	2.63	-5.12	2.91
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-11.19	-10.20	-10.96	-9.72	-7.30	-14.78	-4.34
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	-11.14	-10.16	-10.92	-9.69	-7.27	-14.75	-4.32
Phoenix Area, AZ	CO (1971 8-hour)	Maintenance, Serious	100	0	-46.59	-44.56	-41.59	-40.23	-29.07	-27.16	-21.37
Phoenix-Mesa, AZ	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-48.53	-46.41	-43.32	-41.90	-30.28	-28.28	-22.26
Phoenix-Mesa, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-49.79	-47.61	-44.44	-42.99	-31.07	-29.02	-22.84
Pierce County; Tacoma, WA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	2.31	2.22	2.02	1.99	1.43	1.05	1.09
Pima County; Ajo Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pima County; Rillito Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	-0.25	-0.24	-0.23	-0.22	-0.16	-0.20	-0.11
Pinal and Gila Counties; Payson, AZ	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	-0.24	-0.23	-0.21	-0.20	-0.15	-0.14	-0.11
Pinal County (part); West Pinal, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	-3.01	-2.87	-2.69	-2.60	-1.88	-1.81	-1.37
Pitkin County; Aspen, CO	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	28.53	27.50	25.04	24.60	17.66	13.00	13.44
Pittsburgh Area, PA	CO (1971 8-hour)	Maintenance, --	100	0	-0.61	-0.57	-0.58	-0.53	-0.39	-0.66	-0.25

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Pittsburgh-Beaver Valley, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	41.64	40.32	36.16	35.88	25.65	15.83	19.91
Pittsburgh-Beaver Valley, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	37.48	36.30	32.55	32.30	23.09	14.21	17.92
Plumas County, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.23	0.22	0.20	0.20	0.14	0.09	0.11
Polk County, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.28	-0.27	-0.25	-0.25	-0.18	-0.17	-0.13
Portland Area: Portland Metro Service District Boundary, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-15.06	-14.40	-13.44	-13.00	-9.40	-8.82	-6.90
Power-Bannock Counties; Fort Hall Indian Reservation, ID	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
Power-Bannock Counties; Portneuf Valley Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.90	-0.86	-0.80	-0.78	-0.56	-0.53	-0.41
Provo Area, UT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	-1.23	-1.18	-1.10	-1.07	-0.77	-0.72	-0.57
Provo, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	2.13	2.10	1.78	1.83	1.29	0.21	1.08
Prowers County; Lamar, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.27	0.26	0.24	0.23	0.17	0.11	0.13
Raleigh-Durham Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-21.98	-21.02	-19.63	-18.98	-13.72	-12.86	-10.08
Ramsey County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	20.58	19.84	18.07	17.75	12.74	9.40	9.69
Reading, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-3.91	-3.73	-3.50	-3.38	-2.44	-2.38	-1.78
Reno Area, NV	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-4.01	-3.84	-3.58	-3.47	-2.50	-2.33	-1.84
Rhineland, WI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.38	-0.37	-0.34	-0.33	-0.24	-0.22	-0.18
Riverside County (Coachella Valley), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	-5.55	-5.30	-4.96	-4.79	-3.46	-3.28	-2.54
Riverside County (Coachella Valley), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	-5.55	-5.30	-4.96	-4.79	-3.46	-3.28	-2.54
Riverside County; Coachella Valley Planning Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	-6.58	-6.29	-5.87	-5.68	-4.10	-3.88	-3.01

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Riverside, Los Angeles, Orange, and San Bernardino Counties; South Coast Air Basin, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	-137.86	-131.39	-123.91	-119.09	-86.31	-87.66	-62.54
Rosebud County; Lame Deer, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.10	0.09	0.08	0.08	0.06	0.04	0.05
Routt County (part); Steamboat Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	38.24	36.86	33.56	32.98	23.68	17.43	18.01
Rusk and Panola Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	10.74	10.35	9.43	9.26	6.65	4.90	5.06
Sacramento Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	3.43	3.44	2.75	2.94	2.04	-0.66	1.83
Sacramento County, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	46.30	44.75	40.39	39.91	28.59	19.09	22.00
Sacramento Metro, CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	34.68	33.64	30.01	29.87	21.33	12.22	16.67
Sacramento Metro, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	34.68	33.64	30.01	29.88	21.33	12.22	16.67
Sacramento, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	35.30	34.24	30.57	30.41	21.72	12.59	16.96
Salem Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	-2.88	-2.75	-2.57	-2.48	-1.79	-1.67	-1.32
Salt Lake City Area, UT	CO (1971 8-hour)	Maintenance, --	100	0	11.49	11.09	10.05	9.91	7.10	4.97	5.44
Salt Lake City, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	-6.81	-6.41	-6.28	-5.89	-4.31	-5.66	-2.96
Salt Lake County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	1.28	1.33	0.94	1.09	0.73	-0.97	0.75
Salt Lake County, UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	1.26	1.31	0.92	1.07	0.72	-0.98	0.74
San Antonio, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-11.19	-10.62	-10.16	-9.68	-7.04	-7.95	-5.00
San Bernardino County (part); excluding Searles Valley Planning Area and South Coast Air Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	44.54	42.99	38.97	38.40	27.54	19.37	21.06
San Diego Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-41.08	-39.28	-36.67	-35.47	-25.63	-23.99	-18.84

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
San Diego County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-41.26	-39.45	-36.83	-35.62	-25.75	-24.10	-18.92
San Diego County, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	-41.13	-39.33	-36.71	-35.51	-25.67	-24.02	-18.86
San Francisco Bay Area, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	-20.52	-19.15	-19.24	-17.78	-13.10	-19.82	-8.66
San Francisco Bay Area, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-20.40	-19.03	-19.13	-17.67	-13.03	-19.75	-8.60
San Francisco Bay Area, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	-21.24	-19.84	-19.89	-18.41	-13.56	-20.24	-8.99
San Francisco-Oakland-San Jose Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-14.37	-13.27	-13.75	-12.47	-9.27	-16.20	-5.84
San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	47.57	46.21	41.03	40.97	29.22	15.62	22.98
San Joaquin Valley, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	47.57	46.21	41.03	40.97	29.22	15.62	22.98
San Joaquin Valley, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	47.56	46.21	41.02	40.97	29.21	15.62	22.98
San Joaquin Valley, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	46.53	45.21	40.12	40.08	28.57	15.15	22.49
San Joaquin Valley, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	46.53	45.21	40.12	40.08	28.57	15.15	22.49
San Luis Obispo (Eastern part), CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	4.71	4.54	4.14	4.06	2.92	2.15	2.22
San Luis Obispo (Eastern San Luis Obispo), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	4.71	4.54	4.14	4.06	2.92	2.15	2.22
San Manuel, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.34	0.33	0.30	0.29	0.21	0.14	0.16
San Miguel County; Telluride, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.74	1.67	1.52	1.50	1.07	0.78	0.82
Sanders County (part); Thompson Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Santa Cruz County; Nogales Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.43	-0.41	-0.39	-0.37	-0.27	-0.25	-0.20
Seaford, DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-3.09	-2.96	-2.76	-2.67	-1.93	-1.80	-1.42

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Seattle-Tacoma Area, WA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	-34.09	-32.59	-30.45	-29.43	-21.28	-20.06	-15.62
Seattle-Tacoma, WA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-3.65	-3.48	-3.29	-3.16	-2.29	-2.41	-1.65
Sheboygan County, WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-1.18	-1.13	-1.05	-1.02	-0.74	-0.70	-0.54
Sheboygan County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.56	-0.53	-0.50	-0.48	-0.35	-0.33	-0.25
Sheridan County; City of Sheridan, WY	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.26	0.25	0.22	0.22	0.16	0.09	0.12
Shoshone County (part); excluding Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.29	-0.28	-0.26	-0.25	-0.18	-0.17	-0.13
Shoshone County; City of Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Silver Bow County; Butte, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.31	-0.29	-0.27	-0.27	-0.19	-0.18	-0.14
Somerville Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	-0.10	-0.09	-0.09	-0.08	-0.06	-0.06	-0.04
Southern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	2.13	2.10	1.78	1.83	1.29	0.21	1.08
Southwest Indiana, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	2.20	2.12	1.93	1.89	1.36	0.99	1.04
Spokane Area, WA	CO (1971 8-hour)	Maintenance, Serious	100	0	-3.69	-3.52	-3.29	-3.18	-2.30	-2.14	-1.69
Spokane County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-3.76	-3.59	-3.35	-3.24	-2.34	-2.18	-1.72
Springfield Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	-1.62	-1.55	-1.45	-1.40	-1.01	-0.95	-0.74
St. Bernard Parish, LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	40.65	39.18	35.67	35.06	25.17	18.54	19.14
St. Clair, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.16	0.16	0.13	0.14	0.09	0.00	0.08
St. Louis Area, MO	CO (1971 8-hour)	Maintenance, --	100	0	27.44	26.51	23.96	23.66	16.95	11.45	13.02
St. Louis, MO-IL	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	15.54	15.17	13.25	13.37	9.49	3.81	7.63
St. Louis-St. Charles-Farmington, MO-IL	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	11.92	11.71	10.02	10.25	7.23	1.69	5.97

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Steubenville, OH-WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	4.30	4.15	3.77	3.71	2.66	1.88	2.03
Steubenville-Weirton, OH-WV	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.26	0.26	0.21	0.22	0.15	-0.06	0.14
Stockton Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-4.02	-3.84	-3.59	-3.47	-2.51	-2.37	-1.84
Sullivan County, TN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.19	-0.18	-0.17	-0.16	-0.12	-0.13	-0.09
Sutter Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.58	0.55	0.50	0.50	0.36	0.26	0.27
Syracuse Area; Onondaga County, NY	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-5.59	-5.35	-4.99	-4.83	-3.49	-3.25	-2.57
Tazewell County: Groveland Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.25	-0.24	-0.22	-0.21	-0.15	-0.15	-0.11
Terre Haute, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.62	-0.59	-0.56	-0.54	-0.39	-0.39	-0.28
Thurston County; Cities of Olympia, Tumwater, and Lacey, WA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	-1.21	-1.15	-1.08	-1.04	-0.75	-0.70	-0.55
Titus County, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.10	0.09	0.08	0.08	0.06	0.04	0.05
Toms River Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.22	0.22	0.20	0.19	0.14	0.10	0.11
Tooele County (part), UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	8.26	7.96	7.25	7.13	5.12	3.77	3.89
Trenton Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	-1.00	-0.95	-0.89	-0.86	-0.62	-0.59	-0.46
Trona, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	3.01	2.90	2.64	2.59	1.86	1.37	1.42
Tucson Area, AZ	CO (1971 8-hour)	Maintenance, --	100	0	-11.53	-11.03	-10.30	-9.96	-7.20	-6.75	-5.29
Tuolumne County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.39	-0.37	-0.35	-0.33	-0.24	-0.28	-0.17
Tuscan Buttes, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.19	0.18	0.17	0.16	0.12	0.09	0.09
Tuscan Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.19	0.18	0.17	0.16	0.12	0.09	0.09

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Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Uinta Basin, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	40.04	38.59	35.13	34.53	24.79	18.23	18.86
Union County; LaGrande, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.19	-0.18	-0.17	-0.16	-0.12	-0.11	-0.09
Upper Green River Basin Area, WY	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	18.83	18.15	16.52	16.24	11.66	8.56	8.87
Utah County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	20.87	20.16	18.22	17.99	12.89	8.77	9.90
Vancouver Area: Clark County (part), WA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-3.52	-3.37	-3.15	-3.04	-2.20	-2.06	-1.62
Ventura County, CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	43.27	41.78	37.82	37.30	26.74	18.46	20.50
Ventura County, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	43.28	41.79	37.83	37.31	26.75	18.47	20.50
Vermillion County; Part of Clinton Township, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.07	0.07	0.06	0.06	0.04	0.01	0.03
Vigo County, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.41	0.41	0.33	0.35	0.25	-0.03	0.21
Walla Walla County; Wallula, WA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	-0.04	-0.04	-0.03	-0.03	-0.02	-0.02	-0.02
Waltham Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	-0.43	-0.41	-0.39	-0.38	-0.27	-0.27	-0.20
Warren County: Conewago Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	8.38	8.08	7.36	7.23	5.19	3.82	3.95
Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	8.40	8.09	7.36	7.24	5.20	3.81	3.95
Warren, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	8.40	8.10	7.37	7.24	5.20	3.80	3.96
Washington Area, DC-MD-VA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-8.67	-8.28	-7.75	-7.49	-5.41	-5.17	-3.97
Washington, DC-MD-VA	Ozone (2008 8-hour)	Nonattainment (DC) Maintenance (MD, VA), Marginal	50	0	-66.37	-63.46	-59.26	-57.31	-41.42	-38.84	-30.43
Washington, DC-MD-VA	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	-66.39	-63.48	-59.27	-57.32	-41.44	-38.85	-30.44
Washoe County; Reno Planning Area, NV	PM10 (1987 24-hour)	Maintenance, Serious	100	0	-4.06	-3.88	-3.62	-3.50	-2.53	-2.35	-1.86

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.68	-0.65	-0.61	-0.59	-0.43	-0.40	-0.31
Wayne County; (part), MI	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	4.84	4.67	4.23	4.17	2.99	2.13	2.28
West Central Pinal County, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	-0.21	-0.19	-0.19	-0.18	-0.13	-0.18	-0.09
West Silver Valley, ID	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	-0.16	-0.15	-0.14	-0.14	-0.10	-0.09	-0.07
Williamson County, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.01	0.00	-0.02	-0.01	-0.01	-0.14	0.01
Winston-Salem Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-4.65	-4.45	-4.16	-4.02	-2.90	-2.75	-2.13
Worcester Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	-2.21	-2.11	-1.97	-1.91	-1.38	-1.30	-1.01
Yakima Area, WA	CO (1971 8-hour)	Maintenance, --	100	0	-0.34	-0.32	-0.30	-0.29	-0.21	-0.19	-0.15
Yakima County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-1.14	-1.09	-1.02	-0.98	-0.71	-0.66	-0.52
Yuba City-Marysville, CA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-0.78	-0.74	-0.72	-0.68	-0.50	-0.66	-0.34
Yuma County; Yuma Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-1.89	-1.81	-1.68	-1.63	-1.18	-1.10	-0.87
Yuma, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.97	-0.93	-0.86	-0.84	-0.60	-0.56	-0.44

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Table A-8. Changes in Emissions from U.S. Passenger Cars and Light Trucks by Nonattainment or Maintenance Area and Alternative, Direct and Indirect Impacts--Nitrogen Oxides (NO_x), 2035

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Ada County; Boise, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.55	1.59	1.55	1.54	1.22	1.02	0.97
Adams, Denver, and Boulder Counties; Denver Metropolitan Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	116.91	114.07	104.31	98.84	78.41	55.50	53.03
Ajo, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Albuquerque Area, NM	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	4.37	4.41	4.21	4.12	3.25	2.59	2.47
Allegan County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	2.36	2.31	2.12	2.02	1.60	1.15	1.10
Allegheny County Air Basin: Hazelwood Monitor, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	5.47	5.33	4.88	4.62	3.67	2.60	2.48
Allegheny County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	43.59	42.61	39.07	37.09	29.42	20.98	20.05
Allegheny County; The Area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	5.05	4.92	4.48	4.24	3.36	2.36	2.25
Allegheny, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	14.55	14.17	12.93	12.23	9.70	6.82	6.52
Allentown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	4.37	4.38	4.15	4.03	3.19	2.49	2.38
Allentown-Bethlehem-Easton, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	5.95	5.94	5.60	5.42	4.29	3.30	3.15
Alton Township, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	93.88	91.32	83.14	78.53	62.32	43.54	41.60
Amador County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.01	1.00	0.93	0.89	0.71	0.52	0.50
Anchorage Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	0.46	0.47	0.46	0.46	0.36	0.31	0.29
Anchorage; Eagle River, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.03	0.03	0.03	0.03	0.02	0.02	0.02
Anne Arundel County and Baltimore County, MD	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	4.69	4.82	4.71	4.68	3.69	3.10	2.97

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
AQCR 012: Portions of Grant County, NM	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.01	0.00	0.01	0.02	0.02	0.03	0.03
AQCR 109-Millinocket, ME	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	1.91	1.89	1.77	1.70	1.35	1.01	0.97
AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington Counties (Minneapolis-St. Paul), MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	62.34	61.34	56.74	54.23	42.97	31.44	30.05
AQCR 237: Brown County: Green Bay Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	2.63	2.56	2.33	2.20	1.75	1.23	1.17
AQCR 238: Marathon County: Rothschild Subcity Area, Rib Mountain, Weston, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.17	0.20	0.24	0.26	0.20	0.22	0.21
AQCR 238: Oneida County: Rhinelander Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.01	0.00	0.02	0.03	0.02	0.04	0.04
AQCR 239: Milwaukee County: Milwaukee Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.84	0.96	1.05	1.12	0.88	0.90	0.86
AQCR 240: Dane County: Madison Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.56	0.67	0.77	0.84	0.65	0.71	0.68
Archuleta County; Pagosa Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	114.76	111.63	101.64	96.01	76.19	53.24	50.87
Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	29.64	28.83	26.25	24.80	19.68	13.75	13.14
Aroostock County; City of Presque Isle, ME	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.23	0.22	0.21	0.20	0.16	0.11	0.11
Atlanta, GA	Ozone (2008 8-hour)	Maintenance, Moderate	100	0	9.87	10.94	11.67	12.23	9.58	9.41	9.01
Atlanta, GA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	10.13	10.92	11.30	11.63	9.13	8.53	8.16
Atlantic City Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	-0.01	0.00	0.01	0.02	0.01	0.03	0.03
Bakersfield Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	7.44	7.33	6.80	6.51	5.16	3.80	3.63

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Baltimore Area, MD	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.80	0.78	0.71	0.67	0.53	0.38	0.36
Baltimore, MD	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	20.99	21.06	20.01	19.49	15.41	12.08	11.55
Baltimore, MD	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	20.99	21.07	20.03	19.51	15.42	12.11	11.57
Baton Rouge, LA	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	338.16	329.13	299.91	283.45	224.92	157.55	150.53
Beaver, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.11	0.11	0.10	0.10	0.08	0.06	0.06
Benton County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.01	0.00	0.01	0.01	0.01	0.02	0.02
Berrien County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.92	1.92	1.81	1.75	1.39	1.07	1.03
Billings Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	38.42	37.38	34.06	32.19	25.54	17.88	17.08
Billings, MT	SO ₂ (2010 1-hour)	Maintenance, --	100	0	38.43	37.38	34.04	32.15	25.51	17.83	17.03
Birmingham, AL	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	34.26	33.59	30.92	29.44	23.34	16.84	16.10
Boise-Northern Ada County Area, ID	CO (1971 8-hour)	Maintenance, --	100	0	1.55	1.59	1.55	1.54	1.22	1.02	0.97
Bonner County; The Sandpoint Area, ID	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.05	0.06	0.05	0.05	0.04	0.03	0.03
Boston Area, MA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	2.47	2.54	2.49	2.48	1.96	1.65	1.58
Boyd County (part), KY	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	47.09	45.81	41.70	39.39	31.26	21.84	20.87
Brooke; Follansbee Area, WV	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.23	0.23	0.21	0.20	0.16	0.11	0.11
Burlington Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.16	0.15	0.14	0.14	0.11	0.08	0.08
Butte County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	7.57	7.41	6.80	6.47	5.13	3.67	3.51
Calaveras County, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.56	0.56	0.53	0.51	0.40	0.31	0.29
Calaveras County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.56	0.56	0.53	0.51	0.40	0.31	0.29

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Campbell-Clermont Counties, KY-OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	1.23	1.20	1.11	1.05	0.83	0.60	0.57
Canton-Massillon, OH	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	11.22	10.99	10.11	9.62	7.63	5.49	5.24
Central New Hampshire, NH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.04	0.00	0.06	0.09	0.07	0.14	0.13
Central Steptoe Valley, NV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.01	0.01	0.01	0.01	0.02	0.01
Charleston, WV	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	47.92	46.68	42.60	40.30	31.97	22.49	21.49
Charlotte Area, NC	CO (1971 8-hour)	Maintenance, --	100	0	-0.08	0.28	0.71	0.99	0.75	1.24	1.19
Charlotte-Rock Hill, NC-SC	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	2.73	3.31	3.86	4.24	3.31	3.65	3.49
Chicago, IL-IN-WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	383.80	374.80	343.12	325.43	258.11	183.34	175.18
Chicago-Naperville, IL-IN-WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	385.27	376.36	344.71	327.04	259.38	184.48	176.27
Chico (Butte County), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	7.57	7.41	6.80	6.47	5.13	3.67	3.51
Chico Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.13	0.14	0.15	0.16	0.12	0.12	0.12
Chico, CA	PM _{2.5} (2006 24-hour)	Maintenance, Moderate	100	0	6.78	6.63	6.10	5.80	4.60	3.30	3.16
Cincinnati, OH-KY	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	15.49	15.54	14.75	14.36	11.35	8.89	8.50
Cincinnati, OH-KY-IN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	15.71	15.78	14.99	14.61	11.55	9.07	8.67
Clark County; Las Vegas Planning Area, NV	PM ₁₀ (1987 24-hour)	Maintenance, Serious	100	0	0.93	1.34	1.79	2.08	1.61	2.02	1.93
Cleveland Area, OH	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	1.62	1.83	2.00	2.13	1.66	1.69	1.62
Cleveland, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	13.82	14.08	13.63	13.45	10.62	8.71	8.33
Cleveland, OH	PM _{2.5} (2012 Annual)	Maintenance, Moderate	100	0	3.51	3.74	3.81	3.90	3.06	2.80	2.68
Cleveland-Akron-Lorain, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	27.54	27.45	25.84	25.00	19.78	15.16	14.50

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Cleveland-Akron-Lorain, OH	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	13.82	14.06	13.59	13.39	10.57	8.64	8.26
Cochise County; Paul Spur/Douglas Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.01	0.02	0.02	0.03	0.02	0.03	0.03
Colorado Springs Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	3.54	3.56	3.41	3.33	2.63	2.09	2.00
Columbus, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	8.18	8.42	8.25	8.21	6.47	5.45	5.22
Columbus, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	7.07	7.31	7.21	7.20	5.67	4.83	4.62
Cook County; Lyons Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	4.58	4.47	4.09	3.88	3.08	2.18	2.09
Cook County; Southeast Chicago, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	268.15	260.86	237.53	224.37	178.05	124.45	118.90
Coshocton County; Franklin Township, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.15	0.15	0.14	0.13	0.10	0.07	0.07
Coso Junction, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	8.17	7.94	7.23	6.83	5.42	3.79	3.62
Cuyahoga County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.89	1.07	1.24	1.35	1.05	1.15	1.10
Cuyahoga County, OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.62	1.83	2.00	2.13	1.66	1.69	1.62
Dallas-Fort Worth, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	118.98	117.47	109.18	104.70	82.93	61.47	58.75
Dallas-Fort Worth, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	119.00	117.47	109.15	104.66	82.89	61.41	58.69
Delaware County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	150.89	146.86	133.81	126.47	100.35	70.29	67.15
Denver Metro/North Front Range, CO	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	146.10	142.89	131.08	124.51	98.74	70.56	67.42
Denver-Boulder Area, CO	CO (1971 8-hour)	Maintenance, Serious	100	0	132.79	129.77	118.92	112.87	89.52	63.77	60.93
Denver-Boulder-Greeley-Ft Collins-Loveland, CO	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	146.10	142.89	131.08	124.51	98.74	70.56	67.42
Detroit Area, MI	CO (1971 8-hour)	Maintenance, --	100	0	18.48	18.34	17.16	16.54	13.09	9.88	9.44
Detroit, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	87.47	86.12	79.74	76.26	60.42	44.33	42.36

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Detroit, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	14.82	14.46	13.23	12.54	9.95	7.05	6.74
Detroit-Ann Arbor, MI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	87.54	86.19	79.81	76.33	60.48	44.37	42.40
Doña Ana County (Sunland Park Area), NM	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	20.33	19.77	18.01	17.01	13.50	9.44	9.02
Doña Ana County; Anthony, NM	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	20.33	19.77	18.00	17.01	13.50	9.43	9.01
Door County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Douglas, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.02	0.02	0.02	0.02	0.02
Dukes County, MA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.00	0.00	0.00	0.00	0.00	0.01	0.01
Duluth Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	12.60	12.28	11.20	10.60	8.41	5.92	5.66
East Chicago Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	263.93	256.73	233.74	220.78	175.20	122.42	116.95
East Helena Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
East Kern County Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	7.85	7.65	6.97	6.59	5.23	3.67	3.50
El Paso County, TX	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	22.10	21.61	19.82	18.83	14.93	10.66	10.19
El Paso, TX	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	20.43	19.88	18.11	17.11	13.58	9.50	9.08
Eugene-Springfield Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	-0.05	0.00	0.06	0.10	0.07	0.15	0.14
Evangeline Parish (Partial), LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.47	0.45	0.41	0.39	0.31	0.22	0.21
Fairbanks Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	4.51	4.39	4.00	3.78	3.00	2.10	2.01
Fairbanks, AK	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	4.50	4.39	4.00	3.79	3.00	2.11	2.02
Flathead County; Columbia Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flathead County; Kalispell and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.01	0.00	0.01	0.02	0.01	0.02	0.02

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Flathead County; Whitefish and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fort Collins Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	1.41	1.40	1.32	1.27	1.01	0.77	0.74	0.74
Freehold Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.01	0.00	0.01	0.01	0.01
Freestone and Anderson Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	16.94	16.48	15.01	14.18	11.25	7.87	7.52	7.52
Fremont County; Canon City Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	2.40	2.34	2.14	2.03	1.61	1.14	1.09	1.09
Fresno Area, CA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	2.20	2.26	2.22	2.20	1.74	1.46	1.40	1.40
Grants Pass Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.01	0.00	0.01	0.01	0.01	0.02	0.02	0.02
Great Falls Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	4.87	4.74	4.32	4.08	3.24	2.26	2.16	2.16
Greater Connecticut, CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	1.34	1.65	1.95	2.16	1.68	1.88	1.80	1.80
Greater Connecticut, CT	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	1.34	1.65	1.95	2.16	1.68	1.89	1.81	1.81
Greeley Area, CO	CO (1971 8-hour)	Maintenance, --	100	0	133.34	129.78	118.24	111.75	88.67	62.10	59.33	59.33
Hancock and Brooke Counties (Part); The City of Weirton, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	3.80	3.70	3.37	3.19	2.53	1.77	1.69	1.69
Hancock County (Part) The City of Weirton, including Butler and Clay: Magisterial Districts, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	12.84	12.49	11.37	10.75	8.53	5.96	5.70	5.70
Harrisburg-Lebanon-Carlisle-York, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	5.29	5.39	5.22	5.15	4.06	3.33	3.18	3.18
Hartford-New Britain-Middletown Area, CT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.48	0.71	0.95	1.12	0.86	1.09	1.05	1.05
Hayden, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	1.26	1.22	1.12	1.05	0.84	0.59	0.56	0.56
Hayden, AZ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	1.26	1.22	1.11	1.05	0.84	0.59	0.56	0.56

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Hayden, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	1.26	1.22	1.11	1.05	0.84	0.59	0.56
Hillsborough County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	1.87	1.82	1.66	1.58	1.25	0.88	0.84
Hillsborough-Polk County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	2.06	2.00	1.82	1.72	1.37	0.96	0.91
Houston-Galveston-Brazoria, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	1,072.02	1,044.24	952.62	901.12	714.97	502.55	480.15
Houston-Galveston-Brazoria, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1,063.35	1,035.77	944.86	893.76	709.12	498.39	476.17
Humphreys County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.01	0.00	0.01	0.01	0.01	0.02	0.02
Huntington, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.06	0.07	0.07	0.07	0.06	0.06	0.05
Imperial County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.86	0.88	0.86	0.85	0.67	0.56	0.53
Imperial County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.86	0.88	0.86	0.85	0.67	0.56	0.53
Imperial County, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	-0.04	0.00	0.05	0.08	0.06	0.11	0.11
Imperial County, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	-0.04	0.00	0.05	0.08	0.06	0.11	0.11
Imperial County; Imperial Valley Planning Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	0.86	0.88	0.86	0.85	0.67	0.56	0.53
Indian Wells, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	8.00	7.79	7.10	6.72	5.33	3.74	3.58
Indiana, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	99.44	96.75	88.11	83.24	66.05	46.19	44.13
Indianapolis Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Indianapolis, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	2.68	2.73	2.64	2.60	2.06	1.69	1.61
Inyo County; Owens Valley Planning Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	1.64	1.59	1.45	1.38	1.09	0.77	0.73
Jackson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	2.16	2.11	1.93	1.83	1.45	1.03	0.99
Jackson County; Medford-Ashland (including White City), OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.03	0.00	0.04	0.07	0.05	0.10	0.10

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Jamestown, NY	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	29.79	29.01	26.45	25.01	19.84	13.93	13.31
Jefferson County, KY	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.04	0.04	0.04	0.03	0.03	0.02	0.02
Jefferson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.10	0.11	0.11	0.12	0.09	0.08	0.08
Jefferson County; (part) Steubenville & Mingo Junction, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	3.79	3.70	3.38	3.21	2.54	1.80	1.72
Jefferson County; (part), OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.23	0.23	0.21	0.20	0.16	0.11	0.11
Johnstown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	62.92	61.23	55.78	52.71	41.83	29.28	27.97
Josephine County; Grants Pass, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.01	0.00	0.01	0.01	0.01	0.02	0.02
Juneau; Mendenhall Valley Area, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.01	0.01
Kern County (Eastern Kern), CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	135.66	131.98	120.19	113.54	90.10	63.00	60.19
Kern County (Eastern Kern), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	135.66	131.98	120.19	113.54	90.10	63.00	60.19
King County; Kent, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.01	0.01	0.01	0.01	0.01
King County; Seattle, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.01	0.00	0.01	0.01
Klamath County; Klamath Falls, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.08	0.09	0.09	0.10	0.08	0.08	0.08
Klamath Falls Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.08	0.09	0.09	0.10	0.08	0.08	0.08
Klamath Falls, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.09	0.10	0.11	0.11	0.09	0.09	0.09
Knoxville, TN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	4.20	4.27	4.13	4.07	3.21	2.62	2.50
Knoxville-Sevierville-La Follette, TN	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	9.61	9.57	9.00	8.71	6.89	5.27	5.03
La Porte County; (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	2.67	2.61	2.39	2.27	1.80	1.29	1.23
Lake County (part); Lakeview, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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Lake County, OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.71	0.74	0.75	0.75	0.59	0.53	0.50
Lake County: (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	272.04	264.69	241.08	227.77	180.75	126.43	120.79
Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.06	0.06	0.07	0.07	0.06	0.06	0.06
Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	271.39	264.02	240.43	227.14	180.24	126.02	120.40
Lake County; Polson, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake County; Ronan, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake Tahoe Nevada Area, NV	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.02	0.02	0.02	0.02	0.02
Lake Tahoe North Shore Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	0.10	0.10	0.10	0.10	0.08	0.06	0.06
Lake Tahoe South Shore Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.06	0.07	0.07	0.08	0.06	0.06	0.06
Lancaster, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	1.20	1.27	1.30	1.32	1.04	0.94	0.90
Lancaster, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	1.20	1.27	1.30	1.32	1.04	0.94	0.90
Lane County (part); Oakridge, OR	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lane County; Eugene/Springfield, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.05	0.00	0.06	0.10	0.07	0.15	0.14
Las Vegas Area, NV	CO (1971 8-hour)	Maintenance, Serious	100	0	0.93	1.34	1.79	2.09	1.61	2.02	1.94
Las Vegas, NV	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.93	1.34	1.79	2.08	1.61	2.02	1.93
LaSalle County; Oglesby, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	2.61	2.55	2.33	2.21	1.75	1.24	1.19
Laurel Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	38.43	37.38	34.04	32.15	25.51	17.83	17.03
Lebanon County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.48	0.49	0.48	0.48	0.38	0.32	0.31
Lemont, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	92.38	89.89	81.89	77.38	61.40	42.97	41.05

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NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Liberty-Clairton, PA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	5.05	4.92	4.48	4.24	3.36	2.36	2.25
Lincoln County; Libby and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Logan, UT-ID	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	-0.03	0.00	0.03	0.05	0.04	0.08	0.08
Longmont Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	79.77	77.62	70.69	66.78	52.99	37.06	35.41
Lorain County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.28	0.28	0.27	0.27	0.21	0.17	0.16
Los Angeles, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	161.80	160.88	150.94	145.73	115.33	87.66	83.80
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	137.94	134.38	122.62	116.01	92.04	64.73	61.85
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	137.94	134.38	122.62	116.00	92.04	64.73	61.85
Los Angeles-South Coast Air Basin Area, CA	CO (1971 8-hour)	Maintenance, Serious	100	0	161.50	160.58	150.67	145.48	115.13	87.53	83.67
Los Angeles-South Coast Air Basin Area, CA	NO ₂ (1971 Annual)	Maintenance, --	100	0	161.50	160.58	150.67	145.48	115.13	87.53	83.67
Los Angeles-South Coast Air Basin, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	161.82	160.89	150.95	145.74	115.34	87.67	83.80
Los Angeles-South Coast Air Basin, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	161.80	160.87	150.94	145.73	115.32	87.66	83.79
Los Angeles-South Coast Air Basin, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	161.80	160.88	150.94	145.73	115.33	87.66	83.80
Louisville, KY-IN	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	3.24	3.44	3.49	3.55	2.79	2.52	2.41
Lowell Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.48	0.49	0.47	0.46	0.36	0.29	0.28
Lucas County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	58.26	56.75	51.77	48.97	38.85	27.31	26.09
Madison County; Granite City Township and Nameoki Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	95.50	92.90	84.60	79.91	63.42	44.33	42.35
Manchester Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	-0.02	0.00	0.03	0.05	0.04	0.07	0.07

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Manitowoc County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.21	0.21	0.21	0.21	0.16	0.14	0.13
Maricopa and Pinal Counties; Phoenix Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	2.08	2.88	3.72	4.28	3.32	4.06	3.89
Marion County: Lawrence, Washington, and Warrant Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	3.04	3.07	2.94	2.87	2.27	1.81	1.73
Mariposa County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.09	0.10	0.10	0.10	0.08	0.08	0.07
Mariposa County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.09	0.10	0.10	0.10	0.08	0.08	0.07
Marshall, WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	17.30	16.83	15.33	14.48	11.49	8.04	7.68
Medford Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.02	0.00	0.02	0.04	0.03	0.06	0.05
Memphis Area, TN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	16.28	16.06	14.90	14.27	11.30	8.34	7.97
Memphis, TN-MS-AR	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	17.38	17.19	16.01	15.38	12.18	9.08	8.68
Miami, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	1.25	1.22	1.12	1.06	0.84	0.59	0.57
Miami, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.01	0.01	0.01	0.01
Miami, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	1.25	1.22	1.12	1.06	0.84	0.59	0.57
Milwaukee-Racine, WI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.70	0.95	1.22	1.41	1.09	1.33	1.27
Minneapolis-St. Paul Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	62.38	61.39	56.82	54.32	43.04	31.53	30.14
Missoula Area, MT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	1.42	1.39	1.29	1.24	0.98	0.72	0.69
Missoula county; Missoula and Vicinity, MT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.42	1.40	1.30	1.24	0.98	0.72	0.69
Modesto Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.08	0.12	0.17	0.20	0.16	0.20	0.19

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Mohave County (part); Bullhead City, AZ	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.19	1.17	1.08	1.03	0.82	0.60	0.57
Mono County; Mammoth Lake Planning Area, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.10	1.08	0.99	0.94	0.75	0.54	0.51
Mono County; Mono Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	1.11	1.08	0.99	0.93	0.74	0.52	0.50
Morenci, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morgan County, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.01	0.00	0.01	0.02	0.01	0.02	0.02
Morongo Band of Mission Indians	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	0.45	0.43	0.40	0.37	0.30	0.21	0.20
Morongo Band of Mission Indians, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	0.45	0.43	0.40	0.37	0.30	0.21	0.20
Morristown Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.32	0.32	0.29	0.28	0.22	0.17	0.16
Muscatine County; (part), IA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.05	0.06	0.05	0.05	0.04	0.03	0.03
Muscatine, IA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.05	0.06	0.06	0.06	0.04	0.04	0.04
Muskegon County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.10	0.13	0.17	0.19	0.15	0.18	0.17
Muskingum River, OH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.10	0.10	0.09	0.09	0.07	0.05	0.05
Nashua Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	0.45	0.45	0.44	0.43	0.34	0.27	0.26
Nassau County, FL	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.01	0.00
Nevada County (Western part), CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.21	0.23	0.25	0.26	0.20	0.20	0.19
Nevada County (Western part), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	0.21	0.23	0.25	0.26	0.20	0.20	0.19
New Haven County, CT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.05	0.05	0.05	0.05	0.04	0.04	0.04
New Haven-Meriden-Waterbury Area, CT	CO (1971 8-hour)	Maintenance, --	100	0	1.56	1.70	1.79	1.85	1.45	1.39	1.33
New Manchester-Grant Magisterial District in Hancock County, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	3.67	3.57	3.26	3.08	2.44	1.71	1.63

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
New York County, NY	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	1.35	1.39	1.36	1.36	1.07	0.91	0.87
New York, NY-NJ-CT	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	66.92	68.05	65.76	64.81	51.15	41.77	39.94
New York-N. New Jersey-Long Island Area, NY-NJ-CT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	56.49	56.58	53.60	52.10	41.20	32.09	30.68
New York-N. New Jersey-Long Island, NY-NJ-CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	68.68	69.71	67.19	66.10	52.19	42.37	40.51
New York-Northern New Jersey-Long Island, NY-NJ-CT	Ozone (2015 8-hour)	Nonattainment, Moderate	50	0	68.69	69.72	67.20	66.10	52.19	42.37	40.51
NJ Portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.36	0.35	0.33	0.32	0.25	0.19	0.18
Nogales, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	-0.01	0.00	0.01	0.02	0.01	0.02	0.02
Northern Milwaukee/Ozaukee Shoreline, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.60	0.60	0.56	0.55	0.43	0.33	0.32
Northern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	36.34	35.69	32.93	31.42	24.90	18.09	17.29
Oakridge, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ogden Area, UT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.01	0.00	0.02	0.03	0.02	0.04	0.04
Ogden Area, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.01	0.00	0.02	0.03	0.02	0.04	0.04
Olmsted County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.52	0.51	0.47	0.45	0.36	0.26	0.25
Olmsted; City of Rochester, MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	1.09	1.08	1.01	0.98	0.77	0.59	0.56
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.91	0.88	0.81	0.76	0.60	0.42	0.40
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.91	0.88	0.81	0.76	0.60	0.42	0.40
Pekin, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.95	0.93	0.86	0.82	0.65	0.47	0.45

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Penns Grove Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	1.50	1.46	1.33	1.25	0.99	0.69	0.66
Peoria County: Hollis Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.96	0.93	0.85	0.80	0.64	0.45	0.43
Peoria County: Peoria, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	1.16	1.15	1.07	1.03	0.82	0.62	0.59
Perth Amboy Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	9.47	9.22	8.41	7.95	6.31	4.43	4.23
Philadelphia-Camden County Area, PA-NJ	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	136.12	132.63	121.04	114.53	90.86	63.94	61.09
Philadelphia-Wilmington, PA-NJ-DE	PM _{2.5} (2006 24-hour)	Maintenance, Moderate for PA and DE; Subject to Former Subpart 1 for NJ	100	0	167.11	163.57	150.23	142.83	113.25	81.20	77.59
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	176.44	172.98	159.24	151.64	120.21	86.75	82.90
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	176.44	172.98	159.23	151.63	120.21	86.75	82.90
Phoenix Area, AZ	CO (1971 8-hour)	Maintenance, Serious	100	0	2.04	2.81	3.61	4.16	3.23	3.93	3.77
Phoenix-Mesa, AZ	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	2.08	2.89	3.73	4.30	3.34	4.08	3.91
Phoenix-Mesa, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	2.14	2.97	3.83	4.42	3.43	4.19	4.01
Pierce County; Tacoma, WA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	6.23	6.06	5.52	5.22	4.14	2.89	2.77
Pima County; Ajo Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pima County; Rillito Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	1.24	1.22	1.13	1.08	0.85	0.62	0.59
Pinal and Gila Counties; Payson, AZ	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.01	0.01	0.01	0.01	0.01
Pinal County (part); West Pinal, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	1.42	1.44	1.39	1.37	1.08	0.88	0.84
Pitkin County; Aspen, CO	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	76.06	73.99	67.37	63.64	50.50	35.29	33.72
Pittsburgh Area, PA	CO (1971 8-hour)	Maintenance, --	100	0	6.56	6.43	5.92	5.64	4.47	3.24	3.09

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Pittsburgh-Beaver Valley, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	177.90	173.50	158.54	150.15	119.11	84.14	80.39
Pittsburgh-Beaver Valley, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	160.91	156.93	143.40	135.82	107.74	76.11	72.72
Plumas County, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.79	0.77	0.70	0.66	0.53	0.37	0.35
Polk County, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.16	0.16	0.16	0.15	0.12	0.10	0.09
Portland Area: Portland Metro Service District Boundary, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	1.54	1.78	1.97	2.10	1.64	1.70	1.63
Power-Bannock Counties; Fort Hall Indian Reservation, ID	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Power-Bannock Counties; Portneuf Valley Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.07	0.08	0.09	0.10	0.08	0.09	0.09
Provo Area, UT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	0.00	0.02	0.05	0.06	0.05	0.08	0.07
Provo, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	21.91	21.42	19.64	18.65	14.79	10.55	10.08
Prowers County; Lamar, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.00	0.97	0.89	0.84	0.67	0.47	0.45
Raleigh-Durham Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	1.92	2.26	2.57	2.78	2.17	2.32	2.22
Ramsey County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	54.36	52.87	48.14	45.47	36.08	25.21	24.09
Reading, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	2.40	2.42	2.31	2.26	1.78	1.42	1.36
Reno Area, NV	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.07	0.01	0.09	0.15	0.11	0.22	0.21
Rhineland, WI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.01	0.00	0.01	0.01	0.01	0.02	0.02
Riverside County (Coachella Valley), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	1.20	1.27	1.29	1.32	1.03	0.94	0.89
Riverside County (Coachella Valley), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	1.20	1.27	1.29	1.32	1.03	0.94	0.89
Riverside County; Coachella Valley Planning Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	1.20	1.29	1.33	1.37	1.07	1.00	0.96

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Riverside, Los Angeles, Orange, and San Bernardino Counties; South Coast Air Basin, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	161.82	160.88	150.92	145.70	115.30	87.61	83.75
Rosebud County; Lame Deer, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.32	0.31	0.28	0.27	0.21	0.15	0.14
Routt County (part); Steamboat Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	101.82	99.05	90.18	85.19	67.60	47.25	45.14
Rusk and Panola Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	28.42	27.64	25.17	23.77	18.87	13.18	12.59
Sacramento Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	56.47	55.24	50.69	48.16	38.19	27.32	26.11
Sacramento County, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	166.10	161.86	147.73	139.80	110.92	78.09	74.61
Sacramento Metro, CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	168.65	164.55	150.47	142.59	113.10	80.06	76.50
Sacramento Metro, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	168.65	164.55	150.47	142.59	113.10	80.06	76.50
Sacramento, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	168.65	164.54	150.45	142.55	113.08	80.02	76.46
Salem Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	-0.05	0.00	0.06	0.10	0.08	0.16	0.15
Salt Lake City Area, UT	CO (1971 8-hour)	Maintenance, --	100	0	36.34	35.39	32.27	30.51	24.21	17.00	16.24
Salt Lake City, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	36.32	35.69	32.95	31.45	24.93	18.14	17.34
Salt Lake County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	36.47	35.69	32.78	31.16	24.71	17.71	16.92
Salt Lake County, UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	36.47	35.69	32.78	31.16	24.71	17.71	16.92
San Antonio, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	30.87	30.42	28.21	27.01	21.39	15.76	15.06
San Bernardino County (part); excluding Searles Valley Planning Area and South Coast Air Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	138.48	134.84	122.94	116.24	92.23	64.73	61.84
San Diego Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	2.86	3.52	4.14	4.58	3.57	3.98	3.82

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
San Diego County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	2.86	3.52	4.15	4.59	3.57	4.00	3.83
San Diego County, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	2.86	3.52	4.14	4.58	3.57	3.99	3.82
San Francisco Bay Area, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	168.33	165.21	152.30	145.18	115.08	83.39	79.69
San Francisco Bay Area, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	168.33	165.20	152.29	145.17	115.07	83.38	79.68
San Francisco Bay Area, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	168.35	165.24	152.34	145.23	115.12	83.44	79.74
San Francisco-Oakland-San Jose Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	167.30	164.08	151.13	143.97	114.13	82.49	78.83
San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	255.75	249.63	228.38	216.49	171.72	121.73	116.31
San Joaquin Valley, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	255.75	249.63	228.38	216.49	171.72	121.73	116.31
San Joaquin Valley, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	255.75	249.63	228.38	216.49	171.72	121.73	116.31
San Joaquin Valley, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	252.97	246.93	225.92	214.17	169.88	120.44	115.08
San Joaquin Valley, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	252.97	246.93	225.92	214.17	169.88	120.44	115.08
San Luis Obispo (Eastern part), CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	12.61	12.27	11.17	10.55	8.37	5.85	5.59
San Luis Obispo (Eastern San Luis Obispo), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	12.61	12.27	11.17	10.55	8.37	5.85	5.59
San Manuel, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	1.26	1.23	1.12	1.06	0.84	0.59	0.57
San Miguel County; Telluride, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	4.89	4.75	4.33	4.09	3.25	2.27	2.17
Sanders County (part); Thompson Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Santa Cruz County; Nogales Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.01	0.00	0.01	0.02	0.01	0.02	0.02
Seaford, DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.17	0.23	0.28	0.31	0.24	0.28	0.27

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Seattle-Tacoma Area, WA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	5.58	6.06	6.32	6.54	5.13	4.87	4.66
Seattle-Tacoma, WA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	6.13	6.06	5.65	5.43	4.30	3.22	3.08
Sheboygan County, WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.29	0.30	0.30	0.31	0.24	0.21	0.20
Sheboygan County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.26	0.26	0.25	0.25	0.20	0.16	0.15
Sheridan County; City of Sheridan, WY	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.38	1.34	1.23	1.16	0.92	0.65	0.63
Shoshone County (part); excluding Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.01	0.00	0.01	0.01	0.01	0.02	0.02
Shoshone County; City of Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Silver Bow County; Butte, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.01	0.00	0.01	0.01	0.01	0.02	0.02
Somerville Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.17	0.16	0.15	0.15	0.12	0.09	0.08
Southern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	21.91	21.42	19.64	18.65	14.79	10.55	10.08
Southwest Indiana, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	6.05	5.89	5.36	5.07	4.02	2.81	2.69
Spokane Area, WA	CO (1971 8-hour)	Maintenance, Serious	100	0	0.01	0.07	0.15	0.20	0.15	0.24	0.23
Spokane County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.07	0.15	0.20	0.15	0.24	0.23
Springfield Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.18	0.20	0.22	0.24	0.18	0.19	0.18
St. Bernard Parish, LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	107.99	105.05	95.65	90.35	71.70	50.10	47.87
St. Clair, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	2.04	1.99	1.83	1.73	1.38	0.98	0.94
St. Louis Area, MO	CO (1971 8-hour)	Maintenance, --	100	0	95.52	93.07	84.93	80.36	63.75	44.86	42.86
St. Louis, MO-IL	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	110.99	108.43	99.31	94.22	74.73	53.15	50.79
St. Louis-St. Charles-Farmington, MO-IL	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	111.52	109.01	99.92	94.86	75.23	53.64	51.25

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
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Steubenville, OH-WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	13.24	12.90	11.76	11.12	8.82	6.19	5.91
Steubenville-Weirton, OH-WV	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	4.55	4.45	4.09	3.88	3.08	2.20	2.10
Stockton Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.65	0.71	0.74	0.77	0.60	0.57	0.55
Sullivan County, TN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.40	0.39	0.37	0.35	0.28	0.21	0.20
Sutter Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.52	1.48	1.34	1.27	1.01	0.70	0.67
Syracuse Area; Onondaga County, NY	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.12	0.22	0.33	0.40	0.31	0.41	0.40
Tazewell County: Groveland Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.05	0.06	0.06	0.06	0.05	0.04	0.04
Terre Haute, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.66	0.66	0.62	0.60	0.48	0.36	0.35
Thurston County; Cities of Olympia, Tumwater, and Lacey, WA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	-0.02	0.00	0.03	0.04	0.03	0.07	0.06
Titus County, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.27	0.26	0.24	0.23	0.18	0.13	0.12
Toms River Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.69	0.68	0.62	0.58	0.46	0.32	0.31
Tooele County (part), UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	21.92	21.32	19.41	18.34	14.55	10.17	9.71
Trenton Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.14	0.15	0.16	0.17	0.13	0.13	0.12
Trona, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	8.01	7.79	7.10	6.70	5.32	3.72	3.55
Tucson Area, AZ	CO (1971 8-hour)	Maintenance, --	100	0	1.04	1.22	1.38	1.49	1.16	1.23	1.18
Tuolumne County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.22	1.20	1.11	1.07	0.84	0.62	0.59
Tuscan Buttes, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.50	0.49	0.44	0.42	0.33	0.23	0.22
Tuscan Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.50	0.49	0.44	0.42	0.33	0.23	0.22

Notes:

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Uinta Basin, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	107.11	104.20	94.88	89.63	71.13	49.71	47.50
Union County; LaGrande, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.01	0.01	0.01	0.01
Upper Green River Basin Area, WY	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	50.60	49.23	44.82	42.34	33.60	23.49	22.44
Utah County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	71.38	69.54	63.45	60.03	47.63	33.50	32.00
Vancouver Area: Clark County (part), WA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.34	0.39	0.44	0.47	0.37	0.39	0.37
Ventura County, CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	142.01	138.31	126.16	119.33	94.68	66.53	63.56
Ventura County, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	142.00	138.31	126.16	119.33	94.68	66.52	63.56
Vermillion County; Part of Clinton Township, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.70	0.69	0.63	0.60	0.47	0.34	0.32
Vigo County, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	5.70	5.57	5.11	4.86	3.85	2.75	2.63
Walla Walla County; Wallula, WA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Waltham Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.47	0.47	0.44	0.43	0.34	0.26	0.25
Warren County: Conewago Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	22.26	21.65	19.71	18.62	14.78	10.33	9.87
Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	22.72	22.10	20.13	19.02	15.09	10.55	10.08
Warren, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	22.88	22.26	20.27	19.15	15.20	10.63	10.16
Washington Area, DC-MD-VA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	2.79	2.89	2.84	2.84	2.24	1.91	1.83
Washington, DC-MD-VA	Ozone (2008 8-hour)	Nonattainment (DC) Maintenance (MD, VA), Marginal	50	0	6.14	7.16	8.06	8.70	6.79	7.18	6.87
Washington, DC-MD-VA	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	6.14	7.17	8.06	8.70	6.80	7.18	6.88
Washoe County; Reno Planning Area, NV	PM10 (1987 24-hour)	Maintenance, Serious	100	0	-0.07	0.00	0.09	0.15	0.11	0.22	0.21

Notes:

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Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.18	0.19	0.19	0.19	0.19	0.15	0.13	0.13
Wayne County; (part), MI	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	14.53	14.15	12.90	12.19	9.67	6.78	6.48	6.48
West Central Pinal County, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	1.29	1.26	1.17	1.11	0.88	0.64	0.61	0.61
West Silver Valley, ID	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.01	0.00	0.01	0.01	0.01
Williamson County, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	2.94	2.88	2.65	2.52	2.00	1.44	1.37	1.37
Winston-Salem Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.94	1.00	1.02	1.04	0.82	0.75	0.72	0.72
Worcester Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.36	0.39	0.40	0.42	0.33	0.31	0.30	0.30
Yakima Area, WA	CO (1971 8-hour)	Maintenance, --	100	0	-0.01	0.00	0.01	0.01	0.01	0.02	0.02	0.02
Yakima County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.02	0.00	0.02	0.04	0.03	0.06	0.06	0.06
Yuba City-Marysville, CA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	4.40	4.33	3.99	3.81	3.02	2.20	2.10	2.10
Yuma County; Yuma Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.03	0.00	0.04	0.07	0.05	0.10	0.10	0.10
Yuma, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.02	0.00	0.02	0.04	0.03	0.05	0.05	0.05

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Table A-9. Changes in Emissions from U.S. Passenger Cars and Light Trucks by Nonattainment or Maintenance Area and Alternative, Direct and Indirect Impacts--Nitrogen Oxides (NO_x), 2050

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Ada County; Boise, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	12.59	12.03	11.62	11.39	8.72	6.37	5.58
Adams, Denver, and Boulder Counties; Denver Metropolitan Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	133.64	128.97	118.47	111.36	85.10	65.83	49.95
Ajo, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Albuquerque Area, NM	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	24.58	23.50	22.63	22.12	16.92	12.42	10.77
Allegan County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	3.79	3.65	3.41	3.25	2.49	1.88	1.51
Allegheny County Air Basin: Hazelwood Monitor, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	6.32	6.10	5.61	5.28	4.03	3.12	2.37
Allegheny County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	60.99	58.74	54.55	51.75	39.56	30.22	23.70
Allegheny County; The Area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	4.10	3.98	3.56	3.28	2.50	1.99	1.40
Allegheny, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	13.55	13.11	11.88	11.04	8.43	6.63	4.82
Allentown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	20.95	20.05	19.26	18.79	14.38	10.57	9.13
Allentown-Bethlehem-Easton, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	24.88	23.82	22.84	22.25	17.02	12.54	10.77
Alton Township, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	67.85	65.91	58.44	53.23	40.63	32.79	22.15
Amador County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	2.79	2.68	2.54	2.46	1.88	1.40	1.18
Anchorage Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	3.94	3.76	3.64	3.56	2.73	1.99	1.75
Anchorage; Eagle River, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.22	0.21	0.21	0.20	0.15	0.11	0.10
Anne Arundel County and Baltimore County, MD	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	39.03	37.30	36.05	35.34	27.04	19.76	17.32

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
AQCR 012: Portions of Grant County, NM	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	1.36	1.29	1.26	1.24	0.95	0.69	0.62
AQCR 109-Millinocket, ME	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	6.21	5.95	5.67	5.51	4.21	3.12	2.65
AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington Counties (Minneapolis-St. Paul), MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	142.41	136.66	129.31	124.62	95.31	71.27	59.00
AQCR 237: Brown County: Green Bay Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	2.16	2.10	1.88	1.73	1.32	1.05	0.74
AQCR 238: Marathon County: Rothschild Subcity Area, Rib Mountain, Weston, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	5.74	5.48	5.32	5.24	4.01	2.91	2.59
AQCR 238: Oneida County: Rhinelander Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	1.88	1.80	1.75	1.73	1.32	0.96	0.86
AQCR 239: Milwaukee County: Milwaukee Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	20.41	19.48	18.93	18.63	14.26	10.36	9.21
AQCR 240: Dane County: Madison Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	17.77	16.97	16.50	16.25	12.43	9.03	8.03
Archuleta County; Pagosa Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	83.54	81.14	72.00	65.62	50.09	40.39	27.36
Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	21.56	20.94	18.58	16.93	12.93	10.42	7.06
Aroostock County; City of Presque Isle, ME	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.45	0.44	0.41	0.39	0.30	0.23	0.19
Atlanta, GA	Ozone (2008 8-hour)	Maintenance, Moderate	100	0	193.08	184.36	179.00	176.10	134.78	97.99	86.93
Atlanta, GA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	154.78	147.82	143.39	140.96	107.88	78.51	69.48
Atlantic City Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	1.16	1.11	1.08	1.06	0.81	0.59	0.53
Bakersfield Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	18.92	18.15	17.22	16.64	12.73	9.48	7.92

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Baltimore Area, MD	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.94	0.91	0.83	0.79	0.60	0.46	0.35
Baltimore, MD	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	105.60	101.02	97.13	94.82	72.55	53.31	46.09
Baltimore, MD	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	106.38	101.76	97.86	95.53	73.10	53.70	46.45
Baton Rouge, LA	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	272.06	263.80	236.24	217.11	165.78	132.18	92.38
Beaver, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.52	0.50	0.48	0.47	0.36	0.26	0.23
Benton County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.74	0.71	0.69	0.68	0.52	0.38	0.34
Berrien County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	8.47	8.10	7.78	7.58	5.80	4.27	3.67
Billings Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	30.26	29.35	26.23	24.07	18.38	14.69	10.20
Billings, MT	SO ₂ (2010 1-hour)	Maintenance, --	100	0	27.80	27.01	23.95	21.82	16.65	13.44	9.08
Birmingham, AL	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	61.49	59.10	55.47	53.10	40.60	30.64	24.79
Boise-Northern Ada County Area, ID	CO (1971 8-hour)	Maintenance, --	100	0	12.58	12.02	11.62	11.39	8.71	6.37	5.58
Bonner County; The Sandpoint Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.41	0.39	0.38	0.37	0.28	0.21	0.18
Boston Area, MA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	21.23	20.28	19.61	19.23	14.71	10.75	9.43
Boyd County (part), KY	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	34.11	33.14	29.39	26.77	20.44	16.49	11.15
Brooke; Follansbee Area, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.23	0.22	0.20	0.19	0.14	0.11	0.08
Burlington Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.45	0.43	0.41	0.40	0.31	0.23	0.19
Butte County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	11.76	11.32	10.56	10.06	7.69	5.84	4.65
Calaveras County, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	2.14	2.05	1.96	1.91	1.46	1.08	0.92
Calaveras County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	2.14	2.05	1.97	1.91	1.46	1.08	0.92

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Campbell-Clermont Counties, KY-OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	1.97	1.90	1.77	1.69	1.29	0.98	0.78
Canton-Massillon, OH	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	18.94	18.21	17.06	16.29	12.46	9.43	7.58
Central New Hampshire, NH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	6.04	5.77	5.62	5.55	4.25	3.07	2.75
Central Steptoe Valley, NV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.57	0.54	0.53	0.52	0.40	0.29	0.26
Charleston, WV	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	44.88	43.42	39.36	36.57	27.94	21.95	15.97
Charlotte Area, NC	CO (1971 8-hour)	Maintenance, --	100	0	49.18	46.92	45.72	45.10	34.52	25.00	22.38
Charlotte-Rock Hill, NC-SC	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	93.59	89.33	86.86	85.55	65.48	47.53	42.32
Chicago, IL-IN-WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	482.79	465.45	429.88	405.98	310.29	238.50	184.02
Chicago-Naperville, IL-IN-WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	501.60	483.41	447.30	423.08	323.38	248.03	192.44
Chico (Butte County), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	11.76	11.32	10.56	10.06	7.69	5.84	4.65
Chico Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	2.54	2.43	2.36	2.32	1.77	1.29	1.14
Chico, CA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	11.05	10.63	9.94	9.49	7.25	5.50	4.40
Cincinnati, OH-KY	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	76.72	73.40	70.55	68.86	52.69	38.72	33.46
Cincinnati, OH-KY-IN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	79.90	76.43	73.50	71.76	54.91	40.34	34.89
Clark County; Las Vegas Planning Area, NV	PM10 (1987 24-hour)	Maintenance, Serious	100	0	61.76	58.94	57.37	56.54	43.28	31.39	28.01
Cleveland Area, OH	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	37.25	35.56	34.55	34.00	26.02	18.91	16.80
Cleveland, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	98.60	94.25	90.98	89.09	68.17	49.88	43.57
Cleveland, OH	PM2.5 (2012 Annual)	Maintenance, Moderate	100	0	47.54	45.40	44.02	43.25	33.10	24.10	21.30
Cleveland-Akron-Lorain, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	111.97	107.18	102.73	100.03	76.53	56.43	48.38

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Cleveland-Akron-Lorain, OH	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	95.71	91.49	88.29	86.44	66.14	48.41	42.26
Cochise County; Paul Spur/Douglas Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.84	0.81	0.78	0.77	0.59	0.43	0.38
Colorado Springs Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	19.90	19.03	18.33	17.91	13.71	10.05	8.73
Columbus, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	69.68	66.59	64.37	63.11	48.30	35.28	30.94
Columbus, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	64.86	61.98	59.95	58.80	45.00	32.85	28.85
Cook County; Lyons Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	5.61	5.41	4.99	4.70	3.59	2.77	2.13
Cook County; Southeast Chicago, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	196.86	191.18	169.78	154.85	118.21	95.22	64.67
Coshocton County; Franklin Township, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.14	0.14	0.12	0.11	0.09	0.07	0.05
Coso Junction, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	5.92	5.75	5.10	4.65	3.55	2.86	1.94
Cuyahoga County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	29.18	27.85	27.08	26.67	20.41	14.82	13.19
Cuyahoga County, OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	37.26	35.58	34.56	34.01	26.03	18.92	16.80
Dallas-Fort Worth, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	328.04	314.49	299.09	289.42	221.38	164.63	138.20
Dallas-Fort Worth, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	325.20	311.78	296.44	286.80	219.38	163.18	136.90
Delaware County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	120.83	117.17	104.89	96.36	73.58	58.69	40.97
Denver Metro/North Front Range, CO	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	213.33	205.37	191.11	181.63	138.85	105.81	83.49
Denver-Boulder Area, CO	CO (1971 8-hour)	Maintenance, Serious	100	0	179.96	173.37	160.75	152.31	116.42	89.09	69.55
Denver-Boulder-Greeley-Ft Collins-Loveland, CO	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	213.33	205.37	191.11	181.63	138.85	105.81	83.49
Detroit Area, MI	CO (1971 8-hour)	Maintenance, --	100	0	63.71	61.02	58.31	56.65	43.34	32.06	27.27
Detroit, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	207.85	199.42	188.91	182.22	139.37	104.09	86.44

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Detroit, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	17.64	17.01	15.66	14.75	11.28	8.70	6.65
Detroit-Ann Arbor, MI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	208.29	199.84	189.31	182.62	139.67	104.31	86.64
Doña Ana County (Sunland Park Area), NM	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	15.17	14.73	13.10	11.97	9.14	7.35	5.02
Doña Ana County; Anthony, NM	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	14.89	14.46	12.84	11.71	8.94	7.20	4.89
Door County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Douglas, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.70	0.66	0.65	0.64	0.49	0.35	0.32
Dukes County, MA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.25	0.24	0.23	0.23	0.18	0.13	0.11
Duluth Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	12.08	11.69	10.61	9.87	7.54	5.91	4.33
East Chicago Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	191.08	185.61	164.61	149.96	114.47	92.36	62.43
East Helena Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
East Kern County Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	6.66	6.45	5.80	5.35	4.09	3.24	2.30
El Paso County, TX	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	31.96	30.77	28.62	27.19	20.79	15.85	12.49
El Paso, TX	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	15.69	15.22	13.58	12.43	9.49	7.61	5.24
Eugene-Springfield Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	6.42	6.12	5.97	5.89	4.51	3.26	2.92
Evangeline Parish (Partial), LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.34	0.33	0.29	0.27	0.20	0.16	0.11
Fairbanks Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	3.63	3.52	3.15	2.90	2.21	1.76	1.23
Fairbanks, AK	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	4.06	3.93	3.56	3.30	2.52	1.98	1.43
Flathead County; Columbia Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.11	0.11	0.10	0.10	0.08	0.06	0.05
Flathead County; Kalispell and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	1.02	0.97	0.95	0.93	0.71	0.52	0.46

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Flathead County; Whitefish and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.20	0.20	0.19	0.19	0.14	0.10	0.09
Fort Collins Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	5.47	5.24	5.02	4.88	3.73	2.76	2.36
Freehold Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.37	0.35	0.34	0.34	0.26	0.19	0.17
Freestone and Anderson Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	12.66	12.29	10.93	9.99	7.63	6.13	4.19
Fremont County; Canon City Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	2.86	2.76	2.54	2.40	1.83	1.41	1.08
Fresno Area, CA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	18.44	17.62	17.03	16.70	12.78	9.34	8.19
Grants Pass Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.94	0.90	0.88	0.87	0.66	0.48	0.43
Great Falls Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	3.58	3.48	3.09	2.82	2.15	1.73	1.18
Greater Connecticut, CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	49.65	47.39	46.09	45.40	34.75	25.22	22.47
Greater Connecticut, CT	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	49.69	47.43	46.13	45.44	34.78	25.24	22.48
Greeley Area, CO	CO (1971 8-hour)	Maintenance, --	100	0	106.07	102.87	92.03	84.50	64.52	51.51	35.88
Hancock and Brooke Counties (Part); The City of Weirton, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	3.16	3.06	2.75	2.54	1.94	1.54	1.09
Hancock County (Part) The City of Weirton, including Butler and Clay: Magisterial Districts, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	9.70	9.42	8.38	7.67	5.85	4.70	3.22
Harrisburg-Lebanon-Carlisle-York, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	37.51	35.86	34.61	33.89	25.93	18.98	16.57
Hartford-New Britain-Middletown Area, CT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	33.82	32.28	31.42	30.97	23.70	17.19	15.34
Hayden, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	1.09	1.05	0.95	0.88	0.67	0.53	0.38
Hayden, AZ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	1.02	0.99	0.89	0.82	0.62	0.50	0.35

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Hayden, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	1.02	0.99	0.89	0.82	0.62	0.50	0.35
Hillsborough County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	1.89	1.83	1.66	1.55	1.19	0.93	0.69
Hillsborough-Polk County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	1.55	1.50	1.34	1.22	0.93	0.75	0.51
Houston-Galveston-Brazoria, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	981.08	949.48	859.17	797.04	608.80	479.35	346.84
Houston-Galveston-Brazoria, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	969.34	938.17	848.68	787.10	601.20	473.53	342.30
Humphreys County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.71	0.68	0.66	0.65	0.50	0.36	0.32
Huntington, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	1.14	1.09	1.05	1.04	0.79	0.58	0.51
Imperial County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	6.68	6.38	6.17	6.04	4.62	3.38	2.96
Imperial County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	6.68	6.38	6.16	6.04	4.62	3.38	2.96
Imperial County, CA	PM _{2.5} (2006 24-hour)	Nonattainment, Moderate	100	0	5.09	4.86	4.74	4.67	3.58	2.59	2.32
Imperial County, CA	PM _{2.5} (2012 Annual)	Nonattainment, Moderate	100	0	5.09	4.86	4.74	4.67	3.58	2.59	2.32
Imperial County; Imperial Valley Planning Area, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Serious	70	0	6.57	6.28	6.06	5.94	4.55	3.32	2.91
Indian Wells, CA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	6.99	6.77	6.11	5.65	4.31	3.41	2.44
Indiana, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	74.56	72.38	64.40	58.85	44.93	36.10	24.69
Indianapolis Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	0.07	0.06	0.06	0.06	0.05	0.03	0.03
Indianapolis, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	18.99	18.16	17.53	17.16	13.13	9.61	8.39
Inyo County; Owens Valley Planning Area, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Serious	70	0	1.44	1.39	1.26	1.16	0.89	0.70	0.50
Jackson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	2.88	2.77	2.57	2.43	1.86	1.42	1.11
Jackson County; Medford-Ashland (including White City), OR	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	4.52	4.31	4.20	4.15	3.18	2.30	2.06

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Jamestown, NY	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	25.93	25.11	22.64	20.93	15.98	12.64	9.03
Jefferson County, KY	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.06	0.05	0.05	0.05	0.04	0.03	0.02
Jefferson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	1.45	1.38	1.34	1.32	1.01	0.73	0.65
Jefferson County; (part) Steubenville & Mingo Junction, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	4.28	4.13	3.79	3.56	2.72	2.11	1.59
Jefferson County; (part), OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.32	0.31	0.28	0.27	0.21	0.16	0.12
Johnstown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	49.26	47.78	42.69	39.14	29.89	23.90	16.57
Josephine County; Grants Pass, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.94	0.90	0.88	0.86	0.66	0.48	0.43
Juneau; Mendenhall Valley Area, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.25	0.24	0.23	0.23	0.17	0.13	0.11
Kern County (Eastern Kern), CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	101.13	98.19	87.32	79.75	60.88	48.96	33.42
Kern County (Eastern Kern), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	101.13	98.19	87.32	79.75	60.88	48.96	33.42
King County; Kent, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.56	0.53	0.52	0.51	0.39	0.28	0.25
King County; Seattle, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.41	0.39	0.38	0.38	0.29	0.21	0.19
Klamath County; Klamath Falls, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.68	1.61	1.56	1.54	1.17	0.85	0.76
Klamath Falls Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	1.68	1.61	1.56	1.53	1.17	0.85	0.76
Klamath Falls, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	1.93	1.84	1.79	1.76	1.35	0.98	0.87
Knoxville, TN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	28.82	27.55	26.58	26.02	19.91	14.58	12.72
Knoxville-Sevierville-La Follette, TN	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	38.01	36.39	34.86	33.94	25.96	19.15	16.40
La Porte County; (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	3.77	3.63	3.37	3.20	2.44	1.87	1.47
Lake County (part); Lakeview, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.17	0.16	0.16	0.15	0.12	0.09	0.08

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Lake County, OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	8.20	7.83	7.58	7.45	5.70	4.15	3.66
Lake County: (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	206.69	200.61	178.73	163.50	124.82	100.15	68.78
Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	1.28	1.22	1.19	1.17	0.90	0.65	0.58
Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	202.17	196.28	174.56	159.41	121.70	97.86	66.79
Lake County; Polson, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.06	0.06	0.05	0.05	0.04	0.03	0.03
Lake County; Ronan, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.03	0.03	0.03	0.03	0.02	0.02	0.01
Lake Tahoe Nevada Area, NV	CO (1971 8-hour)	Maintenance, --	100	0	0.65	0.62	0.60	0.59	0.45	0.33	0.29
Lake Tahoe North Shore Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	0.49	0.46	0.45	0.44	0.33	0.25	0.21
Lake Tahoe South Shore Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	1.23	1.17	1.14	1.12	0.86	0.62	0.55
Lancaster, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	15.67	14.97	14.51	14.26	10.91	7.95	7.02
Lancaster, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	15.68	14.97	14.51	14.26	10.91	7.95	7.02
Lane County (part); Oakridge, OR	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.05	0.05	0.05	0.05	0.04	0.03	0.02
Lane County; Eugene/Springfield, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	6.42	6.12	5.97	5.89	4.51	3.26	2.92
Las Vegas Area, NV	CO (1971 8-hour)	Maintenance, Serious	100	0	61.81	58.99	57.42	56.59	43.31	31.41	28.04
Las Vegas, NV	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	61.76	58.94	57.37	56.54	43.28	31.39	28.01
LaSalle County; Oglesby, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	3.00	2.89	2.66	2.50	1.91	1.48	1.12
Laurel Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	27.85	27.05	23.99	21.86	16.68	13.46	9.10
Lebanon County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	4.23	4.04	3.90	3.83	2.93	2.14	1.88
Lemont, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	71.49	69.37	61.91	56.72	43.30	34.67	23.95

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Liberty-Clairton, PA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	4.10	3.98	3.56	3.28	2.50	1.99	1.40
Lincoln County; Libby and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.19	0.18	0.18	0.18	0.14	0.10	0.09
Logan, UT-ID	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	3.58	3.41	3.33	3.28	2.51	1.82	1.63
Longmont Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	60.10	58.34	51.94	47.48	36.25	29.11	19.94
Lorain County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	1.76	1.68	1.62	1.58	1.21	0.89	0.77
Los Angeles, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	602.59	577.00	552.20	537.07	410.89	303.44	259.13
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	128.89	124.70	113.01	104.98	80.19	63.02	45.83
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	128.88	124.69	113.01	104.98	80.19	63.02	45.83
Los Angeles-South Coast Air Basin Area, CA	CO (1971 8-hour)	Maintenance, Serious	100	0	602.55	576.95	552.17	537.06	410.88	303.42	259.14
Los Angeles-South Coast Air Basin Area, CA	NO ₂ (1971 Annual)	Maintenance, --	100	0	602.51	576.91	552.14	537.02	410.85	303.40	259.12
Los Angeles-South Coast Air Basin, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	602.71	577.11	552.31	537.17	410.97	303.50	259.18
Los Angeles-South Coast Air Basin, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	602.42	576.83	552.04	536.91	410.77	303.35	259.05
Los Angeles-South Coast Air Basin, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	602.59	577.00	552.20	537.07	410.89	303.44	259.13
Louisville, KY-IN	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	41.29	39.44	38.23	37.55	28.74	20.94	18.49
Lowell Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	3.00	2.87	2.77	2.71	2.07	1.52	1.32
Lucas County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	53.27	51.55	46.65	43.27	33.05	26.03	18.83
Madison County; Granite City Township and Nameoki Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	70.38	68.34	60.71	55.40	42.29	34.05	23.15
Manchester Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	3.31	3.15	3.07	3.03	2.32	1.68	1.51

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Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
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Manitowoc County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.61	1.54	1.48	1.45	1.11	0.81	0.71
Maricopa and Pinal Counties; Phoenix Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	120.55	115.05	111.96	110.34	84.45	61.25	54.65
Marion County: Lawrence, Washington, and Warrant Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	17.59	16.83	16.21	15.84	12.12	8.89	7.72
Mariposa County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	1.38	1.32	1.28	1.26	0.97	0.70	0.62
Mariposa County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.38	1.32	1.28	1.26	0.97	0.70	0.62
Marshall, WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	12.93	12.55	11.17	10.20	7.79	6.26	4.28
Medford Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	2.43	2.32	2.26	2.23	1.71	1.24	1.11
Memphis Area, TN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	42.04	40.31	38.28	36.99	28.29	21.08	17.61
Memphis, TN-MS-AR	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	51.78	49.62	47.28	45.82	35.05	26.01	21.94
Miami, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	1.36	1.31	1.20	1.12	0.86	0.67	0.50
Miami, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.46	0.44	0.43	0.42	0.32	0.23	0.21
Miami, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	1.36	1.31	1.20	1.13	0.86	0.67	0.50
Milwaukee-Racine, WI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	39.09	37.31	36.30	35.78	27.38	19.86	17.72
Minneapolis-St. Paul Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	145.30	139.42	132.00	127.27	97.34	72.74	60.31
Missoula Area, MT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	3.39	3.26	3.09	2.98	2.28	1.70	1.41
Missoula county; Missoula and Vicinity, MT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	3.41	3.27	3.10	2.99	2.29	1.71	1.42
Modesto Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	6.36	6.07	5.90	5.82	4.45	3.23	2.88

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Mohave County (part); Bullhead City, AZ	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	2.64	2.53	2.39	2.30	1.76	1.32	1.09
Mono County; Mammoth Lake Planning Area, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.70	1.64	1.53	1.46	1.11	0.85	0.67
Mono County; Mono Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.96	0.93	0.84	0.77	0.59	0.47	0.33
Morenci, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.11	0.11	0.10	0.10	0.08	0.06	0.05
Morgan County, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	1.02	0.97	0.94	0.93	0.71	0.52	0.46
Morongo Band of Mission Indians	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	0.39	0.38	0.34	0.32	0.24	0.19	0.14
Morongo Band of Mission Indians, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	0.40	0.38	0.35	0.32	0.25	0.19	0.14
Morristown Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.84	0.81	0.77	0.74	0.57	0.42	0.35
Muscatine County; (part), IA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.34	0.32	0.31	0.30	0.23	0.17	0.15
Muscatine, IA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.62	0.59	0.57	0.56	0.43	0.31	0.28
Muskegon County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	5.30	5.06	4.92	4.85	3.71	2.69	2.40
Muskingum River, OH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.24	0.23	0.22	0.21	0.16	0.12	0.10
Nashua Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	2.93	2.80	2.70	2.64	2.02	1.48	1.29
Nassau County, FL	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.22	0.21	0.21	0.20	0.16	0.11	0.10
Nevada County (Western part), CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	3.90	3.72	3.62	3.56	2.72	1.98	1.75
Nevada County (Western part), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	3.91	3.74	3.63	3.57	2.73	1.99	1.76
New Haven County, CT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.72	0.68	0.66	0.65	0.50	0.36	0.32
New Haven-Meriden-Waterbury Area, CT	CO (1971 8-hour)	Maintenance, --	100	0	26.86	25.65	24.89	24.48	18.73	13.63	12.07
New Manchester-Grant Magisterial District in Hancock County, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	2.82	2.74	2.44	2.23	1.71	1.37	0.94

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
New York County, NY	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	11.89	11.36	10.98	10.77	8.24	6.02	5.28
New York, NY-NJ-CT	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	461.39	441.08	425.61	416.67	318.84	233.37	203.70
New York-N. New Jersey-Long Island Area, NY-NJ-CT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	267.63	256.07	246.00	240.00	183.63	135.04	116.51
New York-N. New Jersey-Long Island, NY-NJ-CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	454.23	434.27	418.87	409.94	313.69	229.70	200.28
New York-Northern New Jersey-Long Island, NY-NJ-CT	Ozone (2015 8-hour)	Nonattainment, Moderate	50	0	453.97	434.02	418.63	409.70	313.50	229.57	200.16
NJ Portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	1.23	1.18	1.13	1.10	0.84	0.62	0.53
Nogales, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	1.02	0.97	0.95	0.94	0.72	0.52	0.46
Northern Milwaukee/Ozaukee Shoreline, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	2.51	2.40	2.30	2.24	1.71	1.26	1.08
Northern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	73.93	71.00	66.94	64.32	49.19	36.93	30.26
Oakridge, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.10	0.09	0.09	0.09	0.07	0.05	0.05
Ogden Area, UT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	1.79	1.71	1.67	1.64	1.26	0.91	0.82
Ogden Area, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	1.79	1.71	1.67	1.64	1.26	0.91	0.82
Olmsted County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.27	1.22	1.16	1.12	0.85	0.64	0.53
Olmsted; City of Rochester, MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	3.94	3.77	3.61	3.51	2.69	1.98	1.69
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.70	0.68	0.60	0.55	0.42	0.34	0.23
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.70	0.68	0.60	0.55	0.42	0.34	0.23
Pekin, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	2.01	1.93	1.82	1.75	1.34	1.00	0.83

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Penns Grove Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	1.09	1.06	0.94	0.85	0.65	0.53	0.36
Peoria County: Hollis Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.78	0.76	0.68	0.63	0.48	0.38	0.27
Peoria County: Peoria, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	3.85	3.69	3.52	3.42	2.62	1.94	1.64
Perth Amboy Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	8.33	8.06	7.27	6.73	5.14	4.06	2.91
Philadelphia-Camden County Area, PA-NJ	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	129.37	125.14	113.55	105.60	80.67	63.30	46.22
Philadelphia-Wilmington, PA-NJ-DE	PM _{2.5} (2006 24-hour)	Maintenance, Moderate for PA and DE; Subject to Former Subpart 1 for NJ	100	0	263.10	253.13	236.34	225.26	172.22	130.73	104.19
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	316.95	304.62	285.94	273.75	209.32	157.94	127.82
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	316.84	304.52	285.84	273.64	209.24	157.89	127.77
Phoenix Area, AZ	CO (1971 8-hour)	Maintenance, Serious	100	0	116.42	111.11	108.13	106.56	81.56	59.16	52.78
Phoenix-Mesa, AZ	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	121.23	115.70	112.60	110.96	84.93	61.60	54.96
Phoenix-Mesa, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	124.45	118.77	115.58	113.91	87.18	63.24	56.42
Pierce County; Tacoma, WA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	4.63	4.50	4.00	3.65	2.79	2.24	1.53
Pima County; Ajo Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pima County; Rillito Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	2.65	2.54	2.40	2.31	1.77	1.32	1.09
Pinal and Gila Counties; Payson, AZ	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.57	0.54	0.53	0.52	0.40	0.29	0.26
Pinal County (part); West Pinal, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	9.60	9.18	8.85	8.67	6.63	4.86	4.24
Pitkin County; Aspen, CO	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	55.71	54.10	48.04	43.81	33.44	26.94	18.29
Pittsburgh Area, PA	CO (1971 8-hour)	Maintenance, --	100	0	12.24	11.76	11.06	10.60	8.10	6.10	4.96

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
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Pittsburgh-Beaver Valley, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	191.20	184.66	168.97	158.30	120.96	93.98	70.47
Pittsburgh-Beaver Valley, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	173.38	167.44	153.24	143.58	109.71	85.23	63.94
Plumas County, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.74	0.72	0.65	0.61	0.46	0.36	0.27
Polk County, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.95	0.91	0.88	0.86	0.66	0.48	0.42
Portland Area: Portland Metro Service District Boundary, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	39.06	37.29	36.24	35.67	27.30	19.83	17.63
Power-Bannock Counties; Fort Hall Indian Reservation, ID	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01
Power-Bannock Counties; Portneuf Valley Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	2.30	2.19	2.13	2.10	1.61	1.17	1.04
Provo Area, UT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	2.92	2.79	2.71	2.68	2.05	1.48	1.33
Provo, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	30.82	29.68	27.57	26.17	20.00	15.27	11.99
Prowers County; Lamar, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.98	0.95	0.86	0.81	0.62	0.48	0.35
Raleigh-Durham Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	56.49	53.92	52.42	51.61	39.50	28.69	25.52
Ramsey County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	39.34	38.22	33.89	30.88	23.57	19.02	12.85
Reading, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	13.43	12.85	12.37	12.09	9.25	6.79	5.89
Reno Area, NV	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	9.62	9.18	8.95	8.83	6.76	4.89	4.38
Rhineland, WI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.92	0.87	0.85	0.84	0.64	0.47	0.42
Riverside County (Coachella Valley), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	15.46	14.77	14.32	14.06	10.76	7.84	6.92
Riverside County (Coachella Valley), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	15.46	14.77	14.32	14.06	10.76	7.84	6.92
Riverside County; Coachella Valley Planning Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	17.94	17.14	16.62	16.34	12.50	9.10	8.05

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Riverside, Los Angeles, Orange, and San Bernardino Counties; South Coast Air Basin, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	600.34	574.85	550.11	535.00	409.31	302.29	258.11
Rosebud County; Lame Deer, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.30	0.29	0.26	0.24	0.18	0.14	0.10
Routt County (part); Steamboat Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	74.46	72.32	64.20	58.54	44.69	36.01	24.43
Rusk and Panola Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	20.62	20.03	17.77	16.19	12.36	9.97	6.74
Sacramento Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	84.41	81.25	75.68	72.00	55.04	41.89	33.16
Sacramento County, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	160.49	155.21	141.01	131.27	100.28	78.58	57.60
Sacramento Metro, CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	192.85	186.11	170.96	160.70	122.80	94.99	72.08
Sacramento Metro, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	192.84	186.11	170.95	160.69	122.80	94.98	72.08
Sacramento, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	191.33	184.66	169.55	159.30	121.73	94.21	71.39
Salem Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	6.88	6.56	6.40	6.31	4.83	3.50	3.14
Salt Lake City Area, UT	CO (1971 8-hour)	Maintenance, --	100	0	31.80	30.79	27.77	25.68	19.61	15.51	11.09
Salt Lake City, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	76.19	73.15	69.03	66.38	50.77	38.08	31.29
Salt Lake County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	56.80	54.65	51.00	48.59	37.15	28.22	22.46
Salt Lake County, UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	56.85	54.70	51.05	48.64	37.19	28.24	22.48
San Antonio, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	77.86	74.68	70.86	68.44	52.35	39.03	32.56
San Bernardino County (part); excluding Searles Valley Planning Area and South Coast Air Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	119.37	115.63	104.14	96.21	73.48	58.18	41.45
San Diego Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	104.40	99.65	96.91	95.45	73.06	53.03	47.23

Notes:

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Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
San Diego County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	104.83	100.06	97.31	95.85	73.36	53.24	47.43
San Diego County, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	104.51	99.76	97.02	95.56	73.14	53.09	47.28
San Francisco Bay Area, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	326.32	313.46	295.05	283.11	216.50	162.85	132.83
San Francisco Bay Area, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	326.02	313.18	294.78	282.84	216.29	162.70	132.70
San Francisco Bay Area, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	328.10	315.16	296.71	284.74	217.75	163.76	133.64
San Francisco-Oakland-San Jose Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	309.63	297.53	279.59	267.91	204.87	154.39	125.34
San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	304.71	293.93	270.65	254.93	194.83	150.28	114.89
San Joaquin Valley, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	304.71	293.93	270.65	254.94	194.83	150.28	114.89
San Joaquin Valley, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	304.72	293.94	270.66	254.94	194.83	150.28	114.89
San Joaquin Valley, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	302.66	291.94	268.88	253.32	193.60	149.29	114.21
San Joaquin Valley, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	302.66	291.94	268.88	253.32	193.60	149.29	114.21
San Luis Obispo (Eastern part), CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	9.28	9.01	8.00	7.30	5.57	4.49	3.05
San Luis Obispo (Eastern San Luis Obispo), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	9.28	9.01	8.00	7.30	5.57	4.49	3.05
San Manuel, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	1.26	1.21	1.11	1.03	0.79	0.62	0.45
San Miguel County; Telluride, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	3.81	3.70	3.30	3.03	2.31	1.85	1.28
Sanders County (part); Thompson Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.03	0.03	0.03	0.03	0.02	0.01	0.01
Santa Cruz County; Nogales Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	1.04	0.99	0.97	0.95	0.73	0.53	0.47
Seaford, DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	7.79	7.44	7.23	7.13	5.46	3.96	3.53

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Seattle-Tacoma Area, WA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	91.85	87.71	85.11	83.69	64.05	46.60	41.27
Seattle-Tacoma, WA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	18.93	18.14	17.30	16.78	12.83	9.52	8.05
Sheboygan County, WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	3.32	3.18	3.08	3.02	2.31	1.69	1.49
Sheboygan County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.77	1.70	1.64	1.60	1.23	0.90	0.78
Sheridan County; City of Sheridan, WY	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.63	1.58	1.45	1.37	1.04	0.81	0.62
Shoshone County (part); excluding Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.70	0.67	0.65	0.65	0.49	0.36	0.32
Shoshone County; City of Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Silver Bow County; Butte, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.74	0.70	0.69	0.68	0.52	0.38	0.34
Somerville Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.51	0.48	0.46	0.45	0.34	0.25	0.21
Southern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	30.82	29.68	27.57	26.16	20.00	15.27	11.99
Southwest Indiana, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	4.61	4.48	3.99	3.65	2.79	2.23	1.54
Spokane Area, WA	CO (1971 8-hour)	Maintenance, Serious	100	0	8.96	8.55	8.33	8.21	6.29	4.55	4.07
Spokane County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	9.13	8.71	8.49	8.37	6.41	4.64	4.15
Springfield Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	4.22	4.02	3.91	3.85	2.95	2.14	1.90
St. Bernard Parish, LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	78.76	76.49	67.89	61.88	47.24	38.08	25.81
St. Clair, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	2.96	2.85	2.65	2.52	1.93	1.47	1.16
St. Louis Area, MO	CO (1971 8-hour)	Maintenance, --	100	0	90.32	87.37	79.26	73.68	56.29	44.19	32.23
St. Louis, MO-IL	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	144.62	139.38	128.97	121.99	93.24	71.51	55.49
St. Louis-St. Charles-Farmington, MO-IL	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	154.27	148.59	137.91	130.79	99.97	76.41	59.83

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Steubenville, OH-WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	11.32	10.96	9.87	9.11	6.96	5.51	3.92
Steubenville-Weirton, OH-WV	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	6.84	6.59	6.14	5.84	4.46	3.40	2.69
Stockton Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	10.82	10.34	10.03	9.86	7.55	5.49	4.86
Sullivan County, TN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	1.11	1.07	1.02	0.98	0.75	0.56	0.47
Sutter Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.10	1.06	0.94	0.86	0.66	0.53	0.36
Syracuse Area; Onondaga County, NY	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	13.77	13.14	12.80	12.62	9.66	7.00	6.25
Tazewell County: Groveland Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.69	0.66	0.64	0.63	0.48	0.35	0.31
Terre Haute, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	2.60	2.49	2.39	2.32	1.78	1.31	1.12
Thurston County; Cities of Olympia, Tumwater, and Lacey, WA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	2.88	2.75	2.68	2.65	2.02	1.47	1.31
Titus County, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.21	0.21	0.18	0.17	0.13	0.10	0.07
Toms River Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.60	0.58	0.52	0.48	0.37	0.29	0.21
Tooele County (part), UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	15.95	15.50	13.75	12.53	9.57	7.71	5.22
Trenton Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	2.64	2.52	2.45	2.41	1.84	1.34	1.19
Trona, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	5.86	5.69	5.05	4.61	3.52	2.83	1.92
Tucson Area, AZ	CO (1971 8-hour)	Maintenance, --	100	0	29.68	28.34	27.54	27.12	20.76	15.07	13.41
Tuolumne County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	2.94	2.82	2.68	2.58	1.98	1.47	1.23
Tuscan Buttes, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.36	0.35	0.31	0.28	0.22	0.17	0.12
Tuscan Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.36	0.35	0.31	0.28	0.22	0.17	0.12

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Uinta Basin, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	78.80	76.53	67.97	62.01	47.34	38.12	25.91
Union County; LaGrande, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.45	0.43	0.42	0.41	0.32	0.23	0.21
Upper Green River Basin Area, WY	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	37.42	36.34	32.30	29.48	22.50	18.11	12.33
Utah County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	66.62	64.46	58.41	54.26	41.45	32.58	23.68
Vancouver Area: Clark County (part), WA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	9.11	8.70	8.46	8.32	6.37	4.63	4.11
Ventura County, CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	128.28	124.17	112.25	104.04	79.46	62.64	45.18
Ventura County, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	128.24	124.13	112.21	104.01	79.44	62.62	45.16
Vermillion County; Part of Clinton Township, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.99	0.96	0.89	0.84	0.65	0.49	0.39
Vigo County, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	8.36	8.05	7.49	7.12	5.45	4.15	3.28
Walla Walla County; Wallula, WA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.10	0.10	0.09	0.09	0.07	0.05	0.05
Waltham Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	1.81	1.74	1.66	1.62	1.24	0.91	0.78
Warren County: Conewago Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	16.22	15.75	13.98	12.74	9.73	7.84	5.31
Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	16.95	16.46	14.64	13.37	10.21	8.21	5.60
Warren, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	17.21	16.70	14.87	13.59	10.37	8.33	5.70
Washington Area, DC-MD-VA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	25.62	24.48	23.68	23.22	17.77	12.97	11.40
Washington, DC-MD-VA	Ozone (2008 8-hour)	Nonattainment (DC) Maintenance (MD, VA), Marginal	50	0	171.11	163.35	158.77	156.32	119.64	86.89	77.28
Washington, DC-MD-VA	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	171.18	163.41	158.83	156.37	119.68	86.92	77.31
Washoe County; Reno Planning Area, NV	PM10 (1987 24-hour)	Maintenance, Serious	100	0	9.71	9.27	9.03	8.91	6.82	4.94	4.42

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	1.96	1.87	1.81	1.78	1.36	0.99	0.87
Wayne County; (part), MI	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	12.14	11.76	10.57	9.74	7.44	5.91	4.17
West Central Pinal County, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	2.65	2.55	2.40	2.31	1.76	1.32	1.09
West Silver Valley, ID	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.38	0.36	0.35	0.35	0.26	0.19	0.17
Williamson County, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	4.85	4.67	4.37	4.17	3.19	2.41	1.94
Winston-Salem Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	12.83	12.25	11.88	11.67	8.93	6.50	5.75
Worcester Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	5.91	5.65	5.48	5.39	4.12	3.00	2.66
Yakima Area, WA	CO (1971 8-hour)	Maintenance, --	100	0	0.80	0.77	0.75	0.74	0.56	0.41	0.37
Yakima County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	2.72	2.60	2.53	2.50	1.91	1.39	1.24
Yuba City-Marysville, CA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	9.14	8.77	8.28	7.96	6.08	4.57	3.75
Yuma County; Yuma Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	4.53	4.32	4.21	4.16	3.18	2.30	2.06
Yuma, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	2.33	2.22	2.17	2.14	1.64	1.19	1.06

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

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Table A-10. Changes in Emissions from U.S. Passenger Cars and Light Trucks by Nonattainment or Maintenance Area and Alternative, Direct and Indirect Impacts--Volatile Organic Compounds (VOCs), 2025

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Ada County; Boise, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	7.01	6.92	6.38	6.40	4.57	2.78	3.47
Adams, Denver, and Boulder Counties; Denver Metropolitan Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	49.75	48.79	45.16	44.99	32.26	21.47	24.33
Ajo, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Albuquerque Area, NM	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	3.46	3.55	3.21	3.35	2.36	0.52	1.86
Allegan County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.01	0.02	0.01	0.03	0.02	-0.11	0.02
Allegheny County Air Basin: Hazelwood Monitor, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.22	-0.19	-0.19	-0.17	-0.13	-0.23	-0.08
Allegheny County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	-3.15	-2.81	-2.74	-2.45	-1.84	-3.12	-1.25
Allegheny County; The Area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.06	0.07	0.06	0.06	0.04	0.01	0.04
Allegheny, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.03	0.05	0.04	0.06	0.04	-0.15	0.04
Allentown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	2.14	2.23	2.00	2.13	1.49	0.08	1.19
Allentown-Bethlehem-Easton, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	1.18	1.32	1.14	1.30	0.88	-0.54	0.75
Alton Township, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	1.63	1.59	1.48	1.46	1.05	0.79	0.78
Amador County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.41	-0.38	-0.37	-0.34	-0.25	-0.31	-0.18
Anchorage Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	6.62	6.47	6.00	5.95	4.28	3.02	3.21
Anchorage; Eagle River, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.38	0.37	0.34	0.34	0.24	0.17	0.18
Anne Arundel County and Baltimore County, MD	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-10.98	-10.38	-9.81	-9.37	-6.84	-7.25	-4.96

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
AQCR 012: Portions of Grant County, NM	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	2.03	1.99	1.84	1.83	1.31	0.91	0.99
AQCR 109-Millinocket, ME	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	3.32	3.27	3.02	3.02	2.16	1.35	1.64
AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington Counties (Minneapolis-St. Paul), MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	29.22	29.24	26.77	27.26	19.37	8.91	14.90
AQCR 237: Brown County: Green Bay Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.01	-0.01	-0.01	0.00	0.00	-0.02	0.00
AQCR 238: Marathon County: Rothschild Subcity Area, Rib Mountain, Weston, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	5.37	5.27	4.88	4.86	3.49	2.30	2.63
AQCR 238: Oneida County: Rhinelander Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	3.08	3.01	2.79	2.77	1.99	1.39	1.50
AQCR 239: Milwaukee County: Milwaukee Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-3.73	-3.47	-3.31	-3.09	-2.28	-2.88	-1.62
AQCR 240: Dane County: Madison Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-4.60	-4.32	-4.09	-3.89	-2.85	-3.17	-2.05
Archuleta County; Pagosa Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	4.81	4.68	4.35	4.30	3.09	2.30	2.31
Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.78	0.76	0.71	0.70	0.50	0.37	0.38
Aroostock County; City of Presque Isle, ME	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.08	-0.08	-0.08	-0.07	-0.05	-0.06	-0.04
Atlanta, GA	Ozone (2008 8-hour)	Maintenance, Moderate	100	0	-20.17	-18.04	-17.58	-15.72	-11.82	-19.82	-8.02
Atlanta, GA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-11.79	-10.22	-10.14	-8.72	-6.67	-13.68	-4.34
Atlantic City Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	-0.19	-0.17	-0.16	-0.15	-0.11	-0.15	-0.08
Bakersfield Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	-1.27	-1.12	-1.10	-0.97	-0.73	-1.34	-0.49

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Baltimore Area, MD	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.05	0.05	0.05	0.05	0.05	0.03	0.00	0.03
Baltimore, MD	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	-24.89	-23.44	-22.19	-21.10	-15.43	-16.95	-11.14	-11.14
Baltimore, MD	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	-25.12	-23.66	-22.39	-21.30	-15.58	-17.11	-11.25	-11.25
Baton Rouge, LA	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	66.12	64.54	59.90	59.34	42.65	30.57	32.00	32.00
Beaver, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.06	-0.06	-0.05	-0.05	-0.04	-0.05	-0.03	-0.03
Benton County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	1.24	1.21	1.12	1.11	0.80	0.56	0.60	0.60
Berrien County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	2.69	2.68	2.46	2.49	1.77	0.92	1.36	1.36
Billings Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	10.11	9.86	9.16	9.05	6.51	4.77	4.88	4.88
Billings, MT	SO ₂ (2010 1-hour)	Maintenance, --	100	0	3.12	3.03	2.82	2.78	2.00	1.51	1.50	1.50
Birmingham, AL	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	16.46	16.32	15.02	15.14	10.80	6.00	8.23	8.23
Boise-Northern Ada County Area, ID	CO (1971 8-hour)	Maintenance, --	100	0	7.01	6.91	6.38	6.39	4.57	2.78	3.47	3.47
Bonner County; The Sandpoint Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.37	0.36	0.33	0.33	0.24	0.16	0.18	0.18
Boston Area, MA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	8.97	8.88	8.18	8.24	5.88	3.30	4.48	4.48
Boyd County (part), KY	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	2.88	2.80	2.61	2.57	1.85	1.39	1.38	1.38
Brooke; Follansbee Area, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.07	0.07	0.06	0.06	0.05	0.03	0.03	0.03
Burlington Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	-0.07	-0.06	-0.06	-0.06	-0.04	-0.05	-0.03	-0.03
Butte County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.80	0.83	0.75	0.79	0.55	0.05	0.44	0.44
Calaveras County, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	-0.26	-0.23	-0.22	-0.21	-0.15	-0.22	-0.11	-0.11
Calaveras County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.26	-0.23	-0.22	-0.21	-0.15	-0.22	-0.11	-0.11

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

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NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Campbell-Clermont Counties, KY-OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.00	0.01	0.01	0.02	0.01	-0.06	0.01
Canton-Massillon, OH	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-0.49	-0.39	-0.40	-0.30	-0.25	-0.82	-0.14
Central New Hampshire, NH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-2.74	-2.61	-2.45	-2.37	-1.72	-1.66	-1.26
Central Steptoe Valley, NV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.03	0.03	0.03	0.03	0.02	-0.02	0.02
Charleston, WV	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	3.84	3.82	3.51	3.55	2.53	1.31	1.94
Charlotte Area, NC	CO (1971 8-hour)	Maintenance, --	100	0	-18.76	-17.83	-16.79	-16.14	-11.75	-11.76	-8.57
Charlotte-Rock Hill, NC-SC	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-18.56	-17.28	-16.46	-15.44	-11.36	-13.95	-8.09
Chicago, IL-IN-WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	3.94	5.56	4.29	6.02	3.79	-9.19	3.73
Chicago-Naperville, IL-IN-WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	4.21	5.98	4.60	6.48	4.07	-10.02	4.02
Chico (Butte County), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.80	0.83	0.75	0.79	0.55	0.05	0.44
Chico Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.42	0.43	0.39	0.40	0.28	0.07	0.22
Chico, CA	PM _{2.5} (2006 24-hour)	Maintenance, Moderate	100	0	0.77	0.80	0.72	0.76	0.53	0.04	0.42
Cincinnati, OH-KY	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-3.70	-3.05	-3.11	-2.50	-1.98	-5.33	-1.19
Cincinnati, OH-KY-IN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-3.18	-2.52	-2.64	-2.00	-1.63	-5.25	-0.91
Clark County; Las Vegas Planning Area, NV	PM ₁₀ (1987 24-hour)	Maintenance, Serious	100	0	-16.42	-15.45	-14.63	-13.90	-10.17	-11.26	-7.34
Cleveland Area, OH	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-4.25	-3.83	-3.72	-3.35	-2.51	-4.01	-1.72
Cleveland, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-14.76	-13.61	-13.03	-12.09	-8.94	-11.94	-6.29
Cleveland, OH	PM _{2.5} (2012 Annual)	Maintenance, Moderate	100	0	-5.14	-4.62	-4.49	-4.04	-3.03	-4.92	-2.07
Cleveland-Akron-Lorain, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-15.17	-13.98	-13.40	-12.41	-9.18	-12.33	-6.46

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Cleveland-Akron-Lorain, OH	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-15.10	-13.96	-13.35	-12.43	-9.18	-11.95	-6.48
Cochise County; Paul Spur/Douglas Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.27	0.27	0.24	0.25	0.18	0.08	0.14
Colorado Springs Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	14.62	14.36	13.28	13.26	9.50	6.15	7.18
Columbus, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.93	1.44	1.06	1.61	0.99	-3.00	1.02
Columbus, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-1.61	-1.06	-1.25	-0.71	-0.67	-4.01	-0.24
Cook County; Lyons Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.12	0.13	0.11	0.13	0.09	-0.07	0.08
Cook County; Southeast Chicago, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	5.10	4.99	4.63	4.59	3.30	2.30	2.48
Coshocton County; Franklin Township, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.22	0.22	0.20	0.20	0.14	0.11	0.11
Coso Junction, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	2.16	2.10	1.95	1.93	1.39	1.05	1.04
Cuyahoga County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-3.42	-3.09	-2.99	-2.70	-2.02	-3.20	-1.39
Cuyahoga County, OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-4.25	-3.83	-3.72	-3.35	-2.51	-4.01	-1.72
Dallas-Fort Worth, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-17.59	-15.07	-15.05	-12.74	-9.82	-21.61	-6.28
Dallas-Fort Worth, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-17.17	-14.68	-14.68	-12.40	-9.57	-21.25	-6.10
Delaware County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	4.95	4.91	4.52	4.56	3.25	1.76	2.48
Denver Metro/North Front Range, CO	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	146.46	143.34	132.83	131.99	94.75	65.20	71.30
Denver-Boulder Area, CO	CO (1971 8-hour)	Maintenance, Serious	100	0	95.96	94.03	87.08	86.64	62.16	41.99	46.83
Denver-Boulder-Greeley-Ft Collins-Loveland, CO	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	146.46	143.34	132.83	131.99	94.75	65.20	71.30
Detroit Area, MI	CO (1971 8-hour)	Maintenance, --	100	0	-3.74	-3.21	-3.20	-2.72	-2.09	-4.53	-1.34
Detroit, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-12.94	-11.36	-11.19	-9.78	-7.43	-14.09	-4.92

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
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Detroit, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.85	0.88	0.79	0.84	0.59	0.04	0.47
Detroit-Ann Arbor, MI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-12.91	-11.34	-11.16	-9.75	-7.41	-14.10	-4.90
Doña Ana County (Sunland Park Area), NM	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.34	1.31	1.21	1.20	0.86	0.62	0.65
Doña Ana County; Anthony, NM	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.98	0.95	0.89	0.88	0.63	0.46	0.47
Door County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Douglas, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.22	0.22	0.20	0.21	0.15	0.07	0.11
Dukes County, MA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-0.07	-0.06	-0.06	-0.06	-0.04	-0.05	-0.03
Duluth Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	4.89	4.78	4.43	4.40	3.16	2.21	2.38
East Chicago Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	5.32	5.18	4.82	4.76	3.42	2.56	2.56
East Helena Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.03	0.03	0.03	0.03	0.02	0.01	0.01
East Kern County Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	1.69	1.66	1.54	1.52	1.09	0.77	0.82
El Paso County, TX	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	3.38	3.43	3.12	3.21	2.27	0.78	1.77
El Paso, TX	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.87	0.86	0.79	0.79	0.57	0.37	0.43
Eugene-Springfield Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	-0.41	-0.34	-0.35	-0.29	-0.22	-0.55	-0.14
Evangeline Parish (Partial), LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.16	0.15	0.14	0.14	0.10	0.08	0.07
Fairbanks Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	0.95	0.93	0.86	0.85	0.61	0.44	0.46
Fairbanks, AK	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	1.80	1.76	1.63	1.62	1.16	0.83	0.87
Flathead County; Columbia Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.10	0.10	0.09	0.09	0.06	0.04	0.05
Flathead County; Kalispell and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.91	0.89	0.82	0.82	0.59	0.38	0.44

Notes:

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				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Flathead County; Whitefish and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.18	0.18	0.17	0.16	0.12	0.08	0.09
Fort Collins Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	2.21	2.18	2.01	2.02	1.45	0.83	1.10
Freehold Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	-0.08	-0.07	-0.07	-0.07	-0.05	-0.06	-0.04
Freestone and Anderson Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.86	0.84	0.78	0.77	0.55	0.39	0.42
Fremont County; Canon City Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.24	0.24	0.22	0.23	0.16	0.05	0.12
Fresno Area, CA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	-5.39	-5.10	-4.82	-4.61	-3.36	-3.52	-2.44
Grants Pass Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.18	0.19	0.17	0.18	0.12	0.04	0.10
Great Falls Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	0.59	0.58	0.54	0.53	0.38	0.28	0.29
Greater Connecticut, CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	-9.06	-8.40	-8.02	-7.49	-5.52	-7.02	-3.91
Greater Connecticut, CT	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	-9.06	-8.40	-8.02	-7.49	-5.53	-7.03	-3.92
Greeley Area, CO	CO (1971 8-hour)	Maintenance, --	100	0	56.07	54.61	50.74	50.15	36.08	26.66	27.01
Hancock and Brooke Counties (Part); The City of Weirton, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.01	0.99	0.92	0.91	0.65	0.47	0.49
Hancock County (Part) The City of Weirton, including Butler and Clay: Magisterial Districts, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	1.64	1.60	1.48	1.47	1.05	0.77	0.79
Harrisburg-Lebanon-Carlisle-York, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	3.00	3.21	2.84	3.09	2.14	-0.36	1.74
Hartford-New Britain-Middletown Area, CT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-7.30	-6.82	-6.48	-6.10	-4.48	-5.35	-3.21
Hayden, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.11	0.11	0.10	0.10	0.07	0.04	0.05
Hayden, AZ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.08	0.08	0.07	0.07	0.05	0.03	0.04

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Hayden, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.08	0.08	0.07	0.07	0.05	0.03	0.04
Hillsborough County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.72	0.70	0.65	0.65	0.46	0.32	0.35
Hillsborough-Polk County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.13	0.13	0.12	0.12	0.08	0.06	0.06
Houston-Galveston-Brazoria, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	379.96	371.26	344.35	341.53	245.36	173.10	184.31
Houston-Galveston-Brazoria, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	374.17	365.58	339.10	336.30	241.61	170.59	181.48
Humphreys County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	1.13	1.11	1.03	1.02	0.73	0.51	0.55
Huntington, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	2.45	2.39	2.22	2.20	1.58	1.13	1.19
Imperial County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	1.65	1.66	1.52	1.55	1.10	0.47	0.85
Imperial County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.65	1.66	1.52	1.55	1.10	0.47	0.85
Imperial County, CA	PM _{2.5} (2006 24-hour)	Nonattainment, Moderate	100	0	0.89	0.91	0.82	0.86	0.60	0.16	0.47
Imperial County, CA	PM _{2.5} (2012 Annual)	Nonattainment, Moderate	100	0	0.89	0.91	0.82	0.86	0.60	0.16	0.47
Imperial County; Imperial Valley Planning Area, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Serious	70	0	1.64	1.64	1.50	1.53	1.09	0.47	0.84
Indian Wells, CA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	1.83	1.79	1.66	1.65	1.18	0.82	0.89
Indiana, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	1.75	1.72	1.59	1.59	1.14	0.70	0.86
Indianapolis Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	0.00	-0.01	0.00
Indianapolis, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-2.77	-2.55	-2.45	-2.27	-1.68	-2.27	-1.18
Inyo County; Owens Valley Planning Area, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Serious	70	0	0.25	0.24	0.22	0.22	0.16	0.11	0.12
Jackson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	1.13	1.11	1.02	1.02	0.73	0.47	0.55
Jackson County; Medford-Ashland (including White City), OR	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	1.50	1.50	1.38	1.40	0.99	0.48	0.76

Notes:

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NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Jamestown, NY	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	1.05	1.06	0.97	0.99	0.70	0.27	0.54
Jefferson County, KY	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jefferson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	1.86	1.82	1.69	1.68	1.20	0.83	0.91
Jefferson County; (part) Steubenville & Mingo Junction, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	1.80	1.77	1.64	1.63	1.17	0.79	0.88
Jefferson County; (part), OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.18	0.18	0.17	0.16	0.12	0.08	0.09
Johnstown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.97	0.98	0.89	0.91	0.65	0.27	0.50
Josephine County; Grants Pass, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.18	0.19	0.17	0.17	0.12	0.04	0.10
Juneau; Mendenhall Valley Area, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.43	0.42	0.39	0.39	0.28	0.19	0.21
Kern County (Eastern Kern), CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	5.66	5.53	5.13	5.09	3.66	2.57	2.75
Kern County (Eastern Kern), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	5.66	5.53	5.13	5.09	3.66	2.57	2.75
King County; Kent, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.10	-0.09	-0.09	-0.08	-0.06	-0.08	-0.04
King County; Seattle, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.07	-0.07	-0.06	-0.06	-0.04	-0.06	-0.03
Klamath County; Klamath Falls, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.19	0.20	0.18	0.19	0.13	0.01	0.11
Klamath Falls Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.19	0.20	0.18	0.19	0.13	0.01	0.11
Klamath Falls, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.22	0.23	0.21	0.22	0.15	0.01	0.12
Knoxville, TN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.73	0.93	0.76	0.97	0.63	-1.04	0.58
Knoxville-Sevierville-La Follette, TN	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	5.64	5.75	5.21	5.41	3.81	1.06	2.99
La Porte County; (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.45	0.45	0.41	0.42	0.30	0.12	0.23
Lake County (part); Lakeview, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.02	0.02	0.02	0.02	0.02	0.00	0.01

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Lake County, OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	-2.23	-2.11	-1.99	-1.90	-1.39	-1.50	-1.00
Lake County: (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	12.06	11.82	10.94	10.89	7.81	5.30	5.88
Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.37	-0.35	-0.33	-0.31	-0.23	-0.25	-0.17
Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	9.36	9.15	8.49	8.43	6.05	4.21	4.55
Lake County; Polson, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.01
Lake County; Ronan, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Lake Tahoe Nevada Area, NV	CO (1971 8-hour)	Maintenance, --	100	0	0.06	0.07	0.06	0.06	0.04	0.00	0.04
Lake Tahoe North Shore Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	0.05	0.05	0.04	0.05	0.03	0.00	0.03
Lake Tahoe South Shore Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.31	-0.29	-0.27	-0.26	-0.19	-0.21	-0.14
Lancaster, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-5.01	-4.75	-4.48	-4.29	-3.13	-3.23	-2.27
Lancaster, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-5.01	-4.75	-4.48	-4.29	-3.13	-3.23	-2.27
Lane County (part); Oakridge, OR	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lane County; Eugene/Springfield, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.41	-0.34	-0.35	-0.29	-0.22	-0.55	-0.14
Las Vegas Area, NV	CO (1971 8-hour)	Maintenance, Serious	100	0	-16.43	-15.46	-14.64	-13.91	-10.18	-11.27	-7.34
Las Vegas, NV	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-16.42	-15.45	-14.63	-13.90	-10.17	-11.26	-7.34
LaSalle County; Oglesby, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.14	0.15	0.13	0.14	0.10	0.01	0.08
Laurel Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	3.25	3.16	2.94	2.90	2.09	1.57	1.56
Lebanon County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	2.33	2.30	2.12	2.12	1.52	0.92	1.15
Lemont, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	3.15	3.10	2.87	2.87	2.05	1.27	1.56

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Liberty-Clairton, PA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.06	0.07	0.06	0.06	0.04	0.01	0.04
Lincoln County; Libby and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.11	0.11	0.10	0.10	0.07	0.04	0.05
Logan, UT-ID	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.08	0.11	0.09	0.12	0.07	-0.16	0.07
Longmont Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	15.03	14.63	13.60	13.44	9.67	7.15	7.24
Lorain County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.20	-0.18	-0.18	-0.16	-0.12	-0.18	-0.08
Los Angeles, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	-151.32	-143.07	-135.13	-129.09	-94.24	-99.62	-68.32
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	-1.00	-0.72	-0.80	-0.53	-0.46	-2.07	-0.22
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	-1.00	-0.72	-0.80	-0.53	-0.46	-2.07	-0.22
Los Angeles-South Coast Air Basin Area, CA	CO (1971 8-hour)	Maintenance, Serious	100	0	-151.67	-143.41	-135.44	-129.39	-94.46	-99.79	-68.48
Los Angeles-South Coast Air Basin Area, CA	NO ₂ (1971 Annual)	Maintenance, --	100	0	-151.65	-143.39	-135.42	-129.38	-94.45	-99.78	-68.47
Los Angeles-South Coast Air Basin, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	-151.35	-143.09	-135.14	-129.10	-94.26	-99.63	-68.32
Los Angeles-South Coast Air Basin, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	-151.26	-143.01	-135.07	-129.03	-94.20	-99.57	-68.28
Los Angeles-South Coast Air Basin, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	-151.32	-143.07	-135.13	-129.09	-94.24	-99.62	-68.32
Louisville, KY-IN	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.33	1.63	1.35	1.67	1.10	-1.46	0.99
Lowell Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.18	0.20	0.17	0.19	0.13	-0.06	0.11
Lucas County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	3.09	3.10	2.83	2.89	2.05	0.89	1.58
Madison County; Granite City Township and Nameoki Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	4.66	4.55	4.22	4.18	3.00	2.19	2.25
Manchester Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	-1.48	-1.42	-1.33	-1.28	-0.93	-0.90	-0.68

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Manitowoc County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.35	-0.33	-0.31	-0.30	-0.22	-0.25	-0.16
Maricopa and Pinal Counties; Phoenix Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	-39.69	-37.60	-35.47	-33.96	-24.77	-25.67	-17.99
Marion County: Lawrence, Washington, and Warrant Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-2.47	-2.28	-2.18	-2.02	-1.50	-2.03	-1.05
Mariposa County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-0.32	-0.30	-0.29	-0.27	-0.20	-0.23	-0.14
Mariposa County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.32	-0.30	-0.29	-0.27	-0.20	-0.23	-0.14
Marshall, WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	1.94	1.89	1.75	1.73	1.25	0.92	0.93
Medford Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.81	0.81	0.74	0.75	0.54	0.26	0.41
Memphis Area, TN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-2.80	-2.47	-2.42	-2.13	-1.61	-2.99	-1.07
Memphis, TN-MS-AR	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	10.93	10.96	10.02	10.23	7.26	3.18	5.60
Miami, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.14	0.14	0.13	0.13	0.10	0.05	0.07
Miami, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.13	0.13	0.12	0.12	0.08	0.04	0.06
Miami, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.14	0.14	0.13	0.13	0.09	0.04	0.07
Milwaukee-Racine, WI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-7.66	-7.13	-6.79	-6.37	-4.69	-5.80	-3.33
Minneapolis-St. Paul Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	28.22	28.28	25.87	26.40	18.74	8.27	14.45
Missoula Area, MT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	2.22	2.18	2.02	2.01	1.44	0.95	1.09
Missoula county; Missoula and Vicinity, MT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	2.24	2.20	2.03	2.03	1.45	0.96	1.10
Modesto Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-1.37	-1.28	-1.21	-1.14	-0.84	-1.00	-0.60

Notes:

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				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Mohave County (part); Bullhead City, AZ	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.50	0.50	0.46	0.47	0.33	0.15	0.26
Mono County; Mammoth Lake Planning Area, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.38	-0.36	-0.34	-0.33	-0.24	-0.23	-0.18
Mono County; Mono Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.03	0.03	0.02	0.02	0.02	0.00	0.01
Morenci, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.16	0.15	0.14	0.14	0.10	0.07	0.08
Morgan County, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.26	-0.25	-0.23	-0.22	-0.16	-0.18	-0.12
Morongo Band of Mission Indians	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	0.05	0.05	0.05	0.05	0.04	0.02	0.03
Morongo Band of Mission Indians, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	0.05	0.05	0.05	0.05	0.03	0.02	0.03
Morristown Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	-0.08	-0.07	-0.07	-0.07	-0.05	-0.07	-0.03
Muscatine County; (part), IA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.57	0.56	0.52	0.51	0.37	0.26	0.28
Muscatine, IA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	1.12	1.09	1.01	1.00	0.72	0.51	0.54
Muskegon County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.81	0.83	0.75	0.78	0.55	0.11	0.43
Muskingum River, OH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.32	0.31	0.29	0.29	0.21	0.15	0.15
Nashua Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	-1.15	-1.10	-1.03	-0.99	-0.72	-0.70	-0.53
Nassau County, FL	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.36	0.35	0.33	0.33	0.23	0.16	0.18
Nevada County (Western part), CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-1.30	-1.24	-1.17	-1.12	-0.81	-0.83	-0.59
Nevada County (Western part), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	-1.31	-1.24	-1.17	-1.12	-0.82	-0.84	-0.59
New Haven County, CT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.09	-0.08	-0.08	-0.07	-0.05	-0.08	-0.04
New Haven-Meriden-Waterbury Area, CT	CO (1971 8-hour)	Maintenance, --	100	0	-3.27	-2.96	-2.86	-2.60	-1.94	-2.97	-1.34
New Manchester-Grant Magisterial District in Hancock County, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.58	0.57	0.53	0.52	0.38	0.27	0.28

Notes:

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NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
New York County, NY	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.65	0.72	0.63	0.71	0.48	-0.27	0.41
New York, NY-NJ-CT	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-21.03	-16.97	-17.55	-13.72	-10.98	-32.51	-6.40
New York-N. New Jersey-Long Island Area, NY-NJ-CT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	-8.89	-6.73	-7.23	-5.16	-4.32	-16.56	-2.24
New York-N. New Jersey-Long Island, NY-NJ-CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	-22.48	-18.45	-18.89	-15.12	-11.97	-32.76	-7.17
New York-Northern New Jersey-Long Island, NY-NJ-CT	Ozone (2015 8-hour)	Nonattainment, Moderate	50	0	-22.43	-18.41	-18.85	-15.08	-11.94	-32.72	-7.15
NJ Portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	-0.23	-0.22	-0.21	-0.20	-0.14	-0.17	-0.10
Nogales, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.08	0.09	0.08	0.09	0.06	-0.01	0.05
Northern Milwaukee/Ozaukee Shoreline, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.65	-0.62	-0.58	-0.56	-0.41	-0.43	-0.30
Northern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.33	0.73	0.47	0.88	0.51	-2.41	0.59
Oakridge, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	-0.01	-0.01	-0.01	0.00	0.00	-0.01	0.00
Ogden Area, UT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.18	-0.16	-0.16	-0.14	-0.10	-0.19	-0.07
Ogden Area, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.18	-0.16	-0.16	-0.14	-0.10	-0.19	-0.07
Olmsted County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.51	0.51	0.47	0.47	0.33	0.20	0.25
Olmsted; City of Rochester, MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	1.74	1.72	1.59	1.59	1.14	0.67	0.87
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.60	0.58	0.54	0.53	0.38	0.29	0.29
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.60	0.58	0.54	0.53	0.38	0.29	0.29
Pekin, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.35	-0.33	-0.31	-0.30	-0.22	-0.24	-0.16

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Penns Grove Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Peoria County: Hollis Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Peoria County: Peoria, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.34	-0.30	-0.29	-0.26	-0.20	-0.33	-0.13	-0.13
Perth Amboy Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	1.33	1.30	1.21	1.20	0.86	0.56	0.65	0.65
Philadelphia-Camden County Area, PA-NJ	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	2.29	2.49	2.18	2.42	1.66	-0.57	1.38	1.38
Philadelphia-Wilmington, PA-NJ-DE	PM _{2.5} (2006 24-hour)	Maintenance, Moderate for PA and DE; Subject to Former Subpart 1 for NJ	100	0	7.08	8.08	6.91	8.05	5.42	-4.26	4.67	4.67
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	3.89	5.38	4.19	5.78	3.66	-8.35	3.56	3.56
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	3.89	5.38	4.19	5.78	3.66	-8.34	3.56	3.56
Phoenix Area, AZ	CO (1971 8-hour)	Maintenance, Serious	100	0	-39.61	-37.55	-35.41	-33.94	-24.74	-25.41	-17.99	-17.99
Phoenix-Mesa, AZ	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-39.91	-37.80	-35.67	-34.15	-24.91	-25.82	-18.09	-18.09
Phoenix-Mesa, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-37.86	-35.78	-33.80	-32.28	-23.57	-24.99	-17.08	-17.08
Pierce County; Tacoma, WA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.09	0.09	0.08	0.08	0.06	0.04	0.05	0.05
Pima County; Ajo Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pima County; Rillito Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.18	0.19	0.16	0.18	0.12	-0.01	0.10	0.10
Pinal and Gila Counties; Payson, AZ	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.16	0.16	0.14	0.15	0.10	0.05	0.08	0.08
Pinal County (part); West Pinal, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	5.79	5.70	5.27	5.27	3.77	2.34	2.86	2.86
Pitkin County; Aspen, CO	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	6.15	5.99	5.57	5.50	3.96	2.94	2.96	2.96
Pittsburgh Area, PA	CO (1971 8-hour)	Maintenance, --	100	0	-0.97	-0.88	-0.85	-0.77	-0.58	-0.88	-0.40	-0.40

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Pittsburgh-Beaver Valley, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	5.36	5.74	5.07	5.55	3.83	-0.79	3.14
Pittsburgh-Beaver Valley, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-2.06	-1.52	-1.66	-1.14	-0.97	-4.09	-0.48
Plumas County, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.08	0.08	0.07	0.07	0.05	0.03	0.04
Polk County, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.60	0.59	0.54	0.54	0.39	0.24	0.29
Portland Area: Portland Metro Service District Boundary, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-8.88	-8.31	-7.89	-7.46	-5.47	-6.35	-3.92
Power-Bannock Counties; Fort Hall Indian Reservation, ID	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.01
Power-Bannock Counties; Portneuf Valley Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.72	1.69	1.57	1.56	1.12	0.71	0.85
Provo Area, UT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	-1.06	-1.01	-0.95	-0.91	-0.66	-0.68	-0.48
Provo, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	-4.68	-4.42	-4.18	-3.99	-2.91	-3.08	-2.11
Prowers County; Lamar, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.07	0.07	0.06	0.06	0.04	0.02	0.03
Raleigh-Durham Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-8.76	-8.05	-7.73	-7.14	-5.29	-7.22	-3.71
Ramsey County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.25	1.22	1.13	1.12	0.80	0.60	0.60
Reading, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.82	0.90	0.79	0.88	0.60	-0.23	0.50
Reno Area, NV	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.97	1.03	0.91	0.99	0.68	-0.05	0.55
Rhineland, WI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	1.50	1.46	1.36	1.35	0.97	0.68	0.73
Riverside County (Coachella Valley), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	-5.22	-4.95	-4.67	-4.48	-3.26	-3.32	-2.37
Riverside County (Coachella Valley), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	-5.22	-4.95	-4.67	-4.48	-3.26	-3.32	-2.37
Riverside County; Coachella Valley Planning Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	-6.27	-5.96	-5.61	-5.39	-3.93	-3.96	-2.86

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Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
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Riverside, Los Angeles, Orange, and San Bernardino Counties; South Coast Air Basin, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	-150.34	-142.13	-134.24	-128.23	-93.62	-99.01	-67.86
Rosebud County; Lame Deer, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.19	0.18	0.17	0.17	0.12	0.09	0.09
Routt County (part); Steamboat Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	10.81	10.52	9.78	9.65	6.95	5.19	5.20
Rusk and Panola Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	2.14	2.08	1.94	1.91	1.38	1.03	1.03
Sacramento Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-13.03	-12.30	-11.63	-11.09	-8.10	-8.67	-5.87
Sacramento County, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-10.76	-10.12	-9.59	-9.10	-6.66	-7.41	-4.80
Sacramento Metro, CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	-14.81	-13.80	-13.14	-12.35	-9.08	-11.02	-6.47
Sacramento Metro, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	-14.81	-13.80	-13.14	-12.34	-9.08	-11.02	-6.47
Sacramento, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	-14.55	-13.56	-12.91	-12.13	-8.92	-10.81	-6.36
Salem Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	0.02	0.07	0.04	0.10	0.05	-0.37	0.07
Salt Lake City Area, UT	CO (1971 8-hour)	Maintenance, --	100	0	1.05	1.07	0.97	1.01	0.71	0.21	0.56
Salt Lake City, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	-0.32	0.11	-0.11	0.33	0.10	-2.85	0.30
Salt Lake County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.52	-0.25	-0.36	-0.09	-0.15	-1.90	0.02
Salt Lake County, UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	-0.52	-0.25	-0.36	-0.09	-0.15	-1.90	0.02
San Antonio, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.02	1.46	1.12	1.59	1.00	-2.51	0.99
San Bernardino County (part); excluding Searles Valley Planning Area and South Coast Air Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	2.04	2.15	1.91	2.05	1.43	-0.06	1.15
San Diego Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-8.90	-7.79	-7.68	-6.69	-5.09	-9.84	-3.36

Notes:

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				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
San Diego County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-8.82	-7.71	-7.61	-6.62	-5.04	-9.83	-3.31
San Diego County, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	-8.79	-7.69	-7.59	-6.59	-5.02	-9.79	-3.30
San Francisco Bay Area, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	-57.59	-54.28	-51.36	-48.89	-35.75	-38.98	-25.82
San Francisco Bay Area, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-57.52	-54.21	-51.29	-48.82	-35.70	-38.93	-25.79
San Francisco Bay Area, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	-58.13	-54.79	-51.84	-49.35	-36.08	-39.34	-26.07
San Francisco-Oakland-San Jose Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-53.91	-50.83	-48.08	-45.79	-33.48	-36.34	-24.19
San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	-22.66	-21.02	-20.06	-18.75	-13.82	-17.46	-9.80
San Joaquin Valley, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	-22.66	-21.02	-20.06	-18.75	-13.82	-17.46	-9.80
San Joaquin Valley, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	-22.66	-21.02	-20.06	-18.75	-13.82	-17.47	-9.80
San Joaquin Valley, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	-23.28	-21.63	-20.63	-19.31	-14.22	-17.76	-10.10
San Joaquin Valley, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	-23.28	-21.63	-20.63	-19.31	-14.22	-17.76	-10.10
San Luis Obispo (Eastern part), CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	2.30	2.23	2.08	2.05	1.48	1.10	1.10
San Luis Obispo (Eastern San Luis Obispo), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	2.30	2.24	2.08	2.05	1.48	1.10	1.10
San Manuel, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.23	0.23	0.21	0.21	0.15	0.09	0.12
San Miguel County; Telluride, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.92	1.86	1.73	1.71	1.23	0.91	0.92
Sanders County (part); Thompson Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.05	0.05	0.04	0.04	0.03	0.02	0.02
Santa Cruz County; Nogales Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.09	0.09	0.08	0.09	0.06	-0.01	0.05
Seaford, DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	11.77	11.51	10.67	10.60	7.61	5.29	5.72

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Seattle-Tacoma Area, WA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	-17.34	-16.12	-15.37	-14.40	-10.60	-13.15	-7.54
Seattle-Tacoma, WA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-3.51	-3.29	-3.12	-2.95	-2.17	-2.49	-1.56
Sheboygan County, WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	2.80	2.75	2.55	2.54	1.82	1.19	1.37
Sheboygan County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.43	1.40	1.30	1.29	0.93	0.61	0.70
Sheridan County; City of Sheridan, WY	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.96	0.94	0.87	0.86	0.62	0.43	0.47
Shoshone County (part); excluding Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.17	0.17	0.15	0.16	0.11	0.04	0.09
Shoshone County; City of Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Silver Bow County; Butte, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.04	0.05	0.04	0.05	0.03	-0.02	0.03
Somerville Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.07	0.07	0.06	0.06	0.05	0.01	0.04
Southern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-4.68	-4.42	-4.18	-3.99	-2.91	-3.08	-2.11
Southwest Indiana, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.45	0.44	0.41	0.41	0.29	0.21	0.22
Spokane Area, WA	CO (1971 8-hour)	Maintenance, Serious	100	0	-3.25	-3.08	-2.91	-2.79	-2.03	-2.06	-1.48
Spokane County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-3.31	-3.14	-2.96	-2.84	-2.07	-2.10	-1.51
Springfield Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	-0.42	-0.38	-0.37	-0.33	-0.25	-0.43	-0.17
St. Bernard Parish, LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	10.86	10.57	9.83	9.70	6.98	5.23	5.22
St. Clair, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.50	0.49	0.45	0.46	0.33	0.16	0.25
St. Louis Area, MO	CO (1971 8-hour)	Maintenance, --	100	0	39.66	38.74	35.94	35.64	25.61	18.08	19.23
St. Louis, MO-IL	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	88.93	87.03	80.66	80.14	57.53	39.65	43.28
St. Louis-St. Charles-Farmington, MO-IL	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	95.57	93.56	86.69	86.17	61.85	42.36	46.55

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Steubenville, OH-WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	2.27	2.22	2.06	2.05	1.47	1.01	1.11
Steubenville-Weirton, OH-WV	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	5.00	4.89	4.53	4.50	3.23	2.23	2.43
Stockton Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-3.30	-3.12	-2.95	-2.82	-2.06	-2.16	-1.49
Sullivan County, TN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.78	0.77	0.71	0.71	0.51	0.33	0.38
Sutter Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.29	0.28	0.26	0.26	0.19	0.14	0.14
Syracuse Area; Onondaga County, NY	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	2.00	2.06	1.86	1.95	1.37	0.23	1.08
Tazewell County: Groveland Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.18	-0.17	-0.16	-0.15	-0.11	-0.12	-0.08
Terre Haute, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	1.76	1.73	1.60	1.60	1.15	0.74	0.87
Thurston County; Cities of Olympia, Tumwater, and Lacey, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-1.02	-0.97	-0.92	-0.88	-0.64	-0.65	-0.47
Titus County, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.12	0.11	0.10	0.10	0.07	0.06	0.06
Toms River Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Tooele County (part), UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.61	0.59	0.55	0.54	0.39	0.29	0.29
Trenton Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	-0.37	-0.34	-0.32	-0.30	-0.22	-0.32	-0.15
Trona, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	2.09	2.03	1.89	1.86	1.34	1.01	1.00
Tucson Area, AZ	CO (1971 8-hour)	Maintenance, --	100	0	2.63	2.80	2.48	2.70	1.86	-0.29	1.52
Tuolumne County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.22	-0.20	-0.19	-0.17	-0.13	-0.22	-0.09
Tuscan Buttes, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.06	0.06	0.05	0.05	0.04	0.03	0.03
Tuscan Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.06	0.06	0.05	0.05	0.04	0.03	0.03

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Uinta Basin, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	18.29	17.80	16.54	16.33	11.76	8.79	8.80
Union County; LaGrande, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.39	0.38	0.35	0.35	0.25	0.16	0.19
Upper Green River Basin Area, WY	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	10.24	9.96	9.26	9.14	6.58	4.92	4.92
Utah County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	1.19	1.29	1.13	1.25	0.86	-0.23	0.71
Vancouver Area: Clark County (part), WA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-3.24	-3.08	-2.90	-2.78	-2.03	-2.05	-1.48
Ventura County, CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	-2.29	-2.01	-1.98	-1.73	-1.32	-2.50	-0.87
Ventura County, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	-2.28	-2.00	-1.97	-1.72	-1.31	-2.49	-0.87
Vermillion County; Part of Clinton Township, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.35	0.35	0.32	0.32	0.23	0.15	0.17
Vigo County, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	3.78	3.71	3.43	3.43	2.46	1.60	1.85
Walla Walla County; Wallula, WA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.10	0.10	0.09	0.09	0.06	0.04	0.05
Waltham Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.11	0.12	0.10	0.11	0.08	-0.03	0.06
Warren County: Conewago Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.94	0.92	0.85	0.84	0.61	0.45	0.45
Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	2.19	2.13	1.98	1.96	1.41	1.03	1.05
Warren, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	2.62	2.56	2.38	2.35	1.69	1.24	1.27
Washington Area, DC-MD-VA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-8.36	-7.93	-7.48	-7.17	-5.23	-5.33	-3.80
Washington, DC-MD-VA	Ozone (2008 8-hour)	Nonattainment (DC) Maintenance (MD, VA), Marginal	50	0	-50.47	-47.68	-45.05	-42.99	-31.40	-33.48	-22.74
Washington, DC-MD-VA	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	-50.47	-47.68	-45.05	-43.00	-31.40	-33.48	-22.74
Washoe County; Reno Planning Area, NV	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.98	1.03	0.92	0.99	0.69	-0.05	0.56

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	1.96	1.92	1.78	1.77	1.27	0.85	0.96
Wayne County; (part), MI	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.93	0.92	0.85	0.85	0.61	0.36	0.46
West Central Pinal County, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	1.15	1.13	1.04	1.04	0.75	0.46	0.57
West Silver Valley, ID	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.09	0.09	0.08	0.08	0.06	0.02	0.05
Williamson County, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.15	0.17	0.15	0.17	0.11	-0.07	0.10
Winston-Salem Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-3.03	-2.85	-2.70	-2.56	-1.87	-2.13	-1.35
Worcester Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	-0.97	-0.89	-0.86	-0.80	-0.59	-0.78	-0.41
Yakima Area, WA	CO (1971 8-hour)	Maintenance, --	100	0	0.40	0.39	0.36	0.36	0.26	0.15	0.20
Yakima County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.34	1.33	1.22	1.23	0.88	0.50	0.67
Yuba City-Marysville, CA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.23	0.27	0.23	0.28	0.18	-0.21	0.16
Yuma County; Yuma Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	1.43	1.43	1.31	1.34	0.95	0.45	0.73
Yuma, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.79	0.79	0.73	0.74	0.52	0.26	0.40

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

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Table A-11. Changes in Emissions from U.S. Passenger Cars and Light Trucks by Nonattainment or Maintenance Area and Alternative, Direct and Indirect Impacts--Volatile Organic Compounds (VOCs), 2035

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Ada County; Boise, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	39.03	38.31	35.19	33.69	26.78	18.88	18.46
Adams, Denver, and Boulder Counties; Denver Metropolitan Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	226.45	222.13	203.91	195.18	155.17	109.07	106.73
Ajo, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Albuquerque Area, NM	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	44.02	43.28	39.80	38.13	30.29	21.54	21.01
Allegan County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	3.30	3.25	2.99	2.87	2.27	1.63	1.59
Allegheny County Air Basin: Hazelwood Monitor, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	3.09	3.04	2.80	2.69	2.13	1.53	1.49
Allegheny County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	36.89	36.35	33.51	32.14	25.50	18.37	17.86
Allegheny County; The Area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.90	0.88	0.81	0.78	0.62	0.44	0.43
Allegheny, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	4.86	4.78	4.40	4.22	3.35	2.40	2.34
Allentown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	34.38	33.80	31.10	29.79	23.66	16.85	16.43
Allentown-Bethlehem-Easton, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	35.85	35.27	32.46	31.11	24.70	17.63	17.18
Alton Township, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	4.94	4.84	4.44	4.24	3.38	2.35	2.31
Amador County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.99	1.97	1.82	1.74	1.38	1.01	0.98
Anchorage Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	25.53	25.02	22.96	21.97	17.47	12.24	11.99
Anchorage; Eagle River, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.45	1.42	1.31	1.25	0.99	0.70	0.68
Anne Arundel County and Baltimore County, MD	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	23.05	22.85	21.18	20.36	16.11	11.96	11.54

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
AQCR 012: Portions of Grant County, NM	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	8.23	8.07	7.40	7.09	5.63	3.95	3.87
AQCR 109-Millinocket, ME	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	17.54	17.22	15.81	15.14	12.03	8.48	8.29
AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington Counties (Minneapolis-St. Paul), MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	240.55	236.33	217.23	208.06	165.31	117.13	114.38
AQCR 237: Brown County: Green Bay Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.39	0.39	0.36	0.34	0.27	0.19	0.19
AQCR 238: Marathon County: Rothschild Subcity Area, Rib Mountain, Weston, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	24.93	24.46	22.45	21.49	17.09	12.01	11.76
AQCR 238: Oneida County: Rhinelander Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	12.22	11.98	10.99	10.52	8.37	5.87	5.74
AQCR 239: Milwaukee County: Milwaukee Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	19.90	19.64	18.13	17.40	13.80	10.02	9.72
AQCR 240: Dane County: Madison Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	13.50	13.35	12.35	11.86	9.40	6.91	6.68
Archuleta County; Pagosa Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	15.43	15.11	13.85	13.25	10.54	7.35	7.21
Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	2.57	2.52	2.31	2.21	1.76	1.23	1.20
Aroostock County; City of Presque Isle, ME	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.20	0.20	0.18	0.18	0.14	0.10	0.10
Atlanta, GA	Ozone (2008 8-hour)	Maintenance, Moderate	100	0	231.52	228.18	210.33	201.71	160.06	115.31	112.12
Atlanta, GA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	196.22	193.31	178.13	170.80	135.55	97.45	94.81
Atlantic City Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	1.28	1.26	1.16	1.11	0.88	0.64	0.62
Bakersfield Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	17.36	17.11	15.77	15.12	12.00	8.63	8.40

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Baltimore Area, MD	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.72	0.71	0.65	0.63	0.50	0.35	0.34
Baltimore, MD	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	67.37	66.69	61.71	59.28	46.96	34.57	33.43
Baltimore, MD	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	67.90	67.21	62.19	59.75	47.33	34.85	33.70
Baton Rouge, LA	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	241.94	237.14	217.52	208.14	165.53	115.84	113.49
Beaver, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.51	0.51	0.47	0.45	0.36	0.26	0.25
Benton County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	4.88	4.79	4.39	4.20	3.34	2.34	2.29
Berrien County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	19.19	18.85	17.32	16.59	13.18	9.33	9.11
Billings Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	34.26	33.57	30.78	29.45	23.42	16.36	16.04
Billings, MT	SO ₂ (2010 1-hour)	Maintenance, --	100	0	9.41	9.22	8.45	8.08	6.43	4.48	4.39
Birmingham, AL	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	107.07	105.13	96.59	92.50	73.51	51.95	50.76
Boise-Northern Ada County Area, ID	CO (1971 8-hour)	Maintenance, --	100	0	39.00	38.28	35.16	33.67	26.76	18.87	18.45
Bonner County; The Sandpoint Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.68	1.65	1.51	1.45	1.15	0.81	0.79
Boston Area, MA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	57.47	56.43	51.84	49.64	39.45	27.88	27.24
Boyd County (part), KY	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	8.80	8.62	7.90	7.55	6.01	4.19	4.11
Brooke; Follansbee Area, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.30	0.30	0.27	0.26	0.21	0.15	0.14
Burlington Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.34	0.33	0.31	0.29	0.23	0.17	0.16
Butte County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	12.28	12.08	11.11	10.64	8.45	6.02	5.87
Calaveras County, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	1.96	1.93	1.78	1.71	1.36	0.98	0.95
Calaveras County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.96	1.93	1.78	1.71	1.36	0.98	0.95

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Campbell-Clermont Counties, KY-OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	1.71	1.69	1.55	1.49	1.18	0.84	0.82
Canton-Massillon, OH	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	15.55	15.31	14.10	13.52	10.73	7.70	7.49
Central New Hampshire, NH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	1.33	1.35	1.28	1.24	0.97	0.80	0.76
Central Steptoe Valley, NV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.97	0.95	0.87	0.84	0.67	0.48	0.46
Charleston, WV	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	27.65	27.16	24.96	23.90	18.99	13.44	13.13
Charlotte Area, NC	CO (1971 8-hour)	Maintenance, --	100	0	21.04	20.99	19.56	18.85	14.88	11.38	10.90
Charlotte-Rock Hill, NC-SC	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	88.21	87.10	80.42	77.18	61.20	44.51	43.18
Chicago, IL-IN-WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	334.57	329.24	303.08	290.49	230.64	164.87	160.63
Chicago-Naperville, IL-IN-WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	363.25	357.46	329.07	315.39	250.41	179.01	174.40
Chico (Butte County), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	12.28	12.08	11.11	10.64	8.45	6.02	5.87
Chico Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	5.10	5.01	4.61	4.42	3.51	2.49	2.43
Chico, CA	PM _{2.5} (2006 24-hour)	Maintenance, Moderate	100	0	11.97	11.77	10.83	10.37	8.24	5.86	5.72
Cincinnati, OH-KY	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	91.80	90.41	83.29	79.85	63.38	45.49	44.28
Cincinnati, OH-KY-IN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	98.10	96.60	88.98	85.31	67.71	48.57	47.28
Clark County; Las Vegas Planning Area, NV	PM ₁₀ (1987 24-hour)	Maintenance, Serious	100	0	46.66	46.18	42.72	41.03	32.51	23.90	23.12
Cleveland Area, OH	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	43.91	43.28	39.90	38.27	30.36	21.89	21.28
Cleveland, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	94.89	93.62	86.38	82.87	65.73	47.61	46.23
Cleveland, OH	PM _{2.5} (2012 Annual)	Maintenance, Moderate	100	0	55.25	54.46	50.20	48.15	38.20	27.54	26.77
Cleveland-Akron-Lorain, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	99.08	97.75	90.19	86.53	68.63	49.70	48.26

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
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Cleveland-Akron-Lorain, OH	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	89.33	88.16	81.35	78.06	61.91	44.89	43.57
Cochise County; Paul Spur/Douglas Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	2.12	2.08	1.91	1.83	1.45	1.03	1.01
Colorado Springs Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	71.09	69.75	64.04	61.30	48.73	34.29	33.55
Columbus, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	102.92	101.29	93.25	89.37	70.96	50.73	49.43
Columbus, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	89.00	87.62	80.69	77.36	61.41	44.00	42.84
Cook County; Lyons Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	3.96	3.89	3.58	3.43	2.73	1.95	1.90
Cook County; Southeast Chicago, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	20.25	19.85	18.21	17.43	13.86	9.72	9.51
Coshocton County; Franklin Township, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.71	0.70	0.64	0.61	0.49	0.34	0.33
Coso Junction, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	6.52	6.38	5.85	5.59	4.45	3.10	3.04
Cuyahoga County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	34.57	34.07	31.41	30.13	23.90	17.24	16.76
Cuyahoga County, OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	43.93	43.30	39.92	38.28	30.38	21.90	21.29
Dallas-Fort Worth, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	327.43	322.54	297.18	284.95	226.15	162.50	158.11
Dallas-Fort Worth, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	324.19	319.34	294.23	282.12	223.91	160.88	156.54
Delaware County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	33.42	32.82	30.16	28.88	22.95	16.23	15.85
Denver Metro/North Front Range, CO	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	608.52	596.73	547.61	524.10	416.73	292.42	286.28
Denver-Boulder Area, CO	CO (1971 8-hour)	Maintenance, Serious	100	0	419.76	411.70	377.87	361.68	287.56	201.99	197.69
Denver-Boulder-Greeley-Ft Collins-Loveland, CO	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	608.52	596.73	547.61	524.10	416.73	292.42	286.28
Detroit Area, MI	CO (1971 8-hour)	Maintenance, --	100	0	67.86	66.84	61.59	59.05	46.87	33.68	32.77
Detroit, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	188.38	185.61	171.05	164.02	130.17	93.64	91.08

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Detroit, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	13.43	13.20	12.15	11.64	9.24	6.58	6.42
Detroit-Ann Arbor, MI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	189.06	186.28	171.67	164.62	130.64	93.98	91.41
Doña Ana County (Sunland Park Area), NM	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	4.80	4.70	4.31	4.12	3.28	2.29	2.25
Doña Ana County; Anthony, NM	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	3.26	3.19	2.93	2.80	2.23	1.56	1.53
Door County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Douglas, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	1.75	1.72	1.58	1.51	1.20	0.85	0.83
Dukes County, MA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.19	0.19	0.18	0.17	0.14	0.10	0.10
Duluth Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	19.35	18.97	17.40	16.65	13.24	9.28	9.09
East Chicago Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	16.63	16.29	14.93	14.28	11.36	7.92	7.77
East Helena Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.11	0.11	0.10	0.09	0.07	0.05	0.05
East Kern County Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	6.66	6.53	5.99	5.74	4.56	3.20	3.13
El Paso County, TX	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	35.24	34.64	31.85	30.51	24.24	17.21	16.79
El Paso, TX	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	4.08	4.00	3.67	3.52	2.79	1.97	1.92
Eugene-Springfield Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	8.92	8.78	8.09	7.76	6.16	4.42	4.30
Evangeline Parish (Partial), LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.47	0.46	0.42	0.40	0.32	0.22	0.22
Fairbanks Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	3.45	3.38	3.10	2.96	2.36	1.65	1.62
Fairbanks, AK	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	6.67	6.54	6.00	5.74	4.56	3.19	3.13
Flathead County; Columbia Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.47	0.46	0.42	0.40	0.32	0.23	0.22
Flathead County; Kalispell and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	4.32	4.24	3.89	3.72	2.96	2.08	2.04

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Flathead County; Whitefish and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.87	0.85	0.78	0.75	0.60	0.42	0.41
Fort Collins Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	13.62	13.37	12.28	11.76	9.35	6.60	6.45
Freehold Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.34	0.33	0.31	0.30	0.23	0.17	0.17
Freestone and Anderson Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	3.24	3.18	2.91	2.79	2.22	1.55	1.52
Fremont County; Canon City Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	2.49	2.45	2.25	2.16	1.71	1.22	1.19
Fresno Area, CA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	10.28	10.20	9.46	9.10	7.20	5.36	5.17
Grants Pass Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	2.04	2.01	1.85	1.77	1.40	1.00	0.97
Great Falls Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	1.88	1.84	1.69	1.61	1.28	0.89	0.88
Greater Connecticut, CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	49.28	48.64	44.89	43.08	34.16	24.80	24.07
Greater Connecticut, CT	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	49.33	48.69	44.94	43.12	34.20	24.82	24.09
Greeley Area, CO	CO (1971 8-hour)	Maintenance, --	100	0	183.47	179.74	164.79	157.65	125.41	87.53	85.81
Hancock and Brooke Counties (Part); The City of Weirton, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	3.69	3.62	3.32	3.17	2.52	1.77	1.73
Hancock County (Part) The City of Weirton, including Butler and Clay: Magisterial Districts, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	5.58	5.47	5.02	4.80	3.82	2.67	2.61
Harrisburg-Lebanon-Carlisle-York, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	61.91	60.89	56.03	53.69	42.64	30.39	29.63
Hartford-New Britain-Middletown Area, CT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	30.66	30.29	27.98	26.85	21.29	15.52	15.04
Hayden, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.60	0.59	0.54	0.52	0.41	0.29	0.29
Hayden, AZ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.42	0.41	0.38	0.36	0.29	0.20	0.20

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Hayden, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.42	0.41	0.37	0.36	0.28	0.20	0.20
Hillsborough County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	2.99	2.94	2.69	2.58	2.05	1.44	1.41
Hillsborough-Polk County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.48	0.47	0.43	0.41	0.33	0.23	0.23
Houston-Galveston-Brazoria, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	1,464.16	1,435.37	1,316.88	1,260.19	1,002.14	702.13	687.65
Houston-Galveston-Brazoria, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1,438.19	1,409.90	1,293.50	1,237.81	984.34	689.62	675.42
Humphreys County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	4.52	4.43	4.07	3.89	3.09	2.17	2.12
Huntington, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	9.07	8.89	8.16	7.80	6.21	4.34	4.26
Imperial County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	14.46	14.21	13.06	12.51	9.94	7.05	6.88
Imperial County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	14.46	14.21	13.06	12.51	9.94	7.05	6.88
Imperial County, CA	PM _{2.5} (2006 24-hour)	Nonattainment, Moderate	100	0	10.66	10.48	9.64	9.24	7.34	5.21	5.09
Imperial County, CA	PM _{2.5} (2012 Annual)	Nonattainment, Moderate	100	0	10.66	10.48	9.64	9.24	7.34	5.21	5.09
Imperial County; Imperial Valley Planning Area, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Serious	70	0	14.24	13.99	12.86	12.32	9.79	6.94	6.78
Indian Wells, CA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	7.39	7.25	6.65	6.36	5.06	3.55	3.47
Indiana, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	9.50	9.33	8.57	8.20	6.52	4.60	4.49
Indianapolis Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	0.06	0.06	0.05	0.05	0.04	0.03	0.03
Indianapolis, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	18.51	18.26	16.84	16.16	12.82	9.28	9.01
Inyo County; Owens Valley Planning Area, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Serious	70	0	1.14	1.12	1.03	0.99	0.78	0.55	0.54
Jackson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	5.45	5.35	4.91	4.70	3.74	2.63	2.57
Jackson County; Medford-Ashland (including White City), OR	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	11.65	11.45	10.52	10.08	8.01	5.67	5.54

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Jamestown, NY	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	10.08	9.91	9.11	8.73	6.93	4.92	4.80
Jefferson County, KY	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.05	0.05	0.04	0.04	0.03	0.02	0.02
Jefferson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	7.74	7.59	6.96	6.66	5.30	3.72	3.64
Jefferson County; (part) Steubenville & Mingo Junction, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	7.83	7.67	7.04	6.74	5.36	3.76	3.68
Jefferson County; (part), OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.78	0.77	0.70	0.67	0.54	0.38	0.37
Johnstown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	8.88	8.73	8.03	7.69	6.11	4.33	4.23
Josephine County; Grants Pass, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	2.04	2.00	1.84	1.76	1.40	0.99	0.97
Juneau; Mendenhall Valley Area, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.68	1.65	1.51	1.45	1.15	0.81	0.79
Kern County (Eastern Kern), CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	21.93	21.50	19.73	18.88	15.01	10.52	10.30
Kern County (Eastern Kern), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	21.93	21.50	19.73	18.88	15.01	10.52	10.30
King County; Kent, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.60	0.59	0.54	0.52	0.41	0.30	0.29
King County; Seattle, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.44	0.43	0.40	0.38	0.30	0.22	0.21
Klamath County; Klamath Falls, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	3.13	3.08	2.84	2.72	2.16	1.54	1.50
Klamath Falls Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	3.13	3.08	2.83	2.72	2.16	1.54	1.50
Klamath Falls, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	3.59	3.53	3.25	3.11	2.47	1.76	1.72
Knoxville, TN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	42.69	42.00	38.67	37.06	29.42	21.02	20.49
Knoxville-Sevierville-La Follette, TN	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	65.71	64.59	59.40	56.90	45.20	32.12	31.34
La Porte County; (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	4.23	4.16	3.82	3.66	2.91	2.06	2.01
Lake County (part); Lakeview, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.33	0.33	0.30	0.29	0.23	0.16	0.16

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Lake County, OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	5.37	5.32	4.92	4.73	3.75	2.77	2.67
Lake County: (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	52.15	51.15	46.95	44.93	35.73	25.09	24.56
Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.84	0.83	0.77	0.74	0.59	0.43	0.42
Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	37.69	36.96	33.91	32.45	25.81	18.10	17.72
Lake County; Polson, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.13	0.13	0.12	0.11	0.09	0.06	0.06
Lake County; Ronan, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.07	0.07	0.06	0.06	0.05	0.03	0.03
Lake Tahoe Nevada Area, NV	CO (1971 8-hour)	Maintenance, --	100	0	1.19	1.17	1.08	1.04	0.82	0.59	0.57
Lake Tahoe North Shore Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	0.78	0.77	0.71	0.68	0.54	0.38	0.37
Lake Tahoe South Shore Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.92	0.91	0.85	0.81	0.64	0.47	0.46
Lancaster, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	8.22	8.16	7.58	7.29	5.77	4.32	4.16
Lancaster, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	8.23	8.17	7.59	7.30	5.77	4.33	4.17
Lane County (part); Oakridge, OR	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.08	0.07	0.07	0.07	0.05	0.04	0.04
Lane County; Eugene/Springfield, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	8.92	8.78	8.09	7.76	6.16	4.42	4.30
Las Vegas Area, NV	CO (1971 8-hour)	Maintenance, Serious	100	0	46.70	46.22	42.75	41.07	32.53	23.92	23.14
Las Vegas, NV	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	46.66	46.18	42.72	41.03	32.51	23.90	23.12
LaSalle County; Oglesby, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	2.17	2.13	1.96	1.88	1.49	1.06	1.04
Laurel Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	9.87	9.67	8.86	8.48	6.74	4.70	4.61
Lebanon County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	13.08	12.84	11.79	11.29	8.97	6.33	6.19
Lemont, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	16.93	16.61	15.26	14.61	11.61	8.18	8.00

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Liberty-Clairton, PA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.90	0.88	0.81	0.78	0.62	0.44	0.43
Lincoln County; Libby and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.63	0.62	0.57	0.54	0.43	0.31	0.30
Logan, UT-ID	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	5.89	5.80	5.33	5.11	4.06	2.90	2.83
Longmont Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	48.95	47.96	43.97	42.06	33.46	23.35	22.89
Lorain County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	1.84	1.81	1.67	1.60	1.27	0.92	0.89
Los Angeles, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	308.83	306.24	283.83	272.87	215.98	160.47	154.82
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	42.97	42.30	38.96	37.35	29.65	21.25	20.69
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	42.96	42.30	38.96	37.35	29.65	21.25	20.69
Los Angeles-South Coast Air Basin Area, CA	CO (1971 8-hour)	Maintenance, Serious	100	0	308.06	305.50	283.14	272.22	215.46	160.11	154.47
Los Angeles-South Coast Air Basin Area, CA	NO ₂ (1971 Annual)	Maintenance, --	100	0	308.06	305.49	283.14	272.21	215.46	160.11	154.46
Los Angeles-South Coast Air Basin, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	308.93	306.35	283.92	272.96	216.05	160.52	154.87
Los Angeles-South Coast Air Basin, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	308.76	306.18	283.76	272.81	215.93	160.43	154.78
Los Angeles-South Coast Air Basin, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	308.83	306.24	283.83	272.87	215.98	160.47	154.82
Louisville, KY-IN	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	65.17	64.12	59.02	56.57	44.92	32.08	31.27
Lowell Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	4.70	4.62	4.25	4.08	3.24	2.31	2.25
Lucas County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	26.82	26.36	24.23	23.21	18.44	13.07	12.76
Madison County; Granite City Township and Nameoki Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	16.16	15.84	14.53	13.90	11.05	7.73	7.57
Manchester Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	0.77	0.78	0.74	0.71	0.56	0.46	0.43

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Manitowoc County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.23	1.21	1.12	1.08	0.85	0.62	0.60
Maricopa and Pinal Counties; Phoenix Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	67.86	67.39	62.53	60.15	47.58	35.60	34.29
Marion County: Lawrence, Washington, and Warrant Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	16.75	16.52	15.24	14.62	11.60	8.39	8.15
Mariposa County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	1.10	1.09	1.01	0.97	0.77	0.56	0.54
Mariposa County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.10	1.09	1.01	0.97	0.77	0.56	0.54
Marshall, WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	6.48	6.35	5.82	5.57	4.43	3.09	3.03
Medford Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	6.27	6.16	5.66	5.42	4.31	3.05	2.98
Memphis Area, TN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	39.15	38.58	35.55	34.09	27.06	19.47	18.94
Memphis, TN-MS-AR	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	94.38	92.73	85.24	81.64	64.87	45.98	44.90
Miami, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	1.14	1.12	1.03	0.99	0.78	0.56	0.54
Miami, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	1.10	1.08	0.99	0.95	0.76	0.54	0.52
Miami, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	1.14	1.12	1.03	0.99	0.79	0.56	0.54
Milwaukee-Racine, WI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	37.62	37.14	34.29	32.91	26.09	18.97	18.40
Minneapolis-St. Paul Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	242.04	237.81	218.60	209.38	166.35	117.92	115.14
Missoula Area, MT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	10.40	10.20	9.36	8.96	7.13	5.01	4.90
Missoula county; Missoula and Vicinity, MT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	10.46	10.26	9.42	9.01	7.17	5.04	4.93
Modesto Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	5.79	5.72	5.29	5.07	4.02	2.93	2.84

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Mohave County (part); Bullhead City, AZ	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	4.29	4.21	3.87	3.71	2.95	2.09	2.04
Mono County; Mammoth Lake Planning Area, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.28	0.29	0.27	0.26	0.20	0.16	0.15
Mono County; Mono Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.32	0.31	0.29	0.27	0.22	0.15	0.15
Morenci, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.64	0.63	0.58	0.55	0.44	0.31	0.30
Morgan County, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.82	0.81	0.75	0.72	0.57	0.42	0.40
Morongo Band of Mission Indians	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	0.27	0.27	0.25	0.24	0.19	0.13	0.13
Morongo Band of Mission Indians, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	0.27	0.27	0.25	0.24	0.19	0.13	0.13
Morristown Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.71	0.70	0.65	0.62	0.49	0.36	0.35
Muscatine County; (part), IA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	2.19	2.14	1.97	1.88	1.50	1.05	1.03
Muscatine, IA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	4.26	4.18	3.84	3.67	2.92	2.04	2.00
Muskegon County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	10.63	10.45	9.61	9.21	7.31	5.20	5.07
Muskingum River, OH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	1.22	1.19	1.10	1.05	0.83	0.58	0.57
Nashua Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	0.65	0.66	0.62	0.60	0.47	0.38	0.36
Nassau County, FL	SO ₂ (2010 1-hour)	Maintenance, --	100	0	1.44	1.41	1.29	1.24	0.98	0.69	0.68
Nevada County (Western part), CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	1.97	1.96	1.82	1.75	1.39	1.04	1.00
Nevada County (Western part), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	1.99	1.98	1.83	1.77	1.40	1.05	1.01
New Haven County, CT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.81	0.80	0.73	0.70	0.56	0.40	0.39
New Haven-Meriden-Waterbury Area, CT	CO (1971 8-hour)	Maintenance, --	100	0	30.61	30.18	27.83	26.69	21.18	15.28	14.85
New Manchester-Grant Magisterial District in Hancock County, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	2.02	1.97	1.81	1.73	1.38	0.96	0.94

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
New York County, NY	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	19.09	18.78	17.28	16.56	13.15	9.38	9.15
New York, NY-NJ-CT	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	585.58	576.67	531.21	509.28	404.24	290.06	282.33
New York-N. New Jersey-Long Island Area, NY-NJ-CT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	329.53	324.47	298.85	286.50	227.42	163.07	158.75
New York-N. New Jersey-Long Island, NY-NJ-CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	568.00	559.39	515.31	494.05	392.14	281.46	273.94
New York-Northern New Jersey-Long Island, NY-NJ-CT	Ozone (2015 8-hour)	Nonattainment, Moderate	50	0	567.71	559.11	515.05	493.81	391.95	281.32	273.80
NJ Portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.83	0.82	0.76	0.73	0.58	0.42	0.41
Nogales, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	1.86	1.83	1.69	1.62	1.28	0.92	0.89
Northern Milwaukee/Ozaukee Shoreline, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.29	1.28	1.19	1.14	0.91	0.67	0.65
Northern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	75.88	74.68	68.75	65.90	52.32	37.42	36.45
Oakridge, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.14	0.14	0.12	0.12	0.09	0.07	0.07
Ogden Area, UT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	2.29	2.26	2.08	2.00	1.58	1.14	1.11
Ogden Area, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	2.29	2.26	2.08	2.00	1.58	1.14	1.11
Olmsted County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	2.95	2.90	2.66	2.55	2.03	1.43	1.40
Olmsted; City of Rochester, MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	10.19	10.00	9.19	8.80	6.99	4.93	4.82
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	1.85	1.81	1.66	1.59	1.26	0.88	0.86
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.85	1.81	1.66	1.59	1.26	0.88	0.86
Pekin, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	1.03	1.01	0.94	0.90	0.71	0.52	0.51

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Penns Grove Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01
Peoria County: Hollis Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.17	0.17	0.15	0.15	0.12	0.08	0.08
Peoria County: Peoria, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	3.72	3.67	3.38	3.24	2.57	1.86	1.80
Perth Amboy Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	6.32	6.20	5.69	5.45	4.33	3.05	2.98
Philadelphia-Camden County Area, PA-NJ	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	55.61	54.70	50.33	48.23	38.30	27.32	26.63
Philadelphia-Wilmington, PA-NJ-DE	PM _{2.5} (2006 24-hour)	Maintenance, Moderate for PA and DE; Subject to Former Subpart 1 for NJ	100	0	244.83	240.86	221.68	212.44	168.69	120.42	117.37
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	309.23	304.31	280.13	268.49	213.17	152.37	148.46
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	309.07	304.14	279.98	268.34	213.06	152.29	148.38
Phoenix Area, AZ	CO (1971 8-hour)	Maintenance, Serious	100	0	61.69	61.31	56.94	54.79	43.33	32.55	31.32
Phoenix-Mesa, AZ	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	68.28	67.80	62.92	60.53	47.88	35.82	34.50
Phoenix-Mesa, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	79.41	78.73	72.96	70.13	55.52	41.21	39.76
Pierce County; Tacoma, WA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.49	0.48	0.44	0.42	0.34	0.24	0.23
Pima County; Ajo Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pima County; Rillito Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	3.28	3.22	2.96	2.84	2.26	1.61	1.57
Pinal and Gila Counties; Payson, AZ	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	1.37	1.34	1.23	1.18	0.94	0.67	0.65
Pinal County (part); West Pinal, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	30.84	30.27	27.80	26.61	21.15	14.91	14.58
Pitkin County; Aspen, CO	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	19.66	19.26	17.66	16.89	13.44	9.37	9.19
Pittsburgh Area, PA	CO (1971 8-hour)	Maintenance, --	100	0	8.90	8.77	8.09	7.76	6.16	4.44	4.32

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Pittsburgh-Beaver Valley, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	114.53	112.65	103.65	99.32	78.88	56.23	54.82
Pittsburgh-Beaver Valley, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	83.55	82.27	75.77	72.64	57.66	41.34	40.24
Plumas County, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.51	0.50	0.46	0.44	0.35	0.25	0.24
Polk County, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	3.10	3.04	2.79	2.68	2.13	1.50	1.47
Portland Area: Portland Metro Service District Boundary, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	32.98	32.59	30.12	28.91	22.92	16.75	16.22
Power-Bannock Counties; Fort Hall Indian Reservation, ID	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.07	0.07	0.06	0.06	0.05	0.03	0.03
Power-Bannock Counties; Portneuf Valley Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	8.70	8.53	7.84	7.50	5.96	4.20	4.11
Provo Area, UT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	1.51	1.50	1.39	1.34	1.06	0.80	0.77
Provo, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	9.51	9.43	8.74	8.41	6.65	4.94	4.77
Prowers County; Lamar, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.61	0.60	0.55	0.53	0.42	0.30	0.29
Raleigh-Durham Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	60.26	59.44	54.84	52.61	41.73	30.20	29.33
Ramsey County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	3.87	3.79	3.48	3.33	2.65	1.84	1.81
Reading, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	20.84	20.50	18.86	18.08	14.35	10.24	9.98
Reno Area, NV	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	18.11	17.81	16.38	15.70	12.47	8.88	8.66
Rhineland, WI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	5.94	5.82	5.34	5.11	4.07	2.85	2.79
Riverside County (Coachella Valley), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	7.24	7.20	6.69	6.45	5.09	3.85	3.70
Riverside County (Coachella Valley), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	7.24	7.20	6.69	6.45	5.09	3.85	3.70
Riverside County; Coachella Valley Planning Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	7.97	7.94	7.39	7.12	5.62	4.27	4.10

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
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Riverside, Los Angeles, Orange, and San Bernardino Counties; South Coast Air Basin, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	308.23	305.64	283.26	272.32	215.55	160.12	154.49
Rosebud County; Lame Deer, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.66	0.64	0.59	0.57	0.45	0.31	0.31
Routt County (part); Steamboat Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	33.84	33.15	30.39	29.07	23.12	16.12	15.81
Rusk and Panola Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	6.56	6.43	5.89	5.64	4.48	3.12	3.06
Sacramento Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	29.43	29.16	27.01	25.96	20.55	15.22	14.69
Sacramento County, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	31.35	31.02	28.69	27.56	21.83	16.04	15.52
Sacramento Metro, CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	67.16	66.33	61.25	58.79	46.61	33.93	32.91
Sacramento Metro, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	67.16	66.32	61.25	58.79	46.61	33.93	32.90
Sacramento, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	65.56	64.75	59.79	57.39	45.50	33.13	32.12
Salem Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	10.92	10.75	9.90	9.49	7.53	5.39	5.25
Salt Lake City Area, UT	CO (1971 8-hour)	Maintenance, --	100	0	11.89	11.69	10.75	10.30	8.18	5.81	5.67
Salt Lake City, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	77.49	76.27	70.23	67.32	53.44	38.25	37.26
Salt Lake County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	46.28	45.56	41.95	40.22	31.93	22.86	22.26
Salt Lake County, UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	46.34	45.62	42.01	40.27	31.97	22.89	22.29
San Antonio, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	90.32	88.88	81.82	78.42	62.26	44.51	43.37
San Bernardino County (part); excluding Searles Valley Planning Area and South Coast Air Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	36.52	35.91	33.04	31.66	25.14	17.91	17.46
San Diego Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	133.98	132.00	121.65	116.65	92.57	66.58	64.77

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Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
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San Diego County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	134.89	132.90	122.47	117.44	93.20	67.03	65.20
San Diego County, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	134.49	132.50	122.11	117.09	92.92	66.83	65.01
San Francisco Bay Area, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	148.70	147.23	136.26	130.92	103.69	76.45	73.90
San Francisco Bay Area, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	148.47	147.00	136.05	130.72	103.53	76.33	73.78
San Francisco Bay Area, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	149.87	148.39	137.34	131.95	104.51	77.06	74.48
San Francisco-Oakland-San Jose Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	134.81	133.50	123.58	118.74	94.04	69.40	67.07
San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	120.41	118.85	109.71	105.28	83.49	60.62	58.83
San Joaquin Valley, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	120.41	118.85	109.71	105.28	83.49	60.62	58.83
San Joaquin Valley, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	120.42	118.86	109.72	105.29	83.49	60.63	58.83
San Joaquin Valley, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	118.48	116.96	107.97	103.62	82.17	59.70	57.92
San Joaquin Valley, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	118.48	116.96	107.97	103.62	82.17	59.70	57.92
San Luis Obispo (Eastern part), CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	7.15	7.00	6.42	6.14	4.89	3.41	3.34
San Luis Obispo (Eastern San Luis Obispo), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	7.15	7.00	6.42	6.14	4.89	3.41	3.34
San Manuel, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	1.24	1.22	1.12	1.07	0.85	0.60	0.59
San Miguel County; Telluride, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	6.19	6.06	5.56	5.32	4.23	2.95	2.89
Sanders County (part); Thompson Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.18	0.18	0.17	0.16	0.13	0.09	0.09
Santa Cruz County; Nogales Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	1.90	1.87	1.72	1.65	1.31	0.93	0.91
Seaford, DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	47.34	46.42	42.59	40.76	32.41	22.73	22.26

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Seattle-Tacoma Area, WA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	85.93	84.84	78.32	75.17	59.60	43.33	42.03
Seattle-Tacoma, WA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	12.25	12.11	11.19	10.75	8.52	6.23	6.04
Sheboygan County, WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	13.30	13.05	11.98	11.47	9.12	6.41	6.28
Sheboygan County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	6.77	6.64	6.10	5.84	4.64	3.26	3.19
Sheridan County; City of Sheridan, WY	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	3.88	3.81	3.49	3.34	2.66	1.86	1.83
Shoshone County (part); excluding Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.61	1.58	1.46	1.39	1.11	0.79	0.77
Shoshone County; City of Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Silver Bow County; Butte, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	1.29	1.27	1.17	1.12	0.89	0.63	0.62
Somerville Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.81	0.79	0.73	0.70	0.55	0.39	0.38
Southern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	9.51	9.43	8.74	8.40	6.65	4.94	4.77
Southwest Indiana, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	1.74	1.70	1.56	1.50	1.19	0.83	0.82
Spokane Area, WA	CO (1971 8-hour)	Maintenance, Serious	100	0	4.31	4.29	3.99	3.85	3.04	2.30	2.21
Spokane County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	4.39	4.38	4.07	3.92	3.10	2.35	2.25
Springfield Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	5.15	5.08	4.68	4.49	3.56	2.57	2.49
St. Bernard Parish, LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	33.75	33.05	30.30	28.98	23.06	16.07	15.76
St. Clair, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	3.83	3.76	3.46	3.31	2.63	1.86	1.82
St. Louis Area, MO	CO (1971 8-hour)	Maintenance, --	100	0	152.41	149.42	137.08	131.18	104.32	73.08	71.58
St. Louis, MO-IL	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	367.92	360.79	331.08	316.87	251.95	176.79	173.07
St. Louis-St. Charles-Farmington, MO-IL	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	402.38	394.60	362.13	346.59	275.58	193.43	189.35

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Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Steubenville, OH-WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	9.56	9.37	8.60	8.23	6.54	4.59	4.50
Steubenville-Weirton, OH-WV	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	20.57	20.17	18.51	17.71	14.08	9.88	9.67
Stockton Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	6.36	6.31	5.85	5.62	4.45	3.31	3.20
Sullivan County, TN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	3.64	3.57	3.28	3.14	2.49	1.75	1.72
Sutter Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.87	0.86	0.78	0.75	0.60	0.42	0.41
Syracuse Area; Onondaga County, NY	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	27.49	27.03	24.86	23.82	18.92	13.46	13.13
Tazewell County: Groveland Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.48	0.48	0.44	0.42	0.33	0.25	0.24
Terre Haute, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	8.63	8.46	7.77	7.44	5.91	4.16	4.07
Thurston County; Cities of Olympia, Tumwater, and Lacey, WA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	1.49	1.48	1.38	1.33	1.05	0.79	0.76
Titus County, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.37	0.36	0.33	0.32	0.25	0.18	0.17
Toms River Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.11	0.11	0.10	0.10	0.08	0.06	0.05
Tooele County (part), UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	2.01	1.97	1.80	1.73	1.37	0.96	0.94
Trenton Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	2.90	2.86	2.63	2.53	2.00	1.45	1.41
Trona, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	6.38	6.24	5.72	5.47	4.36	3.03	2.98
Tucson Area, AZ	CO (1971 8-hour)	Maintenance, --	100	0	53.32	52.44	48.25	46.23	36.72	26.17	25.51
Tuolumne County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	2.57	2.53	2.34	2.24	1.78	1.28	1.24
Tuscan Buttes, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.18	0.17	0.16	0.15	0.12	0.08	0.08
Tuscan Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.18	0.17	0.16	0.15	0.12	0.08	0.08

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Uinta Basin, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	57.09	55.91	51.25	49.03	39.00	27.19	26.66
Union County; LaGrande, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.87	1.84	1.69	1.62	1.29	0.90	0.88
Upper Green River Basin Area, WY	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	32.07	31.41	28.79	27.54	21.91	15.28	14.98
Utah County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	27.23	26.78	24.64	23.61	18.75	13.37	13.03
Vancouver Area: Clark County (part), WA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	4.19	4.18	3.88	3.74	2.96	2.24	2.15
Ventura County, CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	33.47	32.98	30.39	29.15	23.13	16.64	16.18
Ventura County, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	33.46	32.97	30.38	29.13	23.12	16.63	16.18
Vermillion County; Part of Clinton Township, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.82	1.79	1.64	1.57	1.25	0.88	0.86
Vigo County, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	18.01	17.67	16.22	15.53	12.35	8.69	8.50
Walla Walla County; Wallula, WA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.44	0.43	0.40	0.38	0.30	0.21	0.21
Waltham Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	2.65	2.60	2.40	2.30	1.82	1.30	1.27
Warren County: Conewago Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	3.05	2.99	2.74	2.62	2.08	1.45	1.43
Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	7.40	7.25	6.65	6.36	5.06	3.54	3.47
Warren, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	8.94	8.76	8.03	7.68	6.11	4.27	4.18
Washington Area, DC-MD-VA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	11.99	11.93	11.08	10.67	8.43	6.36	6.11
Washington, DC-MD-VA	Ozone (2008 8-hour)	Nonattainment (DC) Maintenance (MD, VA), Marginal	50	0	110.38	109.40	101.35	97.42	77.13	57.16	55.18
Washington, DC-MD-VA	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	110.47	109.49	101.43	97.49	77.18	57.20	55.22
Washoe County; Reno Planning Area, NV	PM10 (1987 24-hour)	Maintenance, Serious	100	0	18.27	17.96	16.53	15.84	12.58	8.96	8.74

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	8.75	8.58	7.88	7.54	5.99	4.21	4.12
Wayne County; (part), MI	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	5.37	5.27	4.84	4.64	3.69	2.60	2.54
West Central Pinal County, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	6.13	6.02	5.53	5.29	4.21	2.96	2.90
West Silver Valley, ID	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.86	0.85	0.78	0.74	0.59	0.42	0.41
Williamson County, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	4.74	4.66	4.29	4.11	3.27	2.33	2.27
Winston-Salem Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	9.99	9.88	9.13	8.77	6.95	5.09	4.93
Worcester Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	6.01	5.93	5.47	5.25	4.16	3.02	2.93
Yakima Area, WA	CO (1971 8-hour)	Maintenance, --	100	0	2.46	2.41	2.22	2.12	1.69	1.19	1.16
Yakima County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	8.33	8.18	7.51	7.19	5.72	4.04	3.95
Yuba City-Marysville, CA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	10.04	9.88	9.09	8.71	6.92	4.94	4.81
Yuma County; Yuma Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	11.45	11.25	10.34	9.90	7.87	5.57	5.44
Yuma, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	6.06	5.95	5.47	5.24	4.16	2.95	2.88

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Table A-12. Changes in Emissions from U.S. Passenger Cars and Light Trucks by Nonattainment or Maintenance Area and Alternative, Direct and Indirect Impacts--Volatile Organic Compounds (VOCs), 2050

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Ada County; Boise, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	64.97	62.53	58.52	55.74	42.44	30.98	25.22
Adams, Denver, and Boulder Counties; Denver Metropolitan Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	358.41	345.05	322.29	306.51	233.46	170.36	138.28
Ajo, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Albuquerque Area, NM	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	82.06	78.92	74.15	70.87	53.92	39.40	32.29
Allegan County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	6.65	6.40	6.02	5.77	4.39	3.21	2.64
Allegheny County Air Basin: Hazelwood Monitor, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	6.66	6.40	6.04	5.79	4.40	3.22	2.66
Allegheny County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	80.82	77.67	73.34	70.38	53.49	39.14	32.32
Allegheny County; The Area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.69	1.63	1.53	1.46	1.11	0.81	0.67
Allegheny, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	9.77	9.40	8.85	8.48	6.45	4.71	3.88
Allentown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	65.20	62.70	58.95	56.36	42.88	31.34	25.70
Allentown-Bethlehem-Easton, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	70.11	67.41	63.44	60.70	46.17	33.76	27.73
Alton Township, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	6.73	6.49	6.02	5.70	4.35	3.17	2.54
Amador County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	4.85	4.66	4.41	4.24	3.22	2.36	1.96
Anchorage Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	38.39	36.97	34.46	32.71	24.93	18.18	14.71
Anchorage; Eagle River, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	2.18	2.10	1.96	1.86	1.42	1.03	0.84
Anne Arundel County and Baltimore County, MD	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	68.47	65.71	62.52	60.35	45.81	33.58	28.04

Notes:

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NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
AQCR 012: Portions of Grant County, NM	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	12.58	12.12	11.30	10.74	8.18	5.97	4.83
AQCR 109-Millinocket, ME	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	28.82	27.74	25.95	24.71	18.82	13.73	11.17
AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington Counties (Minneapolis-St. Paul), MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	427.86	411.61	386.14	368.54	280.48	204.89	167.46
AQCR 237: Brown County: Green Bay Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.81	0.78	0.73	0.70	0.53	0.39	0.32
AQCR 238: Marathon County: Rothschild Subcity Area, Rib Mountain, Weston, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	39.67	38.19	35.68	33.94	25.85	18.86	15.32
AQCR 238: Oneida County: Rhinelander Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	18.55	17.86	16.66	15.82	12.05	8.79	7.12
AQCR 239: Milwaukee County: Milwaukee Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	47.66	45.78	43.34	41.67	31.66	23.18	19.21
AQCR 240: Dane County: Madison Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	36.44	34.99	33.22	32.01	24.31	17.81	14.83
Archuleta County; Pagosa Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	21.59	20.80	19.33	18.30	13.95	10.17	8.18
Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	3.65	3.51	3.27	3.09	2.36	1.72	1.38
Aroostock County; City of Presque Isle, ME	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.58	0.55	0.53	0.51	0.39	0.28	0.24
Atlanta, GA	Ozone (2008 8-hour)	Maintenance, Moderate	100	0	508.17	488.31	461.15	442.51	336.36	246.12	203.24
Atlanta, GA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	420.06	403.70	380.97	365.37	277.76	203.20	167.62
Atlantic City Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	2.95	2.83	2.68	2.57	1.95	1.43	1.18
Bakersfield Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	37.75	36.28	34.25	32.85	24.97	18.27	15.08

Notes:

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Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Baltimore Area, MD	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	1.36	1.31	1.23	1.17	0.89	0.65	0.54
Baltimore, MD	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	185.81	178.37	169.42	163.33	124.02	90.87	75.70
Baltimore, MD	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	187.33	179.83	170.81	164.68	125.04	91.62	76.33
Baton Rouge, LA	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	357.06	343.93	320.32	303.91	231.61	168.89	136.45
Beaver, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	1.16	1.11	1.05	1.01	0.77	0.56	0.46
Benton County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	7.40	7.13	6.64	6.31	4.81	3.51	2.84
Berrien County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	33.42	32.16	30.14	28.75	21.88	15.98	13.05
Billings Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	49.03	47.24	43.94	41.64	31.74	23.14	18.65
Billings, MT	SO ₂ (2010 1-hour)	Maintenance, --	100	0	12.80	12.33	11.45	10.83	8.26	6.02	4.83
Birmingham, AL	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	183.54	176.61	165.46	157.75	120.08	87.69	71.53
Boise-Northern Ada County Area, ID	CO (1971 8-hour)	Maintenance, --	100	0	64.93	62.49	58.48	55.70	42.41	30.96	25.21
Bonner County; The Sandpoint Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	2.66	2.56	2.39	2.27	1.73	1.26	1.03
Boston Area, MA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	98.14	94.44	88.47	84.34	64.20	46.88	38.23
Boyd County (part), KY	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	12.04	11.60	10.77	10.19	7.77	5.66	4.55
Brooke; Follansbee Area, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.47	0.46	0.43	0.41	0.31	0.23	0.18
Burlington Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.81	0.78	0.74	0.71	0.54	0.40	0.33
Butte County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	23.22	22.33	21.00	20.07	15.27	11.16	9.15
Calaveras County, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	4.47	4.30	4.06	3.90	2.97	2.17	1.79
Calaveras County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	4.47	4.30	4.06	3.90	2.97	2.17	1.80

Notes:

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Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Campbell-Clermont Counties, KY-OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	3.46	3.32	3.13	3.00	2.28	1.67	1.37
Canton-Massillon, OH	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	32.39	31.13	29.36	28.14	21.39	15.65	12.89
Central New Hampshire, NH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	8.15	7.81	7.51	7.31	5.54	4.07	3.45
Central Steptoe Valley, NV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	1.90	1.83	1.72	1.65	1.25	0.92	0.75
Charleston, WV	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	48.22	46.40	43.49	41.49	31.58	23.06	18.83
Charlotte Area, NC	CO (1971 8-hour)	Maintenance, --	100	0	79.94	76.66	73.27	70.98	53.84	39.50	33.21
Charlotte-Rock Hill, NC-SC	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	215.27	206.76	195.81	188.34	143.08	104.77	86.89
Chicago, IL-IN-WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	668.31	642.51	605.07	579.31	440.57	322.14	264.88
Chicago-Naperville, IL-IN-WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	725.74	697.72	657.06	629.09	478.43	349.83	287.65
Chico (Butte County), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	23.22	22.33	21.00	20.07	15.27	11.16	9.15
Chico Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	9.47	9.11	8.55	8.17	6.22	4.55	3.72
Chico, CA	PM _{2.5} (2006 24-hour)	Maintenance, Moderate	100	0	22.67	21.80	20.49	19.59	14.91	10.89	8.93
Cincinnati, OH-KY	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	192.90	185.40	174.86	167.63	127.45	93.22	76.84
Cincinnati, OH-KY-IN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	204.59	196.65	185.43	177.73	135.13	98.84	81.44
Clark County; Las Vegas Planning Area, NV	PM ₁₀ (1987 24-hour)	Maintenance, Serious	100	0	127.09	122.01	115.86	111.67	84.80	62.13	51.73
Cleveland Area, OH	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	97.21	93.41	88.24	84.69	64.37	47.10	38.91
Cleveland, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	221.21	212.51	201.02	193.16	146.78	107.44	88.95
Cleveland, OH	PM _{2.5} (2012 Annual)	Maintenance, Moderate	100	0	121.91	117.15	110.65	106.19	80.71	59.06	48.78
Cleveland-Akron-Lorain, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	230.50	221.44	209.45	201.25	152.93	111.94	92.67

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Cleveland-Akron-Lorain, OH	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	210.66	202.36	191.48	184.03	139.84	102.37	84.79
Cochise County; Paul Spur/Douglas Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	3.74	3.60	3.37	3.22	2.45	1.79	1.46
Colorado Springs Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	114.50	110.22	103.03	98.03	74.66	54.49	44.28
Columbus, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	206.15	198.19	186.66	178.72	135.92	99.39	81.73
Columbus, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	183.08	175.98	165.88	158.93	120.85	88.38	72.78
Cook County; Lyons Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	7.76	7.47	7.03	6.72	5.11	3.74	3.07
Cook County; Southeast Chicago, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	30.74	29.60	27.60	26.21	19.97	14.57	11.79
Coshocton County; Franklin Township, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.99	0.96	0.89	0.84	0.64	0.47	0.38
Coso Junction, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	8.86	8.54	7.93	7.50	5.72	4.17	3.35
Cuyahoga County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	76.66	73.66	69.59	66.79	50.77	37.15	30.69
Cuyahoga County, OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	97.25	93.45	88.27	84.72	64.40	47.12	38.93
Dallas-Fort Worth, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	696.80	669.68	631.86	605.90	460.63	336.97	277.89
Dallas-Fort Worth, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	689.42	662.58	625.15	599.46	455.73	333.39	274.93
Delaware County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	57.67	55.49	52.00	49.59	37.75	27.57	22.49
Denver Metro/North Front Range, CO	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	937.64	902.87	842.41	800.44	609.79	444.87	360.46
Denver-Boulder Area, CO	CO (1971 8-hour)	Maintenance, Serious	100	0	656.85	632.42	590.44	561.31	427.57	311.98	253.04
Denver-Boulder-Greeley-Ft Collins-Loveland, CO	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	937.64	902.87	842.41	800.44	609.79	444.87	360.46
Detroit Area, MI	CO (1971 8-hour)	Maintenance, --	100	0	144.59	138.97	131.12	125.74	95.59	69.93	57.67
Detroit, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	406.51	390.66	368.75	353.71	268.89	196.72	162.33

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Detroit, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	25.45	24.48	23.01	22.00	16.74	12.23	10.03
Detroit-Ann Arbor, MI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	407.84	391.94	369.95	354.86	269.76	197.36	162.86
Doña Ana County (Sunland Park Area), NM	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	7.02	6.77	6.30	5.97	4.55	3.32	2.68
Doña Ana County; Anthony, NM	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	4.64	4.47	4.16	3.94	3.00	2.19	1.76
Door County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Douglas, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	3.08	2.97	2.78	2.66	2.02	1.48	1.21
Dukes County, MA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.53	0.51	0.48	0.46	0.35	0.26	0.21
Duluth Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	29.31	28.22	26.32	24.99	19.04	13.89	11.24
East Chicago Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	22.99	22.15	20.57	19.47	14.85	10.82	8.70
East Helena Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.16	0.15	0.14	0.13	0.10	0.07	0.06
East Kern County Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	10.04	9.67	9.02	8.56	6.52	4.76	3.85
El Paso County, TX	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	64.54	62.08	58.29	55.68	42.37	30.96	25.34
El Paso, TX	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	6.50	6.26	5.85	5.56	4.23	3.09	2.51
Eugene-Springfield Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	18.81	18.08	17.06	16.35	12.43	9.09	7.50
Evangeline Parish (Partial), LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.64	0.62	0.57	0.54	0.41	0.30	0.24
Fairbanks Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	5.06	4.88	4.54	4.31	3.28	2.39	1.93
Fairbanks, AK	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	9.90	9.54	8.88	8.43	6.42	4.68	3.79
Flathead County; Columbia Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.75	0.72	0.68	0.64	0.49	0.36	0.29
Flathead County; Kalispell and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	6.92	6.66	6.23	5.92	4.51	3.29	2.68

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
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Flathead County; Whitefish and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	1.39	1.34	1.25	1.19	0.91	0.66	0.54
Fort Collins Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	23.06	22.19	20.79	19.81	15.08	11.01	8.98
Freehold Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.84	0.81	0.77	0.74	0.56	0.41	0.34
Freestone and Anderson Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	4.84	4.66	4.34	4.12	3.14	2.29	1.85
Fremont County; Canon City Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	4.56	4.38	4.12	3.93	2.99	2.19	1.79
Fresno Area, CA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	31.55	30.27	28.82	27.83	21.12	15.49	12.94
Grants Pass Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	3.76	3.61	3.39	3.24	2.47	1.80	1.48
Great Falls Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	2.61	2.51	2.33	2.21	1.68	1.23	0.99
Greater Connecticut, CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	117.67	113.02	106.98	102.85	78.14	57.21	47.41
Greater Connecticut, CT	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	117.77	113.13	107.08	102.94	78.22	57.26	47.45
Greeley Area, CO	CO (1971 8-hour)	Maintenance, --	100	0	258.94	249.49	231.92	219.68	167.48	122.07	98.31
Hancock and Brooke Counties (Part); The City of Weirton, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	5.43	5.23	4.87	4.62	3.52	2.57	2.07
Hancock County (Part) The City of Weirton, including Butler and Clay: Magisterial Districts, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	8.02	7.72	7.18	6.81	5.19	3.78	3.05
Harrisburg-Lebanon-Carlisle-York, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	119.13	114.55	107.75	103.06	78.40	57.31	47.03
Hartford-New Britain-Middletown Area, CT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	76.54	73.50	69.65	67.02	50.91	37.28	30.95
Hayden, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	1.01	0.98	0.91	0.87	0.66	0.48	0.39
Hayden, AZ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.70	0.67	0.63	0.60	0.46	0.33	0.27

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Hayden, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.69	0.66	0.62	0.59	0.45	0.33	0.27
Hillsborough County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	4.63	4.46	4.16	3.95	3.01	2.20	1.78
Hillsborough-Polk County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.72	0.69	0.64	0.61	0.47	0.34	0.27
Houston-Galveston-Brazoria, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	2,201.10	2,119.84	1,975.88	1,875.85	1,429.35	1,042.50	843.31
Houston-Galveston-Brazoria, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	2,160.16	2,080.43	1,939.07	1,840.85	1,402.69	1,023.04	827.53
Humphreys County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	6.88	6.62	6.17	5.86	4.47	3.26	2.64
Huntington, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	13.44	12.94	12.05	11.44	8.72	6.36	5.14
Imperial County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	25.94	24.95	23.41	22.35	17.01	12.43	10.16
Imperial County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	25.92	24.94	23.40	22.34	17.00	12.42	10.16
Imperial County, CA	PM _{2.5} (2006 24-hour)	Nonattainment, Moderate	100	0	19.90	19.14	17.98	17.18	13.07	9.55	7.83
Imperial County, CA	PM _{2.5} (2012 Annual)	Nonattainment, Moderate	100	0	19.90	19.14	17.98	17.18	13.07	9.55	7.83
Imperial County; Imperial Valley Planning Area, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Serious	70	0	25.52	24.55	23.03	21.99	16.73	12.22	10.00
Indian Wells, CA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	11.30	10.88	10.15	9.64	7.34	5.36	4.34
Indiana, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	15.73	15.14	14.16	13.49	10.27	7.50	6.10
Indianapolis Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	0.13	0.13	0.12	0.12	0.09	0.06	0.05
Indianapolis, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	42.89	41.20	38.97	37.44	28.45	20.83	17.24
Inyo County; Owens Valley Planning Area, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Serious	70	0	1.82	1.75	1.64	1.56	1.18	0.86	0.70
Jackson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	8.76	8.43	7.88	7.50	5.71	4.17	3.39
Jackson County; Medford-Ashland (including White City), OR	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	20.54	19.76	18.53	17.68	13.46	9.83	8.03

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Jamestown, NY	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	18.28	17.58	16.51	15.76	12.00	8.76	7.17
Jefferson County, KY	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.10	0.09	0.09	0.08	0.06	0.05	0.04
Jefferson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	11.92	11.48	10.71	10.18	7.75	5.66	4.58
Jefferson County; (part) Steubenville & Mingo Junction, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	12.22	11.77	10.99	10.44	7.96	5.80	4.71
Jefferson County; (part), OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.22	1.18	1.10	1.04	0.79	0.58	0.47
Johnstown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	16.02	15.41	14.46	13.81	10.51	7.68	6.28
Josephine County; Grants Pass, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	3.74	3.60	3.38	3.23	2.46	1.80	1.47
Juneau; Mendenhall Valley Area, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	2.54	2.44	2.28	2.16	1.65	1.20	0.97
Kern County (Eastern Kern), CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	32.99	31.77	29.62	28.12	21.43	15.63	12.64
Kern County (Eastern Kern), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	32.99	31.77	29.62	28.12	21.43	15.63	12.64
King County; Kent, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.39	1.34	1.27	1.22	0.93	0.68	0.56
King County; Seattle, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.02	0.98	0.93	0.89	0.68	0.50	0.41
Klamath County; Klamath Falls, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	5.95	5.72	5.38	5.14	3.91	2.86	2.34
Klamath Falls Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	5.94	5.72	5.37	5.14	3.91	2.86	2.34
Klamath Falls, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	6.81	6.55	6.16	5.89	4.48	3.27	2.68
Knoxville, TN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	84.81	81.54	76.77	73.49	55.89	40.87	33.59
Knoxville-Sevierville-La Follette, TN	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	121.54	116.90	109.81	104.92	79.83	58.34	47.78
La Porte County; (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	7.66	7.37	6.91	6.60	5.02	3.67	3.00
Lake County (part); Lakeview, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.63	0.60	0.57	0.54	0.41	0.30	0.25

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NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Lake County, OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	15.30	14.69	13.96	13.47	10.23	7.49	6.25
Lake County: (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	81.35	78.33	73.12	69.50	52.94	38.63	31.32
Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	2.44	2.34	2.22	2.14	1.63	1.19	1.00
Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	57.50	55.37	51.64	49.05	37.37	27.26	22.07
Lake County; Polson, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.24	0.23	0.21	0.20	0.16	0.11	0.09
Lake County; Ronan, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.12	0.12	0.11	0.11	0.08	0.06	0.05
Lake Tahoe Nevada Area, NV	CO (1971 8-hour)	Maintenance, --	100	0	2.29	2.20	2.07	1.98	1.51	1.10	0.90
Lake Tahoe North Shore Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	1.49	1.43	1.35	1.29	0.98	0.72	0.59
Lake Tahoe South Shore Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	2.50	2.40	2.28	2.20	1.67	1.22	1.02
Lancaster, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	26.60	25.52	24.33	23.51	17.84	13.08	10.95
Lancaster, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	26.62	25.54	24.34	23.53	17.86	13.09	10.96
Lane County (part); Oakridge, OR	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.16	0.15	0.14	0.14	0.11	0.08	0.06
Lane County; Eugene/Springfield, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	18.82	18.09	17.06	16.36	12.44	9.10	7.50
Las Vegas Area, NV	CO (1971 8-hour)	Maintenance, Serious	100	0	127.20	122.11	115.95	111.76	84.87	62.18	51.78
Las Vegas, NV	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	127.09	122.01	115.86	111.67	84.80	62.13	51.73
LaSalle County; Oglesby, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	4.10	3.95	3.71	3.55	2.70	1.97	1.62
Laurel Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	13.48	12.99	12.06	11.41	8.70	6.34	5.09
Lebanon County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	21.78	20.96	19.62	18.69	14.23	10.39	8.46
Lemont, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	27.89	26.85	25.12	23.92	18.21	13.30	10.82

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Liberty-Clairton, PA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	1.69	1.63	1.53	1.46	1.11	0.81	0.67
Lincoln County; Libby and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	1.06	1.02	0.96	0.91	0.69	0.51	0.41
Logan, UT-ID	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	11.74	11.29	10.63	10.18	7.74	5.66	4.65
Longmont Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	69.00	66.49	61.80	58.53	44.62	32.52	26.19
Lorain County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	4.12	3.96	3.74	3.59	2.73	2.00	1.65
Los Angeles, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	926.04	888.69	845.64	816.42	619.72	454.27	379.45
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	88.78	85.34	80.45	77.09	58.62	42.87	35.31
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	88.77	85.33	80.44	77.08	58.61	42.87	35.30
Los Angeles-South Coast Air Basin Area, CA	CO (1971 8-hour)	Maintenance, Serious	100	0	925.18	887.86	844.88	815.71	619.18	453.88	379.14
Los Angeles-South Coast Air Basin Area, CA	NO ₂ (1971 Annual)	Maintenance, --	100	0	925.13	887.81	844.83	815.66	619.14	453.85	379.12
Los Angeles-South Coast Air Basin, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	926.29	888.93	845.86	816.64	619.89	454.39	379.55
Los Angeles-South Coast Air Basin, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	925.76	888.43	845.39	816.18	619.54	454.14	379.34
Los Angeles-South Coast Air Basin, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	926.04	888.69	845.64	816.42	619.72	454.27	379.45
Louisville, KY-IN	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	129.05	124.07	116.81	111.81	85.04	62.18	51.10
Lowell Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	9.14	8.79	8.27	7.91	6.02	4.40	3.61
Lucas County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	48.05	46.22	43.37	41.40	31.51	23.02	18.82
Madison County; Granite City Township and Nameoki Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	23.36	22.51	20.94	19.85	15.13	11.03	8.90
Manchester Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	4.51	4.32	4.16	4.05	3.07	2.25	1.91

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Manitowoc County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	3.18	3.06	2.90	2.79	2.12	1.55	1.29
Maricopa and Pinal Counties; Phoenix Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	216.45	207.67	197.85	191.20	145.10	106.40	89.03
Marion County: Lawrence, Washington, and Warrant Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	38.79	37.27	35.24	33.86	25.73	18.83	15.59
Mariposa County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	2.88	2.76	2.62	2.52	1.92	1.40	1.17
Mariposa County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	2.88	2.76	2.62	2.52	1.92	1.40	1.17
Marshall, WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	9.24	8.91	8.28	7.85	5.98	4.36	3.51
Medford Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	11.06	10.64	9.97	9.52	7.24	5.29	4.32
Memphis Area, TN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	84.71	81.40	76.84	73.71	56.04	41.00	33.83
Memphis, TN-MS-AR	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	168.94	162.52	152.49	145.57	110.78	80.93	66.17
Miami, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	2.02	1.94	1.82	1.74	1.32	0.97	0.79
Miami, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	1.97	1.90	1.78	1.70	1.29	0.95	0.77
Miami, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	2.03	1.95	1.83	1.74	1.33	0.97	0.79
Milwaukee-Racine, WI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	91.30	87.69	83.04	79.86	60.67	44.42	36.84
Minneapolis-St. Paul Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	432.88	416.42	390.73	372.98	283.85	207.36	169.53
Missoula Area, MT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	16.54	15.92	14.88	14.15	10.78	7.87	6.39
Missoula county; Missoula and Vicinity, MT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	16.64	16.02	14.96	14.23	10.84	7.91	6.42
Modesto Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	14.43	13.86	13.13	12.64	9.60	7.03	5.83

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Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Mohave County (part); Bullhead City, AZ	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	7.67	7.38	6.92	6.61	5.03	3.67	3.00
Mono County; Mammoth Lake Planning Area, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.33	1.28	1.22	1.19	0.90	0.66	0.56
Mono County; Mono Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.59	0.57	0.53	0.51	0.39	0.28	0.23
Morenci, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.99	0.95	0.89	0.84	0.64	0.47	0.38
Morgan County, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	2.18	2.09	1.98	1.91	1.45	1.06	0.88
Morongo Band of Mission Indians	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	0.44	0.43	0.40	0.38	0.29	0.21	0.17
Morongo Band of Mission Indians, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	0.45	0.43	0.41	0.39	0.29	0.21	0.17
Morristown Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	1.61	1.54	1.46	1.40	1.07	0.78	0.64
Muscatine County; (part), IA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	3.28	3.16	2.94	2.79	2.13	1.55	1.26
Muscatine, IA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	6.39	6.15	5.73	5.44	4.15	3.02	2.45
Muskegon County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	19.87	19.11	17.96	17.16	13.06	9.54	7.82
Muskingum River, OH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	1.82	1.76	1.64	1.55	1.18	0.86	0.70
Nashua Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	3.61	3.45	3.32	3.23	2.45	1.80	1.52
Nassau County, FL	SO ₂ (2010 1-hour)	Maintenance, --	100	0	2.18	2.10	1.96	1.86	1.42	1.03	0.84
Nevada County (Western part), CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	6.59	6.32	6.03	5.83	4.42	3.24	2.72
Nevada County (Western part), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	6.62	6.35	6.05	5.85	4.44	3.26	2.73
New Haven County, CT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.81	1.74	1.64	1.58	1.20	0.88	0.72
New Haven-Meriden-Waterbury Area, CT	CO (1971 8-hour)	Maintenance, --	100	0	68.39	65.71	62.08	59.60	45.30	33.15	27.39
New Manchester-Grant Magisterial District in Hancock County, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	2.91	2.80	2.61	2.47	1.88	1.37	1.11

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Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
New York County, NY	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	37.28	35.85	33.73	32.28	24.55	17.95	14.74
New York, NY-NJ-CT	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	1,225.36	1,177.76	1,110.71	1,064.64	809.46	592.08	487.90
New York-N. New Jersey-Long Island Area, NY-NJ-CT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	683.70	657.17	619.60	593.77	451.48	330.21	272.00
New York-N. New Jersey-Long Island, NY-NJ-CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	1,192.72	1,146.37	1,081.21	1,036.45	788.01	576.41	475.07
New York-Northern New Jersey-Long Island, NY-NJ-CT	Ozone (2015 8-hour)	Nonattainment, Moderate	50	0	1,192.05	1,145.73	1,080.61	1,035.87	787.57	576.08	474.80
NJ Portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	2.15	2.06	1.96	1.88	1.43	1.05	0.87
Nogales, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	3.60	3.46	3.25	3.11	2.37	1.73	1.42
Northern Milwaukee/Ozaukee Shoreline, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	3.92	3.76	3.58	3.46	2.62	1.92	1.61
Northern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	152.68	146.78	138.26	132.39	100.68	73.62	60.56
Oakridge, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.29	0.28	0.26	0.25	0.19	0.14	0.12
Ogden Area, UT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	4.99	4.79	4.52	4.34	3.30	2.41	1.99
Ogden Area, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	4.99	4.79	4.52	4.34	3.30	2.41	1.99
Olmsted County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	4.92	4.74	4.43	4.22	3.22	2.35	1.91
Olmsted; City of Rochester, MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	17.10	16.45	15.40	14.68	11.17	8.16	6.65
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	2.55	2.46	2.29	2.16	1.65	1.20	0.97
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	2.55	2.46	2.28	2.16	1.65	1.20	0.97
Pekin, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	2.77	2.66	2.53	2.43	1.85	1.35	1.13

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Penns Grove Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.04	0.04	0.04	0.04	0.03	0.03	0.02	0.02
Peoria County: Hollis Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.33	0.31	0.29	0.28	0.21	0.16	0.13	0.13
Peoria County: Peoria, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	8.19	7.87	7.44	7.14	5.42	3.97	3.28	3.28
Perth Amboy Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	10.13	9.76	9.12	8.67	6.61	4.82	3.92	3.92
Philadelphia-Camden County Area, PA-NJ	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	107.82	103.67	97.54	93.31	70.98	51.89	42.60	42.60
Philadelphia-Wilmington, PA-NJ-DE	PM2.5 (2006 24-hour)	Maintenance, Moderate for PA and DE; Subject to Former Subpart 1 for NJ	100	0	480.66	462.15	434.98	416.27	316.61	231.48	190.17	190.17
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	617.19	593.36	558.77	534.97	406.85	297.49	244.60	244.60
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	616.85	593.04	558.47	534.67	406.63	297.32	244.46	244.46
Phoenix Area, AZ	CO (1971 8-hour)	Maintenance, Serious	100	0	203.71	195.43	186.32	180.15	136.70	100.25	83.98	83.98
Phoenix-Mesa, AZ	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	217.72	208.90	199.02	192.33	145.96	107.02	89.56	89.56
Phoenix-Mesa, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	236.34	226.82	215.78	208.29	158.11	115.90	96.78	96.78
Pierce County; Tacoma, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.80	0.77	0.72	0.68	0.52	0.38	0.31	0.31
Pima County; Ajo Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pima County; Rillito Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	6.28	6.04	5.68	5.43	4.13	3.02	2.48	2.48
Pinal and Gila Counties; Payson, AZ	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	2.45	2.36	2.21	2.11	1.61	1.17	0.96	0.96
Pinal County (part); West Pinal, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	50.67	48.77	45.62	43.44	33.08	24.15	19.65	19.65
Pitkin County; Aspen, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	27.46	26.46	24.58	23.28	17.75	12.93	10.41	10.41
Pittsburgh Area, PA	CO (1971 8-hour)	Maintenance, --	100	0	19.89	19.11	18.06	17.34	13.18	9.64	7.97	7.97

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Pittsburgh-Beaver Valley, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	220.77	212.29	199.69	191.01	145.30	106.21	87.18
Pittsburgh-Beaver Valley, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	172.96	166.25	156.73	150.19	114.20	83.52	68.79
Plumas County, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.88	0.84	0.79	0.75	0.57	0.42	0.34
Polk County, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	5.08	4.89	4.57	4.35	3.32	2.42	1.97
Portland Area: Portland Metro Service District Boundary, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	84.34	80.99	76.79	73.93	56.15	41.13	34.17
Power-Bannock Counties; Fort Hall Indian Reservation, ID	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.12	0.12	0.11	0.10	0.08	0.06	0.05
Power-Bannock Counties; Portneuf Valley Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	14.13	13.61	12.72	12.11	9.22	6.73	5.47
Provo Area, UT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	5.06	4.86	4.63	4.48	3.40	2.49	2.09
Provo, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	28.55	27.40	26.08	25.18	19.11	14.01	11.70
Prowers County; Lamar, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.10	1.05	0.99	0.95	0.72	0.53	0.43
Raleigh-Durham Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	139.26	133.78	126.52	121.55	92.37	67.61	55.95
Ramsey County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	5.33	5.14	4.77	4.52	3.44	2.51	2.02
Reading, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	40.47	38.91	36.61	35.03	26.65	19.48	15.99
Reno Area, NV	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	34.63	33.30	31.32	29.95	22.79	16.66	13.67
Rhineland, WI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	9.02	8.69	8.10	7.69	5.86	4.28	3.46
Riverside County (Coachella Valley), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	25.06	24.04	22.94	22.20	16.84	12.35	10.36
Riverside County (Coachella Valley), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	25.06	24.04	22.94	22.20	16.84	12.35	10.36
Riverside County; Coachella Valley Planning Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	28.65	27.48	26.24	25.40	19.27	14.14	11.87

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Riverside, Los Angeles, Orange, and San Bernardino Counties; South Coast Air Basin, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	922.86	885.65	842.72	813.58	617.57	452.69	378.12
Rosebud County; Lame Deer, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.96	0.93	0.86	0.82	0.62	0.45	0.37
Routt County (part); Steamboat Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	46.84	45.14	41.92	39.68	30.26	22.05	17.73
Rusk and Panola Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	8.99	8.67	8.05	7.61	5.81	4.23	3.40
Sacramento Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	85.44	82.01	77.98	75.25	57.13	41.87	34.94
Sacramento County, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	84.81	81.42	77.31	74.50	56.58	41.45	34.51
Sacramento Metro, CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	165.23	158.69	150.32	144.60	109.85	80.44	66.74
Sacramento Metro, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	165.21	158.67	150.30	144.58	109.84	80.43	66.73
Sacramento, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	161.46	155.07	146.89	141.31	107.35	78.61	65.22
Salem Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	22.01	21.16	19.94	19.09	14.52	10.62	8.73
Salt Lake City Area, UT	CO (1971 8-hour)	Maintenance, --	100	0	21.90	21.06	19.78	18.90	14.38	10.51	8.61
Salt Lake City, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	157.23	151.15	142.41	136.40	103.72	75.85	62.42
Salt Lake County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	94.56	90.90	85.66	82.06	62.40	45.63	37.56
Salt Lake County, UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	94.69	91.02	85.78	82.17	62.49	45.70	37.62
San Antonio, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	180.49	173.52	163.41	156.46	118.99	87.00	71.54
San Bernardino County (part); excluding Searles Valley Planning Area and South Coast Air Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	69.69	67.02	63.02	60.27	45.85	33.51	27.49
San Diego Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	288.57	277.32	261.75	251.06	190.86	139.63	115.21

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
San Diego County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	290.25	278.94	263.27	252.51	191.96	140.44	115.87
San Diego County, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	289.38	278.10	262.48	251.76	191.39	140.02	115.53
San Francisco Bay Area, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	415.45	398.80	378.91	365.37	277.42	203.28	169.42
San Francisco Bay Area, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	414.83	398.20	378.34	364.83	277.01	202.98	169.17
San Francisco Bay Area, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	418.88	402.09	382.04	368.39	279.71	204.96	170.82
San Francisco-Oakland-San Jose Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	379.94	364.70	346.57	334.25	253.78	185.97	155.04
San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	288.56	277.17	262.38	252.26	191.66	140.32	116.30
San Joaquin Valley, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	288.56	277.17	262.38	252.26	191.67	140.32	116.30
San Joaquin Valley, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	288.58	277.19	262.39	252.28	191.68	140.33	116.31
San Joaquin Valley, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	285.90	274.61	259.99	250.01	189.94	139.07	115.29
San Joaquin Valley, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	285.90	274.61	259.99	250.01	189.94	139.07	115.29
San Luis Obispo (Eastern part), CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	9.87	9.52	8.84	8.36	6.38	4.65	3.74
San Luis Obispo (Eastern San Luis Obispo), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	9.87	9.51	8.84	8.36	6.38	4.65	3.74
San Manuel, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	2.07	1.99	1.86	1.77	1.35	0.99	0.80
San Miguel County; Telluride, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	8.68	8.37	7.77	7.36	5.61	4.09	3.29
Sanders County (part); Thompson Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.28	0.27	0.25	0.24	0.18	0.13	0.11
Santa Cruz County; Nogales Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	3.67	3.53	3.32	3.17	2.41	1.76	1.45
Seaford, DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	72.20	69.52	64.84	61.59	46.92	34.23	27.72

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
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Seattle-Tacoma Area, WA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	208.21	199.98	189.36	182.10	138.35	101.30	83.99
Seattle-Tacoma, WA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	31.77	30.50	28.93	27.86	21.16	15.50	12.88
Sheboygan County, WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	21.29	20.50	19.15	18.22	13.88	10.13	8.23
Sheboygan County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	10.84	10.43	9.75	9.28	7.06	5.16	4.19
Sheridan County; City of Sheridan, WY	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	5.93	5.71	5.33	5.06	3.86	2.81	2.28
Shoshone County (part); excluding Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	2.92	2.81	2.64	2.52	1.92	1.40	1.15
Shoshone County; City of Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Silver Bow County; Butte, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	2.52	2.42	2.28	2.18	1.66	1.21	1.00
Somerville Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	1.49	1.44	1.35	1.29	0.98	0.72	0.59
Southern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	28.55	27.40	26.07	25.17	19.11	14.01	11.70
Southwest Indiana, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	2.61	2.51	2.34	2.22	1.69	1.23	1.00
Spokane Area, WA	CO (1971 8-hour)	Maintenance, Serious	100	0	15.20	14.58	13.92	13.47	10.22	7.49	6.29
Spokane County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	15.49	14.85	14.18	13.72	10.41	7.64	6.41
Springfield Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	11.25	10.81	10.21	9.80	7.45	5.45	4.50
St. Bernard Parish, LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	46.53	44.85	41.64	39.41	30.05	21.90	17.60
St. Clair, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	6.75	6.49	6.09	5.81	4.42	3.23	2.64
St. Louis Area, MO	CO (1971 8-hour)	Maintenance, --	100	0	228.91	220.46	205.48	195.07	148.64	108.41	87.69
St. Louis, MO-IL	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	566.16	545.17	508.63	483.27	368.17	268.59	217.61
St. Louis-St. Charles-Farmington, MO-IL	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	622.55	599.45	559.40	531.60	404.98	295.46	239.46

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Steubenville, OH-WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	14.79	14.24	13.29	12.63	9.62	7.02	5.69
Steubenville-Weirton, OH-WV	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	31.60	30.43	28.39	26.97	20.55	14.99	12.14
Stockton Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	19.44	18.65	17.75	17.15	13.01	9.54	7.97
Sullivan County, TN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	5.80	5.58	5.21	4.96	3.78	2.76	2.24
Sutter Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.18	1.14	1.06	1.00	0.76	0.56	0.45
Syracuse Area; Onondaga County, NY	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	51.56	49.59	46.60	44.54	33.89	24.77	20.30
Tazewell County: Groveland Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	1.33	1.28	1.21	1.17	0.89	0.65	0.54
Terre Haute, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	13.92	13.40	12.52	11.92	9.08	6.62	5.38
Thurston County; Cities of Olympia, Tumwater, and Lacey, WA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	5.05	4.84	4.62	4.47	3.39	2.48	2.08
Titus County, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.52	0.50	0.47	0.44	0.34	0.24	0.20
Toms River Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.25	0.24	0.23	0.22	0.17	0.12	0.10
Tooele County (part), UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	2.85	2.75	2.55	2.42	1.84	1.34	1.08
Trenton Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	6.58	6.32	5.98	5.74	4.36	3.19	2.64
Trona, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	8.72	8.41	7.80	7.38	5.63	4.10	3.30
Tucson Area, AZ	CO (1971 8-hour)	Maintenance, --	100	0	102.50	98.56	92.71	88.67	67.45	49.31	40.46
Tuolumne County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	5.64	5.42	5.12	4.91	3.73	2.73	2.26
Tuscan Buttes, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.24	0.23	0.21	0.20	0.15	0.11	0.09
Tuscan Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.24	0.23	0.21	0.20	0.15	0.11	0.09

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Uinta Basin, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	78.89	76.02	70.60	66.82	50.95	37.13	29.85
Union County; LaGrande, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	3.01	2.90	2.71	2.58	1.96	1.43	1.16
Upper Green River Basin Area, WY	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	44.39	42.78	39.73	37.61	28.68	20.90	16.80
Utah County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	52.64	50.62	47.62	45.55	34.65	25.33	20.79
Vancouver Area: Clark County (part), WA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	14.98	14.36	13.71	13.27	10.07	7.39	6.20
Ventura County, CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	72.22	69.40	65.51	62.84	47.77	34.95	28.84
Ventura County, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	72.17	69.35	65.46	62.79	47.73	34.92	28.82
Vermillion County; Part of Clinton Township, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	2.98	2.87	2.68	2.55	1.94	1.42	1.15
Vigo County, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	28.86	27.78	25.96	24.70	18.81	13.73	11.15
Walla Walla County; Wallula, WA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.71	0.68	0.63	0.60	0.46	0.34	0.27
Waltham Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	5.09	4.90	4.61	4.41	3.35	2.45	2.01
Warren County: Conewago Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	4.28	4.13	3.84	3.63	2.77	2.02	1.63
Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	10.61	10.22	9.51	9.01	6.87	5.01	4.04
Warren, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	12.84	12.37	11.51	10.91	8.31	6.06	4.89
Washington Area, DC-MD-VA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	40.90	39.24	37.43	36.21	27.47	20.15	16.89
Washington, DC-MD-VA	Ozone (2008 8-hour)	Nonattainment (DC) Maintenance (MD, VA), Marginal	50	0	323.75	310.72	295.53	285.21	216.52	158.69	132.47
Washington, DC-MD-VA	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	323.93	310.89	295.69	285.37	216.63	158.78	132.54
Washoe County; Reno Planning Area, NV	PM10 (1987 24-hour)	Maintenance, Serious	100	0	34.95	33.61	31.61	30.23	22.99	16.81	13.79

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	13.77	13.26	12.38	11.77	8.97	6.54	5.31
Wayne County; (part), MI	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	9.00	8.66	8.10	7.72	5.88	4.29	3.50
West Central Pinal County, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	10.23	9.84	9.21	8.77	6.68	4.87	3.96
West Silver Valley, ID	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	1.56	1.50	1.41	1.35	1.03	0.75	0.61
Williamson County, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	9.28	8.92	8.39	8.03	6.11	4.47	3.67
Winston-Salem Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	26.23	25.19	23.90	23.02	17.48	12.81	10.65
Worcester Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	14.02	13.47	12.74	12.25	9.31	6.81	5.64
Yakima Area, WA	CO (1971 8-hour)	Maintenance, --	100	0	4.17	4.01	3.75	3.58	2.72	1.99	1.62
Yakima County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	14.15	13.61	12.75	12.15	9.25	6.76	5.51
Yuba City-Marysville, CA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	19.83	19.06	17.95	17.18	13.06	9.55	7.85
Yuma County; Yuma Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	20.29	19.52	18.31	17.48	13.30	9.72	7.94
Yuma, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	10.67	10.27	9.63	9.19	6.99	5.11	4.17

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Table A-13. Changes in Emissions from U.S. Passenger Cars and Light Trucks by Nonattainment or Maintenance Area and Alternative, Direct and Indirect Impacts--Carbon Monoxide (CO), 2025

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Ada County; Boise, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-63.22	-60.29	-55.67	-53.79	-39.24	-35.79	-29.20
Adams, Denver, and Boulder Counties; Denver Metropolitan Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-257.35	-245.32	-226.79	-218.96	-159.80	-147.61	-118.68
Ajo, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Albuquerque Area, NM	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-118.05	-112.57	-103.95	-100.44	-73.26	-66.88	-54.52
Allegan County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-11.21	-10.69	-9.88	-9.54	-6.96	-6.39	-5.17
Allegheny County Air Basin: Hazelwood Monitor, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-12.28	-11.70	-10.82	-10.45	-7.63	-7.07	-5.66
Allegheny County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	-158.05	-150.69	-139.24	-134.47	-98.12	-90.14	-72.94
Allegheny County; The Area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-1.56	-1.48	-1.39	-1.33	-0.97	-1.00	-0.71
Allegheny, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-14.76	-14.06	-13.03	-12.56	-9.17	-8.63	-6.79
Allentown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-97.42	-92.90	-85.80	-82.89	-60.47	-55.28	-44.99
Allentown-Bethlehem-Easton, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-112.41	-107.19	-99.00	-95.64	-69.77	-63.82	-51.91
Alton Township, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	7.76	7.46	6.73	6.60	4.77	3.36	3.69
Amador County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-11.08	-10.56	-9.76	-9.43	-6.88	-6.31	-5.11
Anchorage Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	-19.93	-19.01	-17.55	-16.96	-12.37	-11.28	-9.21
Anchorage; Eagle River, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-1.12	-1.07	-0.99	-0.96	-0.70	-0.64	-0.52
Anne Arundel County and Baltimore County, MD	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-196.47	-187.36	-173.01	-167.16	-121.94	-111.32	-90.74

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
AQCR 012: Portions of Grant County, NM	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-7.60	-7.25	-6.69	-6.47	-4.72	-4.29	-3.51
AQCR 109-Millinocket, ME	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-26.32	-25.10	-23.18	-22.39	-16.34	-14.95	-12.15
AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington Counties (Minneapolis-St. Paul), MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-534.19	-509.41	-470.42	-454.49	-331.55	-302.98	-246.69
AQCR 237: Brown County: Green Bay Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.82	-0.78	-0.73	-0.70	-0.51	-0.55	-0.37
AQCR 238: Marathon County: Rothschild Subcity Area, Rib Mountain, Weston, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-31.31	-29.86	-27.57	-26.64	-19.43	-17.69	-14.47
AQCR 238: Oneida County: Rhinelander Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-10.56	-10.07	-9.30	-8.99	-6.55	-5.97	-4.88
AQCR 239: Milwaukee County: Milwaukee Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-110.38	-105.27	-97.18	-93.91	-68.49	-62.37	-51.00
AQCR 240: Dane County: Madison Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-96.80	-92.32	-85.23	-82.36	-60.07	-54.71	-44.72
Archuleta County; Pagosa Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	16.78	16.13	14.50	14.27	10.28	6.84	8.02
Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	3.82	3.67	3.30	3.25	2.34	1.56	1.82
Aroostock County; City of Presque Isle, ME	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-1.55	-1.48	-1.37	-1.32	-0.96	-0.89	-0.72
Atlanta, GA	Ozone (2008 8-hour)	Maintenance, Moderate	100	0	-1,034.30	-986.41	-910.64	-879.98	-641.85	-584.75	-477.84
Atlanta, GA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-819.76	-781.79	-721.75	-697.44	-508.72	-463.52	-378.71
Atlantic City Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	-6.51	-6.21	-5.73	-5.54	-4.04	-3.68	-3.01
Bakersfield Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	-73.02	-69.63	-64.32	-62.13	-45.33	-41.52	-33.71

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Baltimore Area, MD	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-1.73	-1.65	-1.53	-1.47	-1.07	-1.02	-0.79
Baltimore, MD	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	-498.04	-474.95	-438.56	-423.73	-309.10	-282.22	-230.03
Baltimore, MD	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	-502.39	-479.10	-442.39	-427.43	-311.80	-284.68	-232.04
Baton Rouge, LA	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-105.07	-99.88	-93.17	-89.41	-65.51	-65.82	-47.89
Beaver, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-2.42	-2.31	-2.13	-2.06	-1.50	-1.37	-1.12
Benton County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-4.16	-3.97	-3.66	-3.54	-2.58	-2.35	-1.92
Berrien County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-39.23	-37.41	-34.54	-33.37	-24.34	-22.20	-18.12
Billings Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	-7.62	-7.22	-6.79	-6.48	-4.77	-5.13	-3.44
Billings, MT	SO ₂ (2010 1-hour)	Maintenance, --	100	0	6.17	5.93	5.35	5.25	3.79	2.66	2.94
Birmingham, AL	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-198.58	-189.34	-174.91	-168.95	-123.27	-113.02	-91.66
Boise-Northern Ada County Area, ID	CO (1971 8-hour)	Maintenance, --	100	0	-63.18	-60.25	-55.63	-53.75	-39.21	-35.77	-29.18
Bonner County; The Sandpoint Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-2.04	-1.95	-1.80	-1.74	-1.27	-1.15	-0.94
Boston Area, MA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-108.20	-103.19	-95.26	-92.05	-67.15	-61.20	-49.98
Boyd County (part), KY	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	9.98	9.59	8.65	8.49	6.13	4.28	4.75
Brooke; Follansbee Area, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.32	-0.30	-0.28	-0.27	-0.20	-0.18	-0.15
Burlington Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	-1.89	-1.80	-1.66	-1.60	-1.17	-1.07	-0.87
Butte County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-34.62	-33.01	-30.48	-29.45	-21.48	-19.62	-15.99
Calaveras County, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	-9.47	-9.03	-8.34	-8.06	-5.88	-5.38	-4.37
Calaveras County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-9.47	-9.03	-8.34	-8.06	-5.88	-5.38	-4.37

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Campbell-Clermont Counties, KY-OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	-5.74	-5.47	-5.06	-4.89	-3.57	-3.28	-2.65
Canton-Massillon, OH	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-58.75	-56.02	-51.75	-49.99	-36.47	-33.41	-27.12
Central New Hampshire, NH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-33.90	-32.33	-29.84	-28.84	-21.03	-19.15	-15.66
Central Steptoe Valley, NV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-3.16	-3.01	-2.78	-2.69	-1.96	-1.78	-1.46
Charleston, WV	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-50.12	-47.75	-44.22	-42.65	-31.15	-29.24	-23.06
Charlotte Area, NC	CO (1971 8-hour)	Maintenance, --	100	0	-274.44	-261.73	-241.62	-233.49	-170.30	-155.08	-126.80
Charlotte-Rock Hill, NC-SC	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-510.03	-486.41	-449.04	-433.93	-316.50	-288.29	-235.63
Chicago, IL-IN-WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-688.47	-653.61	-612.20	-585.91	-430.09	-448.27	-312.08
Chicago-Naperville, IL-IN-WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-787.06	-747.64	-699.00	-669.79	-491.27	-504.02	-357.62
Chico (Butte County), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	-34.62	-33.01	-30.48	-29.45	-21.49	-19.62	-15.99
Chico Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-13.63	-13.00	-12.00	-11.60	-8.46	-7.71	-6.30
Chico, CA	PM _{2.5} (2006 24-hour)	Maintenance, Moderate	100	0	-33.86	-32.29	-29.82	-28.81	-21.01	-19.19	-15.64
Cincinnati, OH-KY	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-363.50	-346.66	-320.05	-309.27	-225.58	-205.64	-167.92
Cincinnati, OH-KY-IN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-380.28	-362.66	-334.82	-323.54	-235.99	-215.12	-175.67
Clark County; Las Vegas Planning Area, NV	PM ₁₀ (1987 24-hour)	Maintenance, Serious	100	0	-340.40	-324.64	-299.69	-289.61	-211.23	-192.35	-157.27
Cleveland Area, OH	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-200.71	-191.42	-176.71	-170.76	-124.55	-113.47	-92.73
Cleveland, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-491.79	-469.00	-433.00	-418.41	-305.19	-278.18	-227.19
Cleveland, OH	PM _{2.5} (2012 Annual)	Maintenance, Moderate	100	0	-249.95	-238.37	-220.07	-212.65	-155.11	-141.36	-115.47
Cleveland-Akron-Lorain, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-508.59	-485.02	-447.83	-432.71	-315.64	-288.00	-234.92

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Cleveland-Akron-Lorain, OH	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-475.67	-453.64	-418.81	-404.70	-295.19	-269.08	-219.74
Cochise County; Paul Spur/Douglas Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-4.67	-4.45	-4.11	-3.97	-2.90	-2.64	-2.16
Colorado Springs Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-95.13	-90.71	-83.77	-80.93	-59.04	-53.96	-43.93
Columbus, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-354.44	-338.02	-312.06	-301.55	-219.95	-200.42	-163.74
Columbus, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-332.36	-316.97	-292.62	-282.77	-206.25	-187.90	-153.55
Cook County; Lyons Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-10.71	-10.20	-9.46	-9.12	-6.66	-6.32	-4.92
Cook County; Southeast Chicago, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	420.75	404.13	364.62	357.81	258.36	180.97	200.16
Coshocton County; Franklin Township, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.15	-0.14	-0.13	-0.13	-0.09	-0.09	-0.07
Coso Junction, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	2.03	1.95	1.76	1.72	1.25	0.87	0.97
Cuyahoga County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-159.15	-151.78	-140.12	-135.40	-98.76	-89.93	-73.53
Cuyahoga County, OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-200.79	-191.49	-176.78	-170.83	-124.60	-113.51	-92.76
Dallas-Fort Worth, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-1,330.94	-1,269.20	-1,172.02	-1,132.36	-826.03	-754.49	-614.68
Dallas-Fort Worth, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-1,314.98	-1,253.98	-1,157.96	-1,118.78	-816.13	-745.48	-607.30
Delaware County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	-46.87	-44.58	-41.52	-39.89	-29.21	-28.96	-21.41
Denver Metro/North Front Range, CO	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-574.61	-547.83	-506.24	-488.88	-356.74	-328.10	-265.13
Denver-Boulder Area, CO	CO (1971 8-hour)	Maintenance, Serious	100	0	-444.60	-423.86	-391.74	-378.27	-276.05	-254.33	-205.10
Denver-Boulder-Greeley-Ft Collins-Loveland, CO	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-574.61	-547.83	-506.24	-488.88	-356.74	-328.10	-265.13
Detroit Area, MI	CO (1971 8-hour)	Maintenance, --	100	0	-278.70	-265.78	-245.39	-237.11	-172.96	-157.74	-128.74
Detroit, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-791.68	-754.93	-697.20	-673.56	-491.37	-449.27	-365.58

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Detroit, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-37.45	-35.71	-32.99	-31.86	-23.25	-21.32	-17.29
Detroit-Ann Arbor, MI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-793.84	-757.00	-699.10	-675.40	-492.71	-450.49	-366.58
Doña Ana County (Sunland Park Area), NM	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-1.53	-1.45	-1.36	-1.30	-0.96	-1.02	-0.69
Doña Ana County; Anthony, NM	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.06	0.07	0.04	0.05	0.03	-0.12	0.04
Door County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Douglas, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-3.86	-3.68	-3.40	-3.28	-2.39	-2.18	-1.78
Dukes County, MA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-1.41	-1.34	-1.24	-1.20	-0.87	-0.79	-0.65
Duluth Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-15.52	-14.79	-13.68	-13.21	-9.64	-8.92	-7.16
East Chicago Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	434.11	416.86	376.40	369.18	266.66	188.76	206.31
East Helena Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	-0.06	-0.06	-0.05	-0.05	-0.04	-0.03	-0.03
East Kern County Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	-3.62	-3.44	-3.21	-3.08	-2.26	-2.31	-1.65
El Paso County, TX	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-87.44	-83.38	-77.00	-74.39	-54.27	-49.61	-40.38
El Paso, TX	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-3.96	-3.76	-3.50	-3.37	-2.46	-2.39	-1.81
Eugene-Springfield Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	-36.05	-34.38	-31.74	-30.67	-22.37	-20.37	-16.65
Evangeline Parish (Partial), LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.08	0.07	0.07	0.06	0.05	0.03	0.04
Fairbanks Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	-1.93	-1.84	-1.70	-1.64	-1.20	-1.11	-0.89
Fairbanks, AK	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	-4.34	-4.14	-3.83	-3.70	-2.70	-2.48	-2.00
Flathead County; Columbia Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.62	-0.59	-0.55	-0.53	-0.38	-0.35	-0.29
Flathead County; Kalispell and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-5.70	-5.44	-5.02	-4.85	-3.54	-3.22	-2.63

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Flathead County; Whitefish and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-1.15	-1.09	-1.01	-0.98	-0.71	-0.65	-0.53
Fort Collins Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-24.54	-23.40	-21.61	-20.88	-15.23	-13.92	-11.33
Freehold Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	-2.05	-1.96	-1.81	-1.75	-1.27	-1.16	-0.95
Freestone and Anderson Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.87	-0.82	-0.79	-0.74	-0.55	-0.68	-0.38
Fremont County; Canon City Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-4.92	-4.68	-4.35	-4.19	-3.06	-2.96	-2.26
Fresno Area, CA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	-93.47	-89.14	-82.30	-79.52	-58.00	-52.87	-43.18
Grants Pass Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-5.31	-5.06	-4.68	-4.52	-3.30	-3.00	-2.45
Great Falls Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	-0.07	-0.07	-0.07	-0.06	-0.05	-0.08	-0.03
Greater Connecticut, CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	-270.56	-258.02	-238.21	-230.19	-167.90	-152.99	-124.99
Greater Connecticut, CT	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	-270.77	-258.23	-238.40	-230.37	-168.03	-153.11	-125.09
Greeley Area, CO	CO (1971 8-hour)	Maintenance, --	100	0	-36.12	-34.33	-32.05	-30.74	-22.53	-22.77	-16.45
Hancock and Brooke Counties (Part); The City of Weirton, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-1.68	-1.60	-1.49	-1.43	-1.05	-1.03	-0.77
Hancock County (Part) The City of Weirton, including Butler and Clay: Magisterial Districts, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.55	-0.51	-0.51	-0.47	-0.35	-0.55	-0.23
Harrisburg-Lebanon-Carlisle-York, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-185.87	-177.25	-163.66	-158.13	-115.35	-105.28	-85.85
Hartford-New Britain-Middletown Area, CT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-186.58	-177.94	-164.26	-158.74	-115.78	-105.43	-86.20
Hayden, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.61	-0.58	-0.54	-0.52	-0.38	-0.39	-0.28
Hayden, AZ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	-0.25	-0.24	-0.23	-0.21	-0.16	-0.19	-0.11

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Hayden, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.24	-0.23	-0.22	-0.21	-0.15	-0.19	-0.11
Hillsborough County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-2.50	-2.38	-2.21	-2.13	-1.55	-1.48	-1.15
Hillsborough-Polk County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.22	0.22	0.19	0.19	0.13	0.05	0.11
Houston-Galveston-Brazoria, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-1,016.18	-968.25	-896.45	-864.60	-631.44	-591.83	-467.71
Houston-Galveston-Brazoria, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-987.17	-940.59	-870.89	-839.92	-613.43	-575.24	-454.32
Humphreys County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-4.00	-3.81	-3.52	-3.40	-2.48	-2.26	-1.85
Huntington, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-6.09	-5.80	-5.36	-5.18	-3.78	-3.44	-2.81
Imperial County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-33.15	-31.61	-29.20	-28.21	-20.58	-18.81	-15.31
Imperial County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-33.14	-31.60	-29.18	-28.19	-20.57	-18.80	-15.30
Imperial County, CA	PM _{2.5} (2006 24-hour)	Nonattainment, Moderate	100	0	-28.24	-26.93	-24.86	-24.02	-17.52	-15.95	-13.05
Imperial County, CA	PM _{2.5} (2012 Annual)	Nonattainment, Moderate	100	0	-28.24	-26.93	-24.86	-24.02	-17.52	-15.95	-13.05
Imperial County; Imperial Valley Planning Area, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Serious	70	0	-32.54	-31.03	-28.66	-27.68	-20.20	-18.46	-15.03
Indian Wells, CA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	-4.59	-4.37	-4.07	-3.91	-2.86	-2.87	-2.09
Indiana, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.05	0.15	-0.15	0.04	-0.06	-1.94	0.22
Indianapolis Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	-0.29	-0.28	-0.26	-0.25	-0.18	-0.17	-0.13
Indianapolis, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-95.19	-90.78	-83.80	-80.98	-59.07	-53.79	-43.98
Inyo County; Owens Valley Planning Area, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Serious	70	0	-1.16	-1.10	-1.02	-0.99	-0.72	-0.69	-0.53
Jackson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-5.83	-5.55	-5.15	-4.96	-3.63	-3.50	-2.67
Jackson County; Medford-Ashland (including White City), OR	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	-25.36	-24.19	-22.33	-21.58	-15.74	-14.33	-11.72

Notes:

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Jamestown, NY	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-20.05	-19.09	-17.71	-17.06	-12.47	-11.92	-9.20
Jefferson County, KY	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.14	-0.14	-0.13	-0.12	-0.09	-0.08	-0.07
Jefferson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-7.61	-7.26	-6.70	-6.47	-4.72	-4.30	-3.52
Jefferson County; (part) Steubenville & Mingo Junction, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-7.92	-7.55	-6.98	-6.74	-4.92	-4.56	-3.65
Jefferson County; (part), OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.81	-0.78	-0.72	-0.69	-0.50	-0.46	-0.38
Johnstown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-11.61	-11.01	-10.35	-9.88	-7.27	-7.80	-5.24
Josephine County; Grants Pass, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-5.29	-5.05	-4.66	-4.50	-3.28	-2.99	-2.45
Juneau; Mendenhall Valley Area, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-1.39	-1.33	-1.23	-1.18	-0.86	-0.79	-0.64
Kern County (Eastern Kern), CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	4.02	3.98	3.25	3.41	2.36	-0.54	2.14
Kern County (Eastern Kern), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	4.02	3.98	3.25	3.41	2.36	-0.54	2.14
King County; Kent, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-3.15	-3.01	-2.78	-2.68	-1.96	-1.78	-1.46
King County; Seattle, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-2.31	-2.20	-2.03	-1.97	-1.43	-1.31	-1.07
Klamath County; Klamath Falls, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-9.05	-8.63	-7.96	-7.70	-5.61	-5.11	-4.18
Klamath Falls Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-9.04	-8.62	-7.96	-7.69	-5.61	-5.11	-4.18
Klamath Falls, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	-10.36	-9.88	-9.12	-8.82	-6.43	-5.86	-4.79
Knoxville, TN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-142.69	-136.08	-125.64	-121.40	-88.55	-80.76	-65.91
Knoxville-Sevierville-La Follette, TN	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-170.99	-163.06	-150.57	-145.48	-106.12	-96.91	-78.97
La Porte County: (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-8.67	-8.26	-7.65	-7.38	-5.39	-5.10	-3.99
Lake County (part); Lakeview, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.93	-0.89	-0.82	-0.79	-0.58	-0.53	-0.43

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				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Lake County, OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	-42.84	-40.85	-37.71	-36.45	-26.58	-24.21	-19.79
Lake County: (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	383.26	368.39	331.59	325.92	235.09	159.57	182.86
Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-6.91	-6.59	-6.08	-5.88	-4.29	-3.91	-3.19
Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	405.74	389.82	351.38	345.04	249.03	172.28	193.24
Lake County; Polson, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.33	-0.31	-0.29	-0.28	-0.20	-0.19	-0.15
Lake County; Ronan, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.17	-0.16	-0.15	-0.14	-0.10	-0.09	-0.08
Lake Tahoe Nevada Area, NV	CO (1971 8-hour)	Maintenance, --	100	0	-3.55	-3.38	-3.12	-3.02	-2.20	-2.01	-1.64
Lake Tahoe North Shore Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	-2.24	-2.13	-1.97	-1.90	-1.39	-1.27	-1.03
Lake Tahoe South Shore Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-6.52	-6.21	-5.74	-5.54	-4.04	-3.69	-3.01
Lancaster, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-81.91	-78.11	-72.12	-69.69	-50.83	-46.37	-37.84
Lancaster, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-81.92	-78.12	-72.13	-69.69	-50.84	-46.37	-37.84
Lane County (part); Oakridge, OR	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.30	-0.29	-0.27	-0.26	-0.19	-0.17	-0.14
Lane County; Eugene/Springfield, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-36.05	-34.38	-31.74	-30.67	-22.37	-20.37	-16.66
Las Vegas Area, NV	CO (1971 8-hour)	Maintenance, Serious	100	0	-340.68	-324.91	-299.94	-289.85	-211.41	-192.51	-157.40
Las Vegas, NV	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-340.40	-324.64	-299.69	-289.61	-211.23	-192.35	-157.27
LaSalle County; Oglesby, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-5.75	-5.48	-5.07	-4.89	-3.57	-3.30	-2.65
Laurel Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	5.92	5.69	5.13	5.03	3.63	2.52	2.82
Lebanon County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	-21.42	-20.42	-18.86	-18.22	-13.29	-12.13	-9.89
Lemont, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-12.55	-11.88	-11.23	-10.68	-7.87	-8.91	-5.61

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Liberty-Clairton, PA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	-1.56	-1.48	-1.39	-1.33	-0.97	-1.00	-0.71
Lincoln County; Libby and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-1.08	-1.03	-0.95	-0.92	-0.67	-0.61	-0.50
Logan, UT-ID	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	-20.06	-19.13	-17.66	-17.06	-12.45	-11.33	-9.27
Longmont Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-2.75	-2.55	-2.57	-2.34	-1.77	-2.98	-1.13
Lorain County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-8.65	-8.25	-7.61	-7.36	-5.37	-4.89	-4.00
Los Angeles, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	-2,675.48	-2,551.41	-2,355.93	-2,276.28	-1,660.47	-1,515.96	-1,235.70
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	-140.90	-134.23	-124.34	-119.88	-87.57	-82.51	-64.80
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	-140.88	-134.21	-124.33	-119.87	-87.56	-82.50	-64.80
Los Angeles-South Coast Air Basin Area, CA	CO (1971 8-hour)	Maintenance, Serious	100	0	-2,676.94	-2,552.81	-2,357.21	-2,277.53	-1,661.37	-1,516.73	-1,236.39
Los Angeles-South Coast Air Basin Area, CA	NO ₂ (1971 Annual)	Maintenance, --	100	0	-2,676.73	-2,552.60	-2,357.02	-2,277.35	-1,661.24	-1,516.61	-1,236.29
Los Angeles-South Coast Air Basin, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	-2,676.06	-2,551.97	-2,356.44	-2,276.78	-1,660.83	-1,516.30	-1,235.98
Los Angeles-South Coast Air Basin, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	-2,674.53	-2,550.50	-2,355.09	-2,275.48	-1,659.88	-1,515.43	-1,235.27
Los Angeles-South Coast Air Basin, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	-2,675.48	-2,551.41	-2,355.93	-2,276.28	-1,660.47	-1,515.96	-1,235.70
Louisville, KY-IN	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-216.53	-206.50	-190.64	-184.22	-134.37	-122.43	-100.03
Lowell Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	-14.71	-14.03	-12.95	-12.52	-9.13	-8.32	-6.80
Lucas County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-50.19	-47.78	-44.35	-42.70	-31.22	-29.94	-23.03
Madison County; Granite City Township and Nameoki Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.67	0.70	0.48	0.57	0.36	-0.71	0.42
Manchester Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	-18.54	-17.68	-16.32	-15.77	-11.50	-10.48	-8.57

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Manitowoc County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-8.11	-7.74	-7.14	-6.90	-5.04	-4.59	-3.75
Maricopa and Pinal Counties; Phoenix Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	-662.80	-632.12	-583.54	-563.91	-411.31	-374.59	-306.22
Marion County: Lawrence, Washington, and Warrant Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-85.59	-81.63	-75.36	-72.82	-53.11	-48.39	-39.54
Mariposa County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-7.35	-7.01	-6.47	-6.25	-4.56	-4.16	-3.40
Mariposa County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-7.35	-7.01	-6.47	-6.25	-4.56	-4.15	-3.39
Marshall, WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.99	0.96	0.82	0.84	0.59	0.12	0.50
Medford Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-13.64	-13.01	-12.01	-11.61	-8.47	-7.71	-6.30
Memphis Area, TN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-167.05	-159.31	-147.09	-142.13	-103.67	-94.62	-77.16
Memphis, TN-MS-AR	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-216.83	-206.78	-190.92	-184.48	-134.57	-122.76	-100.16
Miami, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-2.14	-2.03	-1.88	-1.82	-1.33	-1.26	-0.98
Miami, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-2.56	-2.45	-2.26	-2.18	-1.59	-1.45	-1.18
Miami, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-2.16	-2.05	-1.90	-1.83	-1.34	-1.27	-0.99
Milwaukee-Racine, WI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-215.11	-205.15	-189.38	-183.01	-133.49	-121.55	-99.38
Minneapolis-St. Paul Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-550.17	-524.65	-484.49	-468.09	-341.46	-312.01	-254.08
Missoula Area, MT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-12.75	-12.15	-11.23	-10.85	-7.91	-7.27	-5.88
Missoula county; Missoula and Vicinity, MT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-12.82	-12.22	-11.30	-10.91	-7.96	-7.32	-5.92
Modesto Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-35.05	-33.43	-30.86	-29.82	-21.75	-19.82	-16.19

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Mohave County (part); Bullhead City, AZ	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-9.80	-9.35	-8.63	-8.34	-6.08	-5.55	-4.53
Mono County; Mammoth Lake Planning Area, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-5.00	-4.77	-4.41	-4.26	-3.11	-2.84	-2.31
Mono County; Mono Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.78	-0.74	-0.69	-0.66	-0.48	-0.45	-0.36
Morenci, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.62	-0.59	-0.55	-0.53	-0.38	-0.35	-0.29
Morgan County, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-5.70	-5.44	-5.02	-4.85	-3.54	-3.22	-2.63
Morongo Band of Mission Indians	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	-0.17	-0.16	-0.16	-0.15	-0.11	-0.13	-0.08
Morongo Band of Mission Indians, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	-0.20	-0.19	-0.18	-0.17	-0.12	-0.14	-0.09
Morristown Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	-3.33	-3.17	-2.93	-2.83	-2.06	-1.89	-1.54
Muscatine County; (part), IA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-1.56	-1.49	-1.38	-1.33	-0.97	-0.89	-0.72
Muscatine, IA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-3.14	-2.99	-2.77	-2.67	-1.95	-1.79	-1.45
Muskegon County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-29.05	-27.70	-25.58	-24.72	-18.03	-16.43	-13.42
Muskingum River, OH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.90	-0.86	-0.80	-0.77	-0.56	-0.51	-0.42
Nashua Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	-14.47	-13.80	-12.74	-12.31	-8.98	-8.19	-6.68
Nassau County, FL	SO ₂ (2010 1-hour)	Maintenance, --	100	0	-1.24	-1.18	-1.09	-1.06	-0.77	-0.70	-0.57
Nevada County (Western part), CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-20.76	-19.79	-18.28	-17.66	-12.88	-11.75	-9.59
Nevada County (Western part), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	-20.82	-19.85	-18.33	-17.71	-12.92	-11.78	-9.62
New Haven County, CT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-3.77	-3.60	-3.32	-3.21	-2.34	-2.13	-1.74
New Haven-Meriden-Waterbury Area, CT	CO (1971 8-hour)	Maintenance, --	100	0	-142.84	-136.22	-125.76	-121.52	-88.64	-80.79	-65.99
New Manchester-Grant Magisterial District in Hancock County, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.25	-0.24	-0.23	-0.21	-0.16	-0.23	-0.11

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
New York County, NY	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-60.69	-57.88	-53.44	-51.64	-37.66	-34.31	-28.04
New York, NY-NJ-CT	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-2,297.18	-2,190.80	-2,022.52	-1,954.42	-1,425.55	-1,298.77	-1,061.27
New York-N. New Jersey-Long Island Area, NY-NJ-CT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	-1,261.31	-1,202.90	-1,110.50	-1,073.11	-782.72	-713.13	-582.71
New York-N. New Jersey-Long Island, NY-NJ-CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	-2,249.84	-2,145.64	-1,980.85	-1,914.15	-1,396.17	-1,272.07	-1,039.39
New York-Northern New Jersey-Long Island, NY-NJ-CT	Ozone (2015 8-hour)	Nonattainment, Moderate	50	0	-2,248.33	-2,144.20	-1,979.52	-1,912.86	-1,395.24	-1,271.22	-1,038.70
NJ Portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	-5.35	-5.11	-4.72	-4.56	-3.32	-3.04	-2.47
Nogales, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	-5.72	-5.45	-5.03	-4.86	-3.55	-3.23	-2.64
Northern Milwaukee/Ozaukee Shoreline, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-11.55	-11.02	-10.17	-9.83	-7.17	-6.53	-5.34
Northern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-251.36	-239.63	-221.49	-213.86	-156.07	-143.91	-115.94
Oakridge, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	-0.55	-0.53	-0.49	-0.47	-0.34	-0.31	-0.26
Ogden Area, UT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-10.07	-9.60	-8.86	-8.57	-6.25	-5.69	-4.65
Ogden Area, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-10.07	-9.60	-8.86	-8.57	-6.25	-5.69	-4.65
Olmsted County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-4.79	-4.57	-4.22	-4.08	-2.97	-2.74	-2.21
Olmsted; City of Rochester, MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-17.16	-16.36	-15.11	-14.60	-10.65	-9.76	-7.92
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.37	0.36	0.32	0.32	0.23	0.13	0.18
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.37	0.36	0.32	0.32	0.23	0.13	0.18
Pekin, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-7.23	-6.89	-6.36	-6.15	-4.49	-4.10	-3.34

Notes:

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Penns Grove Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.36	0.35	0.32	0.31	0.22	0.15	0.17
Peoria County: Hollis Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.36	-0.35	-0.32	-0.31	-0.23	-0.23	-0.17
Peoria County: Peoria, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-16.65	-15.88	-14.66	-14.16	-10.33	-9.43	-7.69
Perth Amboy Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	-6.71	-6.39	-5.93	-5.71	-4.17	-4.00	-3.08
Philadelphia-Camden County Area, PA-NJ	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-156.64	-149.28	-138.13	-133.28	-97.31	-90.64	-72.16
Philadelphia-Wilmington, PA-NJ-DE	PM _{2.5} (2006 24-hour)	Maintenance, Moderate for PA and DE; Subject to Former Subpart 1 for NJ	100	0	-771.81	-735.93	-679.80	-656.66	-479.08	-438.97	-356.30
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-1,032.74	-984.78	-909.55	-878.66	-641.02	-586.63	-476.84
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	-1,032.14	-984.20	-909.02	-878.15	-640.64	-586.30	-476.56
Phoenix Area, AZ	CO (1971 8-hour)	Maintenance, Serious	100	0	-640.18	-610.54	-563.63	-544.66	-397.27	-361.81	-295.77
Phoenix-Mesa, AZ	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-666.65	-635.78	-586.93	-567.18	-413.69	-376.76	-308.00
Phoenix-Mesa, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-683.96	-652.29	-602.17	-581.91	-424.43	-386.54	-316.00
Pierce County; Tacoma, WA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	-0.27	-0.25	-0.24	-0.23	-0.17	-0.22	-0.12
Pima County; Ajo Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pima County; Rillito Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	-9.38	-8.94	-8.26	-7.98	-5.82	-5.35	-4.33
Pinal and Gila Counties; Payson, AZ	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	-3.18	-3.03	-2.80	-2.71	-1.97	-1.80	-1.47
Pinal County (part); West Pinal, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	-47.63	-45.42	-41.94	-40.52	-29.56	-26.96	-22.00
Pitkin County; Aspen, CO	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	5.72	5.52	4.90	4.86	3.49	1.94	2.78
Pittsburgh Area, PA	CO (1971 8-hour)	Maintenance, --	100	0	-40.70	-38.81	-35.85	-34.63	-25.27	-23.16	-18.79

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Pittsburgh-Beaver Valley, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-321.31	-306.25	-283.25	-273.37	-199.56	-185.21	-148.08
Pittsburgh-Beaver Valley, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-292.95	-279.22	-258.26	-249.25	-181.95	-168.86	-135.01
Plumas County, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	-0.97	-0.92	-0.85	-0.82	-0.60	-0.55	-0.45
Polk County, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-4.63	-4.41	-4.07	-3.94	-2.87	-2.62	-2.14
Portland Area: Portland Metro Service District Boundary, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-211.19	-201.41	-185.94	-179.68	-131.06	-119.39	-97.57
Power-Bannock Counties; Fort Hall Indian Reservation, ID	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.13	-0.13	-0.12	-0.11	-0.08	-0.08	-0.06
Power-Bannock Counties; Portneuf Valley Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-12.54	-11.96	-11.04	-10.67	-7.78	-7.08	-5.79
Provo Area, UT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	-16.69	-15.92	-14.70	-14.20	-10.36	-9.43	-7.71
Provo, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	-72.28	-68.86	-63.78	-61.50	-44.92	-42.30	-33.24
Prowers County; Lamar, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-1.39	-1.32	-1.22	-1.18	-0.86	-0.79	-0.64
Raleigh-Durham Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-305.94	-291.77	-269.37	-260.29	-189.86	-173.04	-141.33
Ramsey County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	5.17	4.97	4.48	4.40	3.17	2.20	2.46
Reading, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-64.00	-61.02	-56.36	-54.45	-39.72	-36.32	-29.55
Reno Area, NV	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-53.97	-51.47	-47.51	-45.92	-33.49	-30.49	-24.93
Rhineland, WI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-5.13	-4.89	-4.52	-4.36	-3.18	-2.90	-2.37
Riverside County (Coachella Valley), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	-80.51	-76.78	-70.89	-68.50	-49.96	-45.58	-37.19
Riverside County (Coachella Valley), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	-80.51	-76.78	-70.89	-68.50	-49.96	-45.59	-37.19
Riverside County; Coachella Valley Planning Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	-94.37	-90.00	-83.09	-80.29	-58.57	-53.42	-43.59

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Riverside, Los Angeles, Orange, and San Bernardino Counties; South Coast Air Basin, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	-2,662.82	-2,539.34	-2,344.79	-2,265.52	-1,652.62	-1,508.82	-1,229.86
Rosebud County; Lame Deer, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.34	-0.32	-0.30	-0.29	-0.21	-0.19	-0.16
Routt County (part); Steamboat Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	8.37	8.07	7.19	7.11	5.11	2.99	4.04
Rusk and Panola Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	2.24	2.15	1.93	1.90	1.37	0.91	1.07
Sacramento Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-238.82	-227.74	-210.32	-203.19	-148.23	-135.52	-110.28
Sacramento County, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-209.52	-199.71	-184.68	-178.26	-130.12	-120.51	-96.59
Sacramento Metro, CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	-378.80	-361.15	-333.73	-322.28	-235.17	-216.29	-174.78
Sacramento Metro, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	-378.75	-361.11	-333.69	-322.25	-235.14	-216.27	-174.76
Sacramento, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	-370.34	-353.08	-326.28	-315.09	-229.92	-211.51	-170.88
Salem Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	-38.64	-36.85	-34.02	-32.87	-23.98	-21.83	-17.85
Salt Lake City Area, UT	CO (1971 8-hour)	Maintenance, --	100	0	-16.52	-15.66	-14.74	-14.06	-10.34	-11.21	-7.44
Salt Lake City, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	-263.99	-251.67	-232.61	-224.60	-163.91	-151.04	-121.78
Salt Lake County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-155.29	-148.01	-136.91	-132.13	-96.46	-89.63	-71.56
Salt Lake County, UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	-155.56	-148.26	-137.14	-132.35	-96.62	-89.78	-71.68
San Antonio, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-304.47	-290.34	-268.13	-259.05	-188.97	-172.73	-140.60
San Bernardino County (part); excluding Searles Valley Planning Area and South Coast Air Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-85.91	-81.79	-75.93	-73.10	-53.45	-51.40	-39.40
San Diego Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-569.40	-543.03	-501.31	-484.44	-353.34	-321.86	-263.06

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
San Diego County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-571.83	-545.35	-503.45	-486.51	-354.85	-323.24	-264.18
San Diego County, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	-570.09	-543.69	-501.92	-485.03	-353.77	-322.25	-263.38
San Francisco Bay Area, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	-1,124.55	-1,072.38	-990.28	-956.76	-697.94	-637.58	-519.35
San Francisco Bay Area, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-1,122.93	-1,070.83	-988.85	-955.38	-696.94	-636.66	-518.60
San Francisco Bay Area, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	-1,134.46	-1,081.83	-999.00	-965.19	-704.09	-643.18	-523.93
San Francisco-Oakland-San Jose Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-1,036.58	-988.49	-912.83	-881.92	-643.35	-587.81	-478.71
San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	-632.62	-603.10	-557.44	-538.24	-392.80	-362.14	-291.81
San Joaquin Valley, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	-632.63	-603.10	-557.44	-538.25	-392.80	-362.14	-291.81
San Joaquin Valley, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	-632.66	-603.13	-557.47	-538.27	-392.82	-362.16	-291.83
San Joaquin Valley, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	-633.32	-603.78	-558.05	-538.84	-393.23	-362.42	-292.15
San Joaquin Valley, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	-633.32	-603.78	-558.05	-538.84	-393.23	-362.42	-292.15
San Luis Obispo (Eastern part), CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.58	1.52	1.36	1.34	0.97	0.57	0.76
San Luis Obispo (Eastern San Luis Obispo), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	1.58	1.53	1.36	1.35	0.97	0.57	0.77
San Manuel, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-1.50	-1.43	-1.33	-1.28	-0.93	-0.90	-0.69
San Miguel County; Telluride, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.86	-0.81	-0.76	-0.73	-0.54	-0.58	-0.39
Sanders County (part); Thompson Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.16	-0.15	-0.14	-0.13	-0.10	-0.09	-0.07
Santa Cruz County; Nogales Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-5.83	-5.56	-5.13	-4.96	-3.62	-3.29	-2.69
Seaford, DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-42.66	-40.69	-37.56	-36.30	-26.48	-24.12	-19.71

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Seattle-Tacoma Area, WA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	-489.29	-466.64	-430.78	-416.29	-303.63	-276.53	-226.06
Seattle-Tacoma, WA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-80.36	-76.64	-70.76	-68.37	-49.87	-45.47	-37.12
Sheboygan County, WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-17.39	-16.58	-15.31	-14.79	-10.79	-9.83	-8.03
Sheboygan County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-8.84	-8.43	-7.78	-7.52	-5.48	-4.99	-4.08
Sheridan County; City of Sheridan, WY	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-3.33	-3.17	-2.93	-2.83	-2.07	-1.91	-1.53
Shoshone County (part); excluding Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-3.94	-3.76	-3.47	-3.35	-2.45	-2.23	-1.82
Shoshone County; City of Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00
Silver Bow County; Butte, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-4.13	-3.94	-3.64	-3.52	-2.57	-2.34	-1.91
Somerville Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	-2.14	-2.04	-1.88	-1.82	-1.33	-1.21	-0.99
Southern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-72.27	-68.85	-63.78	-61.49	-44.92	-42.30	-33.24
Southwest Indiana, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.29	-0.27	-0.27	-0.25	-0.19	-0.30	-0.12
Spokane Area, WA	CO (1971 8-hour)	Maintenance, Serious	100	0	-49.88	-47.57	-43.92	-42.44	-30.95	-28.19	-23.05
Spokane County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-50.82	-48.47	-44.75	-43.24	-31.54	-28.72	-23.48
Springfield Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	-22.79	-21.73	-20.06	-19.39	-14.14	-12.88	-10.53
St. Bernard Parish, LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	10.26	9.88	8.84	8.72	6.28	3.93	4.93
St. Clair, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-7.92	-7.55	-6.97	-6.74	-4.91	-4.52	-3.65
St. Louis Area, MO	CO (1971 8-hour)	Maintenance, --	100	0	-110.00	-104.85	-96.96	-93.59	-68.31	-63.31	-50.70
St. Louis, MO-IL	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-345.23	-329.16	-304.13	-293.73	-214.32	-196.89	-159.32
St. Louis-St. Charles-Farmington, MO-IL	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-396.80	-378.34	-349.53	-337.60	-246.32	-226.05	-183.14

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Steubenville, OH-WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-7.93	-7.55	-7.00	-6.75	-4.93	-4.72	-3.64
Steubenville-Weirton, OH-WV	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-19.13	-18.24	-16.85	-16.27	-11.87	-10.90	-8.83
Stockton Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-57.56	-54.89	-50.67	-48.97	-35.72	-32.54	-26.59
Sullivan County, TN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-2.55	-2.41	-2.27	-2.17	-1.59	-1.71	-1.15
Sutter Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.07	0.06	0.06	0.06	0.04	0.03	0.03
Syracuse Area; Onondaga County, NY	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-76.24	-72.71	-67.12	-64.86	-47.31	-43.08	-35.22
Tazewell County: Groveland Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-3.61	-3.44	-3.18	-3.07	-2.24	-2.04	-1.67
Terre Haute, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-11.71	-11.16	-10.31	-9.96	-7.27	-6.63	-5.41
Thurston County; Cities of Olympia, Tumwater, and Lacey, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-16.21	-15.46	-14.27	-13.79	-10.06	-9.16	-7.49
Titus County, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.03	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01
Toms River Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	-0.45	-0.43	-0.40	-0.38	-0.28	-0.27	-0.21
Tooele County (part), UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	10.61	10.19	9.19	9.02	6.51	4.53	5.05
Trenton Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	-14.18	-13.52	-12.49	-12.07	-8.80	-8.01	-6.55
Trona, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	1.72	1.65	1.49	1.46	1.05	0.70	0.82
Tucson Area, AZ	CO (1971 8-hour)	Maintenance, --	100	0	-161.00	-153.54	-141.75	-136.98	-99.91	-91.02	-74.38
Tuolumne County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-11.34	-10.82	-9.99	-9.65	-7.04	-6.43	-5.24
Tuscan Buttes, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.04	0.04	0.03	0.03	0.02	0.02	0.02
Tuscan Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.04	0.04	0.03	0.03	0.02	0.02	0.02

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Uinta Basin, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	6.36	6.15	5.41	5.40	3.85	1.74	3.12
Union County; LaGrande, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-2.54	-2.43	-2.24	-2.16	-1.58	-1.44	-1.18
Upper Green River Basin Area, WY	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	-0.09	-0.05	-0.14	-0.08	-0.08	-0.67	0.02
Utah County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-66.18	-63.00	-58.50	-56.31	-41.18	-39.70	-30.34
Vancouver Area: Clark County (part), WA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-49.35	-47.06	-43.45	-41.98	-30.62	-27.89	-22.80
Ventura County, CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	-120.75	-115.01	-106.60	-102.74	-75.07	-71.14	-55.49
Ventura County, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	-120.58	-114.85	-106.45	-102.59	-74.96	-71.05	-55.41
Vermillion County; Part of Clinton Township, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-2.57	-2.45	-2.26	-2.19	-1.60	-1.47	-1.19
Vigo County, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-22.75	-21.69	-20.04	-19.35	-14.12	-12.97	-10.50
Walla Walla County; Wallula, WA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	-0.53	-0.51	-0.47	-0.45	-0.33	-0.30	-0.24
Waltham Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	-8.23	-7.85	-7.25	-7.00	-5.11	-4.66	-3.80
Warren County: Conewago Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	2.27	2.18	1.96	1.93	1.39	0.89	1.09
Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.24	0.25	0.17	0.20	0.13	-0.29	0.15
Warren, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.48	-0.43	-0.46	-0.41	-0.32	-0.70	-0.18
Washington Area, DC-MD-VA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-128.92	-122.94	-113.54	-109.69	-80.02	-73.19	-59.53
Washington, DC-MD-VA	Ozone (2008 8-hour)	Nonattainment (DC) Maintenance (MD, VA), Marginal	50	0	-925.05	-882.20	-814.48	-787.03	-574.07	-523.25	-427.34
Washington, DC-MD-VA	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	-925.38	-882.52	-814.77	-787.31	-574.27	-523.44	-427.49
Washoe County; Reno Planning Area, NV	PM10 (1987 24-hour)	Maintenance, Serious	100	0	-54.50	-51.98	-47.99	-46.37	-33.82	-30.80	-25.18

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-10.12	-9.65	-8.91	-8.61	-6.28	-5.73	-4.68
Wayne County; (part), MI	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-7.99	-7.62	-7.05	-6.80	-4.97	-4.67	-3.68
West Central Pinal County, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	-9.00	-8.58	-7.93	-7.66	-5.59	-5.13	-4.15
West Silver Valley, ID	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	-2.11	-2.01	-1.85	-1.79	-1.31	-1.19	-0.97
Williamson County, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-14.40	-13.73	-12.69	-12.25	-8.94	-8.24	-6.64
Winston-Salem Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-67.33	-64.21	-59.28	-57.28	-41.78	-38.10	-31.10
Worcester Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	-31.62	-30.15	-27.84	-26.90	-19.62	-17.87	-14.61
Yakima Area, WA	CO (1971 8-hour)	Maintenance, --	100	0	-4.52	-4.31	-3.98	-3.84	-2.80	-2.55	-2.09
Yakima County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-15.30	-14.59	-13.47	-13.01	-9.49	-8.64	-7.07
Yuba City-Marysville, CA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-32.35	-30.85	-28.50	-27.53	-20.08	-18.39	-14.94
Yuma County; Yuma Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-25.38	-24.20	-22.34	-21.59	-15.75	-14.34	-11.72
Yuma, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-13.02	-12.42	-11.47	-11.08	-8.08	-7.36	-6.02

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Table A-14. Changes in Emissions from U.S. Passenger Cars and Light Trucks by Nonattainment or Maintenance Area and Alternative, Direct and Indirect Impacts--Carbon Monoxide (CO), 2035

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Ada County; Boise, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	23.65	24.98	25.91	26.73	21.26	20.32	17.80
Adams, Denver, and Boulder Counties; Denver Metropolitan Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	137.78	142.37	143.17	144.73	115.18	103.45	92.42
Ajo, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Albuquerque Area, NM	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	45.06	47.52	49.19	50.69	40.31	38.39	33.66
Allegan County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	5.15	5.37	5.47	5.57	4.43	4.08	3.62
Allegheny County Air Basin: Hazelwood Monitor, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	7.17	7.38	7.37	7.42	5.91	5.23	4.70
Allegheny County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	73.39	76.43	77.73	79.17	62.98	57.92	51.35
Allegheny County; The Area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	3.22	3.20	3.04	2.94	2.35	1.82	1.71
Allegheny, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	11.40	11.59	11.39	11.33	9.02	7.68	6.98
Allentown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	39.16	41.15	42.39	43.54	34.63	32.67	28.73
Allentown-Bethlehem-Easton, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	45.87	48.16	49.53	50.83	40.43	38.04	33.48
Alton Township, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	19.72	19.12	17.38	16.30	13.01	8.81	8.71
Amador County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	4.99	5.21	5.31	5.42	4.31	3.99	3.53
Anchorage Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	7.42	7.84	8.13	8.39	6.67	6.39	5.59
Anchorage; Eagle River, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.42	0.44	0.46	0.47	0.38	0.36	0.32
Anne Arundel County and Baltimore County, MD	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	75.25	79.34	82.10	84.58	67.26	64.01	56.14

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
AQCR 012: Portions of Grant County, NM	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	2.65	2.81	2.94	3.05	2.42	2.35	2.05
AQCR 109-Millinocket, ME	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	10.83	11.36	11.68	11.98	9.53	8.95	7.88
AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington Counties (Minneapolis-St. Paul), MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	211.24	222.23	229.25	235.71	187.45	177.37	155.83
AQCR 237: Brown County: Green Bay Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	2.19	2.17	2.05	1.98	1.58	1.20	1.14
AQCR 238: Marathon County: Rothschild Subcity Area, Rib Mountain, Weston, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	10.94	11.61	12.12	12.56	9.99	9.67	8.44
AQCR 238: Oneida County: Rhinelander Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	3.68	3.91	4.09	4.23	3.37	3.26	2.84
AQCR 239: Milwaukee County: Milwaukee Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	38.67	41.04	42.85	44.40	35.30	34.16	29.80
AQCR 240: Dane County: Madison Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	33.95	36.03	37.61	38.97	30.98	29.98	26.15
Archuleta County; Pagosa Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	51.81	50.32	45.91	43.19	34.47	23.64	23.26
Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	11.81	11.47	10.47	9.84	7.86	5.39	5.30
Aroostock County; City of Presque Isle, ME	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.72	0.75	0.76	0.77	0.62	0.57	0.50
Atlanta, GA	Ozone (2008 8-hour)	Maintenance, Moderate	100	0	368.02	390.10	406.62	420.91	334.65	322.94	281.98
Atlanta, GA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	293.17	310.65	323.63	334.89	266.27	256.70	224.21
Atlantic City Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	2.27	2.41	2.52	2.61	2.07	2.01	1.75
Bakersfield Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	31.25	32.71	33.51	34.30	27.28	25.46	22.47

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Baltimore Area, MD	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	1.47	1.49	1.46	1.44	1.15	0.97	0.88
Baltimore, MD	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	191.39	201.75	208.69	214.96	170.94	162.59	142.62
Baltimore, MD	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	192.93	203.38	210.38	216.71	172.33	163.94	143.79
Baton Rouge, LA	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	177.84	177.33	168.94	164.33	130.98	103.00	96.30
Beaver, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.97	1.02	1.05	1.08	0.86	0.81	0.71
Benton County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	1.45	1.54	1.61	1.67	1.33	1.28	1.12
Berrien County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	14.41	15.24	15.83	16.35	13.00	12.47	10.91
Billings Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	20.75	20.55	19.38	18.71	14.92	11.39	10.76
Billings, MT	SO ₂ (2010 1-hour)	Maintenance, --	100	0	15.94	15.45	14.05	13.19	10.53	7.14	7.05
Birmingham, AL	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	87.09	91.01	93.00	95.03	75.60	70.21	62.05
Boise-Northern Ada County Area, ID	CO (1971 8-hour)	Maintenance, --	100	0	23.63	24.96	25.89	26.71	21.24	20.31	17.79
Bonner County; The Sandpoint Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.74	0.78	0.82	0.84	0.67	0.64	0.56
Boston Area, MA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	39.19	41.48	43.16	44.62	35.48	34.11	29.82
Boyd County (part), KY	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	26.29	25.50	23.20	21.77	17.38	11.80	11.65
Brooke; Follansbee Area, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.15	0.16	0.16	0.16	0.13	0.12	0.10
Burlington Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.70	0.74	0.77	0.80	0.63	0.61	0.53
Butte County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	13.42	14.14	14.61	15.04	11.96	11.36	9.97
Calaveras County, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	3.91	4.10	4.21	4.32	3.43	3.22	2.84
Calaveras County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	3.91	4.10	4.21	4.32	3.43	3.23	2.84

Notes:

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Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Campbell-Clermont Counties, KY-OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	2.87	2.98	3.01	3.06	2.43	2.21	1.97
Canton-Massillon, OH	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	25.22	26.39	27.02	27.64	21.99	20.50	18.10
Central New Hampshire, NH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	11.82	12.55	13.11	13.58	10.80	10.46	9.12
Central Steptoe Valley, NV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	1.10	1.17	1.22	1.27	1.01	0.98	0.85
Charleston, WV	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	37.71	38.39	37.77	37.60	29.94	25.58	23.24
Charlotte Area, NC	CO (1971 8-hour)	Maintenance, --	100	0	95.97	101.86	106.37	110.23	87.64	84.85	74.01
Charlotte-Rock Hill, NC-SC	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	180.35	191.26	199.49	206.58	164.24	158.68	138.50
Chicago, IL-IN-WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1,536.76	1,526.14	1,444.48	1,398.24	1,114.70	860.54	809.92
Chicago-Naperville, IL-IN-WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	1,572.09	1,563.57	1,483.47	1,438.58	1,146.77	891.45	836.92
Chico (Butte County), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	13.42	14.14	14.62	15.05	11.96	11.36	9.97
Chico Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	4.87	5.16	5.38	5.57	4.43	4.27	3.73
Chico, CA	PM _{2.5} (2006 24-hour)	Maintenance, Moderate	100	0	13.12	13.82	14.28	14.71	11.69	11.11	9.75
Cincinnati, OH-KY	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	132.17	139.88	145.48	150.38	119.57	114.91	100.47
Cincinnati, OH-KY-IN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	138.24	146.30	152.17	157.29	125.06	120.20	105.09
Clark County; Las Vegas Planning Area, NV	PM ₁₀ (1987 24-hour)	Maintenance, Serious	100	0	119.06	126.37	131.96	136.75	108.72	105.26	91.82
Cleveland Area, OH	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	71.35	75.64	78.85	81.62	64.89	62.64	54.69
Cleveland, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	178.25	188.68	196.30	202.96	161.37	155.18	135.65
Cleveland, OH	PM _{2.5} (2012 Annual)	Maintenance, Moderate	100	0	90.01	95.33	99.24	102.65	81.62	78.58	68.66
Cleveland-Akron-Lorain, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	191.11	201.77	209.17	215.75	171.56	163.87	143.54

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Cleveland-Akron-Lorain, OH	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	172.62	182.71	190.07	196.49	156.23	150.20	131.31
Cochise County; Paul Spur/Douglas Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	1.63	1.73	1.81	1.87	1.49	1.44	1.26
Colorado Springs Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	37.74	39.69	40.93	42.08	33.47	31.65	27.81
Columbus, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	126.94	134.50	140.10	144.96	115.25	111.08	97.03
Columbus, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	118.30	125.39	130.70	135.29	107.56	103.79	90.63
Cook County; Lyons Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	9.66	9.77	9.52	9.42	7.50	6.27	5.74
Cook County; Southeast Chicago, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1,095.20	1,061.81	965.80	906.26	723.43	490.77	484.93
Coshocton County; Franklin Township, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.10	0.10	0.10	0.10	0.08	0.07	0.06
Coso Junction, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	5.43	5.27	4.79	4.50	3.59	2.44	2.41
Cuyahoga County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	55.57	58.99	61.61	63.85	50.76	49.16	42.88
Cuyahoga County, OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	71.38	75.66	78.88	81.65	64.92	62.66	54.71
Dallas-Fort Worth, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	518.27	545.82	563.87	580.32	461.50	437.90	384.39
Dallas-Fort Worth, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	512.71	539.91	557.70	573.92	456.41	432.98	380.09
Delaware County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	70.45	70.40	67.29	65.62	52.29	41.51	38.68
Denver Metro/North Front Range, CO	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	275.43	286.31	290.40	295.27	234.93	214.88	190.84
Denver-Boulder Area, CO	CO (1971 8-hour)	Maintenance, Serious	100	0	223.35	231.56	233.99	237.32	188.84	171.37	152.59
Denver-Boulder-Greeley-Ft Collins-Loveland, CO	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	275.43	286.31	290.40	295.27	234.93	214.88	190.84
Detroit Area, MI	CO (1971 8-hour)	Maintenance, --	100	0	103.14	109.01	113.18	116.86	92.92	89.00	77.90
Detroit, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	318.71	334.89	344.88	354.22	281.72	265.69	233.67

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
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Detroit, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	16.48	17.22	17.59	17.97	14.29	13.27	11.73
Detroit-Ann Arbor, MI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	319.48	335.71	345.73	355.10	282.41	266.36	234.26
Doña Ana County (Sunland Park Area), NM	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	3.95	3.92	3.70	3.57	2.85	2.18	2.06
Doña Ana County; Anthony, NM	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	3.40	3.33	3.08	2.93	2.34	1.69	1.63
Door County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Douglas, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	1.35	1.43	1.49	1.55	1.23	1.19	1.04
Dukes County, MA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.49	0.52	0.54	0.56	0.45	0.43	0.38
Duluth Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	8.64	8.91	8.94	9.02	7.18	6.40	5.73
East Chicago Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	1,085.28	1,051.70	955.84	896.35	715.54	484.02	478.79
East Helena Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.02	0.02	0.02	0.02	0.02	0.02	0.02
East Kern County Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	7.02	6.99	6.63	6.43	5.13	3.99	3.74
El Paso County, TX	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	34.97	36.76	37.88	38.93	30.96	29.24	25.70
El Paso, TX	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	4.86	4.87	4.69	4.59	3.66	2.96	2.74
Eugene-Springfield Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	12.56	13.34	13.93	14.44	11.48	11.12	9.70
Evangeline Parish (Partial), LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.22	0.21	0.19	0.18	0.14	0.10	0.10
Fairbanks Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	1.12	1.16	1.16	1.16	0.93	0.82	0.74
Fairbanks, AK	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	1.97	2.05	2.09	2.13	1.70	1.57	1.39
Flathead County; Columbia Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.22	0.23	0.24	0.25	0.20	0.19	0.17
Flathead County; Kalispell and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	1.99	2.11	2.20	2.29	1.82	1.76	1.53

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Flathead County; Whitefish and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.40	0.42	0.44	0.46	0.37	0.35	0.31
Fort Collins Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	9.71	10.21	10.53	10.83	8.61	8.14	7.16
Freehold Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.72	0.76	0.79	0.82	0.65	0.63	0.55
Freestone and Anderson Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	4.53	4.47	4.18	4.01	3.20	2.38	2.27
Fremont County; Canon City Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	5.65	5.68	5.48	5.38	4.28	3.48	3.22
Fresno Area, CA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	33.94	35.92	37.37	38.63	30.71	29.53	25.81
Grants Pass Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	1.85	1.96	2.05	2.13	1.69	1.64	1.43
Great Falls Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	0.78	0.76	0.71	0.68	0.54	0.40	0.38
Greater Connecticut, CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	96.97	102.73	107.00	110.71	88.02	84.83	74.10
Greater Connecticut, CT	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	97.04	102.81	107.09	110.80	88.09	84.89	74.16
Greeley Area, CO	CO (1971 8-hour)	Maintenance, --	100	0	64.20	63.97	60.86	59.14	47.14	36.94	34.58
Hancock and Brooke Counties (Part); The City of Weirton, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	2.40	2.40	2.30	2.25	1.79	1.43	1.33
Hancock County (Part) The City of Weirton, including Butler and Clay: Magisterial Districts, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	5.40	5.31	4.94	4.73	3.77	2.77	2.66
Harrisburg-Lebanon-Carlisle-York, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	70.46	74.34	77.00	79.38	63.12	60.19	52.75
Hartford-New Britain-Middletown Area, CT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	65.16	69.17	72.24	74.87	59.52	57.64	50.28
Hayden, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	1.30	1.29	1.22	1.18	0.94	0.73	0.69
Hayden, AZ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	1.17	1.16	1.08	1.04	0.83	0.62	0.59

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
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Hayden, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	1.17	1.15	1.08	1.03	0.83	0.62	0.59
Hillsborough County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	2.27	2.30	2.24	2.21	1.76	1.47	1.35
Hillsborough-Polk County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	1.50	1.46	1.35	1.28	1.02	0.72	0.70
Houston-Galveston-Brazoria, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	740.76	755.02	744.06	741.73	590.60	506.78	459.69
Houston-Galveston-Brazoria, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	726.21	739.94	728.81	726.26	578.30	495.61	449.74
Humphreys County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	1.39	1.48	1.55	1.60	1.27	1.23	1.08
Huntington, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	2.16	2.29	2.39	2.47	1.97	1.90	1.66
Imperial County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	13.28	13.96	14.38	14.77	11.75	11.09	9.75
Imperial County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	13.27	13.95	14.37	14.77	11.75	11.09	9.75
Imperial County, CA	PM _{2.5} (2006 24-hour)	Nonattainment, Moderate	100	0	9.89	10.50	10.97	11.37	9.04	8.76	7.64
Imperial County, CA	PM _{2.5} (2012 Annual)	Nonattainment, Moderate	100	0	9.89	10.50	10.97	11.37	9.04	8.76	7.64
Imperial County; Imperial Valley Planning Area, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Serious	70	0	13.06	13.73	14.14	14.53	11.55	10.90	9.59
Indian Wells, CA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	7.65	7.63	7.28	7.08	5.64	4.44	4.15
Indiana, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	43.09	42.24	39.15	37.29	29.75	21.53	20.75
Indianapolis Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	0.11	0.12	0.12	0.12	0.10	0.09	0.08
Indianapolis, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	33.45	35.49	37.04	38.37	30.50	29.50	25.74
Inyo County; Owens Valley Planning Area, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Serious	70	0	1.21	1.22	1.18	1.16	0.93	0.76	0.70
Jackson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	6.46	6.50	6.27	6.17	4.91	4.01	3.70
Jackson County; Medford-Ashland (including White City), OR	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	8.84	9.39	9.81	10.16	8.08	7.83	6.83

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Jamestown, NY	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	19.90	20.08	19.48	19.21	15.30	12.64	11.61
Jefferson County, KY	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.06	0.07	0.07	0.07	0.06	0.05	0.05
Jefferson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	2.75	2.91	3.03	3.13	2.49	2.39	2.09
Jefferson County; (part) Steubenville & Mingo Junction, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	4.58	4.72	4.72	4.75	3.78	3.36	3.01
Jefferson County; (part), OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.32	0.34	0.35	0.36	0.29	0.27	0.24
Johnstown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	31.26	30.98	29.21	28.20	22.49	17.18	16.23
Josephine County; Grants Pass, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.84	1.96	2.04	2.12	1.68	1.63	1.42
Juneau; Mendenhall Valley Area, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.49	0.52	0.54	0.56	0.44	0.43	0.37
Kern County (Eastern Kern), CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	59.98	58.69	54.22	51.51	41.10	29.43	28.48
Kern County (Eastern Kern), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	59.98	58.69	54.22	51.51	41.10	29.43	28.48
King County; Kent, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.10	1.17	1.22	1.26	1.00	0.97	0.85
King County; Seattle, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.80	0.85	0.89	0.92	0.73	0.71	0.62
Klamath County; Klamath Falls, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	3.23	3.42	3.57	3.69	2.94	2.83	2.47
Klamath Falls Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	3.23	3.42	3.57	3.69	2.93	2.83	2.47
Klamath Falls, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	3.70	3.92	4.09	4.23	3.36	3.24	2.83
Knoxville, TN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	52.81	55.82	57.95	59.84	47.58	45.57	39.89
Knoxville-Sevierville-La Follette, TN	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	66.03	69.58	71.94	74.07	58.91	55.98	49.12
La Porte County; (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	7.48	7.58	7.40	7.33	5.84	4.90	4.48
Lake County (part); Lakeview, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.33	0.35	0.36	0.38	0.30	0.29	0.25

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Lake County, OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	15.01	15.93	16.63	17.23	13.70	13.26	11.57
Lake County: (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	1,113.06	1,080.38	984.64	925.43	738.68	504.74	497.33
Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	2.45	2.60	2.71	2.80	2.23	2.15	1.88
Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1,104.93	1,071.77	975.68	916.16	731.32	497.65	491.13
Lake County; Polson, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.11	0.12	0.13	0.13	0.10	0.10	0.09
Lake County; Ronan, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.06	0.06	0.06	0.07	0.05	0.05	0.04
Lake Tahoe Nevada Area, NV	CO (1971 8-hour)	Maintenance, --	100	0	1.31	1.39	1.44	1.49	1.18	1.13	0.99
Lake Tahoe North Shore Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	0.91	0.96	0.98	1.01	0.80	0.76	0.66
Lake Tahoe South Shore Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	2.37	2.51	2.61	2.70	2.15	2.06	1.80
Lancaster, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	30.44	32.16	33.38	34.45	27.40	26.22	22.96
Lancaster, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	30.44	32.17	33.38	34.46	27.40	26.22	22.96
Lane County (part); Oakridge, OR	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.11	0.11	0.12	0.12	0.10	0.09	0.08
Lane County; Eugene/Springfield, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	12.56	13.34	13.93	14.44	11.48	11.12	9.70
Las Vegas Area, NV	CO (1971 8-hour)	Maintenance, Serious	100	0	119.16	126.48	132.07	136.87	108.81	105.35	91.90
Las Vegas, NV	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	119.06	126.37	131.96	136.75	108.72	105.26	91.82
LaSalle County; Oglesby, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	3.21	3.31	3.32	3.35	2.67	2.38	2.13
Laurel Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	16.03	15.55	14.15	13.29	10.61	7.22	7.12
Lebanon County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	8.11	8.56	8.87	9.14	7.27	6.93	6.08
Lemont, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	44.25	43.74	41.08	39.54	31.53	23.80	22.58

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Liberty-Clairton, PA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	3.22	3.20	3.04	2.94	2.35	1.82	1.71
Lincoln County; Libby and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.38	0.40	0.42	0.43	0.34	0.33	0.29
Logan, UT-ID	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	6.99	7.43	7.76	8.04	6.39	6.19	5.40
Longmont Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	32.09	31.53	29.35	28.04	22.37	16.41	15.74
Lorain County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	3.02	3.21	3.35	3.47	2.76	2.67	2.33
Los Angeles, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	1,025.89	1,081.57	1,119.01	1,152.78	916.71	872.33	765.04
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	112.45	114.24	112.01	111.27	88.61	75.13	68.42
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	112.44	114.23	112.01	111.26	88.60	75.12	68.42
Los Angeles-South Coast Air Basin Area, CA	CO (1971 8-hour)	Maintenance, Serious	100	0	1,024.98	1,080.72	1,118.29	1,152.13	916.19	872.07	764.75
Los Angeles-South Coast Air Basin Area, CA	NO ₂ (1971 Annual)	Maintenance, --	100	0	1,024.90	1,080.64	1,118.21	1,152.05	916.13	872.00	764.69
Los Angeles-South Coast Air Basin, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	1,026.11	1,081.81	1,119.26	1,153.03	916.91	872.51	765.20
Los Angeles-South Coast Air Basin, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	1,025.55	1,081.22	1,118.64	1,152.39	916.40	872.03	764.78
Los Angeles-South Coast Air Basin, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	1,025.89	1,081.57	1,119.01	1,152.78	916.71	872.33	765.04
Louisville, KY-IN	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	77.43	82.04	85.48	88.45	70.32	67.80	59.22
Lowell Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	5.39	5.70	5.93	6.12	4.87	4.67	4.09
Lucas County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	52.07	52.47	50.82	50.04	39.86	32.77	30.16
Madison County; Granite City Township and Nameoki Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	23.64	23.16	21.44	20.40	16.27	11.72	11.32
Manchester Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	6.47	6.86	7.17	7.43	5.91	5.72	4.99

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Manitowoc County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	2.84	3.02	3.15	3.26	2.59	2.51	2.19
Maricopa and Pinal Counties; Phoenix Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	233.09	247.30	258.09	267.37	212.57	205.60	179.39
Marion County: Lawrence, Washington, and Warrant Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	30.48	32.30	33.67	34.85	27.71	26.74	23.35
Mariposa County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	2.62	2.77	2.89	2.99	2.38	2.30	2.00
Mariposa County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	2.62	2.77	2.89	2.99	2.38	2.29	2.00
Marshall, WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	9.22	9.01	8.31	7.88	6.29	4.48	4.34
Medford Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	4.76	5.05	5.28	5.47	4.35	4.21	3.67
Memphis Area, TN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	63.30	66.79	69.18	71.32	56.72	54.09	47.40
Memphis, TN-MS-AR	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	81.00	85.56	88.74	91.57	72.82	69.63	60.97
Miami, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	1.83	1.85	1.81	1.79	1.43	1.20	1.10
Miami, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.89	0.95	0.99	1.03	0.82	0.79	0.69
Miami, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	1.83	1.86	1.82	1.80	1.43	1.21	1.10
Milwaukee-Racine, WI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	75.20	79.82	83.35	86.38	68.67	66.49	58.00
Minneapolis-St. Paul Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	216.88	228.21	235.48	242.17	192.59	182.33	160.17
Missoula Area, MT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	5.97	6.21	6.31	6.43	5.11	4.69	4.16
Missoula county; Missoula and Vicinity, MT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	6.00	6.25	6.35	6.46	5.14	4.72	4.19
Modesto Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	12.46	13.21	13.77	14.26	11.33	10.94	9.55

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Mohave County (part); Bullhead City, AZ	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	3.74	3.94	4.08	4.21	3.35	3.19	2.79
Mono County; Mammoth Lake Planning Area, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.94	2.05	2.11	2.18	1.73	1.64	1.44
Mono County; Mono Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.47	0.49	0.49	0.49	0.39	0.34	0.31
Morenci, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.22	0.23	0.24	0.25	0.20	0.19	0.17
Morgan County, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	1.99	2.11	2.20	2.28	1.82	1.76	1.53
Morongo Band of Mission Indians	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	0.68	0.68	0.63	0.61	0.49	0.37	0.35
Morongo Band of Mission Indians, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	0.69	0.68	0.64	0.62	0.49	0.37	0.35
Morristown Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	1.39	1.46	1.50	1.54	1.22	1.14	1.01
Muscatine County; (part), IA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.81	0.84	0.84	0.85	0.68	0.61	0.55
Muscatine, IA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	1.36	1.42	1.45	1.49	1.18	1.10	0.97
Muskegon County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	10.46	11.08	11.54	11.93	9.49	9.13	7.98
Muskingum River, OH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.38	0.40	0.41	0.42	0.33	0.31	0.28
Nashua Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	5.30	5.60	5.82	6.02	4.78	4.59	4.02
Nassau County, FL	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.43	0.46	0.48	0.50	0.40	0.38	0.33
Nevada County (Western part), CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	7.64	8.07	8.39	8.66	6.89	6.61	5.78
Nevada County (Western part), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	7.66	8.10	8.41	8.69	6.91	6.63	5.80
New Haven County, CT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.37	1.45	1.51	1.56	1.24	1.19	1.04
New Haven-Meriden-Waterbury Area, CT	CO (1971 8-hour)	Maintenance, --	100	0	51.66	54.69	56.91	58.85	46.79	45.01	39.34
New Manchester-Grant Magisterial District in Hancock County, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	2.00	1.97	1.83	1.76	1.40	1.03	0.99

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
New York County, NY	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	21.63	22.93	23.90	24.73	19.66	18.97	16.56
New York, NY-NJ-CT	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	818.61	867.64	904.25	935.92	744.12	717.87	626.88
New York-N. New Jersey-Long Island Area, NY-NJ-CT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	449.76	476.67	496.75	514.13	408.77	394.31	344.34
New York-N. New Jersey-Long Island, NY-NJ-CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	803.12	851.11	886.86	917.82	729.73	703.77	614.62
New York-Northern New Jersey-Long Island, NY-NJ-CT	Ozone (2015 8-hour)	Nonattainment, Moderate	50	0	802.58	850.54	886.27	917.21	729.25	703.30	614.22
NJ Portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	2.12	2.23	2.30	2.36	1.88	1.78	1.56
Nogales, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	1.99	2.12	2.21	2.29	1.82	1.76	1.54
Northern Milwaukee/Ozaukee Shoreline, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	4.05	4.29	4.48	4.65	3.69	3.57	3.12
Northern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	128.87	133.46	134.65	136.42	108.55	98.19	87.52
Oakridge, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.19	0.21	0.21	0.22	0.18	0.17	0.15
Ogden Area, UT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	3.51	3.72	3.89	4.03	3.21	3.11	2.71
Ogden Area, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	3.51	3.72	3.89	4.03	3.21	3.11	2.71
Olmsted County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	2.46	2.54	2.57	2.60	2.07	1.87	1.67
Olmsted; City of Rochester, MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	7.33	7.68	7.86	8.05	6.40	5.97	5.27
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	1.59	1.54	1.42	1.34	1.07	0.74	0.73
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.59	1.54	1.41	1.34	1.07	0.74	0.73
Pekin, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	2.97	3.12	3.21	3.29	2.62	2.46	2.16

Notes:

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Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Penns Grove Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	1.02	0.99	0.90	0.85	0.68	0.46	0.46
Peoria County: Hollis Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.58	0.58	0.55	0.54	0.43	0.34	0.32
Peoria County: Peoria, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	6.27	6.62	6.86	7.08	5.63	5.37	4.71
Perth Amboy Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	6.78	6.84	6.63	6.54	5.21	4.29	3.95
Philadelphia-Camden County Area, PA-NJ	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	101.20	103.65	102.89	103.09	82.07	71.63	64.60
Philadelphia-Wilmington, PA-NJ-DE	PM _{2.5} (2006 24-hour)	Maintenance, Moderate for PA and DE; Subject to Former Subpart 1 for NJ	100	0	332.05	347.41	355.62	363.80	289.38	269.68	238.08
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	428.09	448.95	461.10	472.74	376.01	352.75	310.76
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	427.88	448.73	460.86	472.50	375.81	352.56	310.60
Phoenix Area, AZ	CO (1971 8-hour)	Maintenance, Serious	100	0	225.15	238.87	249.29	258.25	205.32	198.58	173.27
Phoenix-Mesa, AZ	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	234.42	248.72	259.57	268.90	213.79	206.78	180.42
Phoenix-Mesa, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	240.52	255.18	266.33	275.90	219.36	212.17	185.13
Pierce County; Tacoma, WA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	1.55	1.53	1.42	1.36	1.09	0.81	0.77
Pima County; Ajo Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pima County; Rillito Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	4.35	4.53	4.61	4.70	3.74	3.44	3.05
Pinal and Gila Counties; Payson, AZ	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	1.11	1.18	1.23	1.28	1.01	0.98	0.86
Pinal County (part); West Pinal, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	17.67	18.67	19.37	20.00	15.90	15.22	13.32
Pitkin County; Aspen, CO	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	26.34	25.66	23.53	22.23	17.74	12.39	12.11
Pittsburgh Area, PA	CO (1971 8-hour)	Maintenance, --	100	0	17.66	18.47	18.89	19.31	15.36	14.29	12.62

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				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Pittsburgh-Beaver Valley, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	192.21	197.54	197.09	198.16	157.73	139.24	125.11
Pittsburgh-Beaver Valley, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	174.98	179.85	179.45	180.44	143.63	126.82	113.94
Plumas County, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.38	0.40	0.41	0.42	0.34	0.32	0.28
Polk County, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	1.75	1.84	1.91	1.97	1.57	1.49	1.31
Portland Area: Portland Metro Service District Boundary, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	74.89	79.40	82.80	85.72	68.16	65.81	57.45
Power-Bannock Counties; Fort Hall Indian Reservation, ID	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.05	0.05	0.05	0.05	0.04	0.04	0.04
Power-Bannock Counties; Portneuf Valley Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	4.38	4.65	4.85	5.03	4.00	3.87	3.38
Provo Area, UT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	5.78	6.14	6.41	6.64	5.28	5.11	4.46
Provo, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	57.29	58.22	57.11	56.74	45.19	38.35	34.91
Prowers County; Lamar, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.67	0.69	0.70	0.72	0.57	0.52	0.46
Raleigh-Durham Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	110.48	116.98	121.75	125.91	100.11	96.34	84.19
Ramsey County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	14.08	13.65	12.43	11.67	9.32	6.34	6.26
Reading, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	25.82	27.12	27.93	28.68	22.81	21.50	18.91
Reno Area, NV	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	18.82	19.98	20.87	21.63	17.20	16.66	14.53
Rhineland, WI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	1.79	1.90	1.99	2.06	1.64	1.58	1.38
Riverside County (Coachella Valley), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	30.18	31.87	33.05	34.09	27.11	25.91	22.69
Riverside County (Coachella Valley), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	30.18	31.87	33.05	34.09	27.11	25.91	22.69
Riverside County; Coachella Valley Planning Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	35.01	37.00	38.40	39.65	31.53	30.19	26.42

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Riverside, Los Angeles, Orange, and San Bernardino Counties; South Coast Air Basin, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	1,021.50	1,076.91	1,114.14	1,147.72	912.69	868.43	761.64
Rosebud County; Lame Deer, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.16	0.17	0.17	0.17	0.14	0.13	0.11
Routt County (part); Steamboat Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	35.21	34.28	31.41	29.65	23.66	16.47	16.11
Rusk and Panola Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	6.98	6.78	6.18	5.82	4.64	3.19	3.13
Sacramento Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	95.95	100.84	103.86	106.69	84.85	80.05	70.40
Sacramento County, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	119.48	123.07	123.20	124.15	98.81	87.87	78.76
Sacramento Metro, CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	181.52	188.69	191.39	194.60	154.83	141.62	125.78
Sacramento Metro, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	181.50	188.67	191.37	194.58	154.81	141.61	125.77
Sacramento, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	178.52	185.51	188.07	191.17	152.10	138.98	123.48
Salem Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	13.47	14.30	14.93	15.48	12.31	11.92	10.40
Salt Lake City Area, UT	CO (1971 8-hour)	Maintenance, --	100	0	46.86	46.40	43.73	42.19	33.64	25.63	24.24
Salt Lake City, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	133.27	138.14	139.53	141.48	112.58	102.09	90.92
Salt Lake County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	95.37	97.90	97.50	97.92	77.94	68.53	61.66
Salt Lake County, UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	95.46	98.00	97.60	98.02	78.03	68.61	61.73
San Antonio, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	121.39	127.64	131.57	135.21	107.53	101.59	89.30
San Bernardino County (part); excluding Searles Valley Planning Area and South Coast Air Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	92.53	93.15	90.07	88.58	70.57	57.78	53.26
San Diego Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	201.57	213.75	222.92	230.83	183.52	177.28	154.75

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
San Diego County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	202.41	214.64	223.86	231.80	184.30	178.03	155.40
San Diego County, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	201.80	214.00	223.18	231.10	183.74	177.49	154.93
San Francisco Bay Area, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	439.87	463.11	478.22	492.04	391.30	370.99	325.74
San Francisco Bay Area, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	439.30	462.50	477.60	491.39	390.78	370.49	325.30
San Francisco Bay Area, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	443.33	466.77	482.05	496.01	394.46	374.05	328.41
San Francisco-Oakland-San Jose Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	407.53	428.90	442.68	455.33	362.11	342.99	301.24
San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	323.22	334.81	337.88	342.38	272.44	246.57	219.74
San Joaquin Valley, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	323.22	334.81	337.88	342.38	272.45	246.57	219.74
San Joaquin Valley, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	323.23	334.82	337.89	342.39	272.46	246.58	219.75
San Joaquin Valley, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	320.83	332.49	335.76	340.38	270.85	245.47	218.66
San Joaquin Valley, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	320.83	332.49	335.76	340.38	270.85	245.47	218.66
San Luis Obispo (Eastern part), CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	6.58	6.41	5.87	5.54	4.42	3.08	3.01
San Luis Obispo (Eastern San Luis Obispo), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	6.58	6.41	5.87	5.54	4.42	3.08	3.01
San Manuel, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	1.61	1.62	1.57	1.54	1.23	1.01	0.93
San Miguel County; Telluride, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	2.33	2.31	2.18	2.10	1.67	1.28	1.21
Sanders County (part); Thompson Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.05	0.06	0.06	0.06	0.05	0.05	0.04
Santa Cruz County; Nogales Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	2.03	2.16	2.25	2.34	1.86	1.80	1.57
Seaford, DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	15.11	16.02	16.70	17.30	13.75	13.28	11.60

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Seattle-Tacoma Area, WA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	172.09	182.58	190.53	197.38	156.92	151.76	132.43
Seattle-Tacoma, WA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	29.49	31.19	32.41	33.48	26.62	25.54	22.34
Sheboygan County, WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	6.08	6.46	6.74	6.99	5.56	5.38	4.69
Sheboygan County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	3.10	3.29	3.43	3.56	2.83	2.74	2.39
Sheridan County; City of Sheridan, WY	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.83	1.89	1.89	1.91	1.52	1.36	1.22
Shoshone County (part); excluding Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.37	1.46	1.52	1.58	1.26	1.22	1.06
Shoshone County; City of Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Silver Bow County; Butte, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	1.44	1.53	1.60	1.66	1.32	1.28	1.11
Somerville Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.81	0.85	0.88	0.91	0.72	0.69	0.61
Southern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	57.29	58.21	57.10	56.74	45.19	38.34	34.91
Southwest Indiana, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	3.06	3.01	2.80	2.68	2.14	1.57	1.51
Spokane Area, WA	CO (1971 8-hour)	Maintenance, Serious	100	0	17.45	18.52	19.34	20.05	15.94	15.43	13.46
Spokane County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	17.78	18.88	19.71	20.42	16.24	15.72	13.71
Springfield Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	7.99	8.48	8.86	9.17	7.29	7.06	6.16
St. Bernard Parish, LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	37.27	36.25	33.15	31.24	24.93	17.25	16.91
St. Clair, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	3.87	4.02	4.07	4.14	3.29	3.00	2.67
St. Louis Area, MO	CO (1971 8-hour)	Maintenance, --	100	0	63.58	65.45	65.46	65.92	52.47	46.56	41.76
St. Louis, MO-IL	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	160.33	166.96	169.79	172.94	137.59	126.53	112.18
St. Louis-St. Charles-Farmington, MO-IL	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	178.70	186.44	190.08	193.95	154.29	142.64	126.25

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Steubenville, OH-WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	7.95	8.02	7.78	7.67	6.11	5.04	4.63
Steubenville-Weirton, OH-WV	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	8.64	9.02	9.19	9.37	7.46	6.89	6.10
Stockton Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	20.57	21.80	22.71	23.50	18.68	18.02	15.73
Sullivan County, TN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	6.74	6.68	6.30	6.08	4.85	3.71	3.50
Sutter Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.17	0.17	0.15	0.14	0.11	0.08	0.08
Syracuse Area; Onondaga County, NY	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	26.74	28.38	29.62	30.69	24.40	23.61	20.60
Tazewell County: Groveland Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	1.32	1.39	1.45	1.50	1.19	1.14	1.00
Terre Haute, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	4.45	4.70	4.86	5.01	3.99	3.80	3.33
Thurston County; Cities of Olympia, Tumwater, and Lacey, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	5.65	5.99	6.26	6.49	5.16	5.00	4.36
Titus County, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.19	0.18	0.17	0.16	0.13	0.10	0.09
Toms River Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.40	0.40	0.39	0.39	0.31	0.26	0.24
Tooele County (part), UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	28.28	27.42	24.96	23.43	18.70	12.71	12.55
Trenton Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	4.99	5.29	5.52	5.72	4.55	4.40	3.84
Trona, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	5.44	5.29	4.83	4.54	3.62	2.49	2.45
Tucson Area, AZ	CO (1971 8-hour)	Maintenance, --	100	0	57.22	60.66	63.24	65.46	52.05	50.24	43.86
Tuolumne County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	4.39	4.62	4.78	4.92	3.91	3.72	3.26
Tuscan Buttes, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.09	0.09	0.08	0.08	0.06	0.04	0.04
Tuscan Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.09	0.09	0.08	0.08	0.06	0.04	0.04

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Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Uinta Basin, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	38.30	37.37	34.36	32.52	25.95	18.29	17.80
Union County; LaGrande, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.89	0.94	0.98	1.02	0.81	0.78	0.68
Upper Green River Basin Area, WY	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	13.56	13.29	12.33	11.74	9.37	6.79	6.54
Utah County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	73.50	73.93	71.41	70.17	55.90	45.63	42.10
Vancouver Area: Clark County (part), WA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	17.38	18.44	19.24	19.93	15.84	15.32	13.37
Ventura County, CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	105.95	107.30	104.71	103.66	82.56	69.18	63.26
Ventura County, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	105.89	107.23	104.64	103.59	82.51	69.13	63.21
Vermillion County; Part of Clinton Township, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.28	1.32	1.34	1.36	1.08	0.98	0.88
Vigo County, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	10.60	11.04	11.22	11.43	9.09	8.36	7.41
Walla Walla County; Wallula, WA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.19	0.20	0.21	0.22	0.18	0.17	0.15
Waltham Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	3.11	3.28	3.40	3.50	2.78	2.65	2.33
Warren County: Conewago Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	7.84	7.63	6.97	6.56	5.24	3.62	3.55
Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	9.08	8.89	8.23	7.83	6.25	4.50	4.35
Warren, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	9.51	9.34	8.67	8.28	6.60	4.82	4.63
Washington Area, DC-MD-VA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	52.60	55.22	56.80	58.29	46.36	43.62	38.39
Washington, DC-MD-VA	Ozone (2008 8-hour)	Nonattainment (DC) Maintenance (MD, VA), Marginal	50	0	335.09	354.73	369.08	381.60	303.41	291.80	255.06
Washington, DC-MD-VA	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	335.21	354.85	369.21	381.73	303.52	291.91	255.15
Washoe County; Reno Planning Area, NV	PM10 (1987 24-hour)	Maintenance, Serious	100	0	19.00	20.17	21.07	21.84	17.36	16.82	14.67

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	3.69	3.90	4.06	4.20	3.34	3.20	2.80
Wayne County; (part), MI	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	6.08	6.19	6.09	6.06	4.82	4.11	3.74
West Central Pinal County, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	4.25	4.42	4.50	4.58	3.64	3.34	2.97
West Silver Valley, ID	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.73	0.78	0.81	0.84	0.67	0.65	0.57
Williamson County, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	7.34	7.61	7.68	7.78	6.19	5.60	4.99
Winston-Salem Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	24.69	26.11	27.14	28.03	22.29	21.39	18.71
Worcester Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	11.22	11.89	12.40	12.84	10.20	9.85	8.60
Yakima Area, WA	CO (1971 8-hour)	Maintenance, --	100	0	1.57	1.67	1.74	1.81	1.44	1.39	1.21
Yakima County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	5.33	5.66	5.91	6.13	4.87	4.72	4.12
Yuba City-Marysville, CA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	13.71	14.36	14.72	15.07	11.99	11.20	9.88
Yuma County; Yuma Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	8.85	9.40	9.82	10.18	8.09	7.84	6.83
Yuma, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	4.55	4.83	5.04	5.23	4.16	4.03	3.51

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Table A-15. Changes in Emissions from U.S. Passenger Cars and Light Trucks by Nonattainment or Maintenance Area and Alternative, Direct and Indirect Impacts--Carbon Monoxide (CO), 2050

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Ada County; Boise, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	282.27	269.24	262.22	258.48	198.31	143.57	128.17
Adams, Denver, and Boulder Counties; Denver Metropolitan Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1,217.13	1,161.37	1,129.06	1,111.42	852.86	619.21	550.24
Ajo, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Albuquerque Area, NM	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	527.38	503.05	489.89	482.86	370.47	268.24	239.42
Allegan County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	51.55	49.18	47.85	47.13	36.17	26.22	23.35
Allegheny County Air Basin: Hazelwood Monitor, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	58.87	56.18	54.59	53.72	41.22	29.95	26.58
Allegheny County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	728.36	694.89	676.07	665.90	510.94	370.51	329.90
Allegheny County; The Area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	11.47	10.97	10.55	10.31	7.92	5.84	5.05
Allegheny, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	75.84	72.40	70.23	69.01	52.96	38.60	34.09
Allentown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	438.58	418.37	407.33	401.41	307.98	223.08	198.99
Allentown-Bethlehem-Easton, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	507.24	483.87	471.07	464.20	356.16	258.01	230.11
Alton Township, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	4.03	4.07	2.85	1.99	1.60	2.13	0.50
Amador County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	50.82	48.48	47.17	46.47	35.66	25.85	23.02
Anchorage Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	88.76	84.66	82.46	81.28	62.36	45.14	40.31
Anchorage; Eagle River, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	5.02	4.79	4.66	4.59	3.53	2.55	2.28
Anne Arundel County and Baltimore County, MD	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	877.78	837.28	815.37	803.65	616.60	446.47	398.48

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
AQCR 012: Portions of Grant County, NM	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	33.53	31.98	31.15	30.72	23.57	17.05	15.24
AQCR 109-Millinocket, ME	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	118.92	113.44	110.43	108.82	83.49	60.49	53.94
AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington Counties (Minneapolis-St. Paul), MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	2,398.92	2,288.31	2,228.11	2,195.85	1,684.77	1,220.19	1,088.64
AQCR 237: Brown County: Green Bay Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	6.83	6.53	6.27	6.11	4.70	3.48	2.99
AQCR 238: Marathon County: Rothschild Subcity Area, Rib Mountain, Weston, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	138.15	131.77	128.37	126.57	97.10	70.27	62.78
AQCR 238: Oneida County: Rhinelander Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	46.60	44.45	43.31	42.70	32.76	23.70	21.18
AQCR 239: Milwaukee County: Milwaukee Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	487.17	464.65	452.67	446.30	342.41	247.78	221.37
AQCR 240: Dane County: Madison Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	427.33	407.59	397.08	391.48	300.35	217.35	194.18
Archuleta County; Pagosa Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	24.38	23.84	20.36	17.96	13.97	12.59	7.66
Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	5.60	5.47	4.68	4.13	3.21	2.89	1.76
Aroostock County; City of Presque Isle, ME	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	7.17	6.84	6.66	6.56	5.03	3.65	3.25
Atlanta, GA	Ozone (2008 8-hour)	Maintenance, Moderate	100	0	4,575.14	4,363.78	4,250.99	4,190.92	3,215.35	2,326.97	2,078.61
Atlanta, GA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	3,628.45	3,460.83	3,371.31	3,323.61	2,549.95	1,845.48	1,648.41
Atlantic City Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	28.69	27.36	26.66	26.28	20.16	14.59	13.04
Bakersfield Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	334.05	318.67	310.18	305.60	234.48	169.92	151.46

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Baltimore Area, MD	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	9.10	8.69	8.42	8.27	6.35	4.63	4.08
Baltimore, MD	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	2,227.22	2,124.47	2,068.86	2,039.11	1,564.49	1,132.84	1,011.05
Baltimore, MD	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	2,246.34	2,142.70	2,086.62	2,056.62	1,577.92	1,142.56	1,019.73
Baton Rouge, LA	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	704.39	673.29	648.91	634.63	487.35	358.74	311.72
Beaver, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	10.90	10.40	10.13	9.98	7.66	5.55	4.95
Benton County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	18.34	17.49	17.04	16.80	12.89	9.33	8.34
Berrien County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	174.28	166.24	161.92	159.61	122.46	88.64	79.16
Billings Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	64.36	61.57	59.08	57.59	44.24	32.79	28.17
Billings, MT	SO ₂ (2010 1-hour)	Maintenance, --	100	0	3.63	3.65	2.65	1.95	1.56	1.91	0.58
Birmingham, AL	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	906.36	864.66	841.49	829.00	636.08	461.04	410.81
Boise-Northern Ada County Area, ID	CO (1971 8-hour)	Maintenance, --	100	0	282.07	269.05	262.04	258.29	198.17	143.47	128.08
Bonner County; The Sandpoint Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	9.04	8.63	8.40	8.28	6.36	4.60	4.11
Boston Area, MA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	478.52	456.42	444.59	438.28	336.26	243.38	217.36
Boyd County (part), KY	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	6.78	6.78	5.12	3.96	3.13	3.55	1.32
Brooke; Follansbee Area, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.47	1.41	1.37	1.35	1.03	0.75	0.67
Burlington Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	8.40	8.01	7.81	7.69	5.90	4.27	3.82
Butte County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	155.00	147.85	143.97	141.90	108.87	78.84	70.36
Calaveras County, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	42.80	40.83	39.75	39.17	30.05	21.77	19.41
Calaveras County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	42.81	40.84	39.76	39.17	30.06	21.78	19.42

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Campbell-Clermont Counties, KY-OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	26.83	25.60	24.90	24.51	18.81	13.65	12.14
Canton-Massillon, OH	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	267.22	254.92	248.11	244.45	187.56	135.93	121.15
Central New Hampshire, NH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	149.46	142.55	138.88	136.93	105.05	76.02	67.92
Central Steptoe Valley, NV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	13.92	13.28	12.94	12.75	9.78	7.08	6.33
Charleston, WV	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	255.61	244.01	236.71	232.64	178.55	130.08	114.96
Charlotte Area, NC	CO (1971 8-hour)	Maintenance, --	100	0	1,211.03	1,155.07	1,125.29	1,109.45	851.19	615.94	550.30
Charlotte-Rock Hill, NC-SC	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	2,253.90	2,149.76	2,094.25	2,064.70	1,584.07	1,146.36	1,024.07
Chicago, IL-IN-WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	5,249.65	5,020.32	4,826.45	4,711.18	3,618.69	2,674.45	2,308.69
Chicago-Naperville, IL-IN-WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	5,686.18	5,436.68	5,232.04	5,111.03	3,925.46	2,896.47	2,507.00
Chico (Butte County), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	155.00	147.85	143.97	141.90	108.87	78.84	70.36
Chico Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	60.24	57.46	55.97	55.18	42.33	30.64	27.37
Chico, CA	PM _{2.5} (2006 24-hour)	Maintenance, Moderate	100	0	151.65	144.66	140.86	138.83	106.52	77.14	68.84
Cincinnati, OH-KY	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1,612.60	1,538.13	1,498.23	1,476.95	1,133.16	820.20	732.48
Cincinnati, OH-KY-IN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	1,686.95	1,609.04	1,567.31	1,545.06	1,185.41	858.01	766.25
Clark County; Las Vegas Planning Area, NV	PM ₁₀ (1987 24-hour)	Maintenance, Serious	100	0	1,502.78	1,433.33	1,396.39	1,376.73	1,056.25	764.32	682.88
Cleveland Area, OH	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	887.70	846.68	824.80	813.15	623.87	451.49	403.31
Cleveland, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	2,180.80	2,080.08	2,026.16	1,997.41	1,532.46	1,109.19	990.60
Cleveland, OH	PM _{2.5} (2012 Annual)	Maintenance, Moderate	100	0	1,107.39	1,056.24	1,028.89	1,014.31	778.20	563.24	503.05
Cleveland-Akron-Lorain, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	2,266.89	2,162.27	2,105.88	2,075.75	1,592.59	1,153.00	1,029.31

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Cleveland-Akron-Lorain, OH	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	2,109.71	2,012.28	1,960.10	1,932.28	1,482.49	1,073.03	958.30
Cochise County; Paul Spur/Douglas Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	20.57	19.62	19.11	18.84	14.46	10.46	9.35
Colorado Springs Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	427.39	407.69	396.96	391.21	300.15	217.39	193.95
Columbus, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	1,569.13	1,496.65	1,457.92	1,437.29	1,102.72	798.08	712.85
Columbus, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1,470.15	1,402.23	1,365.99	1,346.68	1,033.20	747.74	667.93
Cook County; Lyons Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	57.38	54.79	53.09	52.12	40.01	29.21	25.73
Cook County; Southeast Chicago, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	262.88	263.45	194.86	146.74	116.61	137.95	45.83
Coshocton County; Franklin Township, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.73	0.70	0.68	0.66	0.51	0.37	0.33
Coso Junction, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.52	1.51	1.16	0.92	0.73	0.79	0.32
Cuyahoga County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	701.97	669.52	652.27	643.09	493.39	357.02	318.98
Cuyahoga County, OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	888.02	847.00	825.11	813.45	624.10	451.66	403.46
Dallas-Fort Worth, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	5,963.20	5,688.16	5,538.92	5,459.02	4,188.41	3,033.11	2,706.60
Dallas-Fort Worth, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	5,892.80	5,621.02	5,473.51	5,394.53	4,138.93	2,997.30	2,674.61
Delaware County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	299.07	285.80	275.74	269.89	207.24	152.29	132.69
Denver Metro/North Front Range, CO	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	2,662.60	2,540.32	2,471.14	2,433.63	1,867.36	1,354.47	1,205.50
Denver-Boulder Area, CO	CO (1971 8-hour)	Maintenance, Serious	100	0	2,077.31	1,982.01	1,927.54	1,897.93	1,456.34	1,056.77	939.93
Denver-Boulder-Greeley-Ft Collins-Loveland, CO	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	2,662.60	2,540.32	2,471.14	2,433.63	1,867.36	1,354.47	1,205.50
Detroit Area, MI	CO (1971 8-hour)	Maintenance, --	100	0	1,239.59	1,182.36	1,151.60	1,135.18	870.95	630.48	562.94
Detroit, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	3,564.87	3,400.56	3,310.83	3,262.69	2,503.32	1,813.26	1,617.43

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				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Detroit, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	171.06	163.19	158.82	156.46	120.05	87.02	77.53
Detroit-Ann Arbor, MI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	3,574.42	3,409.66	3,319.70	3,271.44	2,510.03	1,818.12	1,621.77
Doña Ana County (Sunland Park Area), NM	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	12.61	12.06	11.58	11.29	8.68	6.43	5.53
Doña Ana County; Anthony, NM	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	5.58	5.36	5.05	4.86	3.74	2.85	2.33
Door County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.05	0.05	0.05	0.04	0.03	0.02	0.02
Douglas, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	16.96	16.18	15.76	15.54	11.92	8.63	7.71
Dukes County, MA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	6.20	5.92	5.76	5.68	4.36	3.16	2.82
Duluth Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	73.80	70.42	68.45	67.37	51.70	37.55	33.35
East Chicago Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	194.98	198.63	131.97	84.94	69.17	103.40	15.29
East Helena Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.27	0.25	0.25	0.24	0.19	0.13	0.12
East Kern County Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	25.12	24.01	23.11	22.57	17.34	12.79	11.07
El Paso County, TX	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	394.07	375.90	366.00	360.69	276.74	200.44	178.81
El Paso, TX	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	23.37	22.33	21.58	21.15	16.24	11.90	10.41
Eugene-Springfield Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	158.71	151.37	147.47	145.40	111.55	80.72	72.12
Evangeline Parish (Partial), LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.08	0.08	0.07	0.06	0.04	0.04	0.02
Fairbanks Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	9.28	8.85	8.60	8.47	6.50	4.72	4.19
Fairbanks, AK	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	19.98	19.06	18.55	18.27	14.02	10.16	9.05
Flathead County; Columbia Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	2.73	2.60	2.53	2.50	1.92	1.39	1.24
Flathead County; Kalispell and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	25.14	23.98	23.36	23.03	17.67	12.79	11.42

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Flathead County; Whitefish and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	5.07	4.83	4.71	4.64	3.56	2.58	2.30
Fort Collins Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	109.70	104.64	101.89	100.41	77.04	55.80	49.78
Freehold Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	9.05	8.63	8.41	8.29	6.36	4.60	4.11
Freestone and Anderson Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	11.05	10.59	10.10	9.81	7.54	5.64	4.77
Fremont County; Canon City Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	28.41	27.14	26.25	25.73	19.76	14.47	12.68
Fresno Area, CA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	414.69	395.54	385.28	379.82	291.40	210.92	188.37
Grants Pass Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	23.36	22.28	21.71	21.40	16.42	11.88	10.62
Great Falls Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	1.61	1.54	1.46	1.41	1.09	0.82	0.69
Greater Connecticut, CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	1,197.99	1,142.66	1,113.09	1,097.33	841.90	609.32	544.24
Greater Connecticut, CT	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	1,198.94	1,143.56	1,113.96	1,098.20	842.56	609.80	544.67
Greeley Area, CO	CO (1971 8-hour)	Maintenance, --	100	0	247.39	236.48	227.82	222.73	171.05	126.00	109.36
Hancock and Brooke Counties (Part); The City of Weirton, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	10.48	10.02	9.67	9.47	7.27	5.34	4.66
Hancock County (Part) The City of Weirton, including Butler and Clay: Magisterial Districts, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	11.30	10.83	10.29	9.96	7.66	5.77	4.83
Harrisburg-Lebanon-Carlisle-York, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	829.48	791.20	770.54	759.49	582.71	421.90	376.60
Hartford-New Britain-Middletown Area, CT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	823.45	785.39	765.15	754.39	578.78	418.81	374.19
Hayden, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	4.60	4.40	4.23	4.13	3.17	2.34	2.03
Hayden, AZ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	3.02	2.89	2.76	2.68	2.06	1.54	1.31

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Hayden, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	2.97	2.84	2.72	2.64	2.03	1.51	1.29
Hillsborough County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	13.45	12.84	12.44	12.22	9.38	6.85	6.03
Hillsborough-Polk County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	1.72	1.66	1.53	1.45	1.12	0.88	0.69
Houston-Galveston-Brazoria, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	5,141.69	4,908.02	4,762.35	4,681.24	3,592.76	2,616.42	2,313.59
Houston-Galveston-Brazoria, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	5,006.16	4,778.71	4,636.59	4,557.40	3,497.74	2,547.47	2,252.26
Humphreys County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	17.63	16.81	16.38	16.15	12.39	8.97	8.01
Huntington, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	26.90	25.65	24.99	24.64	18.90	13.68	12.22
Imperial County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	149.17	142.29	138.54	136.53	104.75	75.87	67.68
Imperial County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	149.10	142.23	138.48	136.47	104.71	75.84	67.65
Imperial County, CA	PM _{2.5} (2006 24-hour)	Nonattainment, Moderate	100	0	125.96	120.14	117.05	115.40	88.54	64.07	57.24
Imperial County, CA	PM _{2.5} (2012 Annual)	Nonattainment, Moderate	100	0	125.96	120.14	117.05	115.40	88.54	64.07	57.24
Imperial County; Imperial Valley Planning Area, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Serious	70	0	146.45	139.70	136.02	134.04	102.84	74.49	66.45
Indian Wells, CA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	30.80	29.43	28.38	27.76	21.31	15.68	13.64
Indiana, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	73.32	70.37	66.41	63.90	49.17	37.44	30.76
Indianapolis Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	1.28	1.22	1.19	1.17	0.90	0.65	0.58
Indianapolis, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	419.74	400.35	390.02	384.52	295.01	213.49	190.73
Inyo County; Owens Valley Planning Area, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Serious	70	0	6.46	6.17	5.97	5.85	4.49	3.29	2.89
Jackson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	33.16	31.67	30.64	30.05	23.07	16.88	14.81
Jackson County; Medford-Ashland (including White City), OR	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	111.80	106.64	103.89	102.43	78.58	56.86	50.81

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
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Jamestown, NY	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	110.44	105.47	102.11	100.20	76.92	56.22	49.42
Jefferson County, KY	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.66	0.63	0.61	0.61	0.46	0.34	0.30
Jefferson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	33.72	32.17	31.33	30.89	23.70	17.15	15.32
Jefferson County; (part) Steubenville & Mingo Junction, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	38.10	36.35	35.33	34.76	26.68	19.38	17.20
Jefferson County; (part), OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	3.68	3.51	3.41	3.37	2.58	1.87	1.67
Johnstown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	97.61	93.37	89.61	87.36	67.11	49.74	42.74
Josephine County; Grants Pass, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	23.29	22.21	21.64	21.33	16.37	11.84	10.58
Juneau; Mendenhall Valley Area, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	6.13	5.85	5.70	5.62	4.31	3.12	2.79
Kern County (Eastern Kern), CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	86.26	82.90	77.71	74.37	57.26	44.08	35.56
Kern County (Eastern Kern), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	86.26	82.90	77.71	74.37	57.26	44.08	35.56
King County; Kent, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	13.83	13.20	12.86	12.67	9.72	7.04	6.29
King County; Seattle, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	10.13	9.66	9.41	9.28	7.12	5.15	4.60
Klamath County; Klamath Falls, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	40.01	38.16	37.17	36.65	28.12	20.35	18.18
Klamath Falls Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	39.99	38.14	37.15	36.63	28.10	20.34	18.17
Klamath Falls, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	45.80	43.68	42.55	41.95	32.19	23.29	20.81
Knoxville, TN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	634.64	605.34	589.59	581.18	445.90	322.79	288.21
Knoxville-Sevierville-La Follette, TN	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	765.18	729.88	710.76	700.52	537.47	389.20	347.33
La Porte County; (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	45.87	43.80	42.45	41.69	32.00	23.35	20.58
Lake County (part); Lakeview, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	4.14	3.95	3.84	3.79	2.91	2.10	1.88

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Lake County, OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	189.08	180.34	175.69	173.21	132.89	96.17	85.92
Lake County: (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	436.46	429.06	355.96	305.41	238.36	226.25	124.43
Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	30.52	29.11	28.36	27.96	21.45	15.52	13.87
Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	336.74	333.94	263.31	214.07	168.28	175.53	79.13
Lake County; Polson, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	1.44	1.37	1.34	1.32	1.01	0.73	0.65
Lake County; Ronan, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.74	0.70	0.69	0.68	0.52	0.38	0.34
Lake Tahoe Nevada Area, NV	CO (1971 8-hour)	Maintenance, --	100	0	15.78	15.05	14.66	14.45	11.09	8.03	7.17
Lake Tahoe North Shore Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	10.10	9.64	9.38	9.25	7.09	5.14	4.58
Lake Tahoe South Shore Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	29.16	27.81	27.09	26.70	20.49	14.83	13.24
Lancaster, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	364.51	347.69	338.64	333.80	256.10	185.40	165.53
Lancaster, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	364.55	347.72	338.67	333.84	256.13	185.42	165.55
Lane County (part); Oakridge, OR	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	1.34	1.28	1.25	1.23	0.94	0.68	0.61
Lane County; Eugene/Springfield, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	158.74	151.40	147.50	145.42	111.57	80.73	72.13
Las Vegas Area, NV	CO (1971 8-hour)	Maintenance, Serious	100	0	1,504.03	1,434.53	1,397.55	1,377.88	1,057.13	764.96	683.45
Las Vegas, NV	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1,502.78	1,433.33	1,396.39	1,376.73	1,056.25	764.32	682.88
LaSalle County; Oglesby, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	27.49	26.23	25.49	25.09	19.25	13.98	12.42
Laurel Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	4.77	4.73	3.71	3.00	2.36	2.49	1.09
Lebanon County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	95.56	91.15	88.77	87.50	67.13	48.61	43.39
Lemont, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	123.10	117.82	112.80	109.76	84.34	62.75	53.58

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Liberty-Clairton, PA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	11.47	10.96	10.55	10.30	7.91	5.84	5.05
Lincoln County; Libby and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	4.79	4.57	4.45	4.39	3.37	2.44	2.18
Logan, UT-ID	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	88.47	84.38	82.21	81.05	62.18	45.00	40.20
Longmont Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	65.51	62.80	59.63	57.66	44.34	33.43	27.92
Lorain County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	38.25	36.48	35.54	35.04	26.88	19.45	17.38
Los Angeles, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	11,961.46	11,409.61	11,111.05	10,951.34	8,402.33	6,084.00	5,430.05
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	728.82	695.79	674.71	662.90	508.79	370.90	327.44
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	728.73	695.70	674.63	662.82	508.73	370.85	327.40
Los Angeles-South Coast Air Basin Area, CA	CO (1971 8-hour)	Maintenance, Serious	100	0	11,965.49	11,413.44	11,114.85	10,955.14	8,405.24	6,086.05	5,431.96
Los Angeles-South Coast Air Basin Area, CA	NO ₂ (1971 Annual)	Maintenance, --	100	0	11,964.54	11,412.54	11,113.97	10,954.27	8,404.57	6,085.56	5,431.53
Los Angeles-South Coast Air Basin, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	11,964.05	11,412.08	11,113.45	10,953.71	8,404.14	6,085.32	5,431.22
Los Angeles-South Coast Air Basin, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	11,957.21	11,405.55	11,107.09	10,947.44	8,399.34	6,081.84	5,428.11
Los Angeles-South Coast Air Basin, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	11,961.46	11,409.61	11,111.05	10,951.34	8,402.33	6,084.00	5,430.05
Louisville, KY-IN	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	958.39	914.12	890.48	877.88	673.53	487.45	435.40
Lowell Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	65.27	62.26	60.64	59.78	45.87	33.20	29.65
Lucas County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	280.27	267.67	259.05	254.15	195.10	142.66	125.31
Madison County; Granite City Township and Nameoki Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	37.75	36.25	34.13	32.78	25.22	19.28	15.74
Manchester Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	81.76	77.99	75.98	74.91	57.47	41.59	37.16

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Manitowoc County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	35.79	34.14	33.26	32.79	25.15	18.20	16.26
Maricopa and Pinal Counties; Phoenix Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	2,928.63	2,793.30	2,721.24	2,682.89	2,058.36	1,489.53	1,330.72
Marion County: Lawrence, Washington, and Warrant Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	378.80	361.30	351.96	346.99	266.22	192.66	172.10
Mariposa County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	32.51	31.01	30.21	29.78	22.85	16.54	14.77
Mariposa County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	32.51	31.00	30.20	29.78	22.84	16.53	14.77
Marshall, WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	12.00	11.54	10.77	10.27	7.91	6.14	4.89
Medford Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	60.18	57.40	55.92	55.13	42.30	30.61	27.35
Memphis Area, TN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	745.47	711.07	692.50	682.57	523.70	379.17	338.46
Memphis, TN-MS-AR	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	965.69	921.12	897.12	884.30	678.46	491.18	438.51
Miami, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	11.27	10.76	10.43	10.25	7.86	5.74	5.06
Miami, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	11.31	10.79	10.51	10.36	7.95	5.75	5.14
Miami, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	11.36	10.85	10.51	10.33	7.93	5.78	5.10
Milwaukee-Racine, WI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	949.19	905.32	881.99	869.58	667.15	482.76	431.32
Minneapolis-St. Paul Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	2,469.52	2,355.65	2,293.71	2,260.53	1,734.39	1,256.10	1,120.72
Missoula Area, MT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	58.60	55.91	54.39	53.57	41.11	29.81	26.54
Missoula county; Missoula and Vicinity, MT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	58.95	56.24	54.71	53.89	41.35	29.99	26.70
Modesto Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	154.96	147.80	143.98	141.94	108.90	78.81	70.40

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Mohave County (part); Bullhead City, AZ	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	43.79	41.77	40.67	40.09	30.76	22.27	19.88
Mono County; Mammoth Lake Planning Area, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	22.33	21.30	20.74	20.44	15.68	11.36	10.13
Mono County; Mono Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	3.84	3.67	3.56	3.50	2.69	1.95	1.73
Morenci, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	2.73	2.60	2.53	2.50	1.92	1.39	1.24
Morgan County, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	25.11	23.95	23.34	23.01	17.65	12.77	11.41
Morongo Band of Mission Indians	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	1.84	1.76	1.68	1.64	1.26	0.94	0.80
Morongo Band of Mission Indians, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	1.95	1.86	1.78	1.74	1.33	0.99	0.85
Morristown Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	15.08	14.39	14.01	13.80	10.59	7.67	6.84
Muscatine County; (part), IA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	7.36	7.02	6.82	6.72	5.16	3.74	3.33
Muscatine, IA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	14.30	13.64	13.28	13.08	10.04	7.27	6.48
Muskegon County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	128.66	122.72	119.54	117.85	90.42	65.44	58.45
Muskingum River, OH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	4.09	3.90	3.80	3.74	2.87	2.08	1.85
Nashua Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	64.22	61.25	59.66	58.82	45.12	32.66	29.17
Nassau County, FL	SO ₂ (2010 1-hour)	Maintenance, --	100	0	5.47	5.22	5.08	5.01	3.85	2.78	2.49
Nevada County (Western part), CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	92.22	87.97	85.68	84.46	64.80	46.91	41.89
Nevada County (Western part), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	92.50	88.23	85.94	84.72	65.00	47.05	42.01
New Haven County, CT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	16.79	16.02	15.60	15.38	11.80	8.54	7.63
New Haven-Meriden-Waterbury Area, CT	CO (1971 8-hour)	Maintenance, --	100	0	633.23	603.98	588.33	579.99	444.98	322.07	287.64
New Manchester-Grant Magisterial District in Hancock County, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	4.37	4.19	3.99	3.86	2.97	2.23	1.87

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
New York County, NY	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	268.53	256.12	249.50	245.97	188.71	136.58	122.00
New York, NY-NJ-CT	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	10,162.96	9,693.45	9,442.85	9,309.36	7,142.33	5,169.01	4,617.23
New York-N. New Jersey-Long Island Area, NY-NJ-CT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	5,580.85	5,323.03	5,185.40	5,112.09	3,922.10	2,838.49	2,535.48
New York-N. New Jersey-Long Island, NY-NJ-CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	9,955.72	9,495.81	9,250.24	9,119.43	6,996.62	5,063.61	4,523.00
New York-Northern New Jersey-Long Island, NY-NJ-CT	Ozone (2015 8-hour)	Nonattainment, Moderate	50	0	9,949.08	9,489.47	9,244.07	9,113.35	6,991.95	5,060.23	4,519.98
NJ Portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	24.03	22.92	22.32	21.99	16.88	12.22	10.90
Nogales, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	25.21	24.05	23.43	23.10	17.72	12.82	11.46
Northern Milwaukee/Ozaukee Shoreline, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	50.99	48.63	47.38	46.71	35.84	25.93	23.17
Northern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1,179.04	1,124.97	1,093.94	1,077.04	826.46	599.81	533.34
Oakridge, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	2.45	2.34	2.28	2.25	1.72	1.25	1.11
Ogden Area, UT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	44.32	42.27	41.18	40.60	31.15	22.54	20.14
Ogden Area, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	44.32	42.27	41.18	40.60	31.15	22.54	20.14
Olmsted County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	22.27	21.25	20.66	20.34	15.61	11.33	10.07
Olmsted; City of Rochester, MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	77.87	74.28	72.30	71.23	54.66	39.61	35.30
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	1.29	1.24	1.13	1.05	0.81	0.66	0.48
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.28	1.24	1.12	1.04	0.80	0.66	0.48
Pekin, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	32.63	31.13	30.30	29.86	22.91	16.60	14.80

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
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Penns Grove Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.35	0.35	0.28	0.24	0.18	0.18	0.09
Peoria County: Hollis Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	2.37	2.27	2.19	2.14	1.64	1.21	1.05
Peoria County: Peoria, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	74.20	70.78	68.93	67.95	52.13	37.74	33.69
Perth Amboy Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	37.27	35.59	34.45	33.81	25.95	18.97	16.67
Philadelphia-Camden County Area, PA-NJ	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	770.42	735.29	714.03	702.28	538.95	392.00	347.33
Philadelphia-Wilmington, PA-NJ-DE	PM _{2.5} (2006 24-hour)	Maintenance, Moderate for PA and DE; Subject to Former Subpart 1 for NJ	100	0	3,511.80	3,350.15	3,260.71	3,212.54	2,464.91	1,786.34	1,592.11
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	4,671.36	4,456.17	4,337.98	4,274.47	3,279.66	2,376.12	2,118.74
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	4,668.67	4,453.60	4,335.48	4,272.01	3,277.77	2,374.75	2,117.52
Phoenix Area, AZ	CO (1971 8-hour)	Maintenance, Serious	100	0	2,827.84	2,697.17	2,627.59	2,590.56	1,987.52	1,438.27	1,284.92
Phoenix-Mesa, AZ	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	2,945.31	2,809.22	2,736.75	2,698.18	2,070.09	1,498.01	1,338.30
Phoenix-Mesa, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	3,023.41	2,883.70	2,809.31	2,769.72	2,124.97	1,537.73	1,373.79
Pierce County; Tacoma, WA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	3.45	3.31	3.15	3.05	2.35	1.76	1.48
Pima County; Ajo Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pima County; Rillito Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	43.27	41.28	40.16	39.56	30.35	22.01	19.60
Pinal and Gila Counties; Payson, AZ	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	14.04	13.39	13.05	12.86	9.87	7.14	6.38
Pinal County (part); West Pinal, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	211.10	201.36	196.11	193.32	148.32	107.37	95.86
Pitkin County; Aspen, CO	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	23.10	22.32	20.34	19.02	14.68	11.85	8.82
Pittsburgh Area, PA	CO (1971 8-hour)	Maintenance, --	100	0	185.15	176.63	171.90	169.36	129.95	94.18	83.93

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Pittsburgh-Beaver Valley, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	1,554.05	1,483.05	1,440.85	1,417.65	1,087.90	790.67	701.44
Pittsburgh-Beaver Valley, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	1,416.42	1,351.70	1,313.26	1,292.12	991.57	720.65	639.33
Plumas County, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	4.32	4.12	4.01	3.96	3.04	2.20	1.96
Polk County, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	20.63	19.68	19.16	18.89	14.49	10.49	9.37
Portland Area: Portland Metro Service District Boundary, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	933.65	890.51	867.51	855.26	656.17	474.87	424.20
Power-Bannock Counties; Fort Hall Indian Reservation, ID	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.58	0.55	0.54	0.53	0.41	0.30	0.26
Power-Bannock Counties; Portneuf Valley Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	55.29	52.74	51.38	50.65	38.86	28.12	25.12
Provo Area, UT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	71.83	68.51	66.74	65.80	50.48	36.53	32.64
Provo, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	373.54	356.61	345.83	339.79	260.79	190.10	167.84
Prowers County; Lamar, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	6.44	6.15	5.98	5.89	4.52	3.28	2.92
Raleigh-Durham Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	1,355.99	1,293.36	1,259.85	1,241.99	952.88	689.68	615.97
Ramsey County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	4.28	4.25	3.35	2.72	2.14	2.23	1.00
Reading, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	288.25	274.96	267.71	263.81	202.41	146.62	130.78
Reno Area, NV	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	237.83	226.84	220.99	217.88	167.16	120.96	108.07
Rhineland, WI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	22.66	21.61	21.06	20.76	15.93	11.53	10.30
Riverside County (Coachella Valley), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	359.36	342.77	333.84	329.06	252.47	182.78	163.18
Riverside County (Coachella Valley), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	359.36	342.77	333.84	329.07	252.47	182.78	163.18
Riverside County; Coachella Valley Planning Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	420.40	400.99	390.56	384.99	295.37	213.82	190.92

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Riverside, Los Angeles, Orange, and San Bernardino Counties; South Coast Air Basin, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	11,905.77	11,356.49	11,059.29	10,900.32	8,363.18	6,055.68	5,404.74
Rosebud County; Lame Deer, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	1.59	1.52	1.48	1.46	1.12	0.81	0.72
Routt County (part); Steamboat Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	28.14	27.23	24.63	22.89	17.69	14.44	10.53
Rusk and Panola Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	3.36	3.28	2.81	2.49	1.93	1.73	1.07
Sacramento Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	1,074.89	1,025.34	998.29	983.79	754.82	546.74	487.70
Sacramento County, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1,003.40	957.50	930.52	915.74	702.72	510.49	453.21
Sacramento Metro, CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	1,754.42	1,673.85	1,628.26	1,603.55	1,230.43	892.48	794.32
Sacramento Metro, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	1,754.23	1,673.67	1,628.09	1,603.38	1,230.29	892.38	794.23
Sacramento, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	1,716.98	1,638.14	1,593.48	1,569.25	1,204.11	873.44	777.31
Salem Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	170.17	162.31	158.12	155.90	119.61	86.55	77.33
Salt Lake City Area, UT	CO (1971 8-hour)	Maintenance, --	100	0	142.57	136.41	130.85	127.50	97.96	72.65	62.35
Salt Lake City, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	1,234.78	1,178.13	1,145.73	1,128.11	865.63	628.16	558.67
Salt Lake County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	755.33	720.84	700.22	688.86	528.64	384.30	340.79
Salt Lake County, UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	756.49	721.95	701.30	689.93	529.45	384.90	341.32
San Antonio, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1,369.01	1,305.89	1,271.49	1,253.05	961.41	696.34	621.21
San Bernardino County (part); excluding Searles Valley Planning Area and South Coast Air Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	485.08	463.30	448.25	439.66	337.52	246.93	216.72
San Diego Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	2,517.59	2,401.27	2,339.25	2,306.24	1,769.39	1,280.47	1,143.87

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
San Diego County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	2,528.16	2,411.36	2,349.08	2,315.93	1,776.82	1,285.85	1,148.68
San Diego County, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	2,520.53	2,404.07	2,341.99	2,308.93	1,771.46	1,281.97	1,145.21
San Francisco Bay Area, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	5,042.81	4,810.24	4,683.94	4,616.31	3,541.85	2,564.97	2,288.74
San Francisco Bay Area, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	5,035.66	4,803.42	4,677.30	4,609.75	3,536.82	2,561.33	2,285.49
San Francisco Bay Area, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	5,086.39	4,851.81	4,724.44	4,656.23	3,572.48	2,587.13	2,308.54
San Francisco-Oakland-San Jose Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	4,650.59	4,436.14	4,319.56	4,257.10	3,266.26	2,365.48	2,110.60
San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	2,966.10	2,830.07	2,752.06	2,709.59	2,079.17	1,508.93	1,341.78
San Joaquin Valley, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	2,966.13	2,830.10	2,752.08	2,709.62	2,079.19	1,508.94	1,341.79
San Joaquin Valley, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	2,966.26	2,830.22	2,752.20	2,709.74	2,079.28	1,509.01	1,341.85
San Joaquin Valley, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	2,964.69	2,828.70	2,750.85	2,708.50	2,078.33	1,508.21	1,341.30
San Joaquin Valley, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	2,964.69	2,828.70	2,750.85	2,708.50	2,078.33	1,508.21	1,341.30
San Luis Obispo (Eastern part), CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	5.23	5.06	4.58	4.25	3.29	2.69	1.95
San Luis Obispo (Eastern San Luis Obispo), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	5.21	5.04	4.56	4.23	3.27	2.67	1.94
San Manuel, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	8.66	8.27	8.01	7.86	6.03	4.41	3.87
San Miguel County; Telluride, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	7.23	6.92	6.64	6.47	4.97	3.69	3.17
Sanders County (part); Thompson Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.69	0.66	0.64	0.63	0.48	0.35	0.31
Santa Cruz County; Nogales Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	25.70	24.52	23.88	23.55	18.07	13.07	11.68
Seaford, DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	188.59	179.88	175.23	172.76	132.54	95.92	85.69

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Seattle-Tacoma Area, WA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	2,160.40	2,060.57	2,007.41	1,979.11	1,518.41	1,098.80	981.64
Seattle-Tacoma, WA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	357.13	340.64	331.79	327.07	250.94	181.65	162.20
Sheboygan County, WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	76.71	73.17	71.28	70.28	53.92	39.02	34.86
Sheboygan County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	39.04	37.23	36.27	35.76	27.44	19.85	17.74
Sheridan County; City of Sheridan, WY	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	15.82	15.10	14.68	14.45	11.09	8.05	7.15
Shoshone County (part); excluding Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	17.39	16.58	16.15	15.93	12.22	8.84	7.90
Shoshone County; City of Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02
Silver Bow County; Butte, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	18.24	17.39	16.95	16.71	12.82	9.28	8.29
Somerville Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	9.49	9.05	8.81	8.69	6.67	4.83	4.31
Southern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	373.52	356.59	345.81	339.77	260.78	190.09	167.83
Southwest Indiana, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	6.34	6.08	5.77	5.58	4.29	3.23	2.70
Spokane Area, WA	CO (1971 8-hour)	Maintenance, Serious	100	0	220.23	210.06	204.64	201.76	154.79	112.01	100.08
Spokane County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	224.40	214.03	208.51	205.58	157.72	114.13	101.97
Springfield Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	100.55	95.91	93.43	92.12	70.67	51.14	45.69
St. Bernard Parish, LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	24.43	23.72	21.07	19.28	14.93	12.56	8.68
St. Clair, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	36.82	35.13	34.17	33.65	25.82	18.73	16.67
St. Louis Area, MO	CO (1971 8-hour)	Maintenance, --	100	0	528.20	504.05	489.81	481.99	369.87	268.73	238.53
St. Louis, MO-IL	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1,590.99	1,517.87	1,476.78	1,454.55	1,116.08	809.33	720.62
St. Louis-St. Charles-Farmington, MO-IL	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	1,819.10	1,735.44	1,688.73	1,663.50	1,276.39	925.35	824.25

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Steubenville, OH-WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	43.82	41.85	40.51	39.76	30.52	22.31	19.61
Steubenville-Weirton, OH-WV	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	87.75	83.71	81.46	80.24	61.57	44.63	39.76
Stockton Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	254.75	242.98	236.70	233.35	179.03	129.57	115.73
Sullivan County, TN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	21.21	20.29	19.48	18.99	14.59	10.81	9.29
Sutter Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.04	0.04	0.03	0.02	0.02	0.02	0.01
Syracuse Area; Onondaga County, NY	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	336.55	320.99	312.72	308.31	236.54	171.17	152.92
Tazewell County: Groveland Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	16.03	15.29	14.89	14.68	11.26	8.15	7.28
Terre Haute, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	52.29	49.88	48.58	47.88	36.74	26.60	23.74
Thurston County; Cities of Olympia, Tumwater, and Lacey, WA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	71.29	67.99	66.24	65.31	50.11	36.26	32.40
Titus County, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.41	0.39	0.38	0.36	0.28	0.21	0.18
Toms River Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	2.41	2.30	2.23	2.19	1.68	1.22	1.08
Tooele County (part), UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	7.75	7.72	5.93	4.68	3.69	4.05	1.62
Trenton Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	62.55	59.66	58.12	57.30	43.96	31.81	28.42
Trona, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	2.74	2.67	2.30	2.05	1.59	1.41	0.89
Tucson Area, AZ	CO (1971 8-hour)	Maintenance, --	100	0	711.86	678.98	661.43	652.08	500.29	362.06	323.42
Tuolumne County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	50.77	48.43	47.16	46.48	35.66	25.82	23.04
Tuscan Buttes, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.02	0.02	0.01	0.01	0.01	0.01	0.00
Tuscan Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.02	0.02	0.01	0.01	0.01	0.01	0.00

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Uinta Basin, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	41.09	39.61	36.57	34.58	26.66	21.04	16.27
Union County; LaGrande, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	11.16	10.65	10.37	10.23	7.85	5.68	5.07
Upper Green River Basin Area, WY	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	23.46	22.52	21.27	20.47	15.75	11.98	9.86
Utah County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	377.93	360.98	349.17	342.42	262.87	192.39	168.75
Vancouver Area: Clark County (part), WA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	218.16	208.08	202.71	199.85	153.33	110.96	99.12
Ventura County, CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	641.55	612.55	593.60	582.91	447.43	326.52	287.75
Ventura County, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	640.81	611.85	592.91	582.23	446.91	326.14	287.41
Vermillion County; Part of Clinton Township, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	12.00	11.45	11.14	10.97	8.41	6.11	5.43
Vigo County, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	104.89	100.07	97.36	95.89	73.58	53.35	47.50
Walla Walla County; Wallula, WA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	2.38	2.27	2.21	2.18	1.67	1.21	1.08
Waltham Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	36.19	34.52	33.62	33.14	25.43	18.41	16.43
Warren County: Conewago Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	4.74	4.61	4.06	3.69	2.86	2.44	1.64
Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	14.60	14.02	13.20	12.68	9.76	7.46	6.09
Warren, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	18.08	17.34	16.43	15.86	12.19	9.23	7.66
Washington Area, DC-MD-VA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	581.71	554.90	540.23	532.35	408.45	295.89	263.89
Washington, DC-MD-VA	Ozone (2008 8-hour)	Nonattainment (DC) Maintenance (MD, VA), Marginal	50	0	4,101.96	3,912.52	3,811.10	3,757.02	2,882.48	2,086.33	1,863.28
Washington, DC-MD-VA	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	4,103.41	3,913.90	3,812.45	3,758.36	2,883.50	2,087.07	1,863.94
Washoe County; Reno Planning Area, NV	PM10 (1987 24-hour)	Maintenance, Serious	100	0	240.18	229.08	223.18	220.04	168.81	122.16	109.14

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	44.93	42.86	41.74	41.15	31.57	22.85	20.41
Wayne County; (part), MI	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	40.87	39.01	37.84	37.19	28.54	20.80	18.38
West Central Pinal County, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	42.49	40.53	39.44	38.84	29.80	21.61	19.24
West Silver Valley, ID	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	9.31	8.88	8.65	8.53	6.55	4.74	4.23
Williamson County, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	67.47	64.38	62.60	61.64	47.30	34.32	30.52
Winston-Salem Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	299.04	285.23	277.83	273.87	210.12	152.10	135.82
Worcester Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	139.12	132.69	129.26	127.44	97.77	70.76	63.21
Yakima Area, WA	CO (1971 8-hour)	Maintenance, --	100	0	19.84	18.93	18.44	18.18	13.95	10.09	9.02
Yakima County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	67.39	64.28	62.62	61.74	47.37	34.28	30.62
Yuba City-Marysville, CA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	146.85	140.09	136.36	134.35	103.08	74.70	66.59
Yuma County; Yuma Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	112.03	106.86	104.10	102.64	78.75	56.98	50.91
Yuma, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	57.65	54.98	53.57	52.81	40.52	29.32	26.20

Notes:

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Table A-16. Changes in Emissions from U.S. Passenger Cars and Light Trucks by Nonattainment or Maintenance Area and Alternative, Direct and Indirect Impacts--Acetaldehyde, 2025

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Ada County; Boise, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.04	-0.04	-0.03	-0.03	-0.02	-0.02	-0.02
Adams, Denver, and Boulder Counties; Denver Metropolitan Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.12	-0.11	-0.10	-0.10	-0.07	-0.06	-0.06
Ajo, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Albuquerque Area, NM	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.07	-0.07	-0.06	-0.06	-0.04	-0.04	-0.03
Allegan County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
Allegheny County Air Basin: Hazelwood Monitor, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
Allegheny County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	-0.07	-0.07	-0.06	-0.06	-0.05	-0.04	-0.04
Allegheny County; The Area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Allegheny, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Allentown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-0.06	-0.05	-0.05	-0.05	-0.03	-0.03	-0.03
Allentown-Bethlehem-Easton, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-0.07	-0.06	-0.06	-0.06	-0.04	-0.04	-0.03
Alton Township, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Amador County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
Anchorage Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Anchorage; Eagle River, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Anne Arundel County and Baltimore County, MD	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.12	-0.11	-0.10	-0.10	-0.07	-0.06	-0.05

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
AQCR 012: Portions of Grant County, NM	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AQCR 109-Millinocket, ME	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington Counties (Minneapolis-St. Paul), MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.32	-0.30	-0.27	-0.26	-0.19	-0.17	-0.14	
AQCR 237: Brown County: Green Bay Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AQCR 238: Marathon County: Rothschild Subcity Area, Rib Mountain, Weston, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.02	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
AQCR 238: Oneida County: Rhinelander Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00	0.00
AQCR 239: Milwaukee County: Milwaukee Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.06	-0.06	-0.06	-0.05	-0.04	-0.04	-0.04	-0.03
AQCR 240: Dane County: Madison Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.06	-0.05	-0.05	-0.05	-0.03	-0.03	-0.03	-0.03
Archuleta County; Pagosa Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01
Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
Aroostock County; City of Presque Isle, ME	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Atlanta, GA	Ozone (2008 8-hour)	Maintenance, Moderate	100	0	-0.60	-0.57	-0.52	-0.50	-0.36	-0.33	-0.28	
Atlanta, GA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.48	-0.45	-0.41	-0.40	-0.29	-0.26	-0.22	
Atlantic City Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bakersfield Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	-0.04	-0.04	-0.03	-0.03	-0.02	-0.02	-0.02	-0.02

Notes:

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NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Baltimore Area, MD	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Baltimore, MD	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	-0.29	-0.28	-0.25	-0.24	-0.18	-0.16	-0.13	
Baltimore, MD	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	-0.30	-0.28	-0.25	-0.25	-0.18	-0.16	-0.14	
Baton Rouge, LA	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-0.08	-0.07	-0.07	-0.07	-0.05	-0.04	-0.04	
Beaver, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Benton County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Berrien County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01	
Billings Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00	
Billings, MT	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Birmingham, AL	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-0.11	-0.11	-0.10	-0.10	-0.07	-0.06	-0.05	
Boise-Northern Ada County Area, ID	CO (1971 8-hour)	Maintenance, --	100	0	-0.04	-0.04	-0.03	-0.03	-0.02	-0.02	-0.02	
Bonner County; The Sandpoint Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Boston Area, MA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.06	-0.06	-0.05	-0.05	-0.04	-0.03	-0.03	
Boyd County (part), KY	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Brooke; Follansbee Area, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Burlington Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Butte County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01	
Calaveras County, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	-0.01	-0.01	0.00	0.00	0.00	0.00	0.00	
Calaveras County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.01	-0.01	0.00	0.00	0.00	0.00	0.00	

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Campbell-Clermont Counties, KY-OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Canton-Massillon, OH	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-0.03	-0.03	-0.03	-0.03	-0.03	-0.02	-0.02	-0.02
Central New Hampshire, NH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
Central Steptoe Valley, NV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Charleston, WV	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-0.02	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Charlotte Area, NC	CO (1971 8-hour)	Maintenance, --	100	0	-0.16	-0.15	-0.14	-0.13	-0.13	-0.10	-0.09	-0.07
Charlotte-Rock Hill, NC-SC	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-0.30	-0.28	-0.25	-0.25	-0.25	-0.18	-0.16	-0.13
Chicago, IL-IN-WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.67	-0.63	-0.58	-0.55	-0.55	-0.40	-0.36	-0.30
Chicago-Naperville, IL-IN-WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-0.73	-0.69	-0.62	-0.60	-0.60	-0.44	-0.40	-0.33
Chico (Butte County), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
Chico Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
Chico, CA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
Cincinnati, OH-KY	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.21	-0.20	-0.18	-0.18	-0.18	-0.13	-0.12	-0.10
Cincinnati, OH-KY-IN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-0.22	-0.21	-0.19	-0.19	-0.19	-0.13	-0.12	-0.10
Clark County; Las Vegas Planning Area, NV	PM10 (1987 24-hour)	Maintenance, Serious	100	0	-0.20	-0.19	-0.17	-0.17	-0.17	-0.12	-0.11	-0.09
Cleveland Area, OH	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.12	-0.11	-0.10	-0.10	-0.10	-0.07	-0.06	-0.05
Cleveland, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.29	-0.27	-0.25	-0.24	-0.24	-0.17	-0.16	-0.13
Cleveland, OH	PM2.5 (2012 Annual)	Maintenance, Moderate	100	0	-0.15	-0.14	-0.13	-0.13	-0.12	-0.09	-0.08	-0.07
Cleveland-Akron-Lorain, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-0.30	-0.28	-0.26	-0.25	-0.25	-0.18	-0.16	-0.14

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Cleveland-Akron-Lorain, OH	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-0.28	-0.26	-0.24	-0.23	-0.17	-0.15	-0.13
Cochise County; Paul Spur/Douglas Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Colorado Springs Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.06	-0.05	-0.05	-0.05	-0.03	-0.03	-0.03
Columbus, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-0.21	-0.20	-0.18	-0.17	-0.12	-0.11	-0.09
Columbus, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.19	-0.18	-0.17	-0.16	-0.12	-0.11	-0.09
Cook County; Lyons Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
Cook County; Southeast Chicago, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
Coshocton County; Franklin Township, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coso Junction, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cuyahoga County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.09	-0.09	-0.08	-0.08	-0.06	-0.05	-0.04
Cuyahoga County, OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.12	-0.11	-0.10	-0.10	-0.07	-0.06	-0.05
Dallas-Fort Worth, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-0.75	-0.71	-0.65	-0.62	-0.45	-0.41	-0.35
Dallas-Fort Worth, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.74	-0.70	-0.64	-0.61	-0.45	-0.40	-0.34
Delaware County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	-0.04	-0.04	-0.03	-0.03	-0.02	-0.02	-0.02
Denver Metro/North Front Range, CO	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.30	-0.29	-0.26	-0.25	-0.18	-0.16	-0.14
Denver-Boulder Area, CO	CO (1971 8-hour)	Maintenance, Serious	100	0	-0.23	-0.22	-0.20	-0.19	-0.14	-0.12	-0.11
Denver-Boulder-Greeley-Ft Collins-Loveland, CO	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-0.30	-0.29	-0.26	-0.25	-0.18	-0.16	-0.14
Detroit Area, MI	CO (1971 8-hour)	Maintenance, --	100	0	-0.16	-0.16	-0.14	-0.14	-0.10	-0.09	-0.07
Detroit, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.47	-0.44	-0.40	-0.39	-0.28	-0.26	-0.21

Notes:

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				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Detroit, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
Detroit-Ann Arbor, MI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-0.47	-0.45	-0.41	-0.39	-0.28	-0.26	-0.21
Doña Ana County (Sunland Park Area), NM	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Doña Ana County; Anthony, NM	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Door County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Douglas, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dukes County, MA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Duluth Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
East Chicago Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
East Helena Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
East Kern County Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
El Paso County, TX	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.05	-0.05	-0.04	-0.04	-0.03	-0.03	-0.02
El Paso, TX	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Eugene-Springfield Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
Evangeline Parish (Partial), LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fairbanks Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fairbanks, AK	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flathead County; Columbia Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flathead County; Kalispell and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Flathead County; Whitefish and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fort Collins Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Freehold Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Freestone and Anderson Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fremont County; Canon City Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fresno Area, CA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	-0.05	-0.05	-0.05	-0.05	-0.03	-0.03	-0.02	-0.02
Grants Pass Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Great Falls Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Greater Connecticut, CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	-0.16	-0.15	-0.14	-0.13	-0.10	-0.09	-0.07	-0.07
Greater Connecticut, CT	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	-0.16	-0.15	-0.14	-0.13	-0.10	-0.09	-0.07	-0.07
Greeley Area, CO	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.00	0.01	0.00	0.00
Hancock and Brooke Counties (Part); The City of Weirton, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hancock County (Part) The City of Weirton, including Butler and Clay: Magisterial Districts, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Harrisburg-Lebanon-Carlisle-York, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-0.11	-0.10	-0.09	-0.09	-0.07	-0.06	-0.05	-0.05
Hartford-New Britain-Middletown Area, CT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.11	-0.10	-0.09	-0.09	-0.07	-0.06	-0.05	-0.05
Hayden, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
Hayden, AZ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Hayden, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Hillsborough County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hillsborough-Polk County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Houston-Galveston-Brazoria, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-0.51	-0.48	-0.44	-0.42	-0.32	-0.27	-0.25	
Houston-Galveston-Brazoria, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.50	-0.47	-0.43	-0.41	-0.31	-0.26	-0.24	
Humphreys County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huntington, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Imperial County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01	
Imperial County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01	
Imperial County, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	-0.02	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01	
Imperial County, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	-0.02	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01	
Imperial County; Imperial Valley Planning Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01	
Indian Wells, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Indiana, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01	
Indianapolis Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Indianapolis, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.06	-0.05	-0.05	-0.05	-0.03	-0.03	-0.03	
Inyo County; Owens Valley Planning Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Jackson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Jackson County; Medford-Ashland (including White City), OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Jamestown, NY	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Jefferson County, KY	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jefferson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jefferson County; (part) Steubenville & Mingo Junction, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jefferson County; (part), OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Johnstown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Josephine County; Grants Pass, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Juneau; Mendenhall Valley Area, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kern County (Eastern Kern), CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Kern County (Eastern Kern), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
King County; Kent, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
King County; Seattle, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Klamath County; Klamath Falls, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.01	-0.01	0.00	0.00	0.00	0.00	0.00
Klamath Falls Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.01	-0.01	0.00	0.00	0.00	0.00	0.00
Klamath Falls, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
Knoxville, TN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-0.08	-0.08	-0.07	-0.07	-0.05	-0.04	-0.04
Knoxville-Sevierville-La Follette, TN	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-0.10	-0.09	-0.08	-0.08	-0.06	-0.05	-0.05
La Porte County; (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.01	-0.01	-0.01	0.00	0.00	0.00	0.00
Lake County (part); Lakeview, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Lake County, OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
Lake County: (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.03	-0.03	-0.03	-0.03	-0.03	-0.02	-0.02	-0.01
Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
Lake County; Polson, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake County; Ronan, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake Tahoe Nevada Area, NV	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake Tahoe North Shore Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake Tahoe South Shore Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lancaster, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-0.05	-0.05	-0.04	-0.04	-0.04	-0.03	-0.03	-0.02
Lancaster, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-0.05	-0.05	-0.04	-0.04	-0.04	-0.03	-0.03	-0.02
Lane County (part); Oakridge, OR	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lane County; Eugene/Springfield, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
Las Vegas Area, NV	CO (1971 8-hour)	Maintenance, Serious	100	0	-0.20	-0.19	-0.17	-0.17	-0.17	-0.12	-0.11	-0.09
Las Vegas, NV	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.20	-0.19	-0.17	-0.17	-0.17	-0.12	-0.11	-0.09
LaSalle County; Oglesby, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Laurel Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lebanon County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Lemont, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Liberty-Clairton, PA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lincoln County; Libby and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Logan, UT-ID	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Longmont Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01
Lorain County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Los Angeles, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	-1.55	-1.47	-1.34	-1.29	-0.93	-0.84	-0.71	-0.71
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	-0.07	-0.07	-0.06	-0.06	-0.05	-0.04	-0.04	-0.04
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	-0.07	-0.07	-0.06	-0.06	-0.05	-0.04	-0.04	-0.04
Los Angeles-South Coast Air Basin Area, CA	CO (1971 8-hour)	Maintenance, Serious	100	0	-1.56	-1.47	-1.34	-1.29	-0.93	-0.85	-0.71	-0.71
Los Angeles-South Coast Air Basin Area, CA	NO ₂ (1971 Annual)	Maintenance, --	100	0	-1.55	-1.47	-1.34	-1.29	-0.93	-0.85	-0.71	-0.71
Los Angeles-South Coast Air Basin, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	-1.55	-1.47	-1.34	-1.29	-0.93	-0.84	-0.71	-0.71
Los Angeles-South Coast Air Basin, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	-1.55	-1.47	-1.34	-1.29	-0.93	-0.84	-0.71	-0.71
Los Angeles-South Coast Air Basin, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	-1.55	-1.47	-1.34	-1.29	-0.93	-0.84	-0.71	-0.71
Louisville, KY-IN	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.13	-0.12	-0.11	-0.10	-0.08	-0.07	-0.06	-0.06
Lowell Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
Lucas County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.04	-0.03	-0.03	-0.03	-0.02	-0.02	-0.02	-0.02
Madison County; Granite City Township and Nameoki Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Manchester Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Manitowoc County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maricopa and Pinal Counties; Phoenix Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	-0.38	-0.36	-0.33	-0.32	-0.23	-0.21	-0.17	
Marion County: Lawrence, Washington, and Warrant Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.05	-0.05	-0.04	-0.04	-0.03	-0.03	-0.02	
Mariposa County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mariposa County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Marshall, WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Medford Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00	0.00
Memphis Area, TN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.10	-0.09	-0.08	-0.08	-0.06	-0.05	-0.04	
Memphis, TN-MS-AR	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-0.13	-0.12	-0.11	-0.11	-0.08	-0.07	-0.06	
Miami, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Miami, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Miami, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Milwaukee-Racine, WI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-0.13	-0.12	-0.11	-0.10	-0.08	-0.07	-0.06	
Minneapolis-St. Paul Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.33	-0.31	-0.28	-0.27	-0.20	-0.18	-0.15	
Missoula Area, MT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00	0.00
Missoula county; Missoula and Vicinity, MT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00	0.00
Modesto Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01	

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Mohave County (part); Bullhead City, AZ	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.01	-0.01	0.00	0.00	0.00	0.00	0.00
Mono County; Mammoth Lake Planning Area, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mono County; Mono Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morenci, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morgan County, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morongo Band of Mission Indians	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morongo Band of Mission Indians, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morristown Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Muscatine County; (part), IA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Muscatine, IA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Muskegon County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.02	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01
Muskingum River, OH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nashua Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00
Nassau County, FL	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nevada County (Western part), CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Nevada County (Western part), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
New Haven County, CT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
New Haven-Meriden-Waterbury Area, CT	CO (1971 8-hour)	Maintenance, --	100	0	-0.08	-0.08	-0.07	-0.07	-0.05	-0.05	-0.04
New Manchester-Grant Magisterial District in Hancock County, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
New York County, NY	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.04	-0.03	-0.03	-0.03	-0.02	-0.02	-0.02
New York, NY-NJ-CT	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-1.34	-1.27	-1.15	-1.11	-0.80	-0.73	-0.61
New York-N. New Jersey-Long Island Area, NY-NJ-CT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	-0.74	-0.70	-0.64	-0.61	-0.44	-0.40	-0.34
New York-N. New Jersey-Long Island, NY-NJ-CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	-1.31	-1.24	-1.13	-1.09	-0.79	-0.71	-0.60
New York-Northern New Jersey-Long Island, NY-NJ-CT	Ozone (2015 8-hour)	Nonattainment, Moderate	50	0	-1.31	-1.24	-1.13	-1.09	-0.79	-0.71	-0.60
NJ Portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nogales, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Northern Milwaukee/Ozaukee Shoreline, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
Northern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.16	-0.15	-0.13	-0.13	-0.09	-0.08	-0.07
Oakridge, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ogden Area, UT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.01	-0.01	-0.01	0.00	0.00	0.00	0.00
Ogden Area, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.01	-0.01	-0.01	0.00	0.00	0.00	0.00
Olmsted County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Olmsted; City of Rochester, MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pekin, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Penns Grove Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Peoria County: Hollis Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Peoria County: Peoria, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
Perth Amboy Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Philadelphia-Camden County Area, PA-NJ	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.10	-0.10	-0.09	-0.08	-0.06	-0.06	-0.06	-0.05
Philadelphia-Wilmington, PA-NJ-DE	PM _{2.5} (2006 24-hour)	Maintenance, Moderate for PA and DE; Subject to Former Subpart 1 for NJ	100	0	-0.45	-0.43	-0.39	-0.38	-0.27	-0.25	-0.25	-0.21
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-0.61	-0.57	-0.52	-0.50	-0.36	-0.33	-0.33	-0.28
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	-0.61	-0.57	-0.52	-0.50	-0.36	-0.33	-0.33	-0.28
Phoenix Area, AZ	CO (1971 8-hour)	Maintenance, Serious	100	0	-0.37	-0.35	-0.32	-0.31	-0.22	-0.20	-0.20	-0.17
Phoenix-Mesa, AZ	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-0.38	-0.36	-0.33	-0.32	-0.23	-0.21	-0.21	-0.18
Phoenix-Mesa, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.39	-0.37	-0.34	-0.33	-0.24	-0.21	-0.21	-0.18
Pierce County; Tacoma, WA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pima County; Ajo Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pima County; Rillito Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pinal and Gila Counties; Payson, AZ	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pinal County (part); West Pinal, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01	-0.01
Pitkin County; Aspen, CO	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.05	0.05	0.04	0.04	0.03	0.03	0.03	0.02
Pittsburgh Area, PA	CO (1971 8-hour)	Maintenance, --	100	0	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01	-0.01

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				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Pittsburgh-Beaver Valley, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-0.15	-0.14	-0.13	-0.12	-0.09	-0.08	-0.07
Pittsburgh-Beaver Valley, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-0.13	-0.13	-0.11	-0.11	-0.08	-0.07	-0.07
Plumas County, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Polk County, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Portland Area: Portland Metro Service District Boundary, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.12	-0.12	-0.11	-0.10	-0.07	-0.07	-0.06
Power-Bannock Counties; Fort Hall Indian Reservation, ID	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Power-Bannock Counties; Portneuf Valley Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
Provo Area, UT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
Provo, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	-0.05	-0.05	-0.04	-0.04	-0.03	-0.03	-0.02
Prowers County; Lamar, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Raleigh-Durham Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.18	-0.17	-0.15	-0.15	-0.11	-0.10	-0.08
Ramsey County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Reading, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-0.04	-0.04	-0.03	-0.03	-0.02	-0.02	-0.02
Reno Area, NV	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.03	-0.03	-0.03	-0.03	-0.02	-0.02	-0.01
Rhineland, WI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Riverside County (Coachella Valley), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	-0.05	-0.04	-0.04	-0.04	-0.03	-0.03	-0.02
Riverside County (Coachella Valley), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	-0.05	-0.04	-0.04	-0.04	-0.03	-0.03	-0.02
Riverside County; Coachella Valley Planning Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	-0.06	-0.05	-0.05	-0.05	-0.03	-0.03	-0.03

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Riverside, Los Angeles, Orange, and San Bernardino Counties; South Coast Air Basin, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	-1.55	-1.47	-1.33	-1.28	-0.93	-0.84	-0.71
Rosebud County; Lame Deer, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Routt County (part); Steamboat Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.06	0.05	0.05	0.05	0.03	0.03	0.02
Rusk and Panola Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Sacramento Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.14	-0.13	-0.12	-0.12	-0.08	-0.08	-0.06
Sacramento County, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.13	-0.12	-0.11	-0.10	-0.08	-0.07	-0.06
Sacramento Metro, CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	-0.23	-0.21	-0.19	-0.19	-0.14	-0.12	-0.10
Sacramento Metro, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	-0.23	-0.21	-0.19	-0.19	-0.14	-0.12	-0.10
Sacramento, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	-0.22	-0.21	-0.19	-0.18	-0.13	-0.12	-0.10
Salem Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
Salt Lake City Area, UT	CO (1971 8-hour)	Maintenance, --	100	0	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01	-0.01
Salt Lake City, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	-0.16	-0.15	-0.14	-0.13	-0.10	-0.09	-0.07
Salt Lake County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.10	-0.09	-0.09	-0.08	-0.06	-0.05	-0.05
Salt Lake County, UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	-0.10	-0.09	-0.09	-0.08	-0.06	-0.05	-0.05
San Antonio, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.18	-0.17	-0.15	-0.15	-0.11	-0.10	-0.08
San Bernardino County (part); excluding Searles Valley Planning Area and South Coast Air Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.04	-0.04	-0.04	-0.03	-0.03	-0.02	-0.02
San Diego Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.33	-0.32	-0.29	-0.28	-0.20	-0.18	-0.15

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
San Diego County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-0.33	-0.32	-0.29	-0.28	-0.20	-0.18	-0.15
San Diego County, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	-0.33	-0.32	-0.29	-0.28	-0.20	-0.18	-0.15
San Francisco Bay Area, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	-0.66	-0.63	-0.57	-0.55	-0.40	-0.36	-0.30
San Francisco Bay Area, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.66	-0.63	-0.57	-0.55	-0.40	-0.36	-0.30
San Francisco Bay Area, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	-0.67	-0.64	-0.58	-0.56	-0.40	-0.37	-0.31
San Francisco-Oakland-San Jose Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.61	-0.58	-0.53	-0.51	-0.37	-0.33	-0.28
San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	-0.37	-0.35	-0.32	-0.30	-0.22	-0.20	-0.17
San Joaquin Valley, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	-0.37	-0.35	-0.32	-0.30	-0.22	-0.20	-0.17
San Joaquin Valley, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	-0.37	-0.35	-0.32	-0.30	-0.22	-0.20	-0.17
San Joaquin Valley, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	-0.37	-0.35	-0.32	-0.30	-0.22	-0.20	-0.17
San Joaquin Valley, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	-0.37	-0.35	-0.32	-0.30	-0.22	-0.20	-0.17
San Luis Obispo (Eastern part), CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
San Luis Obispo (Eastern San Luis Obispo), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
San Manuel, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.00	0.00	0.00	0.00	0.00
San Miguel County; Telluride, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sanders County (part); Thompson Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Santa Cruz County; Nogales Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Seaford, DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Seattle-Tacoma Area, WA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	-0.29	-0.27	-0.25	-0.24	-0.17	-0.16	-0.13
Seattle-Tacoma, WA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-0.05	-0.04	-0.04	-0.04	-0.03	-0.03	-0.02
Sheboygan County, WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
Sheboygan County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.01	0.00	0.00	0.00	0.00	0.00	0.00
Sheridan County; City of Sheridan, WY	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Shoshone County (part); excluding Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Shoshone County; City of Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Silver Bow County; Butte, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Somerville Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Southern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.05	-0.05	-0.04	-0.04	-0.03	-0.03	-0.02
Southwest Indiana, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Spokane Area, WA	CO (1971 8-hour)	Maintenance, Serious	100	0	-0.03	-0.03	-0.03	-0.02	-0.02	-0.02	-0.01
Spokane County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.03	-0.03	-0.03	-0.02	-0.02	-0.02	-0.01
Springfield Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
St. Bernard Parish, LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
St. Clair, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
St. Louis Area, MO	CO (1971 8-hour)	Maintenance, --	100	0	-0.07	-0.07	-0.06	-0.06	-0.04	-0.04	-0.03
St. Louis, MO-IL	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.21	-0.20	-0.18	-0.17	-0.13	-0.11	-0.10
St. Louis-St. Charles-Farmington, MO-IL	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-0.24	-0.23	-0.21	-0.20	-0.14	-0.13	-0.11

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Steubenville, OH-WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Steubenville-Weirton, OH-WV	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Stockton Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.03	-0.03	-0.03	-0.03	-0.03	-0.02	-0.02	-0.02
Sullivan County, TN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sutter Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Syracuse Area; Onondaga County, NY	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.04	-0.04	-0.04	-0.04	-0.04	-0.03	-0.02	-0.02
Tazewell County: Groveland Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Terre Haute, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
Thurston County; Cities of Olympia, Tumwater, and Lacey, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
Titus County, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Toms River Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tooele County (part), UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trenton Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
Trona, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tucson Area, AZ	CO (1971 8-hour)	Maintenance, --	100	0	-0.09	-0.08	-0.08	-0.08	-0.07	-0.05	-0.05	-0.04
Tuolumne County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
Tuscan Buttes, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tuscan Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Uinta Basin, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Union County; LaGrande, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Upper Green River Basin Area, WY	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.01
Utah County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.05	-0.05	-0.04	-0.04	-0.04	-0.03	-0.03	-0.02
Vancouver Area: Clark County (part), WA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.03	-0.03	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01
Ventura County, CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	-0.06	-0.06	-0.05	-0.05	-0.05	-0.04	-0.03	-0.03
Ventura County, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	-0.06	-0.06	-0.05	-0.05	-0.05	-0.04	-0.03	-0.03
Vermillion County; Part of Clinton Township, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vigo County, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Walla Walla County; Wallula, WA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Waltham Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Warren County: Conewago Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Warren, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Washington Area, DC-MD-VA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.08	-0.07	-0.07	-0.07	-0.06	-0.05	-0.04	-0.03
Washington, DC-MD-VA	Ozone (2008 8-hour)	Nonattainment (DC) Maintenance (MD, VA), Marginal	50	0	-0.54	-0.51	-0.47	-0.47	-0.45	-0.33	-0.30	-0.25
Washington, DC-MD-VA	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	-0.54	-0.51	-0.47	-0.47	-0.45	-0.33	-0.30	-0.25
Washoe County; Reno Planning Area, NV	PM10 (1987 24-hour)	Maintenance, Serious	100	0	-0.03	-0.03	-0.03	-0.03	-0.03	-0.02	-0.02	-0.01

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.01	-0.01	-0.01	0.00	0.00	0.00	0.00
Wayne County; (part), MI	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.01	-0.01	0.00	0.00	0.00	0.00	0.00
West Central Pinal County, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
West Silver Valley, ID	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Williamson County, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00
Winston-Salem Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.04	-0.04	-0.03	-0.03	-0.02	-0.02	-0.02
Worcester Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
Yakima Area, WA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Yakima County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00
Yuba City-Marysville, CA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
Yuma County; Yuma Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Yuma, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

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Table A-17. Changes in Emissions from U.S. Passenger Cars and Light Trucks by Nonattainment or Maintenance Area and Alternative, Direct and Indirect Impacts--Acetaldehyde, 2035

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Ada County; Boise, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Adams, Denver, and Boulder Counties; Denver Metropolitan Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.21	0.21	0.21	0.21	0.16	0.14	0.11
Ajo, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Albuquerque Area, NM	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.04	0.04	0.04	0.04	0.04	0.03	0.03
Allegan County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.01	0.00	0.00	0.00
Allegheny County Air Basin: Hazelwood Monitor, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Allegheny County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.12	0.12	0.12	0.12	0.09	0.08	0.07
Allegheny County; The Area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Allegheny, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.04	0.04	0.04	0.04	0.03	0.03	0.02
Allentown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.03	0.03	0.03	0.04	0.03	0.03	0.02
Allentown-Bethlehem-Easton, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.04	0.04	0.04	0.04	0.03	0.03	0.03
Alton Township, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Amador County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Anchorage Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Anchorage; Eagle River, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Anne Arundel County and Baltimore County, MD	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.06	0.07	0.07	0.07	0.06	0.05	0.05

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
AQCR 012: Portions of Grant County, NM	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AQCR 109-Millinocket, ME	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington Counties (Minneapolis-St. Paul), MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.18	0.19	0.19	0.20	0.16	0.15	0.14	
AQCR 237: Brown County: Green Bay Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AQCR 238: Marathon County: Rothschild Subcity Area, Rib Mountain, Weston, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
AQCR 238: Oneida County: Rhinelander Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AQCR 239: Milwaukee County: Milwaukee Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.03	0.04	0.04	0.04	0.03	0.03	0.03	0.03
AQCR 240: Dane County: Madison Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.03	0.03	0.03	0.04	0.03	0.03	0.03	0.02
Archuleta County; Pagosa Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.07	0.07	0.06	0.06	0.04	0.04	0.04	0.03
Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01
Aroostock County; City of Presque Isle, ME	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Atlanta, GA	Ozone (2008 8-hour)	Maintenance, Moderate	100	0	0.34	0.35	0.37	0.39	0.31	0.28	0.26	
Atlanta, GA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.27	0.28	0.29	0.31	0.25	0.22	0.21	
Atlantic City Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bakersfield Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	0.04	0.04	0.04	0.04	0.03	0.03	0.03	0.02

Notes:

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NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Baltimore Area, MD	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Baltimore, MD	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	0.16	0.17	0.18	0.19	0.15	0.14	0.13
Baltimore, MD	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	0.16	0.17	0.18	0.19	0.15	0.14	0.13
Baton Rouge, LA	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.08	0.09	0.09	0.09	0.07	0.06	0.05
Beaver, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benton County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Berrien County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Billings Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.01	0.00	0.00	0.00
Billings, MT	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Birmingham, AL	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.08	0.08	0.08	0.09	0.07	0.06	0.06
Boise-Northern Ada County Area, ID	CO (1971 8-hour)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Bonner County; The Sandpoint Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Boston Area, MA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.03	0.04	0.04	0.04	0.03	0.03	0.03
Boyd County (part), KY	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Brooke; Follansbee Area, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Burlington Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Butte County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Calaveras County, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Calaveras County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Campbell-Clermont Counties, KY-OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Canton-Massillon, OH	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Central New Hampshire, NH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Central Steptoe Valley, NV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Charleston, WV	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.07	0.07	0.06	0.06	0.05	0.04	0.03	0.03
Charlotte Area, NC	CO (1971 8-hour)	Maintenance, --	100	0	0.09	0.09	0.10	0.10	0.08	0.07	0.07	0.07
Charlotte-Rock Hill, NC-SC	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.17	0.18	0.19	0.20	0.16	0.14	0.13	0.13
Chicago, IL-IN-WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.37	0.39	0.40	0.43	0.34	0.31	0.29	0.29
Chicago-Naperville, IL-IN-WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.40	0.42	0.44	0.46	0.37	0.34	0.31	0.31
Chico (Butte County), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Chico Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
Chico, CA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Cincinnati, OH-KY	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.12	0.12	0.13	0.13	0.11	0.10	0.09	0.09
Cincinnati, OH-KY-IN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.12	0.13	0.13	0.14	0.11	0.10	0.10	0.10
Clark County; Las Vegas Planning Area, NV	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.11	0.11	0.12	0.13	0.10	0.09	0.08	0.08
Cleveland Area, OH	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.06	0.07	0.07	0.07	0.06	0.05	0.05	0.05
Cleveland, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.16	0.17	0.17	0.18	0.15	0.13	0.12	0.12
Cleveland, OH	PM2.5 (2012 Annual)	Maintenance, Moderate	100	0	0.08	0.08	0.09	0.09	0.07	0.07	0.06	0.06
Cleveland-Akron-Lorain, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.17	0.18	0.19	0.20	0.16	0.14	0.13	0.13

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Cleveland-Akron-Lorain, OH	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.15	0.16	0.17	0.18	0.14	0.13	0.12
Cochise County; Paul Spur/Douglas Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Colorado Springs Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.03	0.04	0.04	0.04	0.03	0.03	0.03
Columbus, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.12	0.12	0.13	0.13	0.11	0.10	0.09
Columbus, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.11	0.11	0.12	0.13	0.10	0.09	0.08
Cook County; Lyons Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cook County; Southeast Chicago, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Coshocton County; Franklin Township, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coso Junction, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Cuyahoga County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.05	0.05	0.06	0.06	0.05	0.04	0.04
Cuyahoga County, OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.06	0.07	0.07	0.07	0.06	0.05	0.05
Dallas-Fort Worth, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.54	0.56	0.57	0.59	0.47	0.43	0.38
Dallas-Fort Worth, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.54	0.56	0.57	0.59	0.47	0.42	0.37
Delaware County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Denver Metro/North Front Range, CO	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.34	0.34	0.34	0.34	0.27	0.24	0.20
Denver-Boulder Area, CO	CO (1971 8-hour)	Maintenance, Serious	100	0	0.28	0.29	0.28	0.29	0.22	0.20	0.17
Denver-Boulder-Greeley-Ft Collins-Loveland, CO	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.34	0.34	0.34	0.34	0.27	0.24	0.20
Detroit Area, MI	CO (1971 8-hour)	Maintenance, --	100	0	0.09	0.09	0.10	0.10	0.08	0.08	0.07
Detroit, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.26	0.28	0.29	0.30	0.24	0.22	0.20

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				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Detroit, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Detroit-Ann Arbor, MI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.26	0.28	0.29	0.30	0.24	0.22	0.20	0.20
Doña Ana County (Sunland Park Area), NM	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Doña Ana County; Anthony, NM	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Door County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Douglas, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dukes County, MA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Duluth Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
East Chicago Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
East Helena Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
East Kern County Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
El Paso County, TX	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.03	0.03	0.03	0.04	0.03	0.03	0.03	0.02
El Paso, TX	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
Eugene-Springfield Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Evangeline Parish (Partial), LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fairbanks Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fairbanks, AK	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flathead County; Columbia Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flathead County; Kalispell and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Flathead County; Whitefish and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fort Collins Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Freehold Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Freestone and Anderson Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Fremont County; Canon City Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Fresno Area, CA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	0.03	0.03	0.03	0.04	0.03	0.03	0.03	0.02
Grants Pass Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Great Falls Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Greater Connecticut, CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	0.09	0.09	0.09	0.10	0.08	0.07	0.07	0.07
Greater Connecticut, CT	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	0.09	0.09	0.10	0.10	0.08	0.07	0.07	0.07
Greeley Area, CO	CO (1971 8-hour)	Maintenance, --	100	0	0.14	0.14	0.13	0.12	0.09	0.08	0.08	0.06
Hancock and Brooke Counties (Part); The City of Weirton, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hancock County (Part) The City of Weirton, including Butler and Clay: Magisterial Districts, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.04	0.04	0.03	0.03	0.02	0.02	0.02	0.01
Harrisburg-Lebanon-Carlisle-York, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.06	0.07	0.07	0.07	0.06	0.05	0.05	0.05
Hartford-New Britain-Middletown Area, CT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.06	0.06	0.06	0.07	0.05	0.05	0.05	0.05
Hayden, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01
Hayden, AZ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Hayden, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Hillsborough County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hillsborough-Polk County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Houston-Galveston-Brazoria, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.85	0.86	0.83	0.83	0.83	0.65	0.58	0.47
Houston-Galveston-Brazoria, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.84	0.85	0.82	0.82	0.82	0.63	0.57	0.46
Humphreys County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huntington, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Imperial County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Imperial County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Imperial County, CA	PM _{2.5} (2006 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Imperial County, CA	PM _{2.5} (2012 Annual)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Imperial County; Imperial Valley Planning Area, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Serious	70	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Indian Wells, CA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Indiana, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.09	0.09	0.08	0.07	0.07	0.06	0.05	0.03
Indianapolis Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Indianapolis, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.03	0.03	0.03	0.03	0.04	0.03	0.03	0.02
Inyo County; Owens Valley Planning Area, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Serious	70	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jackson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jackson County; Medford-Ashland (including White City), OR	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Jamestown, NY	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01
Jefferson County, KY	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jefferson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jefferson County; (part) Steubenville & Mingo Junction, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jefferson County; (part), OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Johnstown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.06	0.06	0.06	0.05	0.04	0.04	0.04	0.03
Josephine County; Grants Pass, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Juneau; Mendenhall Valley Area, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kern County (Eastern Kern), CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	0.07	0.07	0.06	0.06	0.04	0.04	0.04	0.03
Kern County (Eastern Kern), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	0.07	0.07	0.06	0.06	0.04	0.04	0.04	0.03
King County; Kent, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
King County; Seattle, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Klamath County; Klamath Falls, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Klamath Falls Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Klamath Falls, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Knoxville, TN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.05	0.05	0.05	0.06	0.04	0.04	0.04	0.04
Knoxville-Sevierville-La Follette, TN	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.06	0.07	0.07	0.07	0.06	0.05	0.05	0.05
La Porte County; (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake County (part); Lakeview, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Lake County, OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.01	0.01	0.02	0.02	0.01	0.01	0.01
Lake County: (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.02	0.02	0.01
Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Lake County; Polson, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake County; Ronan, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake Tahoe Nevada Area, NV	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake Tahoe North Shore Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake Tahoe South Shore Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lancaster, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.03	0.03	0.03	0.03	0.02	0.02	0.02
Lancaster, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.03	0.03	0.03	0.03	0.02	0.02	0.02
Lane County (part); Oakridge, OR	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lane County; Eugene/Springfield, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Las Vegas Area, NV	CO (1971 8-hour)	Maintenance, Serious	100	0	0.11	0.11	0.12	0.13	0.10	0.09	0.08
Las Vegas, NV	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.11	0.11	0.12	0.13	0.10	0.09	0.08
LaSalle County; Oglesby, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Laurel Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lebanon County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Lemont, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Liberty-Clairton, PA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lincoln County; Libby and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Logan, UT-ID	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Longmont Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.09	0.09	0.08	0.08	0.06	0.05	0.03	
Lorain County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Los Angeles, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	0.94	0.99	1.02	1.07	0.85	0.77	0.71	
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	0.12	0.12	0.11	0.11	0.09	0.08	0.06	
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	0.12	0.12	0.11	0.11	0.09	0.08	0.06	
Los Angeles-South Coast Air Basin Area, CA	CO (1971 8-hour)	Maintenance, Serious	100	0	0.94	0.99	1.02	1.07	0.85	0.77	0.71	
Los Angeles-South Coast Air Basin Area, CA	NO ₂ (1971 Annual)	Maintenance, --	100	0	0.94	0.99	1.02	1.07	0.85	0.77	0.71	
Los Angeles-South Coast Air Basin, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	0.94	0.99	1.02	1.07	0.85	0.77	0.71	
Los Angeles-South Coast Air Basin, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	0.94	0.99	1.02	1.07	0.85	0.77	0.71	
Los Angeles-South Coast Air Basin, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.94	0.99	1.02	1.07	0.85	0.77	0.71	
Louisville, KY-IN	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.07	0.08	0.08	0.08	0.07	0.06	0.06	
Lowell Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.01	0.01	0.00	0.00	0.00	
Lucas County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.02	0.02	0.02	
Madison County; Granite City Township and Nameoki Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Manchester Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	

Notes:

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Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Manitowoc County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maricopa and Pinal Counties; Phoenix Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	0.23	0.24	0.25	0.26	0.21	0.19	0.17	
Marion County: Lawrence, Washington, and Warrant Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.03	0.03	0.03	0.03	0.03	0.02	0.02	
Mariposa County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mariposa County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Marshall, WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Medford Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
Memphis Area, TN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.05	0.06	0.06	0.06	0.05	0.05	0.04	
Memphis, TN-MS-AR	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.07	0.07	0.08	0.08	0.06	0.06	0.05	
Miami, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01	
Miami, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Miami, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01	
Milwaukee-Racine, WI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.07	0.07	0.07	0.08	0.06	0.06	0.05	
Minneapolis-St. Paul Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.18	0.19	0.20	0.21	0.17	0.15	0.14	
Missoula Area, MT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Missoula county; Missoula and Vicinity, MT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Modesto Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Mohave County (part); Bullhead City, AZ	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mono County; Mammoth Lake Planning Area, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mono County; Mono Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morenci, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morgan County, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morongo Band of Mission Indians	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morongo Band of Mission Indians, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morristown Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Muscatine County; (part), IA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Muscatine, IA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Muskegon County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Muskingum River, OH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nashua Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00
Nassau County, FL	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nevada County (Western part), CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Nevada County (Western part), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
New Haven County, CT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
New Haven-Meriden-Waterbury Area, CT	CO (1971 8-hour)	Maintenance, --	100	0	0.05	0.05	0.05	0.05	0.05	0.04	0.04	0.04
New Manchester-Grant Magisterial District in Hancock County, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
New York County, NY	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.02	0.02	0.02	0.02	0.02	0.02	0.02
New York, NY-NJ-CT	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.75	0.79	0.82	0.87	0.69	0.63	0.58
New York-N. New Jersey-Long Island Area, NY-NJ-CT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	0.40	0.42	0.44	0.47	0.37	0.34	0.32
New York-N. New Jersey-Long Island, NY-NJ-CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	0.73	0.77	0.81	0.85	0.68	0.62	0.57
New York-Northern New Jersey-Long Island, NY-NJ-CT	Ozone (2015 8-hour)	Nonattainment, Moderate	50	0	0.73	0.77	0.80	0.85	0.68	0.61	0.57
NJ Portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nogales, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Northern Milwaukee/Ozaukee Shoreline, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Northern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.08	0.09	0.09	0.10	0.08	0.07	0.07
Oakridge, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ogden Area, UT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ogden Area, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Olmsted County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Olmsted; City of Rochester, MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pekin, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Penns Grove Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Peoria County: Hollis Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Peoria County: Peoria, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Perth Amboy Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Philadelphia-Camden County Area, PA-NJ	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.05	0.06	0.06	0.06	0.05	0.05	0.04	0.04
Philadelphia-Wilmington, PA-NJ-DE	PM _{2.5} (2006 24-hour)	Maintenance, Moderate for PA and DE; Subject to Former Subpart 1 for NJ	100	0	0.28	0.30	0.31	0.32	0.26	0.23	0.21	0.21
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.37	0.39	0.40	0.42	0.33	0.30	0.28	0.28
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	0.37	0.38	0.40	0.42	0.33	0.30	0.28	0.28
Phoenix Area, AZ	CO (1971 8-hour)	Maintenance, Serious	100	0	0.22	0.23	0.24	0.25	0.20	0.18	0.17	0.17
Phoenix-Mesa, AZ	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.23	0.24	0.25	0.26	0.21	0.19	0.17	0.17
Phoenix-Mesa, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.24	0.25	0.26	0.27	0.21	0.19	0.18	0.18
Pierce County; Tacoma, WA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pima County; Ajo Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pima County; Rillito Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Pinal and Gila Counties; Payson, AZ	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pinal County (part); West Pinal, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.04	0.04	0.03	0.03	0.03	0.02	0.02	0.02
Pitkin County; Aspen, CO	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.16	0.15	0.14	0.13	0.10	0.09	0.06	0.06
Pittsburgh Area, PA	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.02	0.02	0.02	0.01	0.01	0.01	0.01

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Pittsburgh-Beaver Valley, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.28	0.28	0.27	0.27	0.21	0.19	0.15
Pittsburgh-Beaver Valley, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.26	0.26	0.25	0.25	0.19	0.17	0.14
Plumas County, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Polk County, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Portland Area: Portland Metro Service District Boundary, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.07	0.07	0.07	0.08	0.06	0.06	0.05
Power-Bannock Counties; Fort Hall Indian Reservation, ID	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Power-Bannock Counties; Portneuf Valley Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Provo Area, UT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Provo, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	0.03	0.03	0.03	0.03	0.03	0.02	0.02
Prowers County; Lamar, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Raleigh-Durham Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.10	0.10	0.11	0.11	0.09	0.08	0.08
Ramsey County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Reading, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Reno Area, NV	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01
Rhineland, WI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Riverside County (Coachella Valley), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	0.03	0.03	0.03	0.03	0.02	0.02	0.02
Riverside County (Coachella Valley), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	0.03	0.03	0.03	0.03	0.02	0.02	0.02
Riverside County; Coachella Valley Planning Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	0.03	0.03	0.03	0.04	0.03	0.03	0.02

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Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Riverside, Los Angeles, Orange, and San Bernardino Counties; South Coast Air Basin, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.94	0.98	1.02	1.06	0.85	0.77	0.70
Rosebud County; Lame Deer, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Routt County (part); Steamboat Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.19	0.18	0.16	0.15	0.12	0.10	0.07
Rusk and Panola Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Sacramento Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.09	0.09	0.09	0.10	0.08	0.07	0.06
Sacramento County, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.09	0.09	0.09	0.10	0.08	0.07	0.06
Sacramento Metro, CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	0.14	0.15	0.15	0.16	0.13	0.12	0.11
Sacramento Metro, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	0.14	0.15	0.15	0.16	0.13	0.12	0.11
Sacramento, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.14	0.15	0.15	0.16	0.13	0.11	0.10
Salem Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Salt Lake City Area, UT	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Salt Lake City, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	0.09	0.09	0.10	0.10	0.08	0.07	0.07
Salt Lake County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.05	0.06	0.06	0.06	0.05	0.05	0.04
Salt Lake County, UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.05	0.06	0.06	0.06	0.05	0.05	0.04
San Antonio, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.10	0.11	0.11	0.12	0.09	0.09	0.08
San Bernardino County (part); excluding Searles Valley Planning Area and South Coast Air Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.10	0.10	0.09	0.09	0.07	0.06	0.05
San Diego Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.18	0.19	0.20	0.21	0.17	0.15	0.14

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
San Diego County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.18	0.19	0.20	0.21	0.17	0.15	0.14
San Diego County, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	0.18	0.19	0.20	0.21	0.17	0.15	0.14
San Francisco Bay Area, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.37	0.39	0.40	0.43	0.34	0.31	0.29
San Francisco Bay Area, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.37	0.39	0.40	0.42	0.34	0.31	0.29
San Francisco Bay Area, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.37	0.39	0.41	0.43	0.34	0.31	0.29
San Francisco-Oakland-San Jose Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.34	0.36	0.37	0.39	0.31	0.28	0.26
San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.29	0.30	0.30	0.31	0.24	0.22	0.19
San Joaquin Valley, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	0.29	0.30	0.30	0.31	0.24	0.22	0.19
San Joaquin Valley, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	0.29	0.30	0.30	0.31	0.24	0.22	0.19
San Joaquin Valley, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	0.28	0.29	0.30	0.31	0.24	0.22	0.19
San Joaquin Valley, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.28	0.29	0.30	0.31	0.24	0.22	0.19
San Luis Obispo (Eastern part), CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.02	0.02	0.01	0.01	0.01	0.01	0.01
San Luis Obispo (Eastern San Luis Obispo), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.02	0.02	0.01	0.01	0.01	0.01	0.01
San Manuel, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
San Miguel County; Telluride, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sanders County (part); Thompson Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Santa Cruz County; Nogales Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Seaford, DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.01	0.01	0.01	0.02	0.01	0.01	0.01

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Seattle-Tacoma Area, WA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	0.15	0.16	0.17	0.18	0.14	0.13	0.12
Seattle-Tacoma, WA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.03	0.03	0.03	0.03	0.02	0.02	0.02
Sheboygan County, WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Sheboygan County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sheridan County; City of Sheridan, WY	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Shoshone County (part); excluding Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Shoshone County; City of Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Silver Bow County; Butte, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Somerville Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Southern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.03	0.03	0.03	0.03	0.03	0.02	0.02
Southwest Indiana, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Spokane Area, WA	CO (1971 8-hour)	Maintenance, Serious	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Spokane County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Springfield Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
St. Bernard Parish, LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
St. Clair, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
St. Louis Area, MO	CO (1971 8-hour)	Maintenance, --	100	0	0.04	0.04	0.04	0.04	0.04	0.03	0.03
St. Louis, MO-IL	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.11	0.12	0.13	0.13	0.11	0.10	0.09
St. Louis-St. Charles-Farmington, MO-IL	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.13	0.14	0.15	0.15	0.12	0.11	0.10

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Steubenville, OH-WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.04	0.04	0.04	0.04	0.04	0.03	0.02	0.02
Steubenville-Weirton, OH-WV	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Stockton Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01
Sullivan County, TN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sutter Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Syracuse Area; Onondaga County, NY	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.02	0.03	0.03	0.03	0.03	0.02	0.02	0.02
Tazewell County: Groveland Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Terre Haute, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Thurston County; Cities of Olympia, Tumwater, and Lacey, WA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Titus County, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Toms River Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tooele County (part), UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trenton Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00
Trona, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Tucson Area, AZ	CO (1971 8-hour)	Maintenance, --	100	0	0.07	0.07	0.07	0.07	0.08	0.06	0.05	0.05
Tuolumne County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tuscan Buttes, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tuscan Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Uinta Basin, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.04	0.04	0.03	0.03	0.02	0.02	0.01
Union County; LaGrande, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Upper Green River Basin Area, WY	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.11	0.11	0.10	0.09	0.07	0.06	0.04
Utah County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.03	0.03	0.03	0.03	0.03	0.02	0.02
Vancouver Area: Clark County (part), WA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Ventura County, CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	0.12	0.12	0.11	0.11	0.09	0.08	0.06
Ventura County, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	0.12	0.12	0.11	0.11	0.09	0.08	0.06
Vermillion County; Part of Clinton Township, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vigo County, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Walla Walla County; Wallula, WA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Waltham Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Warren County: Conewago Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Warren, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Washington Area, DC-MD-VA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.04	0.05	0.05	0.05	0.04	0.04	0.03
Washington, DC-MD-VA	Ozone (2008 8-hour)	Nonattainment (DC) Maintenance (MD, VA), Marginal	50	0	0.30	0.31	0.33	0.34	0.28	0.25	0.23
Washington, DC-MD-VA	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	0.30	0.31	0.33	0.34	0.28	0.25	0.23
Washoe County; Reno Planning Area, NV	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01

Notes:

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Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Wayne County; (part), MI	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
West Central Pinal County, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
West Silver Valley, ID	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Williamson County, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Winston-Salem Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.02	0.02	0.03	0.03	0.02	0.02	0.02	0.02
Worcester Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Yakima Area, WA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Yakima County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Yuba City-Marysville, CA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Yuma County; Yuma Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Yuma, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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Table A-18. Changes in Emissions from U.S. Passenger Cars and Light Trucks by Nonattainment or Maintenance Area and Alternative, Direct and Indirect Impacts--Acetaldehyde, 2050

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Ada County; Boise, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.25	0.24	0.24	0.23	0.18	0.13	0.11
Adams, Denver, and Boulder Counties; Denver Metropolitan Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.29	1.23	1.19	1.17	0.89	0.65	0.56
Ajo, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Albuquerque Area, NM	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.48	0.45	0.44	0.44	0.33	0.24	0.21
Allegan County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.05	0.05	0.04	0.04	0.03	0.02	0.02
Allegheny County Air Basin: Hazelwood Monitor, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.05	0.05	0.05	0.05	0.04	0.03	0.02
Allegheny County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.76	0.73	0.71	0.69	0.52	0.39	0.33
Allegheny County; The Area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Allegheny, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.13	0.12	0.12	0.11	0.09	0.06	0.05
Allentown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.40	0.38	0.37	0.36	0.27	0.20	0.18
Allentown-Bethlehem-Easton, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.46	0.44	0.42	0.42	0.32	0.23	0.20
Alton Township, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Amador County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.05	0.04	0.04	0.04	0.03	0.02	0.02
Anchorage Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	0.08	0.08	0.07	0.07	0.06	0.04	0.04
Anchorage; Eagle River, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Anne Arundel County and Baltimore County, MD	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.79	0.75	0.74	0.73	0.55	0.40	0.35

Notes:

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Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
AQCR 012: Portions of Grant County, NM	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.01
AQCR 109-Millinocket, ME	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.11	0.10	0.10	0.10	0.10	0.08	0.05	0.05
AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington Counties (Minneapolis-St. Paul), MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	2.17	2.07	2.02	1.99	1.99	1.51	1.10	0.97
AQCR 237: Brown County: Green Bay Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
AQCR 238: Marathon County: Rothschild Subcity Area, Rib Mountain, Weston, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.13	0.12	0.12	0.12	0.12	0.09	0.07	0.06
AQCR 238: Oneida County: Rhinelander Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.04	0.04	0.04	0.04	0.04	0.03	0.02	0.02
AQCR 239: Milwaukee County: Milwaukee Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.44	0.42	0.41	0.40	0.40	0.31	0.22	0.20
AQCR 240: Dane County: Madison Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.39	0.37	0.36	0.35	0.35	0.27	0.20	0.17
Archuleta County; Pagosa Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.12	0.12	0.11	0.10	0.10	0.08	0.06	0.04
Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.01
Aroostock County; City of Presque Isle, ME	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Atlanta, GA	Ozone (2008 8-hour)	Maintenance, Moderate	100	0	4.14	3.95	3.85	3.80	3.80	2.88	2.10	1.86
Atlanta, GA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	3.29	3.14	3.06	3.02	3.02	2.29	1.66	1.47
Atlantic City Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.03	0.02	0.02	0.02	0.02	0.02	0.01	0.01
Bakersfield Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	0.32	0.31	0.30	0.29	0.29	0.22	0.16	0.14

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Baltimore Area, MD	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Baltimore, MD	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	2.01	1.92	1.87	1.85	1.40	1.02	0.90
Baltimore, MD	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	2.03	1.94	1.89	1.86	1.41	1.03	0.91
Baton Rouge, LA	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.67	0.64	0.62	0.61	0.46	0.34	0.30
Beaver, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Benton County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Berrien County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.16	0.15	0.15	0.14	0.11	0.08	0.07
Billings Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	0.06	0.05	0.05	0.05	0.04	0.03	0.02
Billings, MT	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Birmingham, AL	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.84	0.80	0.78	0.77	0.58	0.42	0.37
Boise-Northern Ada County Area, ID	CO (1971 8-hour)	Maintenance, --	100	0	0.25	0.24	0.24	0.23	0.18	0.13	0.11
Bonner County; The Sandpoint Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Boston Area, MA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.43	0.41	0.40	0.40	0.30	0.22	0.19
Boyd County (part), KY	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Brooke; Follansbee Area, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Burlington Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Butte County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.14	0.14	0.13	0.13	0.10	0.07	0.06
Calaveras County, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02
Calaveras County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Campbell-Clermont Counties, KY-OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01
Canton-Massillon, OH	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.24	0.23	0.23	0.22	0.17	0.12	0.12	0.11
Central New Hampshire, NH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.13	0.13	0.13	0.12	0.09	0.07	0.07	0.06
Central Steptoe Valley, NV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Charleston, WV	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.31	0.29	0.28	0.27	0.21	0.15	0.15	0.13
Charlotte Area, NC	CO (1971 8-hour)	Maintenance, --	100	0	1.10	1.04	1.02	1.00	0.76	0.55	0.55	0.49
Charlotte-Rock Hill, NC-SC	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	2.05	1.96	1.90	1.88	1.42	1.04	1.04	0.92
Chicago, IL-IN-WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	4.57	4.36	4.25	4.19	3.18	2.31	2.31	2.05
Chicago-Naperville, IL-IN-WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	4.97	4.74	4.62	4.56	3.45	2.51	2.51	2.22
Chico (Butte County), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.14	0.14	0.13	0.13	0.10	0.07	0.07	0.06
Chico Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.05	0.05	0.05	0.05	0.04	0.03	0.03	0.02
Chico, CA	PM _{2.5} (2006 24-hour)	Maintenance, Moderate	100	0	0.14	0.13	0.13	0.13	0.10	0.07	0.07	0.06
Cincinnati, OH-KY	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.46	1.39	1.35	1.33	1.01	0.74	0.74	0.65
Cincinnati, OH-KY-IN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	1.52	1.45	1.41	1.40	1.06	0.77	0.77	0.68
Clark County; Las Vegas Planning Area, NV	PM ₁₀ (1987 24-hour)	Maintenance, Serious	100	0	1.36	1.29	1.26	1.24	0.94	0.69	0.69	0.61
Cleveland Area, OH	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.80	0.76	0.74	0.74	0.56	0.41	0.41	0.36
Cleveland, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.97	1.88	1.83	1.81	1.37	1.00	1.00	0.88
Cleveland, OH	PM _{2.5} (2012 Annual)	Maintenance, Moderate	100	0	1.00	0.95	0.93	0.92	0.70	0.51	0.51	0.45
Cleveland-Akron-Lorain, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	2.06	1.97	1.92	1.89	1.43	1.04	1.04	0.92

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Cleveland-Akron-Lorain, OH	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	1.91	1.82	1.77	1.75	1.33	0.97	0.85
Cochise County; Paul Spur/Douglas Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Colorado Springs Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.39	0.37	0.36	0.36	0.27	0.20	0.17
Columbus, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	1.42	1.36	1.32	1.30	0.99	0.72	0.64
Columbus, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.33	1.27	1.24	1.22	0.93	0.67	0.60
Cook County; Lyons Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.05	0.05	0.05	0.05	0.04	0.03	0.02
Cook County; Southeast Chicago, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.07	0.07	0.07	0.06	0.05	0.04	0.03
Coshocton County; Franklin Township, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coso Junction, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Cuyahoga County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.63	0.60	0.59	0.58	0.44	0.32	0.28
Cuyahoga County, OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.80	0.76	0.75	0.74	0.56	0.41	0.36
Dallas-Fort Worth, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	5.56	5.31	5.16	5.09	3.86	2.81	2.47
Dallas-Fort Worth, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	5.50	5.25	5.10	5.03	3.81	2.78	2.45
Delaware County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.26	0.25	0.24	0.24	0.18	0.13	0.12
Denver Metro/North Front Range, CO	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	2.63	2.51	2.43	2.39	1.81	1.33	1.15
Denver-Boulder Area, CO	CO (1971 8-hour)	Maintenance, Serious	100	0	2.08	1.99	1.93	1.89	1.43	1.05	0.91
Denver-Boulder-Greeley-Ft Collins-Loveland, CO	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	2.63	2.51	2.43	2.39	1.81	1.33	1.15
Detroit Area, MI	CO (1971 8-hour)	Maintenance, --	100	0	1.12	1.07	1.04	1.03	0.78	0.57	0.50
Detroit, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	3.22	3.07	3.00	2.96	2.24	1.63	1.44

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Detroit, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.15	0.15	0.14	0.14	0.11	0.08	0.07
Detroit-Ann Arbor, MI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	3.23	3.08	3.00	2.96	2.25	1.64	1.45
Doña Ana County (Sunland Park Area), NM	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Doña Ana County; Anthony, NM	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Door County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Douglas, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.02	0.01	0.01	0.01	0.01	0.01	0.01
Dukes County, MA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Duluth Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.07	0.07	0.06	0.06	0.05	0.03	0.03
East Chicago Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
East Helena Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
East Kern County Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02
El Paso County, TX	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.36	0.34	0.34	0.33	0.25	0.18	0.16
El Paso, TX	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.03	0.03	0.02	0.02	0.02	0.01	0.01
Eugene-Springfield Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	0.14	0.14	0.13	0.13	0.10	0.07	0.06
Evangeline Parish (Partial), LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fairbanks Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Fairbanks, AK	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Flathead County; Columbia Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flathead County; Kalispell and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01

Notes:

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Flathead County; Whitefish and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fort Collins Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.10	0.09	0.09	0.09	0.09	0.07	0.05	0.04
Freehold Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Freestone and Anderson Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.03	0.03	0.03	0.03	0.03	0.02	0.01	0.01
Fremont County; Canon City Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.01
Fresno Area, CA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	0.38	0.36	0.35	0.35	0.35	0.26	0.19	0.17
Grants Pass Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Great Falls Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Greater Connecticut, CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	1.08	1.03	1.01	0.99	0.99	0.75	0.55	0.48
Greater Connecticut, CT	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	1.08	1.03	1.01	0.99	0.99	0.75	0.55	0.48
Greeley Area, CO	CO (1971 8-hour)	Maintenance, --	100	0	0.41	0.39	0.37	0.36	0.36	0.27	0.21	0.16
Hancock and Brooke Counties (Part); The City of Weirton, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Hancock County (Part) The City of Weirton, including Butler and Clay: Magisterial Districts, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.07	0.07	0.06	0.06	0.06	0.04	0.03	0.03
Harrisburg-Lebanon-Carlisle-York, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.75	0.72	0.70	0.69	0.69	0.52	0.38	0.34
Hartford-New Britain-Middletown Area, CT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.74	0.71	0.69	0.68	0.68	0.52	0.38	0.33
Hayden, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.04	0.04	0.03	0.03	0.03	0.02	0.02	0.01
Hayden, AZ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.04	0.03	0.03	0.03	0.03	0.02	0.02	0.01

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Hayden, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.01
Hillsborough County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Hillsborough-Polk County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Houston-Galveston-Brazoria, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	5.38	5.13	4.97	4.87	3.69	2.71	2.33	
Houston-Galveston-Brazoria, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	5.24	5.01	4.84	4.75	3.60	2.64	2.27	
Humphreys County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.02	0.02	0.01	0.01	0.01	0.01	0.01	
Huntington, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01
Imperial County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.13	0.13	0.13	0.12	0.09	0.07	0.06	
Imperial County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.13	0.13	0.13	0.12	0.09	0.07	0.06	
Imperial County, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.11	0.11	0.11	0.10	0.08	0.06	0.05	
Imperial County, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.11	0.11	0.11	0.10	0.08	0.06	0.05	
Imperial County; Imperial Valley Planning Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	0.13	0.13	0.12	0.12	0.09	0.07	0.06	
Indian Wells, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.05	0.04	0.04	0.04	0.03	0.02	0.02	
Indiana, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.19	0.18	0.17	0.17	0.13	0.10	0.07	
Indianapolis Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Indianapolis, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.38	0.36	0.35	0.35	0.27	0.19	0.17	
Inyo County; Owens Valley Planning Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	
Jackson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.03	0.03	0.03	0.03	0.02	0.01	0.01	
Jackson County; Medford-Ashland (including White City), OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.10	0.10	0.09	0.09	0.07	0.05	0.05	

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Jamestown, NY	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.12	0.11	0.11	0.11	0.11	0.08	0.06	0.05
Jefferson County, KY	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jefferson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.01
Jefferson County; (part) Steubenville & Mingo Junction, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.02
Jefferson County; (part), OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Johnstown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.18	0.17	0.16	0.15	0.15	0.12	0.09	0.07
Josephine County; Grants Pass, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Juneau; Mendenhall Valley Area, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Kern County (Eastern Kern), CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	0.17	0.16	0.15	0.15	0.15	0.11	0.08	0.07
Kern County (Eastern Kern), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	0.17	0.16	0.15	0.15	0.15	0.11	0.08	0.07
King County; Kent, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
King County; Seattle, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Klamath County; Klamath Falls, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.04	0.03	0.03	0.03	0.03	0.03	0.02	0.02
Klamath Falls Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.04	0.03	0.03	0.03	0.03	0.03	0.02	0.02
Klamath Falls, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.04	0.04	0.04	0.04	0.04	0.03	0.02	0.02
Knoxville, TN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.58	0.55	0.54	0.53	0.53	0.40	0.29	0.26
Knoxville-Sevierville-La Follette, TN	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.70	0.67	0.65	0.64	0.64	0.49	0.36	0.31
La Porte County; (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.04	0.04	0.04	0.04	0.04	0.03	0.02	0.02
Lake County (part); Lakeview, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Lake County, OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.17	0.16	0.16	0.16	0.16	0.12	0.09	0.08
Lake County: (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.23	0.22	0.21	0.21	0.21	0.16	0.12	0.10
Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.03	0.03	0.03	0.03	0.03	0.02	0.01	0.01
Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.14	0.13	0.13	0.13	0.13	0.10	0.07	0.06
Lake County; Polson, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake County; Ronan, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake Tahoe Nevada Area, NV	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Lake Tahoe North Shore Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Lake Tahoe South Shore Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.03	0.03	0.02	0.02	0.02	0.02	0.01	0.01
Lancaster, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.33	0.31	0.31	0.31	0.30	0.23	0.17	0.15
Lancaster, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.33	0.31	0.31	0.31	0.30	0.23	0.17	0.15
Lane County (part); Oakridge, OR	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lane County; Eugene/Springfield, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.14	0.14	0.13	0.13	0.13	0.10	0.07	0.06
Las Vegas Area, NV	CO (1971 8-hour)	Maintenance, Serious	100	0	1.36	1.30	1.26	1.26	1.25	0.94	0.69	0.61
Las Vegas, NV	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.36	1.29	1.26	1.26	1.24	0.94	0.69	0.61
LaSalle County; Oglesby, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.03	0.03	0.02	0.02	0.02	0.02	0.01	0.01
Laurel Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lebanon County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.09	0.08	0.08	0.08	0.08	0.06	0.04	0.04
Lemont, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.11	0.10	0.10	0.10	0.10	0.07	0.05	0.05

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Liberty-Clairton, PA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Lincoln County; Libby and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Logan, UT-ID	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.08	0.08	0.07	0.07	0.06	0.04	0.04	0.04
Longmont Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.19	0.18	0.17	0.17	0.12	0.10	0.07	0.07
Lorain County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02
Los Angeles, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	10.93	10.42	10.15	10.01	7.59	5.53	4.88	4.88
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	0.75	0.72	0.69	0.68	0.52	0.38	0.33	0.33
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	0.75	0.72	0.69	0.68	0.52	0.38	0.33	0.33
Los Angeles-South Coast Air Basin Area, CA	CO (1971 8-hour)	Maintenance, Serious	100	0	10.93	10.43	10.15	10.01	7.59	5.53	4.88	4.88
Los Angeles-South Coast Air Basin Area, CA	NO ₂ (1971 Annual)	Maintenance, --	100	0	10.93	10.43	10.15	10.01	7.59	5.53	4.88	4.88
Los Angeles-South Coast Air Basin, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	10.93	10.43	10.15	10.01	7.59	5.53	4.88	4.88
Los Angeles-South Coast Air Basin, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	10.92	10.42	10.15	10.01	7.59	5.53	4.88	4.88
Los Angeles-South Coast Air Basin, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	10.93	10.42	10.15	10.01	7.59	5.53	4.88	4.88
Louisville, KY-IN	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.87	0.83	0.81	0.80	0.60	0.44	0.39	0.39
Lowell Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.06	0.06	0.05	0.05	0.04	0.03	0.03	0.03
Lucas County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.25	0.24	0.23	0.23	0.17	0.13	0.11	0.11
Madison County; Granite City Township and Nameoki Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.03	0.03	0.03	0.03	0.02	0.02	0.01	0.01
Manchester Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	0.07	0.07	0.07	0.07	0.05	0.04	0.03	0.03

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Manitowoc County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.01
Maricopa and Pinal Counties; Phoenix Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	2.68	2.55	2.49	2.45	1.86	1.35	1.20	
Marion County: Lawrence, Washington, and Warrant Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.35	0.33	0.32	0.32	0.24	0.17	0.15	
Mariposa County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.03	0.03	0.03	0.03	0.02	0.01	0.01	
Mariposa County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.03	0.03	0.03	0.03	0.02	0.01	0.01	
Marshall, WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.02	0.02	0.02	0.01	0.01	0.01	0.01	
Medford Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.05	0.05	0.05	0.05	0.04	0.03	0.02	
Memphis Area, TN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.67	0.64	0.63	0.62	0.47	0.34	0.30	
Memphis, TN-MS-AR	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.87	0.83	0.81	0.80	0.61	0.44	0.39	
Miami, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02	
Miami, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00	
Miami, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02	
Milwaukee-Racine, WI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.86	0.82	0.80	0.79	0.60	0.43	0.38	
Minneapolis-St. Paul Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	2.23	2.13	2.08	2.05	1.55	1.13	1.00	
Missoula Area, MT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.05	0.05	0.05	0.05	0.04	0.03	0.02	
Missoula county; Missoula and Vicinity, MT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.05	0.05	0.05	0.05	0.04	0.03	0.02	
Modesto Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.14	0.13	0.13	0.13	0.10	0.07	0.06	

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Mohave County (part); Bullhead City, AZ	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.04	0.04	0.04	0.04	0.04	0.03	0.02	0.02
Mono County; Mammoth Lake Planning Area, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Mono County; Mono Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morenci, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morgan County, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01
Morongo Band of Mission Indians	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morongo Band of Mission Indians, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morristown Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Muscatine County; (part), IA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Muscatine, IA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Muskegon County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.12	0.11	0.11	0.11	0.11	0.08	0.06	0.05
Muskingum River, OH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nashua Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	0.06	0.06	0.05	0.05	0.05	0.04	0.03	0.03
Nassau County, FL	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nevada County (Western part), CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.08	0.08	0.08	0.08	0.08	0.06	0.04	0.04
Nevada County (Western part), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	0.08	0.08	0.08	0.08	0.08	0.06	0.04	0.04
New Haven County, CT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01
New Haven-Meriden-Waterbury Area, CT	CO (1971 8-hour)	Maintenance, --	100	0	0.57	0.54	0.53	0.52	0.52	0.40	0.29	0.26
New Manchester-Grant Magisterial District in Hancock County, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
New York County, NY	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.24	0.23	0.23	0.22	0.17	0.12	0.11
New York, NY-NJ-CT	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	9.21	8.78	8.55	8.44	6.40	4.66	4.12
New York-N. New Jersey-Long Island Area, NY-NJ-CT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	5.04	4.81	4.68	4.62	3.51	2.55	2.26
New York-N. New Jersey-Long Island, NY-NJ-CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	9.02	8.60	8.38	8.27	6.27	4.57	4.04
New York-Northern New Jersey-Long Island, NY-NJ-CT	Ozone (2015 8-hour)	Nonattainment, Moderate	50	0	9.01	8.60	8.38	8.26	6.27	4.56	4.03
NJ Portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01
Nogales, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01
Northern Milwaukee/Ozaukee Shoreline, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.05	0.04	0.04	0.04	0.03	0.02	0.02
Northern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.06	1.01	0.99	0.97	0.74	0.54	0.47
Oakridge, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ogden Area, UT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02
Ogden Area, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02
Olmsted County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Olmsted; City of Rochester, MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.07	0.07	0.07	0.06	0.05	0.04	0.03
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pekin, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.03	0.03	0.03	0.03	0.02	0.02	0.01

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Penns Grove Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Peoria County: Hollis Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Peoria County: Peoria, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.07	0.06	0.06	0.06	0.05	0.03	0.03	0.03
Perth Amboy Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02
Philadelphia-Camden County Area, PA-NJ	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.69	0.66	0.64	0.63	0.48	0.35	0.31	0.31
Philadelphia-Wilmington, PA-NJ-DE	PM _{2.5} (2006 24-hour)	Maintenance, Moderate for PA and DE; Subject to Former Subpart 1 for NJ	100	0	3.22	3.07	2.99	2.95	2.23	1.63	1.44	1.44
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	4.26	4.07	3.96	3.91	2.96	2.16	1.90	1.90
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	4.26	4.06	3.96	3.90	2.96	2.16	1.90	1.90
Phoenix Area, AZ	CO (1971 8-hour)	Maintenance, Serious	100	0	2.58	2.47	2.40	2.37	1.80	1.31	1.15	1.15
Phoenix-Mesa, AZ	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	2.69	2.57	2.50	2.47	1.87	1.36	1.20	1.20
Phoenix-Mesa, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	2.76	2.63	2.56	2.53	1.92	1.40	1.23	1.23
Pierce County; Tacoma, WA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pima County; Ajo Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pima County; Rillito Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.07	0.07	0.07	0.06	0.05	0.04	0.03	0.03
Pinal and Gila Counties; Payson, AZ	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Pinal County (part); West Pinal, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.22	0.21	0.21	0.20	0.15	0.11	0.10	0.10
Pitkin County; Aspen, CO	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.27	0.26	0.24	0.23	0.17	0.13	0.09	0.09
Pittsburgh Area, PA	CO (1971 8-hour)	Maintenance, --	100	0	0.17	0.16	0.16	0.15	0.12	0.09	0.08	0.08

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Pittsburgh-Beaver Valley, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	1.67	1.59	1.54	1.51	1.14	0.84	0.72
Pittsburgh-Beaver Valley, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	1.52	1.46	1.41	1.38	1.04	0.77	0.66
Plumas County, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Polk County, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Portland Area: Portland Metro Service District Boundary, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.84	0.80	0.78	0.77	0.59	0.43	0.38
Power-Bannock Counties; Fort Hall Indian Reservation, ID	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Power-Bannock Counties; Portneuf Valley Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.05	0.05	0.05	0.05	0.03	0.03	0.02
Provo Area, UT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	0.06	0.06	0.06	0.06	0.05	0.03	0.03
Provo, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	0.33	0.32	0.31	0.31	0.23	0.17	0.15
Prowers County; Lamar, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Raleigh-Durham Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	1.23	1.17	1.14	1.12	0.85	0.62	0.55
Ramsey County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Reading, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.26	0.25	0.24	0.24	0.18	0.13	0.12
Reno Area, NV	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.21	0.20	0.20	0.20	0.15	0.11	0.10
Rhineland, WI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Riverside County (Coachella Valley), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	0.32	0.31	0.30	0.30	0.23	0.16	0.15
Riverside County (Coachella Valley), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	0.32	0.31	0.30	0.30	0.23	0.16	0.15
Riverside County; Coachella Valley Planning Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	0.38	0.36	0.35	0.35	0.26	0.19	0.17

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Riverside, Los Angeles, Orange, and San Bernardino Counties; South Coast Air Basin, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	10.88	10.38	10.10	9.96	7.56	5.50	4.86
Rosebud County; Lame Deer, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Routt County (part); Steamboat Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.32	0.30	0.28	0.27	0.20	0.16	0.11
Rusk and Panola Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.04	0.04	0.03	0.03	0.02	0.02	0.01
Sacramento Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.99	0.94	0.91	0.90	0.68	0.50	0.44
Sacramento County, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.93	0.89	0.86	0.85	0.64	0.47	0.41
Sacramento Metro, CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	1.61	1.53	1.49	1.47	1.12	0.81	0.72
Sacramento Metro, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	1.61	1.53	1.49	1.47	1.12	0.81	0.72
Sacramento, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	1.57	1.50	1.46	1.44	1.09	0.80	0.70
Salem Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	0.15	0.15	0.14	0.14	0.11	0.08	0.07
Salt Lake City Area, UT	CO (1971 8-hour)	Maintenance, --	100	0	0.12	0.12	0.12	0.11	0.09	0.06	0.06
Salt Lake City, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	1.11	1.06	1.03	1.02	0.77	0.56	0.50
Salt Lake County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.68	0.65	0.63	0.62	0.47	0.34	0.30
Salt Lake County, UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.68	0.65	0.63	0.62	0.47	0.34	0.30
San Antonio, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.24	1.19	1.15	1.14	0.86	0.63	0.56
San Bernardino County (part); excluding Searles Valley Planning Area and South Coast Air Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.53	0.51	0.49	0.48	0.36	0.27	0.23
San Diego Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	2.27	2.17	2.11	2.08	1.58	1.15	1.02

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Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
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San Diego County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	2.28	2.18	2.12	2.09	1.59	1.16	1.02
San Diego County, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	2.28	2.17	2.11	2.09	1.58	1.15	1.02
San Francisco Bay Area, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	4.56	4.35	4.23	4.18	3.17	2.31	2.04
San Francisco Bay Area, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	4.55	4.34	4.23	4.17	3.16	2.30	2.04
San Francisco Bay Area, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	4.60	4.38	4.27	4.21	3.20	2.33	2.06
San Francisco-Oakland-San Jose Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	4.20	4.01	3.90	3.85	2.92	2.13	1.88
San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	2.78	2.66	2.58	2.54	1.93	1.41	1.24
San Joaquin Valley, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	2.78	2.66	2.58	2.54	1.93	1.41	1.24
San Joaquin Valley, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	2.78	2.66	2.58	2.54	1.93	1.41	1.24
San Joaquin Valley, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	2.78	2.65	2.58	2.54	1.92	1.40	1.23
San Joaquin Valley, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	2.78	2.65	2.58	2.54	1.92	1.40	1.23
San Luis Obispo (Eastern part), CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.03	0.03	0.03	0.02	0.02	0.01	0.01
San Luis Obispo (Eastern San Luis Obispo), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.03	0.03	0.03	0.02	0.02	0.01	0.01
San Manuel, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.04	0.04	0.04	0.03	0.03	0.02	0.01
San Miguel County; Telluride, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Sanders County (part); Thompson Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Santa Cruz County; Nogales Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01
Seaford, DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.17	0.16	0.16	0.16	0.12	0.09	0.08

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NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Seattle-Tacoma Area, WA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	1.95	1.86	1.81	1.79	1.36	0.99	0.87
Seattle-Tacoma, WA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.32	0.31	0.30	0.30	0.22	0.16	0.14
Sheboygan County, WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.07	0.07	0.06	0.06	0.05	0.04	0.03
Sheboygan County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.04	0.03	0.03	0.03	0.02	0.02	0.02
Sheridan County; City of Sheridan, WY	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Shoshone County (part); excluding Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.02	0.01	0.01	0.01	0.01	0.01	0.01
Shoshone County; City of Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Silver Bow County; Butte, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Somerville Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Southern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.33	0.32	0.31	0.31	0.23	0.17	0.15
Southwest Indiana, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Spokane Area, WA	CO (1971 8-hour)	Maintenance, Serious	100	0	0.20	0.19	0.18	0.18	0.14	0.10	0.09
Spokane County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.20	0.19	0.19	0.19	0.14	0.10	0.09
Springfield Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.09	0.09	0.08	0.08	0.06	0.05	0.04
St. Bernard Parish, LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.05	0.05	0.05	0.04	0.03	0.03	0.02
St. Clair, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.03	0.03	0.03	0.03	0.02	0.02	0.02
St. Louis Area, MO	CO (1971 8-hour)	Maintenance, --	100	0	0.47	0.45	0.44	0.44	0.33	0.24	0.21
St. Louis, MO-IL	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.43	1.37	1.33	1.31	1.00	0.73	0.64
St. Louis-St. Charles-Farmington, MO-IL	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	1.64	1.56	1.52	1.50	1.14	0.83	0.73

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Steubenville, OH-WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.10	0.10	0.09	0.09	0.07	0.05	0.04
Steubenville-Weirton, OH-WV	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.08	0.08	0.08	0.07	0.06	0.04	0.04
Stockton Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.23	0.22	0.21	0.21	0.16	0.12	0.10
Sullivan County, TN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Sutter Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Syracuse Area; Onondaga County, NY	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.31	0.29	0.28	0.28	0.21	0.15	0.14
Tazewell County: Groveland Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Terre Haute, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.05	0.05	0.04	0.04	0.03	0.02	0.02
Thurston County; Cities of Olympia, Tumwater, and Lacey, WA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.06	0.06	0.06	0.06	0.04	0.03	0.03
Titus County, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Toms River Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tooele County (part), UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trenton Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.06	0.05	0.05	0.05	0.04	0.03	0.03
Trona, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Tucson Area, AZ	CO (1971 8-hour)	Maintenance, --	100	0	0.67	0.64	0.63	0.62	0.47	0.34	0.30
Tuolumne County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.05	0.04	0.04	0.04	0.03	0.02	0.02
Tuscan Buttes, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tuscan Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Uinta Basin, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.09	0.08	0.08	0.07	0.06	0.04	0.03
Union County; LaGrande, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Upper Green River Basin Area, WY	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.20	0.19	0.18	0.17	0.13	0.10	0.07
Utah County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.34	0.32	0.31	0.31	0.23	0.17	0.15
Vancouver Area: Clark County (part), WA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.20	0.19	0.18	0.18	0.14	0.10	0.09
Ventura County, CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	0.69	0.65	0.63	0.62	0.47	0.35	0.30
Ventura County, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	0.68	0.65	0.63	0.62	0.47	0.34	0.30
Vermillion County; Part of Clinton Township, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Vigo County, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.10	0.10	0.09	0.09	0.07	0.05	0.04
Walla Walla County; Wallula, WA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Waltham Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.03	0.03	0.03	0.03	0.02	0.02	0.01
Warren County: Conewago Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.02	0.01	0.01	0.01	0.01	0.01	0.01
Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01
Warren, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.03	0.03	0.02	0.02	0.02	0.01	0.01
Washington Area, DC-MD-VA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.53	0.51	0.49	0.49	0.37	0.27	0.24
Washington, DC-MD-VA	Ozone (2008 8-hour)	Nonattainment (DC) Maintenance (MD, VA), Marginal	50	0	3.71	3.54	3.44	3.40	2.58	1.88	1.66
Washington, DC-MD-VA	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	3.71	3.54	3.45	3.40	2.58	1.88	1.66
Washoe County; Reno Planning Area, NV	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.22	0.21	0.20	0.20	0.15	0.11	0.10

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.04	0.04	0.04	0.04	0.04	0.03	0.02	0.02
Wayne County; (part), MI	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.04	0.03	0.03	0.03	0.03	0.03	0.02	0.02
West Central Pinal County, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.07	0.07	0.06	0.06	0.06	0.05	0.04	0.03
West Silver Valley, ID	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Williamson County, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.06	0.06	0.06	0.06	0.06	0.04	0.03	0.03
Winston-Salem Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.27	0.26	0.25	0.25	0.25	0.19	0.14	0.12
Worcester Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.13	0.12	0.12	0.12	0.12	0.09	0.06	0.06
Yakima Area, WA	CO (1971 8-hour)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Yakima County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.06	0.06	0.06	0.06	0.06	0.04	0.03	0.03
Yuba City-Marysville, CA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.13	0.13	0.12	0.12	0.12	0.09	0.07	0.06
Yuma County; Yuma Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.10	0.10	0.09	0.09	0.09	0.07	0.05	0.05
Yuma, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.05	0.05	0.05	0.05	0.05	0.04	0.03	0.02

Notes:

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Table A-19. Changes in Emissions from U.S. Passenger Cars and Light Trucks by Nonattainment or Maintenance Area and Alternative, Direct and Indirect Impacts--Acrolein, 2025

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Ada County; Boise, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Adams, Denver, and Boulder Counties; Denver Metropolitan Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ajo, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Albuquerque Area, NM	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Allegan County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Allegheny County Air Basin: Hazelwood Monitor, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Allegheny County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Allegheny County; The Area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Allegheny, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Allentown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Allentown-Bethlehem-Easton, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Alton Township, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Amador County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Anchorage Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Anchorage; Eagle River, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Anne Arundel County and Baltimore County, MD	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.01	-0.01	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
AQCR 012: Portions of Grant County, NM	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AQCR 109-Millinocket, ME	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington Counties (Minneapolis-St. Paul), MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AQCR 237: Brown County: Green Bay Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AQCR 238: Marathon County: Rothschild Subcity Area, Rib Mountain, Weston, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AQCR 238: Oneida County: Rhinelander Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AQCR 239: Milwaukee County: Milwaukee Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AQCR 240: Dane County: Madison Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Archuleta County; Pagosa Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Aroostock County; City of Presque Isle, ME	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Atlanta, GA	Ozone (2008 8-hour)	Maintenance, Moderate	100	0	-0.03	-0.03	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01
Atlanta, GA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
Atlantic City Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bakersfield Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Baltimore Area, MD	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Baltimore, MD	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Baltimore, MD	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Baton Rouge, LA	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Beaver, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benton County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Berrien County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Billings Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Billings, MT	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Birmingham, AL	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Boise-Northern Ada County Area, ID	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bonner County; The Sandpoint Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Boston Area, MA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Boyd County (part), KY	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Brooke; Follansbee Area, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Burlington Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Butte County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Calaveras County, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Calaveras County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Campbell-Clermont Counties, KY-OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Canton-Massillon, OH	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Central New Hampshire, NH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Central Steptoe Valley, NV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Charleston, WV	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Charlotte Area, NC	CO (1971 8-hour)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00	0.00
Charlotte-Rock Hill, NC-SC	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Chicago, IL-IN-WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.03	-0.03	-0.03	-0.03	-0.02	-0.02	-0.02	-0.02
Chicago-Naperville, IL-IN-WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-0.04	-0.03	-0.03	-0.03	-0.02	-0.02	-0.02	-0.02
Chico (Butte County), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chico Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chico, CA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cincinnati, OH-KY	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
Cincinnati, OH-KY-IN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Clark County; Las Vegas Planning Area, NV	PM10 (1987 24-hour)	Maintenance, Serious	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
Cleveland Area, OH	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.01	-0.01	0.00	0.00	0.00	0.00	0.00	0.00
Cleveland, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Cleveland, OH	PM2.5 (2012 Annual)	Maintenance, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00	0.00
Cleveland-Akron-Lorain, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Cleveland-Akron-Lorain, OH	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Cochise County; Paul Spur/Douglas Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Colorado Springs Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Columbus, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
Columbus, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00
Cook County; Lyons Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cook County; Southeast Chicago, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coshocton County; Franklin Township, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coso Junction, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cuyahoga County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cuyahoga County, OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.01	-0.01	0.00	0.00	0.00	0.00	0.00	0.00
Dallas-Fort Worth, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-0.03	-0.03	-0.03	-0.03	-0.03	-0.02	-0.02	-0.02
Dallas-Fort Worth, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.03	-0.03	-0.03	-0.03	-0.03	-0.02	-0.02	-0.02
Delaware County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Denver Metro/North Front Range, CO	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Denver-Boulder Area, CO	CO (1971 8-hour)	Maintenance, Serious	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Denver-Boulder-Greeley-Ft Collins-Loveland, CO	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Detroit Area, MI	CO (1971 8-hour)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
Detroit, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Detroit, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Detroit-Ann Arbor, MI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
Doña Ana County (Sunland Park Area), NM	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Doña Ana County; Anthony, NM	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Door County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Douglas, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dukes County, MA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Duluth Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
East Chicago Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
East Helena Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
East Kern County Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
El Paso County, TX	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
El Paso, TX	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Eugene-Springfield Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Evangeline Parish (Partial), LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fairbanks Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fairbanks, AK	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flathead County; Columbia Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flathead County; Kalispell and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Flathead County; Whitefish and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fort Collins Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Freehold Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Freestone and Anderson Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fremont County; Canon City Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fresno Area, CA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grants Pass Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Great Falls Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Greater Connecticut, CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
Greater Connecticut, CT	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
Greeley Area, CO	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hancock and Brooke Counties (Part); The City of Weirton, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hancock County (Part) The City of Weirton, including Butler and Clay: Magisterial Districts, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Harrisburg-Lebanon-Carlisle-York, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hartford-New Britain-Middletown Area, CT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.01	-0.01	0.00	0.00	0.00	0.00	0.00	0.00
Hayden, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hayden, AZ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Hayden, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hillsborough County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hillsborough-Polk County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Houston-Galveston-Brazoria, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-0.03	-0.03	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01
Houston-Galveston-Brazoria, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.03	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01
Humphreys County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huntington, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Imperial County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Imperial County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Imperial County, CA	PM _{2.5} (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Imperial County, CA	PM _{2.5} (2012 Annual)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Imperial County; Imperial Valley Planning Area, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Serious	70	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Indian Wells, CA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Indiana, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Indianapolis Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Indianapolis, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Inyo County; Owens Valley Planning Area, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Serious	70	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jackson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jackson County; Medford-Ashland (including White City), OR	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Jamestown, NY	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jefferson County, KY	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jefferson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jefferson County; (part) Steubenville & Mingo Junction, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jefferson County; (part), OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Johnstown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Josephine County; Grants Pass, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Juneau; Mendenhall Valley Area, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kern County (Eastern Kern), CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kern County (Eastern Kern), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
King County; Kent, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
King County; Seattle, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Klamath County; Klamath Falls, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Klamath Falls Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Klamath Falls, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Knoxville, TN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Knoxville-Sevierville-La Follette, TN	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
La Porte County; (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake County (part); Lakeview, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Lake County, OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake County: (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake County; Polson, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake County; Ronan, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake Tahoe Nevada Area, NV	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake Tahoe North Shore Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake Tahoe South Shore Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lancaster, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lancaster, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lane County (part); Oakridge, OR	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lane County; Eugene/Springfield, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Las Vegas Area, NV	CO (1971 8-hour)	Maintenance, Serious	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
Las Vegas, NV	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
LaSalle County; Oglesby, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Laurel Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lebanon County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lemont, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Liberty-Clairton, PA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lincoln County; Libby and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Logan, UT-ID	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Longmont Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lorain County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Los Angeles, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	-0.08	-0.07	-0.06	-0.06	-0.05	-0.04	-0.04	-0.04
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Los Angeles-South Coast Air Basin Area, CA	CO (1971 8-hour)	Maintenance, Serious	100	0	-0.08	-0.07	-0.06	-0.06	-0.05	-0.04	-0.04	-0.04
Los Angeles-South Coast Air Basin Area, CA	NO ₂ (1971 Annual)	Maintenance, --	100	0	-0.08	-0.07	-0.06	-0.06	-0.05	-0.04	-0.04	-0.04
Los Angeles-South Coast Air Basin, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	-0.08	-0.07	-0.06	-0.06	-0.05	-0.04	-0.04	-0.04
Los Angeles-South Coast Air Basin, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	-0.08	-0.07	-0.06	-0.06	-0.05	-0.04	-0.04	-0.04
Los Angeles-South Coast Air Basin, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	-0.08	-0.07	-0.06	-0.06	-0.05	-0.04	-0.04	-0.04
Louisville, KY-IN	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.01	-0.01	-0.01	0.00	0.00	0.00	0.00	0.00
Lowell Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lucas County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Madison County; Granite City Township and Nameoki Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Manchester Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Manitowoc County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maricopa and Pinal Counties; Phoenix Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
Marion County: Lawrence, Washington, and Warrant Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mariposa County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mariposa County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Marshall, WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Medford Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Memphis Area, TN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Memphis, TN-MS-AR	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
Miami, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Miami, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Miami, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Milwaukee-Racine, WI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
Minneapolis-St. Paul Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Missoula Area, MT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Missoula county; Missoula and Vicinity, MT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Modesto Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Mohave County (part); Bullhead City, AZ	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mono County; Mammoth Lake Planning Area, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mono County; Mono Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morenci, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morgan County, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morongo Band of Mission Indians	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morongo Band of Mission Indians, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morristown Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Muscatine County; (part), IA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Muscatine, IA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Muskegon County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Muskingum River, OH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nashua Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nassau County, FL	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nevada County (Western part), CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nevada County (Western part), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
New Haven County, CT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
New Haven-Meriden-Waterbury Area, CT	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
New Manchester-Grant Magisterial District in Hancock County, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
New York County, NY	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
New York, NY-NJ-CT	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-0.06	-0.05	-0.05	-0.05	-0.05	-0.04	-0.03	-0.03
New York-N. New Jersey-Long Island Area, NY-NJ-CT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	-0.03	-0.03	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
New York-N. New Jersey-Long Island, NY-NJ-CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	-0.06	-0.05	-0.05	-0.05	-0.05	-0.03	-0.03	-0.03
New York-Northern New Jersey-Long Island, NY-NJ-CT	Ozone (2015 8-hour)	Nonattainment, Moderate	50	0	-0.06	-0.05	-0.05	-0.05	-0.05	-0.03	-0.03	-0.03
NJ Portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nogales, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Northern Milwaukee/Ozaukee Shoreline, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Northern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
Oakridge, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ogden Area, UT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ogden Area, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Olmsted County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Olmsted; City of Rochester, MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pekin, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Penns Grove Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Peoria County: Hollis Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Peoria County: Peoria, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Perth Amboy Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Philadelphia-Camden County Area, PA-NJ	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Philadelphia-Wilmington, PA-NJ-DE	PM _{2.5} (2006 24-hour)	Maintenance, Moderate for PA and DE; Subject to Former Subpart 1 for NJ	100	0	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-0.03	-0.03	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	-0.03	-0.03	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01
Phoenix Area, AZ	CO (1971 8-hour)	Maintenance, Serious	100	0	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
Phoenix-Mesa, AZ	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
Phoenix-Mesa, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
Pierce County; Tacoma, WA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pima County; Ajo Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pima County; Rillito Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pinal and Gila Counties; Payson, AZ	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pinal County (part); West Pinal, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pitkin County; Aspen, CO	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Pittsburgh Area, PA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Pittsburgh-Beaver Valley, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pittsburgh-Beaver Valley, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Plumas County, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Polk County, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Portland Area: Portland Metro Service District Boundary, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.01	-0.01	-0.01	0.00	0.00	0.00	0.00	0.00
Power-Bannock Counties; Fort Hall Indian Reservation, ID	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Power-Bannock Counties; Portneuf Valley Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Provo Area, UT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Provo, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Prowers County; Lamar, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Raleigh-Durham Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
Ramsey County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01
Reading, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Reno Area, NV	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rhineland, WI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Riverside County (Coachella Valley), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Riverside County (Coachella Valley), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Riverside County; Coachella Valley Planning Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Riverside, Los Angeles, Orange, and San Bernardino Counties; South Coast Air Basin, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	-0.08	-0.07	-0.06	-0.06	-0.05	-0.04	-0.04
Rosebud County; Lame Deer, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Routt County (part); Steamboat Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Rusk and Panola Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sacramento Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
Sacramento County, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
Sacramento Metro, CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Sacramento Metro, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Sacramento, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Salem Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Salt Lake City Area, UT	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Salt Lake City, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
Salt Lake County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Salt Lake County, UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
San Antonio, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00
San Bernardino County (part); excluding Searles Valley Planning Area and South Coast Air Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
San Diego Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.02	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
San Diego County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-0.02	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01
San Diego County, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	-0.02	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01
San Francisco Bay Area, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	-0.03	-0.03	-0.03	-0.03	-0.02	-0.02	-0.02
San Francisco Bay Area, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.03	-0.03	-0.03	-0.03	-0.02	-0.02	-0.02
San Francisco Bay Area, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	-0.03	-0.03	-0.03	-0.03	-0.02	-0.02	-0.02
San Francisco-Oakland-San Jose Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.03	-0.03	-0.03	-0.02	-0.02	-0.02	-0.01
San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01	-0.01
San Joaquin Valley, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01	-0.01
San Joaquin Valley, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01	-0.01
San Joaquin Valley, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01	-0.01
San Joaquin Valley, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01	-0.01
San Luis Obispo (Eastern part), CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
San Luis Obispo (Eastern San Luis Obispo), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
San Manuel, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
San Miguel County; Telluride, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sanders County (part); Thompson Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Santa Cruz County; Nogales Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Seaford, DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Seattle-Tacoma Area, WA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Seattle-Tacoma, WA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sheboygan County, WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sheboygan County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sheridan County; City of Sheridan, WY	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Shoshone County (part); excluding Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Shoshone County; City of Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Silver Bow County; Butte, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Somerville Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Southern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Southwest Indiana, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Spokane Area, WA	CO (1971 8-hour)	Maintenance, Serious	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Spokane County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Springfield Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
St. Bernard Parish, LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
St. Clair, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
St. Louis Area, MO	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
St. Louis, MO-IL	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
St. Louis-St. Charles-Farmington, MO-IL	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Steubenville, OH-WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Steubenville-Weirton, OH-WV	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stockton Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sullivan County, TN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sutter Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Syracuse Area; Onondaga County, NY	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tazewell County: Groveland Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Terre Haute, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Thurston County; Cities of Olympia, Tumwater, and Lacey, WA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Titus County, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Toms River Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tooele County (part), UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trenton Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trona, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tucson Area, AZ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tuolumne County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tuscan Buttes, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tuscan Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Uinta Basin, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Union County; LaGrande, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Upper Green River Basin Area, WY	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Utah County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vancouver Area: Clark County (part), WA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ventura County, CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ventura County, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vermillion County; Part of Clinton Township, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vigo County, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Walla Walla County; Wallula, WA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Waltham Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Warren County: Conewago Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Warren, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Washington Area, DC-MD-VA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Washington, DC-MD-VA	Ozone (2008 8-hour)	Nonattainment (DC) Maintenance (MD, VA), Marginal	50	0	-0.03	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01
Washington, DC-MD-VA	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	-0.03	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01
Washoe County; Reno Planning Area, NV	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Wayne County; (part), MI	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
West Central Pinal County, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
West Silver Valley, ID	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Williamson County, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Winston-Salem Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worcester Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Yakima Area, WA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Yakima County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Yuba City-Marysville, CA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Yuma County; Yuma Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Yuma, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Table A-20. Changes in Emissions from U.S. Passenger Cars and Light Trucks by Nonattainment or Maintenance Area and Alternative, Direct and Indirect Impacts--Acrolein, 2035

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Ada County; Boise, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Adams, Denver, and Boulder Counties; Denver Metropolitan Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.02	0.02	0.02	0.01	0.01	0.01	0.01
Ajo, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Albuquerque Area, NM	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Allegan County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Allegheny County Air Basin: Hazelwood Monitor, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Allegheny County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Allegheny County; The Area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Allegheny, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Allentown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Allentown-Bethlehem-Easton, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Alton Township, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Amador County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Anchorage Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Anchorage; Eagle River, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Anne Arundel County and Baltimore County, MD	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
AQCR 012: Portions of Grant County, NM	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AQCR 109-Millinocket, ME	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington Counties (Minneapolis-St. Paul), MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.06	0.06	0.06	0.05	0.04	0.04	0.04	0.03
AQCR 237: Brown County: Green Bay Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AQCR 238: Marathon County: Rothschild Subcity Area, Rib Mountain, Weston, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AQCR 238: Oneida County: Rhinelander Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AQCR 239: Milwaukee County: Milwaukee Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AQCR 240: Dane County: Madison Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Archuleta County; Pagosa Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Aroostock County; City of Presque Isle, ME	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Atlanta, GA	Ozone (2008 8-hour)	Maintenance, Moderate	100	0	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02
Atlanta, GA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01
Atlantic City Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bakersfield Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Baltimore Area, MD	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Baltimore, MD	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Baltimore, MD	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Baton Rouge, LA	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Beaver, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benton County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Berrien County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Billings Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Billings, MT	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Birmingham, AL	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Boise-Northern Ada County Area, ID	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bonner County; The Sandpoint Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Boston Area, MA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Boyd County (part), KY	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Brooke; Follansbee Area, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Burlington Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Butte County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Calaveras County, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Calaveras County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Campbell-Clermont Counties, KY-OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Canton-Massillon, OH	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Central New Hampshire, NH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Central Steptoe Valley, NV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Charleston, WV	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Charlotte Area, NC	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Charlotte-Rock Hill, NC-SC	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01
Chicago, IL-IN-WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.02
Chicago-Naperville, IL-IN-WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.03	0.03	0.04	0.03	0.03	0.03	0.03	0.02
Chico (Butte County), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chico Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chico, CA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cincinnati, OH-KY	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Cincinnati, OH-KY-IN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Clark County; Las Vegas Planning Area, NV	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Cleveland Area, OH	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
Cleveland, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Cleveland, OH	PM2.5 (2012 Annual)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Cleveland-Akron-Lorain, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Cleveland-Akron-Lorain, OH	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Cochise County; Paul Spur/Douglas Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Colorado Springs Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Columbus, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Columbus, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Cook County; Lyons Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cook County; Southeast Chicago, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coshocton County; Franklin Township, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coso Junction, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cuyahoga County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cuyahoga County, OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Dallas-Fort Worth, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.05	0.05	0.05	0.05	0.05	0.04	0.04	0.03
Dallas-Fort Worth, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.05	0.05	0.05	0.05	0.05	0.04	0.04	0.03
Delaware County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Denver Metro/North Front Range, CO	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.01
Denver-Boulder Area, CO	CO (1971 8-hour)	Maintenance, Serious	100	0	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01
Denver-Boulder-Greeley-Ft Collins-Loveland, CO	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.01
Detroit Area, MI	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Detroit, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Detroit, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Detroit-Ann Arbor, MI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.02	0.02	0.02	0.02	0.02	0.02	0.01
Doña Ana County (Sunland Park Area), NM	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Doña Ana County; Anthony, NM	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Door County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Douglas, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dukes County, MA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Duluth Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
East Chicago Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
East Helena Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
East Kern County Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
El Paso County, TX	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
El Paso, TX	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Eugene-Springfield Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Evangeline Parish (Partial), LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fairbanks Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fairbanks, AK	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flathead County; Columbia Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flathead County; Kalispell and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Flathead County; Whitefish and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fort Collins Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Freehold Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Freestone and Anderson Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fremont County; Canon City Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fresno Area, CA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grants Pass Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Great Falls Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Greater Connecticut, CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Greater Connecticut, CT	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Greeley Area, CO	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Hancock and Brooke Counties (Part); The City of Weirton, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hancock County (Part) The City of Weirton, including Butler and Clay: Magisterial Districts, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Harrisburg-Lebanon-Carlisle-York, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Hartford-New Britain-Middletown Area, CT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Hayden, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hayden, AZ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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Hayden, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hillsborough County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hillsborough-Polk County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Houston-Galveston-Brazoria, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.05	0.05	0.05	0.05	0.04	0.04	0.04	0.03
Houston-Galveston-Brazoria, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.05	0.05	0.05	0.05	0.04	0.03	0.03	0.03
Humphreys County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huntington, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Imperial County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Imperial County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Imperial County, CA	PM _{2.5} (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Imperial County, CA	PM _{2.5} (2012 Annual)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Imperial County; Imperial Valley Planning Area, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Serious	70	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Indian Wells, CA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Indiana, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Indianapolis Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Indianapolis, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Inyo County; Owens Valley Planning Area, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Serious	70	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jackson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jackson County; Medford-Ashland (including White City), OR	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Jamestown, NY	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jefferson County, KY	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jefferson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jefferson County; (part) Steubenville & Mingo Junction, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jefferson County; (part), OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Johnstown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Josephine County; Grants Pass, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Juneau; Mendenhall Valley Area, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kern County (Eastern Kern), CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kern County (Eastern Kern), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
King County; Kent, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
King County; Seattle, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Klamath County; Klamath Falls, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Klamath Falls Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Klamath Falls, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Knoxville, TN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Knoxville-Sevierville-La Follette, TN	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
La Porte County; (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake County (part); Lakeview, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Lake County, OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake County: (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake County; Polson, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake County; Ronan, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake Tahoe Nevada Area, NV	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake Tahoe North Shore Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake Tahoe South Shore Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lancaster, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lancaster, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lane County (part); Oakridge, OR	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lane County; Eugene/Springfield, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Las Vegas Area, NV	CO (1971 8-hour)	Maintenance, Serious	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Las Vegas, NV	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
LaSalle County; Oglesby, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Laurel Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lebanon County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lemont, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Liberty-Clairton, PA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lincoln County; Libby and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Logan, UT-ID	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Longmont Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Lorain County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Los Angeles, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	0.08	0.08	0.08	0.08	0.08	0.06	0.06	0.05
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Los Angeles-South Coast Air Basin Area, CA	CO (1971 8-hour)	Maintenance, Serious	100	0	0.08	0.08	0.08	0.08	0.08	0.06	0.06	0.05
Los Angeles-South Coast Air Basin Area, CA	NO ₂ (1971 Annual)	Maintenance, --	100	0	0.08	0.08	0.08	0.08	0.08	0.06	0.06	0.05
Los Angeles-South Coast Air Basin, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	0.08	0.08	0.08	0.08	0.08	0.06	0.06	0.05
Los Angeles-South Coast Air Basin, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	0.08	0.08	0.08	0.08	0.08	0.06	0.06	0.05
Los Angeles-South Coast Air Basin, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.08	0.08	0.08	0.08	0.08	0.06	0.06	0.05
Louisville, KY-IN	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Lowell Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lucas County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Madison County; Granite City Township and Nameoki Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Manchester Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Manitowoc County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maricopa and Pinal Counties; Phoenix Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Marion County: Lawrence, Washington, and Warrant Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mariposa County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mariposa County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Marshall, WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Medford Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Memphis Area, TN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Memphis, TN-MS-AR	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Miami, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Miami, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Miami, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Milwaukee-Racine, WI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Minneapolis-St. Paul Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.06	0.06	0.06	0.06	0.04	0.04	0.03
Missoula Area, MT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Missoula county; Missoula and Vicinity, MT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Modesto Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Mohave County (part); Bullhead City, AZ	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mono County; Mammoth Lake Planning Area, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mono County; Mono Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morenci, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morgan County, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morongo Band of Mission Indians	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morongo Band of Mission Indians, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morristown Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Muscatine County; (part), IA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Muscatine, IA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Muskegon County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Muskingum River, OH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nashua Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nassau County, FL	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nevada County (Western part), CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nevada County (Western part), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
New Haven County, CT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
New Haven-Meriden-Waterbury Area, CT	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
New Manchester-Grant Magisterial District in Hancock County, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
New York County, NY	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
New York, NY-NJ-CT	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.09	0.09	0.08	0.08	0.08	0.06	0.06	0.05
New York-N. New Jersey-Long Island Area, NY-NJ-CT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	0.06	0.06	0.05	0.05	0.05	0.04	0.04	0.03
New York-N. New Jersey-Long Island, NY-NJ-CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	0.08	0.09	0.08	0.08	0.08	0.06	0.06	0.05
New York-Northern New Jersey-Long Island, NY-NJ-CT	Ozone (2015 8-hour)	Nonattainment, Moderate	50	0	0.08	0.09	0.08	0.08	0.08	0.06	0.06	0.05
NJ Portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nogales, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Northern Milwaukee/Ozaukee Shoreline, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Northern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Oakridge, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ogden Area, UT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ogden Area, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Olmsted County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Olmsted; City of Rochester, MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pekin, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Penns Grove Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Peoria County: Hollis Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Peoria County: Peoria, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Perth Amboy Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Philadelphia-Camden County Area, PA-NJ	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00
Philadelphia-Wilmington, PA-NJ-DE	PM2.5 (2006 24-hour)	Maintenance, Moderate for PA and DE; Subject to Former Subpart 1 for NJ	100	0	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.02
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.02
Phoenix Area, AZ	CO (1971 8-hour)	Maintenance, Serious	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01
Phoenix-Mesa, AZ	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01
Phoenix-Mesa, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.02	0.02	0.02	0.02	0.01	0.02	0.02	0.01
Pierce County; Tacoma, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pima County; Ajo Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pima County; Rillito Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pinal and Gila Counties; Payson, AZ	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pinal County (part); West Pinal, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pitkin County; Aspen, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.03	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Pittsburgh Area, PA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Pittsburgh-Beaver Valley, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.04	0.04	0.04	0.04	0.04	0.03	0.03	0.02
Pittsburgh-Beaver Valley, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.04	0.04	0.03	0.03	0.03	0.02	0.02	0.02
Plumas County, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Polk County, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Portland Area: Portland Metro Service District Boundary, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Power-Bannock Counties; Fort Hall Indian Reservation, ID	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Power-Bannock Counties; Portneuf Valley Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Provo Area, UT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Provo, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Prowers County; Lamar, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Raleigh-Durham Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Ramsey County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.05	0.05	0.04	0.04	0.04	0.03	0.03	0.02
Reading, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Reno Area, NV	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rhineland, WI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Riverside County (Coachella Valley), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Riverside County (Coachella Valley), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Riverside County; Coachella Valley Planning Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Riverside, Los Angeles, Orange, and San Bernardino Counties; South Coast Air Basin, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.08	0.08	0.08	0.08	0.08	0.06	0.06	0.05
Rosebud County; Lame Deer, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Routt County (part); Steamboat Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.01
Rusk and Panola Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sacramento Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Sacramento County, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Sacramento Metro, CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Sacramento Metro, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Sacramento, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Salem Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Salt Lake City Area, UT	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Salt Lake City, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Salt Lake County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Salt Lake County, UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
San Antonio, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
San Bernardino County (part); excluding Searles Valley Planning Area and South Coast Air Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
San Diego Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
San Diego County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
San Diego County, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
San Francisco Bay Area, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.03	0.03	0.03	0.03	0.03	0.02	0.03	0.02
San Francisco Bay Area, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.03	0.03	0.03	0.03	0.03	0.02	0.03	0.02
San Francisco Bay Area, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.02
San Francisco-Oakland-San Jose Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.02
San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01
San Joaquin Valley, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01
San Joaquin Valley, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01
San Joaquin Valley, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01
San Joaquin Valley, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01
San Luis Obispo (Eastern part), CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
San Luis Obispo (Eastern San Luis Obispo), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
San Manuel, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
San Miguel County; Telluride, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sanders County (part); Thompson Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Santa Cruz County; Nogales Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Seaford, DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Seattle-Tacoma Area, WA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Seattle-Tacoma, WA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sheboygan County, WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sheboygan County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sheridan County; City of Sheridan, WY	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Shoshone County (part); excluding Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Shoshone County; City of Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Silver Bow County; Butte, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Somerville Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Southern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Southwest Indiana, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Spokane Area, WA	CO (1971 8-hour)	Maintenance, Serious	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Spokane County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Springfield Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
St. Bernard Parish, LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
St. Clair, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
St. Louis Area, MO	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
St. Louis, MO-IL	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
St. Louis-St. Charles-Farmington, MO-IL	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Steubenville, OH-WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Steubenville-Weirton, OH-WV	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stockton Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sullivan County, TN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sutter Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Syracuse Area; Onondaga County, NY	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tazewell County: Groveland Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Terre Haute, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Thurston County; Cities of Olympia, Tumwater, and Lacey, WA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Titus County, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Toms River Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tooele County (part), UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trenton Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trona, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tucson Area, AZ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tuolumne County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tuscan Buttes, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tuscan Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Uinta Basin, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Union County; LaGrande, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Upper Green River Basin Area, WY	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Utah County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vancouver Area: Clark County (part), WA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ventura County, CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Ventura County, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Vermillion County; Part of Clinton Township, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vigo County, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Walla Walla County; Wallula, WA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Waltham Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Warren County: Conewago Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Warren, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Washington Area, DC-MD-VA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Washington, DC-MD-VA	Ozone (2008 8-hour)	Nonattainment (DC) Maintenance (MD, VA), Marginal	50	0	0.02	0.03	0.03	0.03	0.02	0.02	0.02
Washington, DC-MD-VA	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	0.02	0.03	0.03	0.03	0.02	0.02	0.02
Washoe County; Reno Planning Area, NV	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Wayne County; (part), MI	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
West Central Pinal County, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
West Silver Valley, ID	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Williamson County, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Winston-Salem Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worcester Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Yakima Area, WA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Yakima County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Yuba City-Marysville, CA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Yuma County; Yuma Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Yuma, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Table A-21. Changes in Emissions from U.S. Passenger Cars and Light Trucks by Nonattainment or Maintenance Area and Alternative, Direct and Indirect Impacts--Acrolein, 2050

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Ada County; Boise, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Adams, Denver, and Boulder Counties; Denver Metropolitan Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.07	0.07	0.07	0.07	0.05	0.04	0.03
Ajo, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Albuquerque Area, NM	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.03	0.02	0.02	0.02	0.02	0.01	0.01
Allegan County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Allegheny County Air Basin: Hazelwood Monitor, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Allegheny County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.06	0.05	0.05	0.05	0.04	0.03	0.02
Allegheny County; The Area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Allegheny, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.02	0.02	0.01	0.01	0.01	0.01	0.01
Allentown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Allentown-Bethlehem-Easton, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01
Alton Township, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Amador County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Anchorage Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Anchorage; Eagle River, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Anne Arundel County and Baltimore County, MD	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
AQCR 012: Portions of Grant County, NM	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AQCR 109-Millinocket, ME	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington Counties (Minneapolis-St. Paul), MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.19	0.19	0.18	0.17	0.13	0.10	0.08	
AQCR 237: Brown County: Green Bay Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AQCR 238: Marathon County: Rothschild Subcity Area, Rib Mountain, Weston, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
AQCR 238: Oneida County: Rhinelander Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AQCR 239: Milwaukee County: Milwaukee Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01
AQCR 240: Dane County: Madison Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Archuleta County; Pagosa Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01
Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Aroostock County; City of Presque Isle, ME	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Atlanta, GA	Ozone (2008 8-hour)	Maintenance, Moderate	100	0	0.23	0.22	0.21	0.21	0.16	0.12	0.10	
Atlanta, GA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.18	0.17	0.17	0.17	0.13	0.09	0.08	
Atlantic City Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bakersfield Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Baltimore Area, MD	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Baltimore, MD	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	0.11	0.10	0.10	0.10	0.08	0.06	0.05
Baltimore, MD	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	0.11	0.11	0.10	0.10	0.08	0.06	0.05
Baton Rouge, LA	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.04	0.03	0.03	0.03	0.02	0.02	0.02
Beaver, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benton County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Berrien County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Billings Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Billings, MT	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Birmingham, AL	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.05	0.05	0.04	0.04	0.03	0.02	0.02
Boise-Northern Ada County Area, ID	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Bonner County; The Sandpoint Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Boston Area, MA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01
Boyd County (part), KY	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Brooke; Follansbee Area, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Burlington Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Butte County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Calaveras County, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Calaveras County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Campbell-Clermont Counties, KY-OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Canton-Massillon, OH	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Central New Hampshire, NH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Central Steptoe Valley, NV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Charleston, WV	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.03	0.02	0.02	0.02	0.02	0.02	0.01	0.01
Charlotte Area, NC	CO (1971 8-hour)	Maintenance, --	100	0	0.06	0.06	0.06	0.05	0.04	0.03	0.03	0.03
Charlotte-Rock Hill, NC-SC	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.11	0.11	0.11	0.10	0.08	0.06	0.05	0.05
Chicago, IL-IN-WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.25	0.24	0.23	0.23	0.17	0.13	0.11	0.11
Chicago-Naperville, IL-IN-WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.27	0.26	0.25	0.25	0.19	0.14	0.12	0.12
Chico (Butte County), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Chico Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chico, CA	PM _{2.5} (2006 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Cincinnati, OH-KY	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.08	0.08	0.07	0.07	0.05	0.04	0.03	0.03
Cincinnati, OH-KY-IN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.08	0.08	0.08	0.08	0.06	0.04	0.04	0.04
Clark County; Las Vegas Planning Area, NV	PM ₁₀ (1987 24-hour)	Maintenance, Serious	100	0	0.07	0.07	0.07	0.07	0.05	0.04	0.03	0.03
Cleveland Area, OH	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02	0.02
Cleveland, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.11	0.10	0.10	0.10	0.07	0.05	0.05	0.05
Cleveland, OH	PM _{2.5} (2012 Annual)	Maintenance, Moderate	100	0	0.05	0.05	0.05	0.05	0.04	0.03	0.02	0.02
Cleveland-Akron-Lorain, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.11	0.11	0.11	0.10	0.08	0.06	0.05	0.05

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Cleveland-Akron-Lorain, OH	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.10	0.10	0.10	0.10	0.07	0.05	0.05
Cochise County; Paul Spur/Douglas Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Colorado Springs Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Columbus, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.08	0.07	0.07	0.07	0.05	0.04	0.03
Columbus, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.07	0.07	0.07	0.07	0.05	0.04	0.03
Cook County; Lyons Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cook County; Southeast Chicago, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coshocton County; Franklin Township, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coso Junction, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cuyahoga County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.03	0.03	0.03	0.03	0.02	0.02	0.02
Cuyahoga County, OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02
Dallas-Fort Worth, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.31	0.30	0.29	0.29	0.22	0.16	0.14
Dallas-Fort Worth, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.31	0.30	0.29	0.28	0.21	0.16	0.14
Delaware County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Denver Metro/North Front Range, CO	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.15	0.14	0.14	0.14	0.10	0.08	0.06
Denver-Boulder Area, CO	CO (1971 8-hour)	Maintenance, Serious	100	0	0.12	0.11	0.11	0.11	0.08	0.06	0.05
Denver-Boulder-Greeley-Ft Collins-Loveland, CO	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.15	0.14	0.14	0.14	0.10	0.08	0.06
Detroit Area, MI	CO (1971 8-hour)	Maintenance, --	100	0	0.06	0.06	0.06	0.06	0.04	0.03	0.03
Detroit, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.18	0.17	0.16	0.16	0.12	0.09	0.08

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Detroit, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Detroit-Ann Arbor, MI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.18	0.17	0.17	0.16	0.12	0.09	0.08	0.08
Doña Ana County (Sunland Park Area), NM	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Doña Ana County; Anthony, NM	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Door County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Douglas, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dukes County, MA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Duluth Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
East Chicago Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
East Helena Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
East Kern County Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
El Paso County, TX	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01
El Paso, TX	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Eugene-Springfield Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Evangeline Parish (Partial), LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fairbanks Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fairbanks, AK	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flathead County; Columbia Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flathead County; Kalispell and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Flathead County; Whitefish and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fort Collins Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Freehold Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Freestone and Anderson Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fremont County; Canon City Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fresno Area, CA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01
Grants Pass Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Great Falls Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Greater Connecticut, CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	0.06	0.06	0.05	0.05	0.04	0.03	0.03	0.03
Greater Connecticut, CT	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	0.06	0.06	0.05	0.05	0.04	0.03	0.03	0.03
Greeley Area, CO	CO (1971 8-hour)	Maintenance, --	100	0	0.03	0.03	0.03	0.03	0.02	0.01	0.01	0.01
Hancock and Brooke Counties (Part); The City of Weirton, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hancock County (Part) The City of Weirton, including Butler and Clay: Magisterial Districts, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Harrisburg-Lebanon-Carlisle-York, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02	0.02
Hartford-New Britain-Middletown Area, CT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02	0.02
Hayden, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hayden, AZ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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Appendix A Air Quality Nonattainment Area Results

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				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Hayden, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hillsborough County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hillsborough-Polk County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Houston-Galveston-Brazoria, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.28	0.27	0.26	0.25	0.19	0.14	0.12	0.12
Houston-Galveston-Brazoria, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.27	0.26	0.25	0.25	0.19	0.14	0.12	0.12
Humphreys County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huntington, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Imperial County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Imperial County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Imperial County, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
Imperial County, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
Imperial County; Imperial Valley Planning Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
Indian Wells, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Indiana, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.03	0.03	0.02	0.02	0.02	0.01	0.01	0.01
Indianapolis Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Indianapolis, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01
Inyo County; Owens Valley Planning Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jackson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jackson County; Medford-Ashland (including White City), OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00

Notes:

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				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Jamestown, NY	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Jefferson County, KY	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jefferson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jefferson County; (part) Steubenville & Mingo Junction, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jefferson County; (part), OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Johnstown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Josephine County; Grants Pass, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Juneau; Mendenhall Valley Area, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kern County (Eastern Kern), CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Kern County (Eastern Kern), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
King County; Kent, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
King County; Seattle, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Klamath County; Klamath Falls, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Klamath Falls Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Klamath Falls, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Knoxville, TN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.01
Knoxville-Sevierville-La Follette, TN	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.04	0.04	0.04	0.04	0.04	0.03	0.02	0.02
La Porte County; (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake County (part); Lakeview, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

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NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Lake County, OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Lake County: (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Lake County; Polson, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake County; Ronan, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake Tahoe Nevada Area, NV	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake Tahoe North Shore Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake Tahoe South Shore Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lancaster, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Lancaster, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Lane County (part); Oakridge, OR	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lane County; Eugene/Springfield, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Las Vegas Area, NV	CO (1971 8-hour)	Maintenance, Serious	100	0	0.07	0.07	0.07	0.07	0.07	0.05	0.04	0.03
Las Vegas, NV	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.07	0.07	0.07	0.07	0.07	0.05	0.04	0.03
LaSalle County; Oglesby, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Laurel Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lebanon County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lemont, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00

Notes:

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NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Liberty-Clairton, PA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lincoln County; Libby and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Logan, UT-ID	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Longmont Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Lorain County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Los Angeles, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	0.59	0.57	0.55	0.54	0.41	0.30	0.26	0.26
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02	0.02
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02	0.02
Los Angeles-South Coast Air Basin Area, CA	CO (1971 8-hour)	Maintenance, Serious	100	0	0.59	0.57	0.55	0.54	0.41	0.30	0.26	0.26
Los Angeles-South Coast Air Basin Area, CA	NO ₂ (1971 Annual)	Maintenance, --	100	0	0.59	0.57	0.55	0.54	0.41	0.30	0.26	0.26
Los Angeles-South Coast Air Basin, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	0.59	0.57	0.55	0.54	0.41	0.30	0.26	0.26
Los Angeles-South Coast Air Basin, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	0.59	0.57	0.55	0.54	0.41	0.30	0.26	0.26
Los Angeles-South Coast Air Basin, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.59	0.57	0.55	0.54	0.41	0.30	0.26	0.26
Louisville, KY-IN	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.05	0.05	0.04	0.04	0.03	0.02	0.02	0.02
Lowell Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lucas County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Madison County; Granite City Township and Nameoki Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Manchester Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Manitowoc County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maricopa and Pinal Counties; Phoenix Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	0.14	0.14	0.13	0.13	0.10	0.07	0.06	0.06
Marion County: Lawrence, Washington, and Warrant Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01
Mariposa County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mariposa County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Marshall, WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Medford Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Memphis Area, TN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.04	0.04	0.03	0.03	0.03	0.02	0.02	0.02
Memphis, TN-MS-AR	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.05	0.05	0.04	0.04	0.03	0.02	0.02	0.02
Miami, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Miami, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Miami, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Milwaukee-Racine, WI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.05	0.04	0.04	0.04	0.03	0.02	0.02	0.02
Minneapolis-St. Paul Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.20	0.19	0.18	0.18	0.13	0.10	0.08	0.08
Missoula Area, MT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Missoula county; Missoula and Vicinity, MT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Modesto Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Mohave County (part); Bullhead City, AZ	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mono County; Mammoth Lake Planning Area, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mono County; Mono Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morenci, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morgan County, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morongo Band of Mission Indians	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morongo Band of Mission Indians, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morristown Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Muscatine County; (part), IA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Muscatine, IA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Muskegon County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Muskingum River, OH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nashua Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nassau County, FL	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nevada County (Western part), CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nevada County (Western part), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
New Haven County, CT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
New Haven-Meriden-Waterbury Area, CT	CO (1971 8-hour)	Maintenance, --	100	0	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.01
New Manchester-Grant Magisterial District in Hancock County, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
New York County, NY	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
New York, NY-NJ-CT	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.54	0.51	0.50	0.49	0.37	0.27	0.23
New York-N. New Jersey-Long Island Area, NY-NJ-CT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	0.31	0.30	0.29	0.28	0.21	0.16	0.13
New York-N. New Jersey-Long Island, NY-NJ-CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	0.53	0.50	0.49	0.48	0.36	0.27	0.23
New York-Northern New Jersey-Long Island, NY-NJ-CT	Ozone (2015 8-hour)	Nonattainment, Moderate	50	0	0.53	0.50	0.49	0.48	0.36	0.27	0.23
NJ Portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nogales, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Northern Milwaukee/Ozaukee Shoreline, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Northern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.06	0.06	0.05	0.05	0.04	0.03	0.03
Oakridge, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ogden Area, UT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ogden Area, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Olmsted County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Olmsted; City of Rochester, MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pekin, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Penns Grove Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Peoria County: Hollis Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Peoria County: Peoria, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Perth Amboy Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Philadelphia-Camden County Area, PA-NJ	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.04	0.04	0.04	0.03	0.03	0.02	0.02	0.02
Philadelphia-Wilmington, PA-NJ-DE	PM _{2.5} (2006 24-hour)	Maintenance, Moderate for PA and DE; Subject to Former Subpart 1 for NJ	100	0	0.18	0.17	0.17	0.16	0.12	0.09	0.08	0.08
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.24	0.23	0.22	0.22	0.16	0.12	0.10	0.10
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	0.24	0.23	0.22	0.22	0.16	0.12	0.10	0.10
Phoenix Area, AZ	CO (1971 8-hour)	Maintenance, Serious	100	0	0.14	0.13	0.13	0.13	0.10	0.07	0.06	0.06
Phoenix-Mesa, AZ	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.14	0.14	0.13	0.13	0.10	0.07	0.06	0.06
Phoenix-Mesa, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.15	0.14	0.14	0.14	0.10	0.08	0.07	0.07
Pierce County; Tacoma, WA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pima County; Ajo Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pima County; Rillito Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pinal and Gila Counties; Payson, AZ	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pinal County (part); West Pinal, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Pitkin County; Aspen, CO	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.04	0.04	0.04	0.03	0.03	0.02	0.01	0.01
Pittsburgh Area, PA	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Pittsburgh-Beaver Valley, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.13	0.12	0.12	0.11	0.08	0.06	0.05
Pittsburgh-Beaver Valley, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.12	0.11	0.11	0.10	0.08	0.06	0.05
Plumas County, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Polk County, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Portland Area: Portland Metro Service District Boundary, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.05	0.04	0.04	0.04	0.03	0.02	0.02
Power-Bannock Counties; Fort Hall Indian Reservation, ID	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Power-Bannock Counties; Portneuf Valley Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Provo Area, UT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Provo, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Prowers County; Lamar, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Raleigh-Durham Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.07	0.06	0.06	0.06	0.05	0.03	0.03
Ramsey County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.08	0.07	0.07	0.06	0.05	0.04	0.03
Reading, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Reno Area, NV	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Rhineland, WI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Riverside County (Coachella Valley), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Riverside County (Coachella Valley), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Riverside County; Coachella Valley Planning Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Riverside, Los Angeles, Orange, and San Bernardino Counties; South Coast Air Basin, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.59	0.56	0.55	0.54	0.41	0.30	0.26
Rosebud County; Lame Deer, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Routt County (part); Steamboat Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.05	0.05	0.04	0.04	0.03	0.02	0.02
Rusk and Panola Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Sacramento Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.05	0.05	0.05	0.05	0.04	0.03	0.02
Sacramento County, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.05	0.05	0.05	0.05	0.03	0.03	0.02
Sacramento Metro, CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	0.09	0.08	0.08	0.08	0.06	0.04	0.04
Sacramento Metro, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	0.09	0.08	0.08	0.08	0.06	0.04	0.04
Sacramento, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.08	0.08	0.08	0.08	0.06	0.04	0.04
Salem Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Salt Lake City Area, UT	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Salt Lake City, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	0.06	0.06	0.06	0.06	0.04	0.03	0.03
Salt Lake County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.04	0.04	0.03	0.03	0.03	0.02	0.02
Salt Lake County, UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.04	0.04	0.03	0.03	0.03	0.02	0.02
San Antonio, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.07	0.06	0.06	0.06	0.05	0.03	0.03
San Bernardino County (part); excluding Searles Valley Planning Area and South Coast Air Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.03	0.03	0.03	0.03	0.02	0.01	0.01
San Diego Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.12	0.12	0.12	0.11	0.09	0.06	0.05

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
San Diego County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.12	0.12	0.12	0.11	0.09	0.06	0.05
San Diego County, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	0.12	0.12	0.12	0.11	0.09	0.06	0.05
San Francisco Bay Area, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.25	0.24	0.23	0.23	0.17	0.13	0.11
San Francisco Bay Area, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.25	0.24	0.23	0.23	0.17	0.13	0.11
San Francisco Bay Area, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.25	0.24	0.23	0.23	0.17	0.13	0.11
San Francisco-Oakland-San Jose Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.23	0.22	0.21	0.21	0.16	0.12	0.10
San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.15	0.14	0.14	0.14	0.10	0.08	0.07
San Joaquin Valley, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	0.15	0.14	0.14	0.14	0.10	0.08	0.07
San Joaquin Valley, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	0.15	0.14	0.14	0.14	0.10	0.08	0.07
San Joaquin Valley, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	0.15	0.14	0.14	0.14	0.10	0.08	0.07
San Joaquin Valley, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.15	0.14	0.14	0.14	0.10	0.08	0.07
San Luis Obispo (Eastern part), CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
San Luis Obispo (Eastern San Luis Obispo), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
San Manuel, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
San Miguel County; Telluride, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sanders County (part); Thompson Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Santa Cruz County; Nogales Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Seaford, DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Seattle-Tacoma Area, WA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	0.11	0.10	0.10	0.10	0.10	0.07	0.05	0.05
Seattle-Tacoma, WA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Sheboygan County, WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sheboygan County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sheridan County; City of Sheridan, WY	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Shoshone County (part); excluding Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Shoshone County; City of Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Silver Bow County; Butte, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Somerville Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Southern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Southwest Indiana, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Spokane Area, WA	CO (1971 8-hour)	Maintenance, Serious	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Spokane County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Springfield Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
St. Bernard Parish, LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
St. Clair, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
St. Louis Area, MO	CO (1971 8-hour)	Maintenance, --	100	0	0.03	0.02	0.02	0.02	0.02	0.02	0.01	0.01
St. Louis, MO-IL	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.08	0.07	0.07	0.07	0.07	0.05	0.04	0.03
St. Louis-St. Charles-Farmington, MO-IL	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.09	0.09	0.08	0.08	0.08	0.06	0.05	0.04

Notes:

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				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Steubenville, OH-WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Steubenville-Weirton, OH-WV	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stockton Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Sullivan County, TN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sutter Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Syracuse Area; Onondaga County, NY	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01
Tazewell County: Groveland Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Terre Haute, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Thurston County; Cities of Olympia, Tumwater, and Lacey, WA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Titus County, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Toms River Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tooele County (part), UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trenton Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trona, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tucson Area, AZ	CO (1971 8-hour)	Maintenance, --	100	0	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02
Tuolumne County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tuscan Buttes, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tuscan Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Uinta Basin, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Union County; LaGrande, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Upper Green River Basin Area, WY	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Utah County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Vancouver Area: Clark County (part), WA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Ventura County, CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	0.04	0.03	0.03	0.03	0.03	0.02	0.02	0.02
Ventura County, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	0.04	0.03	0.03	0.03	0.03	0.02	0.02	0.02
Vermillion County; Part of Clinton Township, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vigo County, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Walla Walla County; Wallula, WA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Waltham Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Warren County: Conewago Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Warren, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Washington Area, DC-MD-VA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.03	0.03	0.03	0.03	0.03	0.02	0.01	0.01
Washington, DC-MD-VA	Ozone (2008 8-hour)	Nonattainment (DC) Maintenance (MD, VA), Marginal	50	0	0.20	0.19	0.19	0.18	0.18	0.14	0.10	0.09
Washington, DC-MD-VA	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	0.20	0.19	0.19	0.18	0.18	0.14	0.10	0.09
Washoe County; Reno Planning Area, NV	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Wayne County; (part), MI	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
West Central Pinal County, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
West Silver Valley, ID	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Williamson County, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Winston-Salem Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Worcester Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Yakima Area, WA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Yakima County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Yuba City-Marysville, CA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Yuma County; Yuma Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Yuma, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Table A-22. Changes in Emissions from U.S. Passenger Cars and Light Trucks by Nonattainment or Maintenance Area and Alternative, Direct and Indirect Impacts--Benzene, 2025

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Ada County; Boise, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.11	-0.11	-0.10	-0.10	-0.07	-0.07	-0.05
Adams, Denver, and Boulder Counties; Denver Metropolitan Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.35	-0.33	-0.31	-0.29	-0.22	-0.23	-0.16
Ajo, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Albuquerque Area, NM	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.27	-0.26	-0.24	-0.23	-0.17	-0.16	-0.13
Allegan County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.03	-0.03	-0.02	-0.02	-0.02	-0.02	-0.01
Allegheny County Air Basin: Hazelwood Monitor, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.03	-0.03	-0.03	-0.03	-0.02	-0.02	-0.01
Allegheny County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	-0.39	-0.37	-0.34	-0.33	-0.24	-0.23	-0.18
Allegheny County; The Area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Allegheny, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.03	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01
Allentown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-0.23	-0.22	-0.21	-0.20	-0.15	-0.14	-0.11
Allentown-Bethlehem-Easton, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-0.28	-0.26	-0.25	-0.24	-0.17	-0.16	-0.13
Alton Township, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Amador County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.03	-0.03	-0.03	-0.03	-0.02	-0.02	-0.01
Anchorage Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	0.03	0.03	0.03	0.03	0.02	0.01	0.01
Anchorage; Eagle River, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Anne Arundel County and Baltimore County, MD	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.52	-0.50	-0.47	-0.45	-0.33	-0.30	-0.24

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
AQCR 012: Portions of Grant County, NM	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
AQCR 109-Millinocket, ME	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.06	-0.05	-0.05	-0.05	-0.04	-0.03	-0.03
AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington Counties (Minneapolis-St. Paul), MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-1.11	-1.05	-0.98	-0.95	-0.70	-0.67	-0.51
AQCR 237: Brown County: Green Bay Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AQCR 238: Marathon County: Rothschild Subcity Area, Rib Mountain, Weston, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.05	-0.05	-0.05	-0.04	-0.03	-0.03	-0.02
AQCR 238: Oneida County: Rhinelander Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
AQCR 239: Milwaukee County: Milwaukee Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.28	-0.27	-0.25	-0.25	-0.18	-0.17	-0.13
AQCR 240: Dane County: Madison Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.25	-0.24	-0.22	-0.21	-0.16	-0.14	-0.11
Archuleta County; Pagosa Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Aroostock County; City of Presque Isle, ME	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Atlanta, GA	Ozone (2008 8-hour)	Maintenance, Moderate	100	0	-2.62	-2.50	-2.34	-2.26	-1.65	-1.53	-1.22
Atlanta, GA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-2.08	-1.98	-1.85	-1.79	-1.31	-1.21	-0.96
Atlantic City Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	-0.02	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01
Bakersfield Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	-0.19	-0.18	-0.16	-0.16	-0.12	-0.11	-0.09

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Baltimore Area, MD	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Baltimore, MD	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	-1.31	-1.25	-1.17	-1.13	-0.83	-0.76	-0.61	
Baltimore, MD	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	-1.32	-1.26	-1.18	-1.14	-0.83	-0.77	-0.62	
Baton Rouge, LA	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-0.20	-0.19	-0.18	-0.17	-0.13	-0.13	-0.09	
Beaver, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00	
Benton County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.01	-0.01	0.00	0.00	0.00	0.00	0.00	
Berrien County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.09	-0.08	-0.08	-0.07	-0.05	-0.05	-0.04	
Billings Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	
Billings, MT	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	
Birmingham, AL	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-0.46	-0.44	-0.41	-0.39	-0.29	-0.27	-0.21	
Boise-Northern Ada County Area, ID	CO (1971 8-hour)	Maintenance, --	100	0	-0.11	-0.11	-0.10	-0.10	-0.07	-0.07	-0.05	
Bonner County; The Sandpoint Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Boston Area, MA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.24	-0.23	-0.22	-0.21	-0.15	-0.14	-0.11	
Boyd County (part), KY	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01	
Brooke; Follansbee Area, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Burlington Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Butte County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.08	-0.08	-0.07	-0.07	-0.05	-0.05	-0.04	
Calaveras County, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	-0.03	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	
Calaveras County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.03	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Campbell-Clermont Counties, KY-OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Canton-Massillon, OH	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-0.15	-0.14	-0.14	-0.13	-0.10	-0.09	-0.07	-0.07
Central New Hampshire, NH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.09	-0.09	-0.08	-0.08	-0.06	-0.05	-0.04	-0.04
Central Steptoe Valley, NV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00	0.00
Charleston, WV	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-0.11	-0.11	-0.10	-0.09	-0.07	-0.07	-0.05	-0.05
Charlotte Area, NC	CO (1971 8-hour)	Maintenance, --	100	0	-0.73	-0.70	-0.65	-0.63	-0.46	-0.42	-0.34	-0.34
Charlotte-Rock Hill, NC-SC	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-1.31	-1.25	-1.17	-1.13	-0.83	-0.76	-0.61	-0.61
Chicago, IL-IN-WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-2.77	-2.64	-2.46	-2.38	-1.74	-1.63	-1.28	-1.28
Chicago-Naperville, IL-IN-WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-3.01	-2.87	-2.68	-2.59	-1.89	-1.77	-1.40	-1.40
Chico (Butte County), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	-0.08	-0.08	-0.07	-0.07	-0.05	-0.05	-0.04	-0.04
Chico Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.04	-0.03	-0.03	-0.03	-0.02	-0.02	-0.02	-0.02
Chico, CA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-0.08	-0.07	-0.07	-0.07	-0.05	-0.05	-0.04	-0.04
Cincinnati, OH-KY	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.91	-0.87	-0.81	-0.79	-0.57	-0.53	-0.42	-0.42
Cincinnati, OH-KY-IN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-0.95	-0.91	-0.85	-0.82	-0.60	-0.56	-0.44	-0.44
Clark County; Las Vegas Planning Area, NV	PM10 (1987 24-hour)	Maintenance, Serious	100	0	-0.89	-0.85	-0.80	-0.77	-0.56	-0.52	-0.41	-0.41
Cleveland Area, OH	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.50	-0.48	-0.45	-0.43	-0.31	-0.29	-0.23	-0.23
Cleveland, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-1.24	-1.18	-1.10	-1.06	-0.78	-0.72	-0.57	-0.57
Cleveland, OH	PM2.5 (2012 Annual)	Maintenance, Moderate	100	0	-0.62	-0.59	-0.55	-0.54	-0.39	-0.36	-0.29	-0.29
Cleveland-Akron-Lorain, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-1.27	-1.21	-1.13	-1.09	-0.80	-0.74	-0.59	-0.59

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Cleveland-Akron-Lorain, OH	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-1.20	-1.14	-1.07	-1.03	-0.75	-0.70	-0.56
Cochise County; Paul Spur/Douglas Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
Colorado Springs Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.10	-0.10	-0.09	-0.09	-0.06	-0.07	-0.05
Columbus, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-0.85	-0.81	-0.76	-0.73	-0.53	-0.50	-0.39
Columbus, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.81	-0.77	-0.72	-0.69	-0.51	-0.47	-0.37
Cook County; Lyons Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.03	-0.03	-0.03	-0.03	-0.02	-0.02	-0.01
Cook County; Southeast Chicago, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.04	-0.03	-0.03	-0.03	-0.02	-0.02	-0.02
Coshocton County; Franklin Township, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coso Junction, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Cuyahoga County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.40	-0.38	-0.35	-0.34	-0.25	-0.23	-0.18
Cuyahoga County, OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.50	-0.48	-0.45	-0.43	-0.31	-0.29	-0.23
Dallas-Fort Worth, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-3.36	-3.20	-2.99	-2.89	-2.11	-1.96	-1.56
Dallas-Fort Worth, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-3.32	-3.17	-2.96	-2.86	-2.09	-1.94	-1.54
Delaware County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	-0.12	-0.11	-0.11	-0.10	-0.07	-0.07	-0.06
Denver Metro/North Front Range, CO	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.65	-0.60	-0.57	-0.53	-0.40	-0.45	-0.30
Denver-Boulder Area, CO	CO (1971 8-hour)	Maintenance, Serious	100	0	-0.52	-0.48	-0.45	-0.43	-0.32	-0.36	-0.24
Denver-Boulder-Greeley-Ft Collins-Loveland, CO	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-0.65	-0.60	-0.57	-0.53	-0.40	-0.45	-0.30
Detroit Area, MI	CO (1971 8-hour)	Maintenance, --	100	0	-0.65	-0.62	-0.58	-0.56	-0.41	-0.39	-0.30
Detroit, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-1.93	-1.84	-1.72	-1.66	-1.21	-1.13	-0.89

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Detroit, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.09	-0.08	-0.08	-0.07	-0.05	-0.05	-0.04
Detroit-Ann Arbor, MI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-1.93	-1.84	-1.72	-1.66	-1.21	-1.14	-0.90
Doña Ana County (Sunland Park Area), NM	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Doña Ana County; Anthony, NM	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Door County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Douglas, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00
Dukes County, MA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Duluth Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
East Chicago Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
East Helena Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
East Kern County Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
El Paso County, TX	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.21	-0.20	-0.18	-0.18	-0.13	-0.12	-0.10
El Paso, TX	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
Eugene-Springfield Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	-0.09	-0.09	-0.08	-0.08	-0.06	-0.05	-0.04
Evangeline Parish (Partial), LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fairbanks Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Fairbanks, AK	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Flathead County; Columbia Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flathead County; Kalispell and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Flathead County; Whitefish and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fort Collins Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.04	-0.04	-0.04	-0.03	-0.03	-0.03	-0.03	-0.02
Freehold Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	-0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Freestone and Anderson Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fremont County; Canon City Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Fresno Area, CA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	-0.25	-0.24	-0.23	-0.22	-0.16	-0.15	-0.15	-0.12
Grants Pass Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Great Falls Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Greater Connecticut, CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	-0.70	-0.67	-0.62	-0.60	-0.44	-0.41	-0.41	-0.33
Greater Connecticut, CT	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	-0.70	-0.67	-0.63	-0.60	-0.44	-0.41	-0.41	-0.33
Greeley Area, CO	CO (1971 8-hour)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.01	0.00	0.00	0.01
Hancock and Brooke Counties (Part); The City of Weirton, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hancock County (Part) The City of Weirton, including Butler and Clay: Magisterial Districts, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Harrisburg-Lebanon-Carlisle-York, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-0.47	-0.44	-0.42	-0.40	-0.29	-0.27	-0.27	-0.22
Hartford-New Britain-Middletown Area, CT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.48	-0.46	-0.43	-0.42	-0.30	-0.28	-0.28	-0.23
Hayden, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hayden, AZ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Hayden, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hillsborough County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hillsborough-Polk County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Houston-Galveston-Brazoria, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-0.40	-0.34	-0.32	-0.27	-0.24	-0.44	-0.18	
Houston-Galveston-Brazoria, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.34	-0.28	-0.27	-0.22	-0.20	-0.41	-0.15	
Humphreys County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huntington, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.01	-0.01	-0.01	0.00	0.00	0.00	0.00	0.00
Imperial County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-0.09	-0.08	-0.08	-0.07	-0.05	-0.05	-0.04	
Imperial County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.09	-0.08	-0.08	-0.07	-0.05	-0.05	-0.04	
Imperial County, CA	PM _{2.5} (2006 24-hour)	Nonattainment, Moderate	100	0	-0.07	-0.07	-0.06	-0.06	-0.05	-0.04	-0.03	
Imperial County, CA	PM _{2.5} (2012 Annual)	Nonattainment, Moderate	100	0	-0.07	-0.07	-0.06	-0.06	-0.05	-0.04	-0.03	
Imperial County; Imperial Valley Planning Area, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Serious	70	0	-0.09	-0.08	-0.08	-0.07	-0.05	-0.05	-0.04	
Indian Wells, CA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	-0.01	-0.01	0.00	0.00	0.00	0.00	0.00	
Indiana, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Indianapolis Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Indianapolis, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.24	-0.23	-0.21	-0.21	-0.15	-0.14	-0.11	
Inyo County; Owens Valley Planning Area, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Serious	70	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jackson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Jackson County; Medford-Ashland (including White City), OR	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	-0.06	-0.05	-0.05	-0.05	-0.04	-0.03	-0.03	

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Jamestown, NY	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-0.04	-0.04	-0.04	-0.04	-0.04	-0.03	-0.03	-0.02
Jefferson County, KY	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jefferson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Jefferson County; (part) Steubenville & Mingo Junction, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Jefferson County; (part), OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Johnstown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-0.03	-0.03	-0.03	-0.03	-0.03	-0.02	-0.02	-0.01
Josephine County; Grants Pass, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Juneau; Mendenhall Valley Area, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kern County (Eastern Kern), CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	-0.03	-0.03	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01
Kern County (Eastern Kern), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	-0.03	-0.03	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01
King County; Kent, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00
King County; Seattle, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
Klamath County; Klamath Falls, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
Klamath Falls Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
Klamath Falls, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01
Knoxville, TN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-0.35	-0.33	-0.31	-0.30	-0.30	-0.22	-0.20	-0.16
Knoxville-Sevierville-La Follette, TN	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-0.40	-0.38	-0.35	-0.34	-0.34	-0.25	-0.24	-0.18
La Porte County; (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
Lake County (part); Lakeview, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Lake County, OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	-0.11	-0.11	-0.10	-0.10	-0.07	-0.06	-0.05
Lake County: (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.12	-0.11	-0.10	-0.10	-0.07	-0.07	-0.05
Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.07	-0.06	-0.06	-0.06	-0.04	-0.04	-0.03
Lake County; Polson, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake County; Ronan, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake Tahoe Nevada Area, NV	CO (1971 8-hour)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
Lake Tahoe North Shore Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
Lake Tahoe South Shore Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
Lancaster, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-0.22	-0.21	-0.20	-0.19	-0.14	-0.13	-0.10
Lancaster, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-0.22	-0.21	-0.20	-0.19	-0.14	-0.13	-0.10
Lane County (part); Oakridge, OR	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lane County; Eugene/Springfield, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.09	-0.09	-0.08	-0.08	-0.06	-0.05	-0.04
Las Vegas Area, NV	CO (1971 8-hour)	Maintenance, Serious	100	0	-0.89	-0.85	-0.80	-0.77	-0.56	-0.52	-0.41
Las Vegas, NV	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.89	-0.85	-0.80	-0.77	-0.56	-0.52	-0.41
LaSalle County; Oglesby, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Laurel Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Lebanon County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	-0.05	-0.05	-0.04	-0.04	-0.03	-0.03	-0.02
Lemont, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.05	-0.05	-0.04	-0.04	-0.03	-0.03	-0.02

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Liberty-Clairton, PA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lincoln County; Libby and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Logan, UT-ID	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	-0.05	-0.05	-0.04	-0.04	-0.03	-0.03	-0.02	-0.02
Longmont Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
Lorain County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01	-0.01
Los Angeles, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	-7.28	-6.95	-6.49	-6.28	-4.57	-4.21	-3.38	-3.38
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	-0.41	-0.40	-0.37	-0.36	-0.26	-0.24	-0.19	-0.19
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	-0.41	-0.40	-0.37	-0.36	-0.26	-0.24	-0.19	-0.19
Los Angeles-South Coast Air Basin Area, CA	CO (1971 8-hour)	Maintenance, Serious	100	0	-7.28	-6.95	-6.49	-6.28	-4.58	-4.21	-3.38	-3.38
Los Angeles-South Coast Air Basin Area, CA	NO ₂ (1971 Annual)	Maintenance, --	100	0	-7.28	-6.95	-6.49	-6.28	-4.58	-4.21	-3.38	-3.38
Los Angeles-South Coast Air Basin, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	-7.28	-6.95	-6.49	-6.28	-4.58	-4.21	-3.38	-3.38
Los Angeles-South Coast Air Basin, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	-7.27	-6.94	-6.49	-6.28	-4.57	-4.21	-3.38	-3.38
Los Angeles-South Coast Air Basin, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	-7.28	-6.95	-6.49	-6.28	-4.57	-4.21	-3.38	-3.38
Louisville, KY-IN	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.53	-0.50	-0.47	-0.45	-0.33	-0.31	-0.25	-0.25
Lowell Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	-0.04	-0.03	-0.03	-0.03	-0.02	-0.02	-0.02	-0.02
Lucas County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.15	-0.14	-0.13	-0.13	-0.10	-0.09	-0.07	-0.07
Madison County; Granite City Township and Nameoki Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Manchester Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	-0.05	-0.05	-0.05	-0.04	-0.03	-0.03	-0.02	-0.02

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Manitowoc County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
Maricopa and Pinal Counties; Phoenix Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	-1.75	-1.67	-1.56	-1.51	-1.10	-1.01	-0.81	-0.81
Marion County: Lawrence, Washington, and Warrant Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.22	-0.21	-0.19	-0.19	-0.14	-0.13	-0.10	-0.10
Mariposa County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
Mariposa County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
Marshall, WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Medford Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.03	-0.03	-0.03	-0.03	-0.03	-0.02	-0.02	-0.01
Memphis Area, TN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.43	-0.41	-0.38	-0.37	-0.27	-0.25	-0.20	-0.20
Memphis, TN-MS-AR	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-0.50	-0.48	-0.44	-0.43	-0.31	-0.30	-0.23	-0.23
Miami, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.01	-0.01	0.00	0.00	0.00	0.00	0.00	0.00
Miami, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.01	-0.01	-0.01	0.00	0.00	0.00	0.00	0.00
Miami, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.01	-0.01	-0.01	0.00	0.00	0.00	0.00	0.00
Milwaukee-Racine, WI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-0.56	-0.53	-0.50	-0.48	-0.35	-0.32	-0.26	-0.26
Minneapolis-St. Paul Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-1.15	-1.09	-1.02	-0.98	-0.72	-0.69	-0.53	-0.53
Missoula Area, MT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.03	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01
Missoula county; Missoula and Vicinity, MT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.03	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01
Modesto Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.08	-0.08	-0.07	-0.07	-0.05	-0.05	-0.04	-0.04

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Mohave County (part); Bullhead City, AZ	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
Mono County; Mammoth Lake Planning Area, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Mono County; Mono Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morenci, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morgan County, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Morongo Band of Mission Indians	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morongo Band of Mission Indians, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morristown Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00
Muscatine County; (part), IA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Muscatine, IA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Muskegon County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.06	-0.06	-0.06	-0.06	-0.06	-0.04	-0.04	-0.03
Muskingum River, OH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nashua Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	-0.04	-0.04	-0.04	-0.04	-0.03	-0.03	-0.02	-0.02
Nassau County, FL	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nevada County (Western part), CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-0.05	-0.05	-0.05	-0.05	-0.05	-0.03	-0.03	-0.02
Nevada County (Western part), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	-0.05	-0.05	-0.05	-0.05	-0.05	-0.03	-0.03	-0.03
New Haven County, CT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
New Haven-Meriden-Waterbury Area, CT	CO (1971 8-hour)	Maintenance, --	100	0	-0.37	-0.35	-0.33	-0.32	-0.32	-0.23	-0.21	-0.17
New Manchester-Grant Magisterial District in Hancock County, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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New York County, NY	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.13	-0.12	-0.12	-0.11	-0.08	-0.08	-0.06
New York, NY-NJ-CT	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-5.55	-5.29	-4.95	-4.78	-3.49	-3.26	-2.58
New York-N. New Jersey-Long Island Area, NY-NJ-CT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	-3.01	-2.87	-2.68	-2.59	-1.89	-1.77	-1.40
New York-N. New Jersey-Long Island, NY-NJ-CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	-5.45	-5.19	-4.85	-4.69	-3.42	-3.20	-2.53
New York-Northern New Jersey-Long Island, NY-NJ-CT	Ozone (2015 8-hour)	Nonattainment, Moderate	50	0	-5.45	-5.19	-4.85	-4.68	-3.42	-3.20	-2.53
NJ Portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Nogales, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Northern Milwaukee/Ozaukee Shoreline, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.03	-0.03	-0.03	-0.03	-0.02	-0.02	-0.01
Northern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.69	-0.66	-0.62	-0.59	-0.43	-0.40	-0.32
Oakridge, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ogden Area, UT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.03	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01
Ogden Area, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.03	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01
Olmsted County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
Olmsted; City of Rochester, MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.03	-0.03	-0.03	-0.03	-0.02	-0.02	-0.02
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pekin, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Penns Grove Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Peoria County: Hollis Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Peoria County: Peoria, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.04	-0.04	-0.04	-0.04	-0.04	-0.03	-0.02	-0.02
Perth Amboy Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
Philadelphia-Camden County Area, PA-NJ	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.31	-0.30	-0.28	-0.27	-0.20	-0.19	-0.15	-0.15
Philadelphia-Wilmington, PA-NJ-DE	PM _{2.5} (2006 24-hour)	Maintenance, Moderate for PA and DE; Subject to Former Subpart 1 for NJ	100	0	-1.89	-1.80	-1.68	-1.62	-1.19	-1.11	-0.88	-0.88
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-2.55	-2.42	-2.27	-2.19	-1.60	-1.50	-1.18	-1.18
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	-2.54	-2.42	-2.26	-2.19	-1.60	-1.49	-1.18	-1.18
Phoenix Area, AZ	CO (1971 8-hour)	Maintenance, Serious	100	0	-1.69	-1.61	-1.51	-1.46	-1.06	-0.98	-0.78	-0.78
Phoenix-Mesa, AZ	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-1.76	-1.68	-1.57	-1.52	-1.11	-1.02	-0.82	-0.82
Phoenix-Mesa, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-1.80	-1.72	-1.61	-1.55	-1.13	-1.04	-0.84	-0.84
Pierce County; Tacoma, WA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pima County; Ajo Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pima County; Rillito Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01	-0.01
Pinal and Gila Counties; Payson, AZ	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00	0.00
Pinal County (part); West Pinal, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	-0.12	-0.11	-0.10	-0.10	-0.07	-0.07	-0.05	-0.05
Pitkin County; Aspen, CO	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02	0.02
Pittsburgh Area, PA	CO (1971 8-hour)	Maintenance, --	100	0	-0.10	-0.10	-0.09	-0.09	-0.06	-0.06	-0.05	-0.05

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Pittsburgh-Beaver Valley, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-0.78	-0.75	-0.70	-0.67	-0.49	-0.47	-0.36
Pittsburgh-Beaver Valley, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-0.73	-0.69	-0.65	-0.62	-0.46	-0.43	-0.34
Plumas County, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Polk County, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
Portland Area: Portland Metro Service District Boundary, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.55	-0.52	-0.49	-0.47	-0.34	-0.32	-0.25
Power-Bannock Counties; Fort Hall Indian Reservation, ID	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Power-Bannock Counties; Portneuf Valley Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
Provo Area, UT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	-0.04	-0.04	-0.04	-0.04	-0.03	-0.03	-0.02
Provo, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	-0.22	-0.21	-0.20	-0.19	-0.14	-0.13	-0.10
Prowers County; Lamar, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Raleigh-Durham Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.78	-0.75	-0.70	-0.68	-0.49	-0.46	-0.36
Ramsey County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Reading, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-0.17	-0.16	-0.15	-0.14	-0.10	-0.10	-0.08
Reno Area, NV	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.13	-0.12	-0.12	-0.11	-0.08	-0.08	-0.06
Rhineland, WI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
Riverside County (Coachella Valley), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	-0.22	-0.21	-0.20	-0.19	-0.14	-0.13	-0.10
Riverside County (Coachella Valley), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	-0.22	-0.21	-0.20	-0.19	-0.14	-0.13	-0.10
Riverside County; Coachella Valley Planning Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	-0.26	-0.25	-0.23	-0.22	-0.16	-0.15	-0.12

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Riverside, Los Angeles, Orange, and San Bernardino Counties; South Coast Air Basin, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	-7.24	-6.91	-6.46	-6.25	-4.55	-4.19	-3.36
Rosebud County; Lame Deer, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Routt County (part); Steamboat Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.07	0.07	0.06	0.06	0.04	0.03	0.03
Rusk and Panola Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sacramento Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.65	-0.62	-0.58	-0.56	-0.41	-0.38	-0.30
Sacramento County, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.59	-0.56	-0.53	-0.51	-0.37	-0.34	-0.27
Sacramento Metro, CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	-1.04	-0.99	-0.92	-0.89	-0.65	-0.60	-0.48
Sacramento Metro, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	-1.04	-0.99	-0.92	-0.89	-0.65	-0.60	-0.48
Sacramento, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	-1.01	-0.97	-0.90	-0.87	-0.64	-0.59	-0.47
Salem Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	-0.09	-0.09	-0.08	-0.08	-0.06	-0.05	-0.04
Salt Lake City Area, UT	CO (1971 8-hour)	Maintenance, --	100	0	-0.07	-0.07	-0.07	-0.06	-0.05	-0.04	-0.03
Salt Lake City, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	-0.72	-0.69	-0.64	-0.62	-0.45	-0.42	-0.34
Salt Lake County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.44	-0.42	-0.39	-0.38	-0.28	-0.25	-0.20
Salt Lake County, UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	-0.44	-0.42	-0.39	-0.38	-0.28	-0.26	-0.20
San Antonio, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.76	-0.72	-0.68	-0.65	-0.48	-0.44	-0.35
San Bernardino County (part); excluding Searles Valley Planning Area and South Coast Air Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.27	-0.25	-0.24	-0.23	-0.17	-0.16	-0.12
San Diego Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-1.47	-1.40	-1.31	-1.26	-0.92	-0.85	-0.68

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
San Diego County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-1.47	-1.40	-1.31	-1.27	-0.93	-0.86	-0.68
San Diego County, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	-1.47	-1.40	-1.31	-1.26	-0.92	-0.85	-0.68
San Francisco Bay Area, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	-3.06	-2.92	-2.73	-2.64	-1.92	-1.77	-1.42
San Francisco Bay Area, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-3.06	-2.92	-2.73	-2.64	-1.92	-1.77	-1.42
San Francisco Bay Area, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	-3.09	-2.95	-2.75	-2.66	-1.94	-1.79	-1.43
San Francisco-Oakland-San Jose Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-2.83	-2.70	-2.52	-2.44	-1.78	-1.63	-1.31
San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	-1.65	-1.58	-1.47	-1.42	-1.04	-0.97	-0.77
San Joaquin Valley, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	-1.65	-1.58	-1.47	-1.42	-1.04	-0.97	-0.77
San Joaquin Valley, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	-1.65	-1.58	-1.47	-1.42	-1.04	-0.97	-0.77
San Joaquin Valley, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	-1.65	-1.58	-1.47	-1.42	-1.04	-0.97	-0.77
San Joaquin Valley, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	-1.65	-1.58	-1.47	-1.42	-1.04	-0.97	-0.77
San Luis Obispo (Eastern part), CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
San Luis Obispo (Eastern San Luis Obispo), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
San Manuel, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
San Miguel County; Telluride, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sanders County (part); Thompson Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Santa Cruz County; Nogales Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Seaford, DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-0.10	-0.10	-0.09	-0.09	-0.06	-0.06	-0.05

Notes:

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Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Seattle-Tacoma Area, WA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	-1.25	-1.19	-1.11	-1.08	-0.79	-0.73	-0.58
Seattle-Tacoma, WA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-0.20	-0.19	-0.18	-0.17	-0.13	-0.12	-0.09
Sheboygan County, WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-0.04	-0.03	-0.03	-0.03	-0.02	-0.02	-0.02
Sheboygan County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
Sheridan County; City of Sheridan, WY	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Shoshone County (part); excluding Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00
Shoshone County; City of Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Silver Bow County; Butte, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
Somerville Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	-0.01	0.00	0.00	0.00	0.00	0.00	0.00
Southern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.22	-0.21	-0.20	-0.19	-0.14	-0.13	-0.10
Southwest Indiana, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Spokane Area, WA	CO (1971 8-hour)	Maintenance, Serious	100	0	-0.13	-0.12	-0.11	-0.11	-0.08	-0.07	-0.06
Spokane County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.13	-0.12	-0.12	-0.11	-0.08	-0.08	-0.06
Springfield Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	-0.06	-0.05	-0.05	-0.05	-0.04	-0.03	-0.03
St. Bernard Parish, LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.08	0.08	0.07	0.07	0.05	0.04	0.04
St. Clair, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
St. Louis Area, MO	CO (1971 8-hour)	Maintenance, --	100	0	-0.17	-0.16	-0.15	-0.14	-0.11	-0.11	-0.08
St. Louis, MO-IL	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.60	-0.57	-0.53	-0.51	-0.38	-0.38	-0.28
St. Louis-St. Charles-Farmington, MO-IL	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-0.71	-0.68	-0.63	-0.61	-0.45	-0.44	-0.33

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Steubenville, OH-WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Steubenville-Weirton, OH-WV	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-0.03	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01
Stockton Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.13	-0.12	-0.11	-0.11	-0.08	-0.08	-0.06	
Sullivan County, TN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00	0.00
Sutter Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Syracuse Area; Onondaga County, NY	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.16	-0.15	-0.14	-0.13	-0.10	-0.09	-0.07	
Tazewell County: Groveland Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
Terre Haute, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01	-0.01
Thurston County; Cities of Olympia, Tumwater, and Lacey, WA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	-0.04	-0.04	-0.04	-0.04	-0.03	-0.02	-0.02	-0.02
Titus County, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Toms River Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tooele County (part), UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trenton Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	-0.04	-0.03	-0.03	-0.03	-0.02	-0.02	-0.02	-0.02
Trona, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Tucson Area, AZ	CO (1971 8-hour)	Maintenance, --	100	0	-0.37	-0.36	-0.33	-0.32	-0.24	-0.22	-0.17	
Tuolumne County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.03	-0.03	-0.03	-0.03	-0.02	-0.02	-0.01	
Tuscan Buttes, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tuscan Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Uinta Basin, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.00	0.01	0.00	0.00	0.00
Union County; LaGrande, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Upper Green River Basin Area, WY	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02
Utah County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.22	-0.21	-0.20	-0.19	-0.14	-0.13	-0.10
Vancouver Area: Clark County (part), WA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.13	-0.12	-0.12	-0.11	-0.08	-0.08	-0.06
Ventura County, CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	-0.36	-0.35	-0.32	-0.31	-0.23	-0.21	-0.17
Ventura County, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	-0.36	-0.35	-0.32	-0.31	-0.23	-0.21	-0.17
Vermillion County; Part of Clinton Township, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vigo County, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.04	-0.04	-0.03	-0.03	-0.02	-0.02	-0.02
Walla Walla County; Wallula, WA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Waltham Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
Warren County: Conewago Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Warren, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Washington Area, DC-MD-VA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.35	-0.34	-0.31	-0.30	-0.22	-0.20	-0.16
Washington, DC-MD-VA	Ozone (2008 8-hour)	Nonattainment (DC) Maintenance (MD, VA), Marginal	50	0	-2.44	-2.33	-2.18	-2.11	-1.53	-1.42	-1.13
Washington, DC-MD-VA	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	-2.44	-2.33	-2.18	-2.11	-1.54	-1.42	-1.13
Washoe County; Reno Planning Area, NV	PM10 (1987 24-hour)	Maintenance, Serious	100	0	-0.13	-0.13	-0.12	-0.11	-0.08	-0.08	-0.06

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Wayne County; (part), MI	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
West Central Pinal County, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
West Silver Valley, ID	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Williamson County, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.04	-0.03	-0.03	-0.03	-0.03	-0.02	-0.02	-0.02
Winston-Salem Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.17	-0.16	-0.15	-0.15	-0.15	-0.11	-0.10	-0.08
Worcester Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	-0.08	-0.08	-0.07	-0.07	-0.07	-0.05	-0.05	-0.04
Yakima Area, WA	CO (1971 8-hour)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
Yakima County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.03	-0.03	-0.03	-0.03	-0.03	-0.02	-0.02	-0.02
Yuba City-Marysville, CA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-0.08	-0.07	-0.07	-0.07	-0.07	-0.05	-0.05	-0.04
Yuma County; Yuma Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.06	-0.05	-0.05	-0.05	-0.05	-0.03	-0.03	-0.03
Yuma, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.03	-0.03	-0.03	-0.03	-0.02	-0.02	-0.02	-0.01

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

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Table A-23. Changes in Emissions from U.S. Passenger Cars and Light Trucks by Nonattainment or Maintenance Area and Alternative, Direct and Indirect Impacts--Benzene, 2035

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Ada County; Boise, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.21	0.21	0.19	0.19	0.15	0.12	0.10
Adams, Denver, and Boulder Counties; Denver Metropolitan Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.31	1.30	1.21	1.16	0.91	0.71	0.64
Ajo, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Albuquerque Area, NM	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.21	0.21	0.20	0.20	0.15	0.13	0.12
Allegan County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Allegheny County Air Basin: Hazelwood Monitor, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Allegheny County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.25	0.25	0.24	0.23	0.18	0.16	0.14
Allegheny County; The Area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Allegheny, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.07	0.07	0.06	0.06	0.05	0.04	0.03
Allentown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.15	0.15	0.14	0.14	0.11	0.10	0.08
Allentown-Bethlehem-Easton, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.16	0.16	0.15	0.15	0.12	0.11	0.09
Alton Township, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Amador County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Anchorage Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	0.27	0.27	0.24	0.23	0.18	0.14	0.13
Anchorage; Eagle River, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.02	0.01	0.01	0.01	0.01	0.01	0.01
Anne Arundel County and Baltimore County, MD	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.13	0.14	0.14	0.14	0.11	0.12	0.09

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
AQCR 012: Portions of Grant County, NM	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.05	0.04	0.04	0.04	0.03	0.02	0.02
AQCR 109-Millinocket, ME	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.06	0.06	0.05	0.05	0.04	0.03	0.03
AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington Counties (Minneapolis-St. Paul), MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	1.32	1.33	1.25	1.21	0.95	0.79	0.69
AQCR 237: Brown County: Green Bay Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AQCR 238: Marathon County: Rothschild Subcity Area, Rib Mountain, Weston, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.11	0.11	0.10	0.10	0.08	0.06	0.06
AQCR 238: Oneida County: Rhinelander Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.05	0.05	0.04	0.04	0.03	0.02	0.02
AQCR 239: Milwaukee County: Milwaukee Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.09	0.09	0.09	0.09	0.07	0.07	0.06
AQCR 240: Dane County: Madison Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.09	0.09	0.09	0.09	0.07	0.07	0.05
Archuleta County; Pagosa Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01
Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02
Aroostock County; City of Presque Isle, ME	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Atlanta, GA	Ozone (2008 8-hour)	Maintenance, Moderate	100	0	1.00	1.03	1.01	0.99	0.77	0.76	0.61
Atlanta, GA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.80	0.83	0.81	0.79	0.62	0.60	0.49
Atlantic City Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Bakersfield Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	0.09	0.09	0.09	0.08	0.07	0.06	0.05

Notes:

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Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Baltimore Area, MD	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Baltimore, MD	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	0.37	0.39	0.39	0.38	0.30	0.31	0.25	0.25
Baltimore, MD	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	0.37	0.39	0.39	0.39	0.30	0.31	0.25	0.25
Baton Rouge, LA	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.72	0.72	0.67	0.64	0.50	0.39	0.35	0.35
Beaver, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benton County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01
Berrien County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.08	0.08	0.07	0.07	0.06	0.05	0.04	0.04
Billings Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	0.09	0.09	0.08	0.08	0.06	0.05	0.04	0.04
Billings, MT	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.03	0.03	0.03	0.02	0.02	0.01	0.01	0.01
Birmingham, AL	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.38	0.38	0.36	0.35	0.27	0.24	0.20	0.20
Boise-Northern Ada County Area, ID	CO (1971 8-hour)	Maintenance, --	100	0	0.21	0.21	0.19	0.19	0.15	0.12	0.10	0.10
Bonner County; The Sandpoint Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Boston Area, MA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.20	0.20	0.19	0.19	0.15	0.13	0.11	0.11
Boyd County (part), KY	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.07	0.07	0.07	0.06	0.05	0.04	0.03	0.03
Brooke; Follansbee Area, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Burlington Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Butte County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.06	0.06	0.06	0.06	0.04	0.04	0.03	0.03
Calaveras County, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.01	0.00	0.01	0.00	0.00
Calaveras County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.01	0.00	0.01	0.00	0.00

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Campbell-Clermont Counties, KY-OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Canton-Massillon, OH	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.06	0.06	0.06	0.06	0.06	0.05	0.05	0.04
Central New Hampshire, NH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Central Steptoe Valley, NV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Charleston, WV	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.16	0.16	0.15	0.14	0.14	0.11	0.09	0.08
Charlotte Area, NC	CO (1971 8-hour)	Maintenance, --	100	0	0.15	0.16	0.16	0.16	0.16	0.13	0.14	0.11
Charlotte-Rock Hill, NC-SC	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.43	0.45	0.44	0.43	0.43	0.34	0.34	0.27
Chicago, IL-IN-WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.50	1.53	1.47	1.44	1.44	1.12	1.03	0.86
Chicago-Naperville, IL-IN-WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	1.62	1.65	1.59	1.55	1.55	1.21	1.11	0.93
Chico (Butte County), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.06	0.06	0.06	0.06	0.06	0.04	0.04	0.03
Chico Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Chico, CA	PM _{2.5} (2006 24-hour)	Maintenance, Moderate	100	0	0.06	0.06	0.06	0.06	0.06	0.04	0.04	0.03
Cincinnati, OH-KY	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.38	0.39	0.38	0.38	0.38	0.29	0.28	0.23
Cincinnati, OH-KY-IN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.41	0.43	0.41	0.41	0.41	0.32	0.30	0.25
Clark County; Las Vegas Planning Area, NV	PM ₁₀ (1987 24-hour)	Maintenance, Serious	100	0	0.23	0.25	0.25	0.25	0.25	0.19	0.20	0.16
Cleveland Area, OH	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.22	0.23	0.22	0.22	0.22	0.17	0.16	0.13
Cleveland, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.52	0.54	0.52	0.51	0.51	0.40	0.38	0.31
Cleveland, OH	PM _{2.5} (2012 Annual)	Maintenance, Moderate	100	0	0.28	0.29	0.28	0.27	0.27	0.21	0.20	0.17
Cleveland-Akron-Lorain, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.58	0.59	0.57	0.56	0.56	0.44	0.41	0.34

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Cleveland-Akron-Lorain, OH	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.49	0.51	0.50	0.49	0.38	0.36	0.30
Cochise County; Paul Spur/Douglas Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Colorado Springs Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.52	0.51	0.48	0.46	0.36	0.28	0.25
Columbus, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.49	0.50	0.48	0.47	0.37	0.33	0.28
Columbus, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.43	0.44	0.42	0.41	0.32	0.29	0.25
Cook County; Lyons Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Cook County; Southeast Chicago, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02
Coshocton County; Franklin Township, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coso Junction, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.04	0.04	0.03	0.03	0.02	0.02	0.02
Cuyahoga County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.18	0.18	0.18	0.17	0.13	0.13	0.10
Cuyahoga County, OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.22	0.23	0.22	0.22	0.17	0.16	0.13
Dallas-Fort Worth, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	1.47	1.51	1.47	1.43	1.12	1.07	0.88
Dallas-Fort Worth, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.45	1.49	1.45	1.42	1.10	1.05	0.86
Delaware County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.21	0.21	0.19	0.19	0.15	0.12	0.11
Denver Metro/North Front Range, CO	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	3.23	3.19	2.96	2.84	2.24	1.73	1.56
Denver-Boulder Area, CO	CO (1971 8-hour)	Maintenance, Serious	100	0	2.47	2.44	2.27	2.18	1.72	1.32	1.20
Denver-Boulder-Greeley-Ft Collins-Loveland, CO	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	3.23	3.19	2.96	2.84	2.24	1.73	1.56
Detroit Area, MI	CO (1971 8-hour)	Maintenance, --	100	0	0.44	0.45	0.43	0.42	0.33	0.29	0.24
Detroit, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.12	1.14	1.09	1.06	0.83	0.75	0.63

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Detroit, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.07	0.08	0.07	0.07	0.05	0.05	0.04
Detroit-Ann Arbor, MI	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	1.12	1.14	1.10	1.07	0.84	0.76	0.64
Doña Ana County (Sunland Park Area), NM	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01
Doña Ana County; Anthony, NM	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Door County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Douglas, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Dukes County, MA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Duluth Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.08	0.08	0.07	0.07	0.06	0.04	0.04
East Chicago Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01
East Helena Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
East Kern County Area, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Serious	70	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02
El Paso County, TX	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.14	0.14	0.13	0.13	0.10	0.09	0.08
El Paso, TX	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.02	0.02	0.01	0.01	0.01	0.01	0.01
Eugene-Springfield Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	0.04	0.04	0.04	0.04	0.03	0.03	0.02
Evangeline Parish (Partial), LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fairbanks Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	0.04	0.04	0.03	0.03	0.03	0.02	0.02
Fairbanks, AK	PM _{2.5} (2006 24-hour)	Nonattainment, Serious	70	0	0.07	0.07	0.06	0.06	0.05	0.04	0.03
Flathead County; Columbia Falls and Vicinity, MT	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flathead County; Kalispell and Vicinity, MT	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Flathead County; Whitefish and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fort Collins Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.09	0.09	0.08	0.08	0.06	0.05	0.05	0.05
Freehold Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Freestone and Anderson Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Fremont County; Canon City Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01
Fresno Area, CA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	0.04	0.05	0.05	0.05	0.04	0.05	0.05	0.03
Grants Pass Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Great Falls Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Greater Connecticut, CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	0.22	0.23	0.23	0.22	0.17	0.18	0.14	0.14
Greater Connecticut, CT	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	0.22	0.23	0.23	0.22	0.17	0.18	0.14	0.14
Greeley Area, CO	CO (1971 8-hour)	Maintenance, --	100	0	0.53	0.52	0.48	0.46	0.36	0.27	0.25	0.25
Hancock and Brooke Counties (Part); The City of Weirton, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Hancock County (Part) The City of Weirton, including Butler and Clay: Magisterial Districts, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.06	0.06	0.05	0.05	0.04	0.03	0.03	0.03
Harrisburg-Lebanon-Carlisle-York, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.21	0.21	0.21	0.20	0.16	0.15	0.12	0.12
Hartford-New Britain-Middletown Area, CT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.14	0.15	0.15	0.15	0.11	0.12	0.09	0.09
Hayden, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hayden, AZ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Hayden, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hillsborough County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Hillsborough-Polk County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Houston-Galveston-Brazoria, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	8.73	8.61	7.95	7.63	6.02	4.55	4.16	
Houston-Galveston-Brazoria, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	8.65	8.53	7.87	7.56	5.96	4.50	4.12	
Humphreys County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01	
Huntington, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.03	0.03	0.03	0.03	0.02	0.02	0.02	
Imperial County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.03	0.03	0.03	0.03	0.02	0.02	0.02	
Imperial County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.03	0.03	0.03	0.03	0.02	0.02	0.02	
Imperial County, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.02	0.02	0.02	0.02	0.02	0.02	0.02	
Imperial County, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.02	0.02	0.02	0.02	0.02	0.02	0.02	
Imperial County; Imperial Valley Planning Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	0.03	0.03	0.03	0.03	0.02	0.02	0.02	
Indian Wells, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02	
Indiana, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.12	0.12	0.11	0.11	0.08	0.06	0.06	
Indianapolis Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Indianapolis, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.09	0.10	0.10	0.09	0.07	0.07	0.06	
Inyo County; Owens Valley Planning Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Jackson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.03	0.03	0.03	0.03	0.02	0.02	0.01	
Jackson County; Medford-Ashland (including White City), OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.05	0.05	0.05	0.04	0.03	0.03	0.03	

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Jamestown, NY	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.08	0.08	0.08	0.08	0.08	0.06	0.05	0.04
Jefferson County, KY	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jefferson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.03	0.02	0.02	0.02	0.02	0.02	0.01	0.01
Jefferson County; (part) Steubenville & Mingo Junction, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.02
Jefferson County; (part), OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Johnstown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.09	0.09	0.08	0.08	0.08	0.06	0.05	0.04
Josephine County; Grants Pass, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Juneau; Mendenhall Valley Area, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Kern County (Eastern Kern), CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	0.07	0.07	0.07	0.07	0.06	0.05	0.04	0.04
Kern County (Eastern Kern), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	0.07	0.07	0.07	0.07	0.06	0.05	0.04	0.04
King County; Kent, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
King County; Seattle, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Klamath County; Klamath Falls, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Klamath Falls Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Klamath Falls, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01
Knoxville, TN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.19	0.19	0.18	0.18	0.18	0.14	0.13	0.11
Knoxville-Sevierville-La Follette, TN	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.29	0.29	0.28	0.27	0.27	0.21	0.18	0.16
La Porte County; (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01
Lake County (part); Lakeview, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Lake County, OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.04	0.04	0.04	0.04	0.04	0.03	0.03	0.02
Lake County: (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.14	0.14	0.13	0.13	0.13	0.10	0.08	0.07
Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.09	0.09	0.09	0.09	0.08	0.07	0.05	0.05
Lake County; Polson, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake County; Ronan, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake Tahoe Nevada Area, NV	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake Tahoe North Shore Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake Tahoe South Shore Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lancaster, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.05	0.05	0.05	0.05	0.05	0.04	0.05	0.04
Lancaster, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.05	0.05	0.05	0.05	0.05	0.04	0.05	0.04
Lane County (part); Oakridge, OR	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lane County; Eugene/Springfield, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.04	0.04	0.04	0.04	0.04	0.03	0.03	0.02
Las Vegas Area, NV	CO (1971 8-hour)	Maintenance, Serious	100	0	0.23	0.25	0.25	0.25	0.25	0.19	0.20	0.16
Las Vegas, NV	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.23	0.25	0.25	0.25	0.25	0.19	0.20	0.16
LaSalle County; Oglesby, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Laurel Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.03	0.03	0.03	0.03	0.03	0.02	0.01	0.01
Lebanon County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.04	0.04	0.04	0.04	0.03	0.03	0.02	0.02
Lemont, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.08	0.08	0.07	0.07	0.07	0.06	0.05	0.04

Notes:

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NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Liberty-Clairton, PA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Lincoln County; Libby and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Logan, UT-ID	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.02
Longmont Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.14	0.14	0.13	0.12	0.10	0.07	0.07	0.07
Lorain County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Los Angeles, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	1.32	1.44	1.49	1.49	1.15	1.35	1.02	1.02
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	0.15	0.16	0.15	0.15	0.12	0.12	0.09	0.09
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	0.15	0.16	0.15	0.15	0.12	0.12	0.09	0.09
Los Angeles-South Coast Air Basin Area, CA	CO (1971 8-hour)	Maintenance, Serious	100	0	1.32	1.44	1.49	1.49	1.15	1.35	1.02	1.02
Los Angeles-South Coast Air Basin Area, CA	NO ₂ (1971 Annual)	Maintenance, --	100	0	1.32	1.44	1.49	1.49	1.15	1.35	1.02	1.02
Los Angeles-South Coast Air Basin, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	1.32	1.44	1.49	1.49	1.15	1.35	1.02	1.02
Los Angeles-South Coast Air Basin, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	1.32	1.44	1.49	1.49	1.15	1.35	1.02	1.02
Los Angeles-South Coast Air Basin, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	1.32	1.44	1.49	1.49	1.15	1.35	1.02	1.02
Louisville, KY-IN	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.27	0.28	0.27	0.26	0.20	0.19	0.16	0.16
Lowell Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01
Lucas County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.08	0.08	0.08	0.08	0.06	0.06	0.05	0.05
Madison County; Granite City Township and Nameoki Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.06	0.06	0.06	0.05	0.04	0.03	0.03	0.03
Manchester Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Manitowoc County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Maricopa and Pinal Counties; Phoenix Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	0.43	0.45	0.46	0.45	0.35	0.38	0.30	
Marion County: Lawrence, Washington, and Warrant Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.08	0.09	0.09	0.08	0.07	0.06	0.05	
Mariposa County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Mariposa County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Marshall, WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.08	0.08	0.07	0.07	0.05	0.04	0.04	
Medford Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.03	0.03	0.02	0.02	0.02	0.02	0.01	
Memphis Area, TN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.16	0.17	0.16	0.16	0.13	0.12	0.10	
Memphis, TN-MS-AR	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.37	0.38	0.36	0.35	0.27	0.24	0.20	
Miami, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Miami, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Miami, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Milwaukee-Racine, WI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.17	0.18	0.17	0.17	0.13	0.14	0.11	
Minneapolis-St. Paul Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	1.35	1.35	1.27	1.23	0.96	0.80	0.70	
Missoula Area, MT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.04	0.04	0.04	0.03	0.03	0.02	0.02	
Missoula county; Missoula and Vicinity, MT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.04	0.04	0.04	0.03	0.03	0.02	0.02	
Modesto Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.05	0.05	0.05	0.05	0.04	0.03	0.03	

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Mohave County (part); Bullhead City, AZ	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Mono County; Mammoth Lake Planning Area, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mono County; Mono Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morenci, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morgan County, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Morongo Band of Mission Indians	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morongo Band of Mission Indians, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morristown Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Muscatine County; (part), IA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Muscatine, IA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Muskegon County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.06	0.06	0.05	0.05	0.05	0.04	0.03	0.03
Muskingum River, OH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nashua Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.01	0.01	0.01	0.01	0.00	0.01	0.00
Nassau County, FL	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nevada County (Western part), CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Nevada County (Western part), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
New Haven County, CT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
New Haven-Meriden-Waterbury Area, CT	CO (1971 8-hour)	Maintenance, --	100	0	0.13	0.13	0.13	0.13	0.13	0.10	0.10	0.08
New Manchester-Grant Magisterial District in Hancock County, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00

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				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
New York County, NY	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.13	0.13	0.12	0.12	0.09	0.08	0.07
New York, NY-NJ-CT	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	3.04	3.10	2.99	2.91	2.28	2.08	1.74
New York-N. New Jersey-Long Island Area, NY-NJ-CT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	1.78	1.81	1.74	1.69	1.33	1.20	1.01
New York-N. New Jersey-Long Island, NY-NJ-CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	2.95	3.01	2.90	2.83	2.21	2.02	1.69
New York-Northern New Jersey-Long Island, NY-NJ-CT	Ozone (2015 8-hour)	Nonattainment, Moderate	50	0	2.95	3.01	2.89	2.82	2.21	2.02	1.69
NJ Portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Nogales, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Northern Milwaukee/Ozaukee Shoreline, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Northern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.20	0.21	0.21	0.21	0.16	0.17	0.13
Oakridge, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ogden Area, UT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Ogden Area, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Olmsted County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Olmsted; City of Rochester, MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.05	0.05	0.05	0.05	0.04	0.03	0.03
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pekin, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Penns Grove Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Peoria County: Hollis Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Peoria County: Peoria, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Perth Amboy Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Philadelphia-Camden County Area, PA-NJ	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.54	0.54	0.51	0.49	0.38	0.31	0.27	
Philadelphia-Wilmington, PA-NJ-DE	PM _{2.5} (2006 24-hour)	Maintenance, Moderate for PA and DE; Subject to Former Subpart 1 for NJ	100	0	1.12	1.14	1.10	1.07	0.83	0.75	0.63	
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	1.41	1.43	1.38	1.34	1.05	0.96	0.80	
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	1.41	1.43	1.38	1.34	1.05	0.96	0.80	
Phoenix Area, AZ	CO (1971 8-hour)	Maintenance, Serious	100	0	0.41	0.43	0.44	0.43	0.34	0.37	0.28	
Phoenix-Mesa, AZ	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.43	0.46	0.46	0.46	0.35	0.38	0.30	
Phoenix-Mesa, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.45	0.48	0.48	0.48	0.37	0.40	0.31	
Pierce County; Tacoma, WA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pima County; Ajo Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pima County; Rillito Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01
Pinal and Gila Counties; Payson, AZ	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
Pinal County (part); West Pinal, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.06	0.06	0.06	0.06	0.04	0.04	0.03	
Pitkin County; Aspen, CO	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.17	0.16	0.15	0.14	0.11	0.08	0.08	
Pittsburgh Area, PA	CO (1971 8-hour)	Maintenance, --	100	0	0.05	0.05	0.05	0.05	0.04	0.03	0.03	

Notes:

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NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Pittsburgh-Beaver Valley, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.64	0.65	0.61	0.60	0.47	0.40	0.35
Pittsburgh-Beaver Valley, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.55	0.55	0.53	0.51	0.40	0.35	0.30
Plumas County, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Polk County, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Portland Area: Portland Metro Service District Boundary, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.17	0.18	0.18	0.17	0.14	0.14	0.11
Power-Bannock Counties; Fort Hall Indian Reservation, ID	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Power-Bannock Counties; Portneuf Valley Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.04	0.04	0.04	0.04	0.03	0.03	0.02
Provo Area, UT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Provo, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	0.05	0.05	0.05	0.05	0.04	0.05	0.04
Prowers County; Lamar, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Raleigh-Durham Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.28	0.29	0.28	0.28	0.22	0.21	0.17
Ramsey County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Reading, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.06	0.06	0.06	0.06	0.05	0.05	0.04
Reno Area, NV	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.07	0.07	0.07	0.07	0.05	0.05	0.04
Rhineland, WI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01
Riverside County (Coachella Valley), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	0.03	0.03	0.04	0.04	0.03	0.04	0.03
Riverside County (Coachella Valley), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	0.03	0.03	0.04	0.04	0.03	0.04	0.03
Riverside County; Coachella Valley Planning Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	0.04	0.04	0.04	0.04	0.03	0.04	0.03

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Riverside, Los Angeles, Orange, and San Bernardino Counties; South Coast Air Basin, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	1.32	1.43	1.48	1.48	1.14	1.34	1.01
Rosebud County; Lame Deer, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Routt County (part); Steamboat Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.25	0.24	0.22	0.21	0.17	0.12	0.11
Rusk and Panola Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Sacramento Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.12	0.13	0.13	0.13	0.10	0.12	0.09
Sacramento County, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.16	0.17	0.17	0.17	0.13	0.14	0.11
Sacramento Metro, CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	0.28	0.29	0.29	0.29	0.23	0.24	0.19
Sacramento Metro, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	0.28	0.29	0.29	0.29	0.23	0.24	0.19
Sacramento, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.27	0.29	0.29	0.29	0.22	0.23	0.18
Salem Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	0.05	0.05	0.05	0.05	0.04	0.04	0.03
Salt Lake City Area, UT	CO (1971 8-hour)	Maintenance, --	100	0	0.05	0.05	0.04	0.04	0.03	0.03	0.03
Salt Lake City, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	0.21	0.22	0.22	0.22	0.17	0.17	0.14
Salt Lake County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.14	0.14	0.14	0.14	0.11	0.11	0.09
Salt Lake County, UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.14	0.14	0.14	0.14	0.11	0.11	0.09
San Antonio, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.37	0.38	0.37	0.36	0.28	0.26	0.22
San Bernardino County (part); excluding Searles Valley Planning Area and South Coast Air Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.13	0.13	0.12	0.12	0.09	0.09	0.07
San Diego Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.48	0.50	0.49	0.49	0.38	0.38	0.31

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San Diego County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.48	0.50	0.50	0.49	0.38	0.38	0.31
San Diego County, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	0.48	0.50	0.49	0.49	0.38	0.38	0.31
San Francisco Bay Area, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.57	0.62	0.64	0.64	0.49	0.58	0.44
San Francisco Bay Area, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.57	0.62	0.64	0.64	0.49	0.58	0.44
San Francisco Bay Area, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.58	0.63	0.65	0.65	0.50	0.58	0.44
San Francisco-Oakland-San Jose Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.52	0.57	0.59	0.59	0.45	0.53	0.40
San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.76	0.78	0.76	0.74	0.58	0.55	0.45
San Joaquin Valley, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	0.76	0.78	0.76	0.74	0.58	0.55	0.45
San Joaquin Valley, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	0.76	0.78	0.76	0.74	0.58	0.55	0.45
San Joaquin Valley, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	0.76	0.78	0.75	0.74	0.58	0.54	0.45
San Joaquin Valley, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.76	0.78	0.75	0.74	0.58	0.54	0.45
San Luis Obispo (Eastern part), CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.04	0.04	0.04	0.03	0.03	0.02	0.02
San Luis Obispo (Eastern San Luis Obispo), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.04	0.04	0.04	0.03	0.03	0.02	0.02
San Manuel, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
San Miguel County; Telluride, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Sanders County (part); Thompson Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Santa Cruz County; Nogales Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Seaford, DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.06	0.06	0.06	0.05	0.04	0.04	0.03

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				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Seattle-Tacoma Area, WA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	0.44	0.46	0.45	0.44	0.34	0.34	0.28
Seattle-Tacoma, WA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.09	0.09	0.09	0.08	0.07	0.06	0.05
Sheboygan County, WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02
Sheboygan County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Sheridan County; City of Sheridan, WY	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Shoshone County (part); excluding Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Shoshone County; City of Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Silver Bow County; Butte, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Somerville Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Southern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.05	0.05	0.05	0.05	0.04	0.05	0.04
Southwest Indiana, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Spokane Area, WA	CO (1971 8-hour)	Maintenance, Serious	100	0	0.04	0.04	0.04	0.04	0.03	0.03	0.03
Spokane County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.04	0.04	0.04	0.04	0.03	0.03	0.03
Springfield Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.02	0.02	0.01
St. Bernard Parish, LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.27	0.27	0.24	0.23	0.18	0.13	0.12
St. Clair, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
St. Louis Area, MO	CO (1971 8-hour)	Maintenance, --	100	0	0.50	0.50	0.46	0.45	0.35	0.28	0.25
St. Louis, MO-IL	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.27	1.26	1.18	1.13	0.89	0.71	0.63
St. Louis-St. Charles-Farmington, MO-IL	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	1.38	1.38	1.28	1.24	0.97	0.78	0.69

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Steubenville, OH-WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.08	0.08	0.08	0.07	0.06	0.04	0.04
Steubenville-Weirton, OH-WV	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.09	0.09	0.08	0.08	0.06	0.05	0.04
Stockton Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.11	0.11	0.10	0.10	0.08	0.07	0.06
Sullivan County, TN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.02	0.02	0.01	0.01	0.01	0.01	0.01
Sutter Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Syracuse Area; Onondaga County, NY	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.18	0.18	0.17	0.17	0.13	0.11	0.09
Tazewell County: Groveland Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Terre Haute, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02
Thurston County; Cities of Olympia, Tumwater, and Lacey, WA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Titus County, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Toms River Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tooele County (part), UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Trenton Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.02	0.01	0.01	0.01	0.01	0.01
Trona, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.04	0.04	0.03	0.03	0.02	0.02	0.02
Tucson Area, AZ	CO (1971 8-hour)	Maintenance, --	100	0	0.26	0.26	0.25	0.24	0.19	0.17	0.14
Tuolumne County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Tuscan Buttes, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tuscan Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Uinta Basin, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.08	0.08	0.08	0.07	0.06	0.04	0.04
Union County; LaGrande, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Upper Green River Basin Area, WY	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.17	0.17	0.15	0.15	0.11	0.08	0.08
Utah County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.05	0.05	0.05	0.05	0.04	0.05	0.04
Vancouver Area: Clark County (part), WA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.03	0.04	0.04	0.04	0.03	0.03	0.02
Ventura County, CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	0.13	0.14	0.14	0.13	0.10	0.10	0.08
Ventura County, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	0.13	0.14	0.14	0.13	0.10	0.10	0.08
Vermillion County; Part of Clinton Township, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Vigo County, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.09	0.09	0.08	0.08	0.06	0.05	0.04
Walla Walla County; Wallula, WA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Waltham Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Warren County: Conewago Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01
Warren, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.03	0.03	0.03	0.02	0.02	0.01	0.01
Washington Area, DC-MD-VA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.07	0.08	0.08	0.08	0.06	0.07	0.05
Washington, DC-MD-VA	Ozone (2008 8-hour)	Nonattainment (DC) Maintenance (MD, VA), Marginal	50	0	0.62	0.66	0.66	0.66	0.51	0.55	0.43
Washington, DC-MD-VA	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	0.62	0.66	0.66	0.66	0.51	0.55	0.43
Washoe County; Reno Planning Area, NV	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.07	0.07	0.07	0.07	0.05	0.05	0.04

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.04	0.04	0.04	0.04	0.04	0.03	0.02	0.02
Wayne County; (part), MI	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
West Central Pinal County, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
West Silver Valley, ID	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Williamson County, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01
Winston-Salem Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.06	0.06	0.06	0.06	0.06	0.05	0.05	0.04
Worcester Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.02
Yakima Area, WA	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Yakima County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.02
Yuba City-Marysville, CA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.05	0.05	0.05	0.05	0.05	0.04	0.03	0.03
Yuma County; Yuma Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.05	0.05	0.05	0.05	0.05	0.04	0.03	0.03
Yuma, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.01

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Table A-24. Changes in Emissions from U.S. Passenger Cars and Light Trucks by Nonattainment or Maintenance Area and Alternative, Direct and Indirect Impacts--Benzene, 2050

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Ada County; Boise, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.74	0.71	0.68	0.66	0.50	0.37	0.31
Adams, Denver, and Boulder Counties; Denver Metropolitan Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	3.76	3.61	3.44	3.33	2.52	1.85	1.54
Ajo, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Albuquerque Area, NM	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	1.12	1.08	1.04	1.01	0.77	0.56	0.48
Allegan County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.10	0.10	0.10	0.09	0.07	0.05	0.04
Allegheny County Air Basin: Hazelwood Monitor, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.12	0.11	0.11	0.11	0.08	0.06	0.05
Allegheny County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	1.48	1.42	1.37	1.34	1.01	0.75	0.64
Allegheny County; The Area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.03	0.03	0.02	0.02	0.02	0.01	0.01
Allegheny, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.21	0.20	0.19	0.19	0.14	0.10	0.09
Allentown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.89	0.85	0.82	0.81	0.61	0.45	0.38
Allentown-Bethlehem-Easton, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	1.01	0.97	0.94	0.91	0.69	0.51	0.43
Alton Township, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.03	0.03	0.03	0.03	0.02	0.01	0.01
Amador County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.09	0.08	0.08	0.08	0.06	0.04	0.04
Anchorage Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	0.52	0.50	0.47	0.45	0.35	0.25	0.21
Anchorage; Eagle River, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.03	0.03	0.03	0.03	0.02	0.01	0.01
Anne Arundel County and Baltimore County, MD	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	1.56	1.49	1.45	1.42	1.07	0.79	0.68

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
AQCR 012: Portions of Grant County, NM	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.12	0.11	0.11	0.10	0.08	0.06	0.05
AQCR 109-Millinocket, ME	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.27	0.26	0.25	0.24	0.18	0.13	0.11
AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington Counties (Minneapolis-St. Paul), MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	5.63	5.39	5.18	5.04	3.81	2.81	2.37
AQCR 237: Brown County: Green Bay Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
AQCR 238: Marathon County: Rothschild Subcity Area, Rib Mountain, Weston, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.38	0.36	0.35	0.33	0.25	0.19	0.16
AQCR 238: Oneida County: Rhinelander Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.14	0.13	0.13	0.12	0.09	0.07	0.06
AQCR 239: Milwaukee County: Milwaukee Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.89	0.85	0.82	0.81	0.61	0.45	0.39
AQCR 240: Dane County: Madison Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.79	0.75	0.73	0.72	0.54	0.40	0.34
Archuleta County; Pagosa Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.06	0.06	0.05	0.05	0.04	0.03	0.02
Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.07	0.06	0.06	0.06	0.04	0.03	0.03
Aroostock County; City of Presque Isle, ME	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Atlanta, GA	Ozone (2008 8-hour)	Maintenance, Moderate	100	0	8.55	8.18	7.93	7.76	5.87	4.33	3.70
Atlanta, GA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	6.79	6.50	6.30	6.17	4.66	3.44	2.94
Atlantic City Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.05	0.05	0.05	0.05	0.04	0.03	0.02
Bakersfield Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	0.64	0.62	0.60	0.58	0.44	0.32	0.28

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Baltimore Area, MD	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Baltimore, MD	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	4.00	3.82	3.71	3.64	2.75	2.03	1.74	
Baltimore, MD	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	4.03	3.86	3.74	3.67	2.77	2.05	1.75	
Baton Rouge, LA	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	2.10	2.02	1.92	1.86	1.41	1.04	0.86	
Beaver, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01	
Benton County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.06	0.05	0.05	0.05	0.04	0.03	0.02	
Berrien County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.38	0.36	0.35	0.34	0.26	0.19	0.16	
Billings Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	0.23	0.22	0.21	0.20	0.15	0.11	0.09	
Billings, MT	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02	
Birmingham, AL	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	1.95	1.86	1.80	1.75	1.33	0.98	0.83	
Boise-Northern Ada County Area, ID	CO (1971 8-hour)	Maintenance, --	100	0	0.74	0.71	0.68	0.66	0.50	0.37	0.31	
Bonner County; The Sandpoint Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.03	0.02	0.02	0.02	0.02	0.01	0.01	
Boston Area, MA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	1.03	0.99	0.95	0.93	0.70	0.52	0.44	
Boyd County (part), KY	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.11	0.11	0.10	0.09	0.07	0.05	0.04	
Brooke; Follansbee Area, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Burlington Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.02	0.02	0.01	0.01	0.01	0.01	0.01	
Butte County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.33	0.31	0.30	0.29	0.22	0.16	0.14	
Calaveras County, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.07	0.07	0.07	0.07	0.05	0.04	0.03	
Calaveras County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.07	0.07	0.07	0.07	0.05	0.04	0.03	

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Campbell-Clermont Counties, KY-OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.05	0.05	0.05	0.05	0.05	0.03	0.03	0.02
Canton-Massillon, OH	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.50	0.48	0.47	0.46	0.46	0.35	0.25	0.22
Central New Hampshire, NH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.25	0.24	0.23	0.23	0.23	0.17	0.13	0.11
Central Steptoe Valley, NV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.03	0.03	0.02	0.02	0.02	0.02	0.01	0.01
Charleston, WV	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.62	0.59	0.57	0.55	0.55	0.42	0.31	0.26
Charlotte Area, NC	CO (1971 8-hour)	Maintenance, --	100	0	2.10	2.01	1.95	1.91	1.91	1.45	1.07	0.92
Charlotte-Rock Hill, NC-SC	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	4.12	3.95	3.83	3.75	3.75	2.84	2.09	1.79
Chicago, IL-IN-WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	10.03	9.60	9.28	9.07	9.07	6.86	5.06	4.30
Chicago-Naperville, IL-IN-WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	10.87	10.41	10.06	9.83	9.83	7.44	5.48	4.67
Chico (Butte County), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.33	0.31	0.30	0.29	0.29	0.22	0.16	0.14
Chico Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.11	0.10	0.10	0.10	0.10	0.07	0.06	0.05
Chico, CA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.32	0.31	0.30	0.29	0.29	0.22	0.16	0.14
Cincinnati, OH-KY	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	3.06	2.93	2.83	2.77	2.77	2.10	1.55	1.32
Cincinnati, OH-KY-IN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	3.22	3.08	2.98	2.92	2.92	2.21	1.63	1.39
Clark County; Las Vegas Planning Area, NV	PM10 (1987 24-hour)	Maintenance, Serious	100	0	2.68	2.56	2.49	2.44	2.44	1.84	1.36	1.17
Cleveland Area, OH	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	1.70	1.63	1.57	1.54	1.54	1.17	0.86	0.73
Cleveland, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	4.14	3.96	3.84	3.75	3.75	2.84	2.09	1.79
Cleveland, OH	PM2.5 (2012 Annual)	Maintenance, Moderate	100	0	2.13	2.03	1.97	1.93	1.93	1.46	1.07	0.92
Cleveland-Akron-Lorain, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	4.35	4.17	4.03	3.94	3.94	2.98	2.20	1.88

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Cleveland-Akron-Lorain, OH	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	3.99	3.82	3.70	3.62	2.74	2.02	1.72
Cochise County; Paul Spur/Douglas Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.05	0.04	0.04	0.04	0.03	0.02	0.02
Colorado Springs Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	1.41	1.35	1.29	1.24	0.94	0.69	0.57
Columbus, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	3.15	3.02	2.91	2.85	2.15	1.59	1.35
Columbus, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	2.90	2.78	2.68	2.62	1.99	1.46	1.25
Cook County; Lyons Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.11	0.11	0.11	0.10	0.08	0.06	0.05
Cook County; Southeast Chicago, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.18	0.17	0.16	0.16	0.12	0.09	0.08
Coshocton County; Franklin Township, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coso Junction, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.05	0.05	0.05	0.05	0.03	0.03	0.02
Cuyahoga County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	1.34	1.29	1.25	1.22	0.92	0.68	0.58
Cuyahoga County, OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.70	1.63	1.58	1.54	1.17	0.86	0.73
Dallas-Fort Worth, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	11.38	10.89	10.54	10.31	7.80	5.75	4.91
Dallas-Fort Worth, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	11.24	10.75	10.41	10.19	7.71	5.68	4.85
Delaware County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.75	0.72	0.69	0.67	0.51	0.37	0.31
Denver Metro/North Front Range, CO	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	8.74	8.39	7.99	7.71	5.84	4.30	3.57
Denver-Boulder Area, CO	CO (1971 8-hour)	Maintenance, Serious	100	0	6.75	6.48	6.17	5.95	4.51	3.32	2.76
Denver-Boulder-Greeley-Ft Collins-Loveland, CO	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	8.74	8.39	7.99	7.71	5.84	4.30	3.57
Detroit Area, MI	CO (1971 8-hour)	Maintenance, --	100	0	2.56	2.45	2.37	2.31	1.75	1.29	1.09
Detroit, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	7.14	6.84	6.61	6.45	4.88	3.60	3.06

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Detroit, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.37	0.36	0.34	0.33	0.25	0.19	0.16
Detroit-Ann Arbor, MI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	7.16	6.86	6.63	6.47	4.90	3.61	3.07
Doña Ana County (Sunland Park Area), NM	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.05	0.05	0.05	0.04	0.03	0.02	0.02
Doña Ana County; Anthony, NM	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.03	0.03	0.03	0.02	0.02	0.01	0.01
Door County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Douglas, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.04	0.04	0.03	0.03	0.03	0.02	0.02
Dukes County, MA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Duluth Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.23	0.22	0.21	0.20	0.15	0.11	0.09
East Chicago Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	0.05	0.05	0.04	0.04	0.03	0.02	0.02
East Helena Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
East Kern County Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	0.10	0.09	0.09	0.08	0.06	0.05	0.04
El Paso County, TX	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.81	0.78	0.75	0.73	0.55	0.41	0.35
El Paso, TX	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.06	0.06	0.05	0.05	0.04	0.03	0.02
Eugene-Springfield Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	0.31	0.29	0.28	0.28	0.21	0.15	0.13
Evangeline Parish (Partial), LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fairbanks Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	0.07	0.06	0.06	0.06	0.04	0.03	0.03
Fairbanks, AK	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	0.13	0.13	0.12	0.11	0.09	0.06	0.05
Flathead County; Columbia Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Flathead County; Kalispell and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.06	0.06	0.06	0.06	0.04	0.03	0.03

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Flathead County; Whitefish and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Fort Collins Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.30	0.29	0.27	0.27	0.20	0.15	0.12	0.12
Freehold Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01
Freestone and Anderson Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.03	0.03	0.02	0.02	0.02	0.01	0.01	0.01
Fremont County; Canon City Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.07	0.06	0.06	0.06	0.05	0.03	0.03	0.03
Fresno Area, CA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	0.71	0.68	0.66	0.65	0.49	0.36	0.31	0.31
Grants Pass Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.05	0.05	0.05	0.04	0.03	0.02	0.02	0.02
Great Falls Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
Greater Connecticut, CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	2.18	2.08	2.02	1.98	1.50	1.11	0.95	0.95
Greater Connecticut, CT	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	2.18	2.09	2.02	1.98	1.50	1.11	0.95	0.95
Greeley Area, CO	CO (1971 8-hour)	Maintenance, --	100	0	1.12	1.08	1.02	0.98	0.74	0.55	0.45	0.45
Hancock and Brooke Counties (Part); The City of Weirton, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.04	0.04	0.03	0.03	0.02	0.02	0.01	0.01
Hancock County (Part) The City of Weirton, including Butler and Clay: Magisterial Districts, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.10	0.10	0.09	0.09	0.07	0.05	0.04	0.04
Harrisburg-Lebanon-Carlisle-York, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	1.59	1.52	1.47	1.44	1.09	0.80	0.69	0.69
Hartford-New Britain-Middletown Area, CT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	1.48	1.42	1.38	1.35	1.02	0.75	0.65	0.65
Hayden, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Hayden, AZ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Hayden, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Hillsborough County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.04	0.03	0.03	0.03	0.03	0.02	0.02	0.01
Hillsborough-Polk County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Houston-Galveston-Brazoria, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	20.41	19.60	18.57	17.87	13.56	9.96	8.20	
Houston-Galveston-Brazoria, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	20.08	19.28	18.27	17.57	13.33	9.80	8.07	
Humphreys County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.06	0.05	0.05	0.05	0.04	0.03	0.02	
Huntington, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.09	0.09	0.08	0.08	0.06	0.04	0.04	
Imperial County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.27	0.26	0.25	0.25	0.19	0.14	0.12	
Imperial County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.27	0.26	0.25	0.25	0.19	0.14	0.12	
Imperial County, CA	PM _{2.5} (2006 24-hour)	Nonattainment, Moderate	100	0	0.23	0.22	0.21	0.21	0.16	0.12	0.10	
Imperial County, CA	PM _{2.5} (2012 Annual)	Nonattainment, Moderate	100	0	0.23	0.22	0.21	0.21	0.16	0.12	0.10	
Imperial County; Imperial Valley Planning Area, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Serious	70	0	0.27	0.26	0.25	0.24	0.18	0.14	0.12	
Indian Wells, CA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.11	0.10	0.10	0.09	0.07	0.05	0.04	
Indiana, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.28	0.27	0.25	0.24	0.19	0.14	0.11	
Indianapolis Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Indianapolis, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.79	0.75	0.73	0.72	0.54	0.40	0.34	
Inyo County; Owens Valley Planning Area, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Serious	70	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	
Jackson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.09	0.09	0.08	0.08	0.06	0.05	0.04	
Jackson County; Medford-Ashland (including White City), OR	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.24	0.23	0.22	0.22	0.17	0.12	0.10	

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Jamestown, NY	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.29	0.28	0.27	0.26	0.19	0.14	0.12
Jefferson County, KY	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jefferson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.09	0.08	0.08	0.08	0.06	0.04	0.04
Jefferson County; (part) Steubenville & Mingo Junction, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.11	0.10	0.10	0.10	0.07	0.05	0.04
Jefferson County; (part), OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Johnstown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.28	0.27	0.25	0.24	0.19	0.14	0.11
Josephine County; Grants Pass, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.05	0.05	0.04	0.04	0.03	0.02	0.02
Juneau; Mendenhall Valley Area, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.04	0.04	0.03	0.03	0.02	0.02	0.01
Kern County (Eastern Kern), CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	0.22	0.21	0.20	0.20	0.15	0.11	0.09
Kern County (Eastern Kern), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	0.22	0.21	0.20	0.20	0.15	0.11	0.09
King County; Kent, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.03	0.02	0.02	0.02	0.02	0.01	0.01
King County; Seattle, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Klamath County; Klamath Falls, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.08	0.08	0.08	0.07	0.06	0.04	0.03
Klamath Falls Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.08	0.08	0.08	0.07	0.06	0.04	0.03
Klamath Falls, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.09	0.09	0.09	0.08	0.06	0.05	0.04
Knoxville, TN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	1.25	1.20	1.16	1.13	0.86	0.63	0.54
Knoxville-Sevierville-La Follette, TN	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	1.60	1.53	1.48	1.44	1.09	0.81	0.68
La Porte County; (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.10	0.10	0.09	0.09	0.07	0.05	0.04
Lake County (part); Lakeview, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00

Notes:

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Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Lake County, OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.35	0.33	0.32	0.31	0.24	0.18	0.15
Lake County: (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.59	0.56	0.54	0.53	0.40	0.29	0.25
Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.06	0.05	0.05	0.05	0.04	0.03	0.02
Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.37	0.35	0.34	0.33	0.25	0.18	0.15
Lake County; Polson, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake County; Ronan, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake Tahoe Nevada Area, NV	CO (1971 8-hour)	Maintenance, --	100	0	0.03	0.03	0.03	0.03	0.02	0.02	0.01
Lake Tahoe North Shore Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Lake Tahoe South Shore Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.05	0.05	0.05	0.05	0.03	0.03	0.02
Lancaster, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.64	0.61	0.59	0.58	0.44	0.32	0.28
Lancaster, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.64	0.61	0.59	0.58	0.44	0.32	0.28
Lane County (part); Oakridge, OR	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lane County; Eugene/Springfield, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.31	0.29	0.28	0.28	0.21	0.15	0.13
Las Vegas Area, NV	CO (1971 8-hour)	Maintenance, Serious	100	0	2.68	2.56	2.49	2.44	1.85	1.36	1.17
Las Vegas, NV	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	2.68	2.56	2.49	2.44	1.84	1.36	1.17
LaSalle County; Oglesby, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.06	0.05	0.05	0.05	0.04	0.03	0.02
Laurel Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.05	0.04	0.04	0.04	0.03	0.02	0.02
Lebanon County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.20	0.19	0.19	0.18	0.14	0.10	0.09
Lemont, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.30	0.28	0.27	0.26	0.20	0.15	0.12

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Liberty-Clairton, PA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.03	0.03	0.02	0.02	0.02	0.01	0.01
Lincoln County; Libby and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Logan, UT-ID	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.18	0.17	0.16	0.16	0.12	0.09	0.08
Longmont Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.30	0.28	0.27	0.26	0.20	0.14	0.12
Lorain County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.07	0.07	0.07	0.07	0.05	0.04	0.03
Los Angeles, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	20.50	19.61	19.07	18.72	14.16	10.44	8.98
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	1.34	1.28	1.24	1.22	0.92	0.68	0.58
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	1.34	1.28	1.24	1.22	0.92	0.68	0.58
Los Angeles-South Coast Air Basin Area, CA	CO (1971 8-hour)	Maintenance, Serious	100	0	20.51	19.61	19.07	18.73	14.16	10.44	8.98
Los Angeles-South Coast Air Basin Area, CA	NO ₂ (1971 Annual)	Maintenance, --	100	0	20.51	19.61	19.07	18.73	14.16	10.44	8.98
Los Angeles-South Coast Air Basin, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	20.51	19.61	19.07	18.73	14.16	10.44	8.98
Los Angeles-South Coast Air Basin, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	20.50	19.60	19.06	18.72	14.15	10.44	8.97
Los Angeles-South Coast Air Basin, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	20.50	19.61	19.07	18.72	14.16	10.44	8.98
Louisville, KY-IN	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.88	1.80	1.74	1.70	1.29	0.95	0.81
Lowell Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.13	0.12	0.12	0.11	0.09	0.06	0.05
Lucas County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.54	0.52	0.50	0.49	0.37	0.27	0.23
Madison County; Granite City Township and Nameoki Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.14	0.13	0.13	0.12	0.09	0.07	0.06
Manchester Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	0.14	0.13	0.13	0.12	0.09	0.07	0.06

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Manitowoc County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.07	0.06	0.06	0.06	0.05	0.03	0.03
Maricopa and Pinal Counties; Phoenix Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	5.17	4.95	4.81	4.71	3.56	2.63	2.26
Marion County: Lawrence, Washington, and Warrant Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.71	0.68	0.66	0.65	0.49	0.36	0.31
Mariposa County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.06	0.06	0.06	0.06	0.04	0.03	0.03
Mariposa County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.06	0.06	0.06	0.06	0.04	0.03	0.03
Marshall, WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.13	0.13	0.12	0.11	0.09	0.06	0.05
Medford Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.13	0.13	0.12	0.12	0.09	0.07	0.06
Memphis Area, TN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	1.39	1.33	1.29	1.26	0.96	0.71	0.60
Memphis, TN-MS-AR	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	2.04	1.95	1.88	1.84	1.39	1.02	0.87
Miami, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01
Miami, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01
Miami, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01
Milwaukee-Racine, WI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	1.72	1.64	1.60	1.56	1.18	0.87	0.75
Minneapolis-St. Paul Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	5.77	5.53	5.31	5.17	3.91	2.88	2.43
Missoula Area, MT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.15	0.14	0.13	0.13	0.10	0.07	0.06
Missoula county; Missoula and Vicinity, MT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.15	0.14	0.13	0.13	0.10	0.07	0.06
Modesto Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.32	0.30	0.29	0.29	0.22	0.16	0.14

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Mohave County (part); Bullhead City, AZ	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.10	0.09	0.09	0.09	0.09	0.07	0.05	0.04
Mono County; Mammoth Lake Planning Area, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.04	0.04	0.03	0.03	0.03	0.03	0.02	0.02
Mono County; Mono Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Morenci, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Morgan County, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.05	0.04	0.04	0.04	0.04	0.03	0.02	0.02
Morongo Band of Mission Indians	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morongo Band of Mission Indians, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morristown Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.03	0.03	0.03	0.03	0.03	0.02	0.01	0.01
Muscatine County; (part), IA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.03	0.02	0.02	0.02	0.02	0.02	0.01	0.01
Muscatine, IA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.05	0.05	0.04	0.04	0.04	0.03	0.02	0.02
Muskegon County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.28	0.27	0.26	0.25	0.25	0.19	0.14	0.12
Muskingum River, OH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Nashua Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	0.11	0.10	0.10	0.10	0.10	0.07	0.05	0.05
Nassau County, FL	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01
Nevada County (Western part), CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.17	0.16	0.16	0.16	0.15	0.12	0.09	0.07
Nevada County (Western part), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	0.17	0.16	0.16	0.16	0.15	0.12	0.09	0.07
New Haven County, CT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.01
New Haven-Meriden-Waterbury Area, CT	CO (1971 8-hour)	Maintenance, --	100	0	1.17	1.12	1.08	1.06	1.06	0.80	0.59	0.51
New Manchester-Grant Magisterial District in Hancock County, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
New York County, NY	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.61	0.58	0.56	0.54	0.41	0.30	0.26
New York, NY-NJ-CT	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	20.18	19.32	18.67	18.25	13.81	10.18	8.66
New York-N. New Jersey-Long Island Area, NY-NJ-CT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	11.24	10.76	10.40	10.16	7.69	5.66	4.82
New York-N. New Jersey-Long Island, NY-NJ-CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	19.73	18.88	18.25	17.84	13.50	9.95	8.47
New York-Northern New Jersey-Long Island, NY-NJ-CT	Ozone (2015 8-hour)	Nonattainment, Moderate	50	0	19.71	18.87	18.24	17.83	13.49	9.94	8.46
NJ Portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02
Nogales, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.05	0.05	0.05	0.05	0.04	0.03	0.02
Northern Milwaukee/Ozaukee Shoreline, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.09	0.09	0.08	0.08	0.06	0.05	0.04
Northern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	2.12	2.03	1.97	1.93	1.46	1.07	0.92
Oakridge, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ogden Area, UT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.08	0.08	0.08	0.07	0.06	0.04	0.04
Ogden Area, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.08	0.08	0.08	0.07	0.06	0.04	0.04
Olmsted County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.06	0.05	0.05	0.05	0.04	0.03	0.02
Olmsted; City of Rochester, MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.19	0.18	0.18	0.17	0.13	0.10	0.08
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pekin, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.06	0.06	0.06	0.05	0.04	0.03	0.03

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Penns Grove Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Peoria County: Hollis Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Peoria County: Peoria, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.14	0.14	0.13	0.13	0.10	0.07	0.06	0.06
Perth Amboy Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.08	0.08	0.07	0.07	0.05	0.04	0.03	0.03
Philadelphia-Camden County Area, PA-NJ	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	1.97	1.88	1.81	1.75	1.33	0.98	0.82	0.82
Philadelphia-Wilmington, PA-NJ-DE	PM _{2.5} (2006 24-hour)	Maintenance, Moderate for PA and DE; Subject to Former Subpart 1 for NJ	100	0	7.06	6.76	6.53	6.38	4.83	3.56	3.03	3.03
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	9.27	8.88	8.58	8.38	6.34	4.68	3.98	3.98
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	9.27	8.87	8.57	8.38	6.34	4.67	3.98	3.98
Phoenix Area, AZ	CO (1971 8-hour)	Maintenance, Serious	100	0	4.99	4.77	4.63	4.55	3.44	2.54	2.18	2.18
Phoenix-Mesa, AZ	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	5.20	4.97	4.83	4.74	3.58	2.64	2.27	2.27
Phoenix-Mesa, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	5.35	5.12	4.97	4.88	3.69	2.72	2.33	2.33
Pierce County; Tacoma, WA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Pima County; Ajo Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pima County; Rillito Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.09	0.09	0.08	0.08	0.06	0.04	0.04	0.04
Pinal and Gila Counties; Payson, AZ	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.03	0.03	0.03	0.03	0.02	0.02	0.01	0.01
Pinal County (part); West Pinal, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.41	0.39	0.38	0.37	0.28	0.21	0.18	0.18
Pitkin County; Aspen, CO	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.27	0.26	0.24	0.23	0.17	0.13	0.10	0.10
Pittsburgh Area, PA	CO (1971 8-hour)	Maintenance, --	100	0	0.36	0.34	0.33	0.32	0.24	0.18	0.15	0.15

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Pittsburgh-Beaver Valley, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	3.32	3.18	3.06	2.99	2.26	1.67	1.41
Pittsburgh-Beaver Valley, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	2.97	2.85	2.75	2.68	2.03	1.49	1.27
Plumas County, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Polk County, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.05	0.05	0.05	0.05	0.04	0.03	0.02
Portland Area: Portland Metro Service District Boundary, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	1.70	1.62	1.58	1.54	1.17	0.86	0.74
Power-Bannock Counties; Fort Hall Indian Reservation, ID	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Power-Bannock Counties; Portneuf Valley Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.15	0.14	0.14	0.13	0.10	0.07	0.06
Provo Area, UT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	0.12	0.12	0.11	0.11	0.08	0.06	0.05
Provo, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	0.64	0.62	0.60	0.59	0.44	0.33	0.28
Prowers County; Lamar, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Raleigh-Durham Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	2.51	2.40	2.32	2.28	1.72	1.27	1.09
Ramsey County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.03	0.03	0.03	0.02	0.02	0.01	0.01
Reading, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.54	0.51	0.50	0.49	0.37	0.27	0.23
Reno Area, NV	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.47	0.45	0.44	0.43	0.32	0.24	0.20
Rhineland, WI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.07	0.06	0.06	0.06	0.04	0.03	0.03
Riverside County (Coachella Valley), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	0.60	0.58	0.56	0.55	0.42	0.31	0.27
Riverside County (Coachella Valley), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	0.60	0.58	0.56	0.55	0.42	0.31	0.27
Riverside County; Coachella Valley Planning Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	0.71	0.68	0.66	0.65	0.49	0.36	0.31

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

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Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Riverside, Los Angeles, Orange, and San Bernardino Counties; South Coast Air Basin, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	20.41	19.52	18.98	18.64	14.09	10.39	8.94
Rosebud County; Lame Deer, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Routt County (part); Steamboat Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.39	0.37	0.35	0.33	0.25	0.18	0.15
Rusk and Panola Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Sacramento Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	1.84	1.76	1.71	1.68	1.27	0.94	0.81
Sacramento County, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.78	1.70	1.65	1.62	1.23	0.90	0.78
Sacramento Metro, CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	3.12	2.98	2.90	2.84	2.15	1.58	1.36
Sacramento Metro, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	3.12	2.98	2.90	2.84	2.15	1.58	1.36
Sacramento, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	3.06	2.92	2.84	2.78	2.10	1.55	1.33
Salem Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	0.34	0.32	0.31	0.31	0.23	0.17	0.15
Salt Lake City Area, UT	CO (1971 8-hour)	Maintenance, --	100	0	0.28	0.27	0.26	0.25	0.19	0.14	0.12
Salt Lake City, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	2.22	2.12	2.06	2.02	1.52	1.12	0.96
Salt Lake County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	1.36	1.30	1.27	1.24	0.94	0.69	0.59
Salt Lake County, UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	1.37	1.31	1.27	1.24	0.94	0.69	0.59
San Antonio, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	2.66	2.55	2.47	2.41	1.82	1.34	1.15
San Bernardino County (part); excluding Searles Valley Planning Area and South Coast Air Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.92	0.88	0.85	0.83	0.63	0.46	0.40
San Diego Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	4.61	4.41	4.28	4.19	3.17	2.34	2.00

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
San Diego County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	4.63	4.43	4.29	4.21	3.18	2.35	2.01
San Diego County, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	4.61	4.41	4.28	4.19	3.17	2.34	2.00
San Francisco Bay Area, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	8.67	8.29	8.06	7.91	5.98	4.41	3.79
San Francisco Bay Area, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	8.65	8.27	8.05	7.90	5.97	4.41	3.79
San Francisco Bay Area, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	8.74	8.36	8.13	7.98	6.03	4.45	3.83
San Francisco-Oakland-San Jose Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	7.98	7.63	7.42	7.29	5.51	4.06	3.49
San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	5.69	5.44	5.27	5.15	3.90	2.87	2.45
San Joaquin Valley, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	5.69	5.44	5.27	5.15	3.90	2.87	2.45
San Joaquin Valley, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	5.69	5.44	5.27	5.15	3.90	2.87	2.45
San Joaquin Valley, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	5.68	5.44	5.26	5.15	3.89	2.87	2.45
San Joaquin Valley, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	5.68	5.44	5.26	5.15	3.89	2.87	2.45
San Luis Obispo (Eastern part), CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.06	0.06	0.06	0.05	0.04	0.03	0.02
San Luis Obispo (Eastern San Luis Obispo), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.06	0.06	0.06	0.05	0.04	0.03	0.02
San Manuel, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
San Miguel County; Telluride, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.03	0.03	0.03	0.03	0.02	0.01	0.01
Sanders County (part); Thompson Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Santa Cruz County; Nogales Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.05	0.05	0.05	0.05	0.04	0.03	0.02
Seaford, DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.37	0.36	0.35	0.34	0.26	0.19	0.16

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Seattle-Tacoma Area, WA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	3.99	3.82	3.70	3.63	2.74	2.02	1.73
Seattle-Tacoma, WA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.68	0.65	0.63	0.62	0.47	0.34	0.29
Sheboygan County, WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.18	0.17	0.16	0.16	0.12	0.09	0.07
Sheboygan County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.09	0.09	0.08	0.08	0.06	0.04	0.04
Sheridan County; City of Sheridan, WY	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.05	0.05	0.05	0.05	0.04	0.03	0.02
Shoshone County (part); excluding Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02
Shoshone County; City of Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Silver Bow County; Butte, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02
Somerville Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Southern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.64	0.62	0.60	0.59	0.44	0.33	0.28
Southwest Indiana, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Spokane Area, WA	CO (1971 8-hour)	Maintenance, Serious	100	0	0.40	0.39	0.37	0.37	0.28	0.20	0.18
Spokane County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.41	0.39	0.38	0.37	0.28	0.21	0.18
Springfield Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.19	0.18	0.18	0.17	0.13	0.10	0.08
St. Bernard Parish, LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.42	0.40	0.38	0.36	0.27	0.20	0.16
St. Clair, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.08	0.08	0.07	0.07	0.05	0.04	0.03
St. Louis Area, MO	CO (1971 8-hour)	Maintenance, --	100	0	1.54	1.47	1.41	1.36	1.03	0.76	0.63
St. Louis, MO-IL	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	4.28	4.11	3.93	3.81	2.89	2.12	1.78
St. Louis-St. Charles-Farmington, MO-IL	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	4.80	4.60	4.41	4.27	3.24	2.38	2.00

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Steubenville, OH-WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.19	0.18	0.17	0.16	0.12	0.09	0.08
Steubenville-Weirton, OH-WV	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.27	0.25	0.24	0.23	0.18	0.13	0.11
Stockton Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.55	0.53	0.51	0.50	0.38	0.28	0.23
Sullivan County, TN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.05	0.05	0.05	0.05	0.04	0.03	0.02
Sutter Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.02	0.02	0.02	0.01	0.01	0.01	0.01
Syracuse Area; Onondaga County, NY	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.79	0.75	0.72	0.70	0.53	0.39	0.33
Tazewell County: Groveland Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.03	0.03	0.03	0.03	0.02	0.01	0.01
Terre Haute, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.14	0.14	0.13	0.13	0.10	0.07	0.06
Thurston County; Cities of Olympia, Tumwater, and Lacey, WA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.13	0.12	0.12	0.12	0.09	0.06	0.06
Titus County, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Toms River Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tooele County (part), UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Trenton Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.12	0.11	0.11	0.11	0.08	0.06	0.05
Trona, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.06	0.05	0.05	0.05	0.04	0.03	0.02
Tucson Area, AZ	CO (1971 8-hour)	Maintenance, --	100	0	1.48	1.41	1.36	1.33	1.01	0.74	0.63
Tuolumne County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.09	0.09	0.08	0.08	0.06	0.05	0.04
Tuscan Buttes, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tuscan Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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Uinta Basin, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.17	0.17	0.16	0.15	0.12	0.08	0.07
Union County; LaGrande, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.03	0.03	0.03	0.03	0.02	0.01	0.01
Upper Green River Basin Area, WY	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.28	0.26	0.25	0.24	0.18	0.13	0.11
Utah County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.65	0.62	0.60	0.59	0.45	0.33	0.28
Vancouver Area: Clark County (part), WA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.39	0.37	0.36	0.35	0.27	0.20	0.17
Ventura County, CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	1.18	1.12	1.09	1.07	0.81	0.60	0.51
Ventura County, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	1.17	1.12	1.09	1.07	0.81	0.59	0.51
Vermillion County; Part of Clinton Township, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.03	0.03	0.03	0.03	0.02	0.02	0.01
Vigo County, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.29	0.27	0.26	0.25	0.19	0.14	0.12
Walla Walla County; Wallula, WA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Waltham Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.07	0.07	0.07	0.06	0.05	0.04	0.03
Warren County: Conewago Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.03	0.02	0.02	0.02	0.02	0.01	0.01
Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.06	0.05	0.05	0.05	0.04	0.03	0.02
Warren, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.07	0.06	0.06	0.06	0.04	0.03	0.03
Washington Area, DC-MD-VA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	1.01	0.96	0.94	0.92	0.69	0.51	0.44
Washington, DC-MD-VA	Ozone (2008 8-hour)	Nonattainment (DC) Maintenance (MD, VA), Marginal	50	0	7.28	6.96	6.76	6.63	5.01	3.70	3.17
Washington, DC-MD-VA	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	7.28	6.96	6.76	6.63	5.02	3.70	3.17
Washoe County; Reno Planning Area, NV	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.48	0.46	0.44	0.43	0.33	0.24	0.20

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.13	0.13	0.12	0.12	0.09	0.07	0.05
Wayne County; (part), MI	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.09	0.09	0.08	0.08	0.06	0.04	0.04
West Central Pinal County, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.08	0.08	0.08	0.07	0.06	0.04	0.04
West Silver Valley, ID	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Williamson County, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.14	0.13	0.13	0.12	0.09	0.07	0.06
Winston-Salem Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.55	0.53	0.51	0.50	0.38	0.28	0.24
Worcester Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.26	0.25	0.24	0.23	0.18	0.13	0.11
Yakima Area, WA	CO (1971 8-hour)	Maintenance, --	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02
Yakima County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.15	0.14	0.13	0.13	0.10	0.07	0.06
Yuba City-Marysville, CA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.30	0.28	0.27	0.27	0.20	0.15	0.13
Yuma County; Yuma Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.25	0.24	0.23	0.22	0.17	0.12	0.10
Yuma, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.13	0.12	0.12	0.11	0.09	0.06	0.05

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Table A-25. Changes in Emissions from U.S. Passenger Cars and Light Trucks by Nonattainment or Maintenance Area and Alternative, Direct and Indirect Impacts--1,3-Butadiene, 2025

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Ada County; Boise, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
Adams, Denver, and Boulder Counties; Denver Metropolitan Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.08	-0.08	-0.07	-0.07	-0.07	-0.05	-0.04	-0.04
Ajo, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Albuquerque Area, NM	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.03	-0.03	-0.03	-0.03	-0.03	-0.02	-0.02	-0.02
Allegan County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Allegheny County Air Basin: Hazelwood Monitor, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Allegheny County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	-0.05	-0.04	-0.04	-0.04	-0.04	-0.03	-0.03	-0.02
Allegheny County; The Area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Allegheny, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Allentown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-0.03	-0.03	-0.03	-0.03	-0.02	-0.02	-0.02	-0.01
Allentown-Bethlehem-Easton, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-0.03	-0.03	-0.03	-0.03	-0.03	-0.02	-0.02	-0.02
Alton Township, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Amador County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Anchorage Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00	0.00
Anchorage; Eagle River, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Anne Arundel County and Baltimore County, MD	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.06	-0.05	-0.05	-0.05	-0.05	-0.04	-0.03	-0.03

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
AQCR 012: Portions of Grant County, NM	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AQCR 109-Millinocket, ME	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington Counties (Minneapolis-St. Paul), MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.16	-0.15	-0.14	-0.13	-0.10	-0.09	-0.07	-0.07
AQCR 237: Brown County: Green Bay Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AQCR 238: Marathon County: Rothschild Subcity Area, Rib Mountain, Weston, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
AQCR 238: Oneida County: Rhinelander Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AQCR 239: Milwaukee County: Milwaukee Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.03	-0.03	-0.03	-0.03	-0.03	-0.02	-0.02	-0.01
AQCR 240: Dane County: Madison Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.03	-0.03	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01
Archuleta County; Pagosa Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Aroostock County; City of Presque Isle, ME	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Atlanta, GA	Ozone (2008 8-hour)	Maintenance, Moderate	100	0	-0.30	-0.29	-0.26	-0.25	-0.19	-0.17	-0.14	-0.14
Atlanta, GA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.24	-0.23	-0.21	-0.20	-0.15	-0.13	-0.11	-0.11
Atlantic City Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bakersfield Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01

Notes:

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NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Baltimore Area, MD	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Baltimore, MD	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	-0.15	-0.14	-0.13	-0.12	-0.09	-0.08	-0.07	-0.07
Baltimore, MD	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	-0.15	-0.14	-0.13	-0.13	-0.09	-0.08	-0.07	-0.07
Baton Rouge, LA	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-0.03	-0.03	-0.03	-0.03	-0.02	-0.02	-0.02	-0.02
Beaver, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benton County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Berrien County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Billings Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Billings, MT	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Birmingham, AL	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-0.06	-0.06	-0.05	-0.05	-0.04	-0.03	-0.03	-0.03
Boise-Northern Ada County Area, ID	CO (1971 8-hour)	Maintenance, --	100	0	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01	-0.01
Bonner County; The Sandpoint Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Boston Area, MA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.03	-0.03	-0.03	-0.03	-0.02	-0.02	-0.01	-0.01
Boyd County (part), KY	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Brooke; Follansbee Area, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Burlington Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Butte County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
Calaveras County, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Calaveras County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Campbell-Clermont Counties, KY-OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Canton-Massillon, OH	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01
Central New Hampshire, NH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
Central Steptoe Valley, NV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Charleston, WV	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-0.02	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Charlotte Area, NC	CO (1971 8-hour)	Maintenance, --	100	0	-0.08	-0.08	-0.07	-0.07	-0.05	-0.04	-0.04	-0.04
Charlotte-Rock Hill, NC-SC	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-0.15	-0.14	-0.13	-0.13	-0.09	-0.08	-0.07	-0.07
Chicago, IL-IN-WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.33	-0.31	-0.29	-0.28	-0.21	-0.18	-0.15	-0.15
Chicago-Naperville, IL-IN-WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-0.36	-0.34	-0.32	-0.31	-0.22	-0.20	-0.17	-0.17
Chico (Butte County), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
Chico Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chico, CA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
Cincinnati, OH-KY	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.11	-0.10	-0.09	-0.09	-0.07	-0.06	-0.05	-0.05
Cincinnati, OH-KY-IN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-0.11	-0.11	-0.10	-0.09	-0.07	-0.06	-0.05	-0.05
Clark County; Las Vegas Planning Area, NV	PM10 (1987 24-hour)	Maintenance, Serious	100	0	-0.10	-0.09	-0.09	-0.08	-0.06	-0.05	-0.05	-0.05
Cleveland Area, OH	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.06	-0.06	-0.05	-0.05	-0.04	-0.03	-0.03	-0.03
Cleveland, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.14	-0.14	-0.13	-0.12	-0.09	-0.08	-0.07	-0.07
Cleveland, OH	PM2.5 (2012 Annual)	Maintenance, Moderate	100	0	-0.07	-0.07	-0.06	-0.06	-0.05	-0.04	-0.03	-0.03
Cleveland-Akron-Lorain, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-0.15	-0.14	-0.13	-0.13	-0.09	-0.08	-0.07	-0.07

Notes:

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Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Cleveland-Akron-Lorain, OH	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-0.14	-0.13	-0.12	-0.12	-0.09	-0.08	-0.06
Cochise County; Paul Spur/Douglas Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Colorado Springs Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.03	-0.03	-0.02	-0.02	-0.02	-0.02	-0.01
Columbus, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-0.10	-0.10	-0.09	-0.09	-0.06	-0.06	-0.05
Columbus, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.10	-0.09	-0.08	-0.08	-0.06	-0.05	-0.04
Cook County; Lyons Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cook County; Southeast Chicago, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coshocton County; Franklin Township, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coso Junction, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cuyahoga County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.05	-0.04	-0.04	-0.04	-0.03	-0.03	-0.02
Cuyahoga County, OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.06	-0.06	-0.05	-0.05	-0.04	-0.03	-0.03
Dallas-Fort Worth, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-0.39	-0.37	-0.34	-0.33	-0.24	-0.22	-0.18
Dallas-Fort Worth, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.39	-0.37	-0.34	-0.33	-0.24	-0.21	-0.18
Delaware County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
Denver Metro/North Front Range, CO	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.17	-0.16	-0.15	-0.15	-0.11	-0.10	-0.08
Denver-Boulder Area, CO	CO (1971 8-hour)	Maintenance, Serious	100	0	-0.14	-0.13	-0.12	-0.11	-0.08	-0.08	-0.06
Denver-Boulder-Greeley-Ft Collins-Loveland, CO	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-0.17	-0.16	-0.15	-0.15	-0.11	-0.10	-0.08
Detroit Area, MI	CO (1971 8-hour)	Maintenance, --	100	0	-0.08	-0.08	-0.07	-0.07	-0.05	-0.04	-0.04
Detroit, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.23	-0.22	-0.20	-0.20	-0.14	-0.13	-0.11

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Detroit, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
Detroit-Ann Arbor, MI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-0.23	-0.22	-0.20	-0.20	-0.15	-0.13	-0.11
Doña Ana County (Sunland Park Area), NM	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Doña Ana County; Anthony, NM	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Door County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Douglas, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dukes County, MA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Duluth Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
East Chicago Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
East Helena Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
East Kern County Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
El Paso County, TX	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.03	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01
El Paso, TX	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Eugene-Springfield Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
Evangeline Parish (Partial), LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fairbanks Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fairbanks, AK	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flathead County; Columbia Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flathead County; Kalispell and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Flathead County; Whitefish and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fort Collins Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00	0.00
Freehold Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Freestone and Anderson Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fremont County; Canon City Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fresno Area, CA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	-0.03	-0.03	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01
Grants Pass Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Great Falls Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Greater Connecticut, CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	-0.08	-0.07	-0.07	-0.07	-0.05	-0.04	-0.04	-0.04
Greater Connecticut, CT	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	-0.08	-0.07	-0.07	-0.07	-0.05	-0.04	-0.04	-0.04
Greeley Area, CO	CO (1971 8-hour)	Maintenance, --	100	0	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Hancock and Brooke Counties (Part); The City of Weirton, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hancock County (Part) The City of Weirton, including Butler and Clay: Magisterial Districts, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Harrisburg-Lebanon-Carlisle-York, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-0.05	-0.05	-0.05	-0.05	-0.03	-0.03	-0.03	-0.03
Hartford-New Britain-Middletown Area, CT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.05	-0.05	-0.05	-0.05	-0.03	-0.03	-0.03	-0.03
Hayden, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hayden, AZ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Hayden, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hillsborough County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hillsborough-Polk County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Houston-Galveston-Brazoria, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-0.06	-0.06	-0.05	-0.05	-0.06	-0.02	-0.06	-0.06
Houston-Galveston-Brazoria, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.05	-0.05	-0.05	-0.04	-0.05	-0.02	-0.06	-0.06
Humphreys County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huntington, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Imperial County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
Imperial County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
Imperial County, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
Imperial County, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
Imperial County; Imperial Valley Planning Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
Indian Wells, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Indiana, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Indianapolis Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Indianapolis, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.03	-0.03	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01
Inyo County; Owens Valley Planning Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jackson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jackson County; Medford-Ashland (including White City), OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00	0.00

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Jamestown, NY	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
Jefferson County, KY	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jefferson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jefferson County; (part) Steubenville & Mingo Junction, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jefferson County; (part), OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Johnstown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-0.01	-0.01	0.00	0.00	0.00	0.00	0.00
Josephine County; Grants Pass, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Juneau; Mendenhall Valley Area, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kern County (Eastern Kern), CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kern County (Eastern Kern), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
King County; Kent, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
King County; Seattle, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Klamath County; Klamath Falls, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Klamath Falls Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Klamath Falls, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Knoxville, TN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-0.04	-0.04	-0.04	-0.04	-0.03	-0.02	-0.02
Knoxville-Sevierville-La Follette, TN	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-0.05	-0.05	-0.04	-0.04	-0.03	-0.03	-0.02
La Porte County; (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake County (part); Lakeview, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Lake County, OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Lake County: (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00
Lake County; Polson, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake County; Ronan, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake Tahoe Nevada Area, NV	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake Tahoe North Shore Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake Tahoe South Shore Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lancaster, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
Lancaster, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
Lane County (part); Oakridge, OR	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lane County; Eugene/Springfield, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
Las Vegas Area, NV	CO (1971 8-hour)	Maintenance, Serious	100	0	-0.10	-0.09	-0.09	-0.09	-0.08	-0.06	-0.05	-0.05
Las Vegas, NV	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.10	-0.09	-0.09	-0.09	-0.08	-0.06	-0.05	-0.05
LaSalle County; Oglesby, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Laurel Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lebanon County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
Lemont, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00

Notes:

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NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Liberty-Clairton, PA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lincoln County; Libby and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Logan, UT-ID	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	-0.01	-0.01	-0.01	0.00	0.00	0.00	0.00	0.00
Longmont Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lorain County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Los Angeles, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	-0.78	-0.74	-0.69	-0.67	-0.49	-0.44	-0.36	-0.36
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	-0.05	-0.04	-0.04	-0.04	-0.03	-0.03	-0.02	-0.02
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	-0.05	-0.04	-0.04	-0.04	-0.03	-0.03	-0.02	-0.02
Los Angeles-South Coast Air Basin Area, CA	CO (1971 8-hour)	Maintenance, Serious	100	0	-0.78	-0.74	-0.69	-0.67	-0.49	-0.44	-0.37	-0.37
Los Angeles-South Coast Air Basin Area, CA	NO ₂ (1971 Annual)	Maintenance, --	100	0	-0.78	-0.74	-0.69	-0.67	-0.49	-0.44	-0.36	-0.36
Los Angeles-South Coast Air Basin, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	-0.78	-0.74	-0.69	-0.67	-0.49	-0.44	-0.36	-0.36
Los Angeles-South Coast Air Basin, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	-0.78	-0.74	-0.69	-0.67	-0.49	-0.44	-0.36	-0.36
Los Angeles-South Coast Air Basin, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	-0.78	-0.74	-0.69	-0.67	-0.49	-0.44	-0.36	-0.36
Louisville, KY-IN	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.06	-0.06	-0.06	-0.05	-0.04	-0.03	-0.03	-0.03
Lowell Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lucas County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01	-0.01
Madison County; Granite City Township and Nameoki Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Manchester Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	-0.01	-0.01	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Manitowoc County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maricopa and Pinal Counties; Phoenix Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	-0.19	-0.18	-0.17	-0.16	-0.12	-0.10	-0.09	-0.09
Marion County: Lawrence, Washington, and Warrant Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
Mariposa County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mariposa County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Marshall, WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Medford Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Memphis Area, TN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.05	-0.05	-0.04	-0.04	-0.03	-0.03	-0.02	-0.02
Memphis, TN-MS-AR	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-0.06	-0.06	-0.06	-0.05	-0.04	-0.04	-0.03	-0.03
Miami, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Miami, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Miami, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Milwaukee-Racine, WI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-0.06	-0.06	-0.05	-0.05	-0.04	-0.03	-0.03	-0.03
Minneapolis-St. Paul Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.16	-0.15	-0.14	-0.14	-0.10	-0.09	-0.08	-0.08
Missoula Area, MT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Missoula county; Missoula and Vicinity, MT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Modesto Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Mohave County (part); Bullhead City, AZ	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mono County; Mammoth Lake Planning Area, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mono County; Mono Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morenci, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morgan County, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morongo Band of Mission Indians	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morongo Band of Mission Indians, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morristown Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Muscatine County; (part), IA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Muscatine, IA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Muskegon County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00
Muskingum River, OH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nashua Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nassau County, FL	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nevada County (Western part), CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
Nevada County (Western part), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
New Haven County, CT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
New Haven-Meriden-Waterbury Area, CT	CO (1971 8-hour)	Maintenance, --	100	0	-0.04	-0.04	-0.04	-0.04	-0.04	-0.03	-0.02	-0.02
New Manchester-Grant Magisterial District in Hancock County, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
New York County, NY	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01	-0.01
New York, NY-NJ-CT	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-0.67	-0.63	-0.59	-0.57	-0.42	-0.37	-0.31
New York-N. New Jersey-Long Island Area, NY-NJ-CT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	-0.37	-0.35	-0.32	-0.31	-0.23	-0.20	-0.17
New York-N. New Jersey-Long Island, NY-NJ-CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	-0.65	-0.62	-0.57	-0.55	-0.41	-0.36	-0.30
New York-Northern New Jersey-Long Island, NY-NJ-CT	Ozone (2015 8-hour)	Nonattainment, Moderate	50	0	-0.65	-0.62	-0.57	-0.55	-0.41	-0.36	-0.30
NJ Portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nogales, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Northern Milwaukee/Ozaukee Shoreline, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Northern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.08	-0.07	-0.07	-0.06	-0.05	-0.04	-0.04
Oakridge, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ogden Area, UT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ogden Area, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Olmsted County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Olmsted; City of Rochester, MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.01	0.00	0.00	0.00	0.00	0.00	0.00
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pekin, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Penns Grove Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Peoria County: Hollis Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Peoria County: Peoria, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Perth Amboy Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Philadelphia-Camden County Area, PA-NJ	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.05	-0.05	-0.04	-0.04	-0.03	-0.03	-0.02	-0.02
Philadelphia-Wilmington, PA-NJ-DE	PM _{2.5} (2006 24-hour)	Maintenance, Moderate for PA and DE; Subject to Former Subpart 1 for NJ	100	0	-0.23	-0.22	-0.20	-0.19	-0.14	-0.13	-0.11	-0.11
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-0.31	-0.29	-0.27	-0.26	-0.19	-0.17	-0.14	-0.14
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	-0.30	-0.29	-0.27	-0.26	-0.19	-0.17	-0.14	-0.14
Phoenix Area, AZ	CO (1971 8-hour)	Maintenance, Serious	100	0	-0.18	-0.17	-0.16	-0.15	-0.11	-0.10	-0.09	-0.09
Phoenix-Mesa, AZ	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-0.19	-0.18	-0.17	-0.16	-0.12	-0.11	-0.09	-0.09
Phoenix-Mesa, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.19	-0.19	-0.17	-0.17	-0.12	-0.11	-0.09	-0.09
Pierce County; Tacoma, WA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pima County; Ajo Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pima County; Rillito Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pinal and Gila Counties; Payson, AZ	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pinal County (part); West Pinal, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Pitkin County; Aspen, CO	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pittsburgh Area, PA	CO (1971 8-hour)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01

Notes:

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				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Pittsburgh-Beaver Valley, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-0.10	-0.09	-0.09	-0.08	-0.06	-0.06	-0.05
Pittsburgh-Beaver Valley, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-0.09	-0.09	-0.08	-0.08	-0.06	-0.05	-0.04
Plumas County, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Polk County, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Portland Area: Portland Metro Service District Boundary, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.06	-0.06	-0.05	-0.05	-0.04	-0.03	-0.03
Power-Bannock Counties; Fort Hall Indian Reservation, ID	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Power-Bannock Counties; Portneuf Valley Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Provo Area, UT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Provo, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
Prowers County; Lamar, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Raleigh-Durham Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.09	-0.08	-0.08	-0.08	-0.06	-0.05	-0.04
Ramsey County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Reading, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
Reno Area, NV	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Rhineland, WI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Riverside County (Coachella Valley), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
Riverside County (Coachella Valley), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
Riverside County; Coachella Valley Planning Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	-0.03	-0.03	-0.02	-0.02	-0.02	-0.02	-0.01

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Riverside, Los Angeles, Orange, and San Bernardino Counties; South Coast Air Basin, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	-0.78	-0.74	-0.68	-0.66	-0.49	-0.43	-0.36
Rosebud County; Lame Deer, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Routt County (part); Steamboat Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rusk and Panola Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sacramento Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.07	-0.07	-0.06	-0.06	-0.04	-0.04	-0.03
Sacramento County, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.07	-0.06	-0.06	-0.06	-0.04	-0.04	-0.03
Sacramento Metro, CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	-0.11	-0.11	-0.10	-0.10	-0.07	-0.06	-0.05
Sacramento Metro, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	-0.11	-0.11	-0.10	-0.10	-0.07	-0.06	-0.05
Sacramento, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	-0.11	-0.11	-0.10	-0.10	-0.07	-0.06	-0.05
Salem Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Salt Lake City Area, UT	CO (1971 8-hour)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00
Salt Lake City, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	-0.08	-0.08	-0.07	-0.07	-0.05	-0.04	-0.04
Salt Lake County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.05	-0.05	-0.04	-0.04	-0.03	-0.03	-0.02
Salt Lake County, UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	-0.05	-0.05	-0.04	-0.04	-0.03	-0.03	-0.02
San Antonio, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.09	-0.09	-0.08	-0.08	-0.06	-0.05	-0.04
San Bernardino County (part); excluding Searles Valley Planning Area and South Coast Air Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.03	-0.03	-0.03	-0.03	-0.02	-0.02	-0.01
San Diego Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.16	-0.16	-0.14	-0.14	-0.10	-0.09	-0.08

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
San Diego County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-0.17	-0.16	-0.15	-0.14	-0.10	-0.09	-0.08
San Diego County, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	-0.17	-0.16	-0.15	-0.14	-0.10	-0.09	-0.08
San Francisco Bay Area, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	-0.33	-0.31	-0.29	-0.28	-0.21	-0.18	-0.15
San Francisco Bay Area, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.33	-0.31	-0.29	-0.28	-0.21	-0.18	-0.15
San Francisco Bay Area, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	-0.33	-0.32	-0.29	-0.28	-0.21	-0.19	-0.16
San Francisco-Oakland-San Jose Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.30	-0.29	-0.27	-0.26	-0.19	-0.17	-0.14
San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	-0.19	-0.18	-0.17	-0.16	-0.12	-0.11	-0.09
San Joaquin Valley, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	-0.19	-0.18	-0.17	-0.16	-0.12	-0.11	-0.09
San Joaquin Valley, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	-0.19	-0.18	-0.17	-0.16	-0.12	-0.11	-0.09
San Joaquin Valley, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	-0.19	-0.18	-0.17	-0.16	-0.12	-0.11	-0.09
San Joaquin Valley, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	-0.19	-0.18	-0.17	-0.16	-0.12	-0.11	-0.09
San Luis Obispo (Eastern part), CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
San Luis Obispo (Eastern San Luis Obispo), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
San Manuel, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
San Miguel County; Telluride, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sanders County (part); Thompson Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Santa Cruz County; Nogales Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Seaford, DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Seattle-Tacoma Area, WA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	-0.14	-0.13	-0.12	-0.12	-0.09	-0.08	-0.07
Seattle-Tacoma, WA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
Sheboygan County, WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-0.01	0.00	0.00	0.00	0.00	0.00	0.00
Sheboygan County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sheridan County; City of Sheridan, WY	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Shoshone County (part); excluding Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Shoshone County; City of Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Silver Bow County; Butte, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Somerville Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Southern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
Southwest Indiana, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Spokane Area, WA	CO (1971 8-hour)	Maintenance, Serious	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Spokane County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Springfield Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
St. Bernard Parish, LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
St. Clair, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
St. Louis Area, MO	CO (1971 8-hour)	Maintenance, --	100	0	-0.03	-0.03	-0.03	-0.03	-0.02	-0.02	-0.02
St. Louis, MO-IL	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.10	-0.10	-0.09	-0.09	-0.06	-0.06	-0.05
St. Louis-St. Charles-Farmington, MO-IL	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-0.12	-0.11	-0.10	-0.10	-0.07	-0.07	-0.06

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Steubenville, OH-WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Steubenville-Weirton, OH-WV	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-0.01	-0.01	-0.01	0.00	0.00	0.00	0.00	0.00
Stockton Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.02	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Sullivan County, TN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sutter Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Syracuse Area; Onondaga County, NY	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01	-0.01
Tazewell County: Groveland Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Terre Haute, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Thurston County; Cities of Olympia, Tumwater, and Lacey, WA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Titus County, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Toms River Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tooele County (part), UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trenton Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trona, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tucson Area, AZ	CO (1971 8-hour)	Maintenance, --	100	0	-0.05	-0.04	-0.04	-0.04	-0.03	-0.03	-0.03	-0.02
Tuolumne County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tuscan Buttes, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tuscan Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Uinta Basin, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Union County; LaGrande, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Upper Green River Basin Area, WY	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Utah County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01
Vancouver Area: Clark County (part), WA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Ventura County, CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	-0.04	-0.04	-0.04	-0.03	-0.03	-0.02	-0.02	-0.02
Ventura County, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	-0.04	-0.04	-0.04	-0.03	-0.03	-0.02	-0.02	-0.02
Vermillion County; Part of Clinton Township, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vigo County, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00	0.00
Walla Walla County; Wallula, WA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Waltham Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Warren County: Conewago Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Warren, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Washington Area, DC-MD-VA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.04	-0.04	-0.03	-0.03	-0.02	-0.02	-0.02	-0.02
Washington, DC-MD-VA	Ozone (2008 8-hour)	Nonattainment (DC) Maintenance (MD, VA), Marginal	50	0	-0.27	-0.26	-0.24	-0.23	-0.17	-0.15	-0.13	-0.13
Washington, DC-MD-VA	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	-0.27	-0.26	-0.24	-0.23	-0.17	-0.15	-0.13	-0.13
Washoe County; Reno Planning Area, NV	PM10 (1987 24-hour)	Maintenance, Serious	100	0	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Wayne County; (part), MI	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
West Central Pinal County, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
West Silver Valley, ID	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Williamson County, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Winston-Salem Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01	-0.01
Worcester Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
Yakima Area, WA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Yakima County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Yuba City-Marysville, CA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
Yuma County; Yuma Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00	0.00
Yuma, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Table A-26. Changes in Emissions from U.S. Passenger Cars and Light Trucks by Nonattainment or Maintenance Area and Alternative, Direct and Indirect Impacts--1,3-Butadiene, 2035

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Ada County; Boise, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Adams, Denver, and Boulder Counties; Denver Metropolitan Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.04	0.04	0.04	0.04	0.03	0.03	0.02
Ajo, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Albuquerque Area, NM	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Allegan County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Allegheny County Air Basin: Hazelwood Monitor, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Allegheny County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.02	0.02	0.02	0.02	0.02	0.02	0.01
Allegheny County; The Area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Allegheny, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Allentown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Allentown-Bethlehem-Easton, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.01	0.02	0.02	0.02	0.01	0.01	0.01
Alton Township, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Amador County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Anchorage Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Anchorage; Eagle River, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Anne Arundel County and Baltimore County, MD	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.03	0.03	0.03	0.03	0.02	0.02	0.02

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
AQCR 012: Portions of Grant County, NM	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AQCR 109-Millinocket, ME	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington Counties (Minneapolis-St. Paul), MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.07	0.07	0.07	0.07	0.06	0.06	0.05	0.05
AQCR 237: Brown County: Green Bay Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AQCR 238: Marathon County: Rothschild Subcity Area, Rib Mountain, Weston, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AQCR 238: Oneida County: Rhinelander Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AQCR 239: Milwaukee County: Milwaukee Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
AQCR 240: Dane County: Madison Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Archuleta County; Pagosa Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Aroostock County; City of Presque Isle, ME	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Atlanta, GA	Ozone (2008 8-hour)	Maintenance, Moderate	100	0	0.13	0.14	0.14	0.14	0.11	0.12	0.09	0.09
Atlanta, GA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.10	0.11	0.11	0.11	0.09	0.09	0.07	0.07
Atlantic City Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bakersfield Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Baltimore Area, MD	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Baltimore, MD	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	0.06	0.07	0.07	0.07	0.07	0.05	0.06	0.04
Baltimore, MD	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	0.06	0.07	0.07	0.07	0.07	0.05	0.06	0.04
Baton Rouge, LA	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.05	0.05	0.05	0.05	0.05	0.04	0.04	0.03
Beaver, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benton County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Berrien County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Billings Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Billings, MT	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Birmingham, AL	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.02
Boise-Northern Ada County Area, ID	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Bonner County; The Sandpoint Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Boston Area, MA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Boyd County (part), KY	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Brooke; Follansbee Area, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Burlington Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Butte County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Calaveras County, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Calaveras County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Campbell-Clermont Counties, KY-OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Canton-Massillon, OH	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Central New Hampshire, NH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Central Steptoe Valley, NV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Charleston, WV	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Charlotte Area, NC	CO (1971 8-hour)	Maintenance, --	100	0	0.03	0.04	0.04	0.04	0.04	0.03	0.03	0.02
Charlotte-Rock Hill, NC-SC	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.06	0.07	0.07	0.07	0.07	0.05	0.06	0.04
Chicago, IL-IN-WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.15	0.15	0.16	0.15	0.15	0.12	0.13	0.10
Chicago-Naperville, IL-IN-WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.16	0.17	0.17	0.17	0.17	0.13	0.14	0.10
Chico (Butte County), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chico Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chico, CA	PM _{2.5} (2006 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cincinnati, OH-KY	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.05	0.05	0.05	0.05	0.05	0.04	0.04	0.03
Cincinnati, OH-KY-IN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.05	0.05	0.05	0.05	0.05	0.04	0.04	0.03
Clark County; Las Vegas Planning Area, NV	PM ₁₀ (1987 24-hour)	Maintenance, Serious	100	0	0.04	0.05	0.05	0.05	0.05	0.04	0.04	0.03
Cleveland Area, OH	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.02
Cleveland, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.06	0.07	0.07	0.07	0.07	0.05	0.06	0.04
Cleveland, OH	PM _{2.5} (2012 Annual)	Maintenance, Moderate	100	0	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.02
Cleveland-Akron-Lorain, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.07	0.07	0.07	0.07	0.07	0.05	0.06	0.04

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Cleveland-Akron-Lorain, OH	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.06	0.06	0.06	0.06	0.06	0.05	0.05	0.04
Cochise County; Paul Spur/Douglas Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Colorado Springs Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Columbus, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.05	0.05	0.05	0.05	0.05	0.04	0.04	0.03
Columbus, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.04	0.04	0.04	0.04	0.04	0.03	0.04	0.03
Cook County; Lyons Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cook County; Southeast Chicago, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Coshocton County; Franklin Township, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coso Junction, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cuyahoga County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01
Cuyahoga County, OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.02
Dallas-Fort Worth, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.17	0.18	0.18	0.18	0.18	0.14	0.16	0.11
Dallas-Fort Worth, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.17	0.18	0.18	0.18	0.18	0.14	0.15	0.11
Delaware County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Denver Metro/North Front Range, CO	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.08	0.08	0.08	0.08	0.08	0.06	0.07	0.05
Denver-Boulder Area, CO	CO (1971 8-hour)	Maintenance, Serious	100	0	0.06	0.06	0.06	0.06	0.06	0.05	0.05	0.04
Denver-Boulder-Greeley-Ft Collins-Loveland, CO	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.08	0.08	0.08	0.08	0.08	0.06	0.07	0.05
Detroit Area, MI	CO (1971 8-hour)	Maintenance, --	100	0	0.04	0.04	0.04	0.04	0.04	0.03	0.03	0.02
Detroit, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.11	0.11	0.11	0.11	0.11	0.09	0.09	0.07

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Detroit, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Detroit-Ann Arbor, MI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.11	0.11	0.11	0.11	0.11	0.09	0.10	0.07
Doña Ana County (Sunland Park Area), NM	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Doña Ana County; Anthony, NM	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Door County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Douglas, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dukes County, MA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Duluth Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
East Chicago Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
East Helena Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
East Kern County Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
El Paso County, TX	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
El Paso, TX	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Eugene-Springfield Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Evangeline Parish (Partial), LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fairbanks Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fairbanks, AK	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flathead County; Columbia Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flathead County; Kalispell and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Flathead County; Whitefish and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fort Collins Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Freehold Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Freestone and Anderson Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fremont County; Canon City Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fresno Area, CA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Grants Pass Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Great Falls Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Greater Connecticut, CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	0.03	0.04	0.04	0.04	0.04	0.03	0.03	0.02
Greater Connecticut, CT	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	0.03	0.04	0.04	0.04	0.04	0.03	0.03	0.02
Greeley Area, CO	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Hancock and Brooke Counties (Part); The City of Weirton, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hancock County (Part) The City of Weirton, including Butler and Clay: Magisterial Districts, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Harrisburg-Lebanon-Carlisle-York, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.02	0.02	0.03	0.02	0.02	0.02	0.02	0.02
Hartford-New Britain-Middletown Area, CT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.02	0.02	0.03	0.02	0.02	0.02	0.02	0.02
Hayden, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hayden, AZ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Hayden, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hillsborough County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hillsborough-Polk County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Houston-Galveston-Brazoria, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.98	0.97	0.89	0.85	0.64	0.60	0.40
Houston-Galveston-Brazoria, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.98	0.96	0.88	0.84	0.64	0.60	0.40
Humphreys County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huntington, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Imperial County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Imperial County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Imperial County, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Imperial County, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Imperial County; Imperial Valley Planning Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Indian Wells, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Indiana, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Indianapolis Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Indianapolis, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Inyo County; Owens Valley Planning Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jackson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jackson County; Medford-Ashland (including White City), OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Jamestown, NY	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jefferson County, KY	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jefferson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jefferson County; (part) Steubenville & Mingo Junction, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jefferson County; (part), OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Johnstown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Josephine County; Grants Pass, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Juneau; Mendenhall Valley Area, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kern County (Eastern Kern), CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kern County (Eastern Kern), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
King County; Kent, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
King County; Seattle, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Klamath County; Klamath Falls, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Klamath Falls Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Klamath Falls, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Knoxville, TN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01
Knoxville-Sevierville-La Follette, TN	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01
La Porte County; (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake County (part); Lakeview, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Lake County, OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Lake County: (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Lake County; Polson, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake County; Ronan, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake Tahoe Nevada Area, NV	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake Tahoe North Shore Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake Tahoe South Shore Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lancaster, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Lancaster, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Lane County (part); Oakridge, OR	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lane County; Eugene/Springfield, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Las Vegas Area, NV	CO (1971 8-hour)	Maintenance, Serious	100	0	0.04	0.05	0.05	0.05	0.05	0.04	0.04	0.03
Las Vegas, NV	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.04	0.05	0.05	0.05	0.05	0.04	0.04	0.03
LaSalle County; Oglesby, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Laurel Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lebanon County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lemont, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Liberty-Clairton, PA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lincoln County; Libby and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Logan, UT-ID	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Longmont Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lorain County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Los Angeles, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	0.34	0.36	0.37	0.36	0.28	0.31	0.23	0.23
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01
Los Angeles-South Coast Air Basin Area, CA	CO (1971 8-hour)	Maintenance, Serious	100	0	0.34	0.36	0.37	0.36	0.28	0.31	0.23	0.23
Los Angeles-South Coast Air Basin Area, CA	NO ₂ (1971 Annual)	Maintenance, --	100	0	0.34	0.36	0.37	0.36	0.28	0.31	0.23	0.23
Los Angeles-South Coast Air Basin, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	0.34	0.36	0.37	0.36	0.28	0.31	0.23	0.23
Los Angeles-South Coast Air Basin, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	0.34	0.36	0.37	0.36	0.28	0.31	0.23	0.23
Los Angeles-South Coast Air Basin, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.34	0.36	0.37	0.36	0.28	0.31	0.23	0.23
Louisville, KY-IN	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02
Lowell Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lucas County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Madison County; Granite City Township and Nameoki Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Manchester Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Manitowoc County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maricopa and Pinal Counties; Phoenix Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	0.09	0.10	0.10	0.10	0.10	0.08	0.08	0.06
Marion County: Lawrence, Washington, and Warrant Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Mariposa County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mariposa County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Marshall, WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Medford Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Memphis Area, TN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01
Memphis, TN-MS-AR	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.03	0.03	0.03	0.03	0.03	0.02	0.03	0.02
Miami, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Miami, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Miami, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Milwaukee-Racine, WI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.02
Minneapolis-St. Paul Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.07	0.07	0.08	0.07	0.07	0.06	0.06	0.05
Missoula Area, MT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Missoula county; Missoula and Vicinity, MT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Modesto Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Mohave County (part); Bullhead City, AZ	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mono County; Mammoth Lake Planning Area, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mono County; Mono Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morenci, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morgan County, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morongo Band of Mission Indians	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morongo Band of Mission Indians, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morristown Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Muscatine County; (part), IA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Muscatine, IA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Muskegon County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Muskingum River, OH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nashua Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nassau County, FL	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nevada County (Western part), CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nevada County (Western part), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
New Haven County, CT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
New Haven-Meriden-Waterbury Area, CT	CO (1971 8-hour)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.01	0.02	0.01	0.01
New Manchester-Grant Magisterial District in Hancock County, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
New York County, NY	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
New York, NY-NJ-CT	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.29	0.31	0.31	0.31	0.24	0.26	0.19
New York-N. New Jersey-Long Island Area, NY-NJ-CT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	0.16	0.17	0.17	0.17	0.13	0.14	0.11
New York-N. New Jersey-Long Island, NY-NJ-CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	0.29	0.30	0.30	0.30	0.23	0.26	0.19
New York-Northern New Jersey-Long Island, NY-NJ-CT	Ozone (2015 8-hour)	Nonattainment, Moderate	50	0	0.29	0.30	0.30	0.30	0.23	0.26	0.19
NJ Portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nogales, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Northern Milwaukee/Ozaukee Shoreline, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Northern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.04	0.04	0.04	0.04	0.03	0.03	0.02
Oakridge, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ogden Area, UT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ogden Area, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Olmsted County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Olmsted; City of Rochester, MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pekin, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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Penns Grove Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Peoria County: Hollis Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Peoria County: Peoria, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Perth Amboy Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Philadelphia-Camden County Area, PA-NJ	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01
Philadelphia-Wilmington, PA-NJ-DE	PM _{2.5} (2006 24-hour)	Maintenance, Moderate for PA and DE; Subject to Former Subpart 1 for NJ	100	0	0.10	0.11	0.11	0.11	0.08	0.09	0.09	0.07
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.13	0.14	0.14	0.14	0.11	0.12	0.12	0.09
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	0.13	0.14	0.14	0.14	0.11	0.12	0.12	0.09
Phoenix Area, AZ	CO (1971 8-hour)	Maintenance, Serious	100	0	0.09	0.09	0.09	0.09	0.07	0.08	0.08	0.06
Phoenix-Mesa, AZ	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.09	0.10	0.10	0.10	0.08	0.08	0.08	0.06
Phoenix-Mesa, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.10	0.10	0.10	0.10	0.08	0.08	0.08	0.06
Pierce County; Tacoma, WA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pima County; Ajo Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pima County; Rillito Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pinal and Gila Counties; Payson, AZ	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pinal County (part); West Pinal, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.00	0.01	0.01	0.00
Pitkin County; Aspen, CO	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pittsburgh Area, PA	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00

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Pittsburgh-Beaver Valley, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.05	0.05	0.05	0.05	0.05	0.04	0.04	0.03
Pittsburgh-Beaver Valley, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.05	0.05	0.05	0.05	0.05	0.04	0.04	0.03
Plumas County, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Polk County, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Portland Area: Portland Metro Service District Boundary, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.02
Power-Bannock Counties; Fort Hall Indian Reservation, ID	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Power-Bannock Counties; Portneuf Valley Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Provo Area, UT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Provo, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Prowers County; Lamar, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Raleigh-Durham Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.04	0.04	0.04	0.04	0.04	0.03	0.04	0.03
Ramsey County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Reading, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Reno Area, NV	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Rhineland, WI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Riverside County (Coachella Valley), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Riverside County (Coachella Valley), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Riverside County; Coachella Valley Planning Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Riverside, Los Angeles, Orange, and San Bernardino Counties; South Coast Air Basin, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.34	0.36	0.36	0.36	0.36	0.28	0.31	0.23
Rosebud County; Lame Deer, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Routt County (part); Steamboat Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rusk and Panola Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sacramento Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.02
Sacramento County, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.03	0.03	0.03	0.03	0.03	0.02	0.03	0.02
Sacramento Metro, CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	0.05	0.05	0.05	0.05	0.05	0.04	0.05	0.03
Sacramento Metro, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	0.05	0.05	0.05	0.05	0.05	0.04	0.05	0.03
Sacramento, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.05	0.05	0.05	0.05	0.05	0.04	0.04	0.03
Salem Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Salt Lake City Area, UT	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Salt Lake City, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	0.04	0.04	0.04	0.04	0.04	0.03	0.03	0.02
Salt Lake County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01
Salt Lake County, UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01
San Antonio, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.04	0.04	0.04	0.04	0.04	0.03	0.04	0.03
San Bernardino County (part); excluding Searles Valley Planning Area and South Coast Air Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
San Diego Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.07	0.08	0.08	0.08	0.08	0.06	0.07	0.05

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
San Diego County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.07	0.08	0.08	0.08	0.06	0.07	0.05
San Diego County, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	0.07	0.08	0.08	0.08	0.06	0.07	0.05
San Francisco Bay Area, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.14	0.15	0.15	0.15	0.12	0.13	0.10
San Francisco Bay Area, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.14	0.15	0.15	0.15	0.12	0.13	0.10
San Francisco Bay Area, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.15	0.15	0.15	0.15	0.12	0.13	0.10
San Francisco-Oakland-San Jose Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.13	0.14	0.14	0.14	0.11	0.12	0.09
San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.09	0.09	0.09	0.09	0.07	0.08	0.06
San Joaquin Valley, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	0.09	0.09	0.09	0.09	0.07	0.08	0.06
San Joaquin Valley, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	0.09	0.09	0.09	0.09	0.07	0.08	0.06
San Joaquin Valley, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	0.09	0.09	0.09	0.09	0.07	0.08	0.06
San Joaquin Valley, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.09	0.09	0.09	0.09	0.07	0.08	0.06
San Luis Obispo (Eastern part), CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
San Luis Obispo (Eastern San Luis Obispo), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
San Manuel, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
San Miguel County; Telluride, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sanders County (part); Thompson Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Santa Cruz County; Nogales Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Seaford, DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Seattle-Tacoma Area, WA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	0.06	0.06	0.07	0.06	0.05	0.06	0.04
Seattle-Tacoma, WA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Sheboygan County, WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sheboygan County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sheridan County; City of Sheridan, WY	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Shoshone County (part); excluding Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Shoshone County; City of Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Silver Bow County; Butte, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Somerville Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Southern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Southwest Indiana, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Spokane Area, WA	CO (1971 8-hour)	Maintenance, Serious	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Spokane County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Springfield Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
St. Bernard Parish, LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
St. Clair, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
St. Louis Area, MO	CO (1971 8-hour)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
St. Louis, MO-IL	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.05	0.05	0.05	0.05	0.04	0.04	0.03
St. Louis-St. Charles-Farmington, MO-IL	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.05	0.05	0.06	0.05	0.04	0.05	0.03

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Steubenville, OH-WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Steubenville-Weirton, OH-WV	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stockton Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Sullivan County, TN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sutter Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Syracuse Area; Onondaga County, NY	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Tazewell County: Groveland Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Terre Haute, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Thurston County; Cities of Olympia, Tumwater, and Lacey, WA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Titus County, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Toms River Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tooele County (part), UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trenton Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trona, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tucson Area, AZ	CO (1971 8-hour)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01
Tuolumne County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tuscan Buttes, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tuscan Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Uinta Basin, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Union County; LaGrande, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Upper Green River Basin Area, WY	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Utah County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Vancouver Area: Clark County (part), WA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Ventura County, CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01
Ventura County, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01
Vermillion County; Part of Clinton Township, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vigo County, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Walla Walla County; Wallula, WA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Waltham Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Warren County: Conewago Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Warren, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Washington Area, DC-MD-VA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.02	0.01
Washington, DC-MD-VA	Ozone (2008 8-hour)	Nonattainment (DC) Maintenance (MD, VA), Marginal	50	0	0.12	0.12	0.12	0.12	0.12	0.10	0.11	0.08
Washington, DC-MD-VA	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	0.12	0.12	0.12	0.12	0.12	0.10	0.11	0.08
Washoe County; Reno Planning Area, NV	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00

Notes:

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				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Wayne County; (part), MI	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
West Central Pinal County, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
West Silver Valley, ID	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Williamson County, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Winston-Salem Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Worcester Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Yakima Area, WA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Yakima County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Yuba City-Marysville, CA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Yuma County; Yuma Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Yuma, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Table A-27. Changes in Emissions from U.S. Passenger Cars and Light Trucks by Nonattainment or Maintenance Area and Alternative, Direct and Indirect Impacts--1,3-Butadiene, 2050

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Ada County; Boise, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.08	0.08	0.08	0.07	0.06	0.04	0.04
Adams, Denver, and Boulder Counties; Denver Metropolitan Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.35	0.33	0.32	0.32	0.24	0.18	0.15
Ajo, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Albuquerque Area, NM	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.15	0.14	0.14	0.14	0.10	0.08	0.07
Allegan County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Allegheny County Air Basin: Hazelwood Monitor, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Allegheny County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.21	0.20	0.20	0.19	0.15	0.11	0.09
Allegheny County; The Area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Allegheny, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01
Allentown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.12	0.12	0.12	0.11	0.09	0.06	0.05
Allentown-Bethlehem-Easton, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.14	0.14	0.13	0.13	0.10	0.07	0.06
Alton Township, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Amador County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Anchorage Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	0.03	0.02	0.02	0.02	0.02	0.01	0.01
Anchorage; Eagle River, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Anne Arundel County and Baltimore County, MD	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.25	0.24	0.23	0.23	0.17	0.13	0.11

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
AQCR 012: Portions of Grant County, NM	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
AQCR 109-Millinocket, ME	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.01
AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington Counties (Minneapolis-St. Paul), MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.68	0.65	0.64	0.63	0.47	0.35	0.30	
AQCR 237: Brown County: Green Bay Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AQCR 238: Marathon County: Rothschild Subcity Area, Rib Mountain, Weston, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02	0.02
AQCR 238: Oneida County: Rhinelander Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
AQCR 239: Milwaukee County: Milwaukee Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.14	0.13	0.13	0.13	0.10	0.07	0.06	0.06
AQCR 240: Dane County: Madison Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.12	0.12	0.11	0.11	0.08	0.06	0.05	0.05
Archuleta County; Pagosa Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Aroostock County; City of Presque Isle, ME	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Atlanta, GA	Ozone (2008 8-hour)	Maintenance, Moderate	100	0	1.31	1.25	1.22	1.20	0.90	0.67	0.57	0.57
Atlanta, GA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.04	0.99	0.97	0.95	0.71	0.53	0.45	0.45
Atlantic City Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Bakersfield Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	0.10	0.09	0.09	0.09	0.07	0.05	0.04	0.04

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Baltimore Area, MD	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Baltimore, MD	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	0.64	0.61	0.59	0.58	0.44	0.33	0.28
Baltimore, MD	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	0.64	0.61	0.60	0.59	0.44	0.33	0.28
Baton Rouge, LA	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.25	0.24	0.23	0.23	0.17	0.13	0.10
Beaver, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benton County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Berrien County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.05	0.05	0.05	0.05	0.03	0.03	0.02
Billings Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Billings, MT	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Birmingham, AL	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.26	0.25	0.24	0.24	0.18	0.13	0.11
Boise-Northern Ada County Area, ID	CO (1971 8-hour)	Maintenance, --	100	0	0.08	0.08	0.08	0.07	0.06	0.04	0.04
Bonner County; The Sandpoint Area, ID	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Boston Area, MA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.14	0.13	0.13	0.13	0.09	0.07	0.06
Boyd County (part), KY	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Brooke; Follansbee Area, WV	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Burlington Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Butte County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02
Calaveras County, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Calaveras County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Campbell-Clermont Counties, KY-OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Canton-Massillon, OH	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.08	0.07	0.07	0.07	0.07	0.05	0.04	0.03
Central New Hampshire, NH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.04	0.04	0.04	0.04	0.04	0.03	0.02	0.02
Central Steptoe Valley, NV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Charleston, WV	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.07	0.07	0.07	0.07	0.07	0.05	0.04	0.03
Charlotte Area, NC	CO (1971 8-hour)	Maintenance, --	100	0	0.35	0.33	0.32	0.32	0.32	0.24	0.18	0.15
Charlotte-Rock Hill, NC-SC	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.64	0.62	0.60	0.59	0.59	0.44	0.33	0.28
Chicago, IL-IN-WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.45	1.38	1.35	1.33	1.33	1.00	0.74	0.63
Chicago-Naperville, IL-IN-WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	1.57	1.50	1.47	1.44	1.44	1.08	0.80	0.69
Chico (Butte County), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.04	0.04	0.04	0.04	0.04	0.03	0.02	0.02
Chico Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Chico, CA	PM _{2.5} (2006 24-hour)	Maintenance, Moderate	100	0	0.04	0.04	0.04	0.04	0.04	0.03	0.02	0.02
Cincinnati, OH-KY	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.46	0.44	0.43	0.42	0.42	0.32	0.24	0.20
Cincinnati, OH-KY-IN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.48	0.46	0.45	0.44	0.44	0.33	0.25	0.21
Clark County; Las Vegas Planning Area, NV	PM ₁₀ (1987 24-hour)	Maintenance, Serious	100	0	0.43	0.41	0.40	0.39	0.39	0.30	0.22	0.19
Cleveland Area, OH	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.25	0.24	0.24	0.23	0.23	0.17	0.13	0.11
Cleveland, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.62	0.59	0.58	0.57	0.57	0.43	0.32	0.27
Cleveland, OH	PM _{2.5} (2012 Annual)	Maintenance, Moderate	100	0	0.32	0.30	0.29	0.29	0.29	0.22	0.16	0.14
Cleveland-Akron-Lorain, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.65	0.62	0.60	0.59	0.59	0.45	0.33	0.28

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Cleveland-Akron-Lorain, OH	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.60	0.58	0.56	0.55	0.41	0.31	0.26
Cochise County; Paul Spur/Douglas Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Colorado Springs Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.12	0.12	0.11	0.11	0.08	0.06	0.05
Columbus, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.45	0.43	0.42	0.41	0.31	0.23	0.20
Columbus, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.42	0.40	0.39	0.38	0.29	0.21	0.18
Cook County; Lyons Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.02	0.02	0.02	0.01	0.01	0.01	0.01
Cook County; Southeast Chicago, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.03	0.03	0.02	0.02	0.02	0.01	0.01
Coshocton County; Franklin Township, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coso Junction, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cuyahoga County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.20	0.19	0.19	0.18	0.14	0.10	0.09
Cuyahoga County, OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.25	0.24	0.24	0.23	0.17	0.13	0.11
Dallas-Fort Worth, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	1.70	1.63	1.59	1.56	1.17	0.87	0.74
Dallas-Fort Worth, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.68	1.61	1.57	1.54	1.16	0.86	0.73
Delaware County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.08	0.08	0.08	0.08	0.06	0.04	0.04
Denver Metro/North Front Range, CO	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.76	0.73	0.71	0.70	0.52	0.39	0.33
Denver-Boulder Area, CO	CO (1971 8-hour)	Maintenance, Serious	100	0	0.59	0.57	0.55	0.54	0.41	0.30	0.26
Denver-Boulder-Greeley-Ft Collins-Loveland, CO	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.76	0.73	0.71	0.70	0.52	0.39	0.33
Detroit Area, MI	CO (1971 8-hour)	Maintenance, --	100	0	0.36	0.34	0.33	0.33	0.25	0.18	0.16
Detroit, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.02	0.98	0.95	0.94	0.70	0.52	0.45

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Detroit, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.05	0.05	0.05	0.05	0.04	0.03	0.02
Detroit-Ann Arbor, MI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	1.03	0.98	0.96	0.94	0.71	0.52	0.45
Doña Ana County (Sunland Park Area), NM	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Doña Ana County; Anthony, NM	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Door County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Douglas, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dukes County, MA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Duluth Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
East Chicago Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
East Helena Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
East Kern County Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
El Paso County, TX	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.11	0.11	0.10	0.10	0.08	0.06	0.05
El Paso, TX	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Eugene-Springfield Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	0.05	0.04	0.04	0.04	0.03	0.02	0.02
Evangeline Parish (Partial), LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fairbanks Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fairbanks, AK	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Flathead County; Columbia Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flathead County; Kalispell and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Flathead County; Whitefish and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fort Collins Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.01
Freehold Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Freestone and Anderson Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fremont County; Canon City Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Fresno Area, CA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	0.12	0.11	0.11	0.11	0.11	0.08	0.06	0.05
Grants Pass Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Great Falls Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Greater Connecticut, CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	0.34	0.33	0.32	0.31	0.31	0.24	0.17	0.15
Greater Connecticut, CT	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	0.34	0.33	0.32	0.31	0.31	0.24	0.18	0.15
Greeley Area, CO	CO (1971 8-hour)	Maintenance, --	100	0	0.07	0.07	0.07	0.07	0.06	0.05	0.04	0.03
Hancock and Brooke Counties (Part); The City of Weirton, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hancock County (Part) The City of Weirton, including Butler and Clay: Magisterial Districts, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Harrisburg-Lebanon-Carlisle-York, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.24	0.23	0.22	0.22	0.22	0.16	0.12	0.10
Hartford-New Britain-Middletown Area, CT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.24	0.22	0.22	0.22	0.22	0.16	0.12	0.10
Hayden, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hayden, AZ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Hayden, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hillsborough County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hillsborough-Polk County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Houston-Galveston-Brazoria, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	2.80	2.68	2.55	2.46	1.85	1.41	1.10	1.10
Houston-Galveston-Brazoria, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	2.76	2.64	2.51	2.42	1.82	1.39	1.08	1.08
Humphreys County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huntington, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Imperial County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02	0.02
Imperial County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02	0.02
Imperial County, CA	PM _{2.5} (2006 24-hour)	Nonattainment, Moderate	100	0	0.04	0.03	0.03	0.03	0.02	0.02	0.02	0.02
Imperial County, CA	PM _{2.5} (2012 Annual)	Nonattainment, Moderate	100	0	0.04	0.03	0.03	0.03	0.02	0.02	0.02	0.02
Imperial County; Imperial Valley Planning Area, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Serious	70	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02	0.02
Indian Wells, CA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Indiana, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01
Indianapolis Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Indianapolis, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.12	0.11	0.11	0.11	0.08	0.06	0.05	0.05
Inyo County; Owens Valley Planning Area, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Serious	70	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jackson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Jackson County; Medford-Ashland (including White City), OR	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.01

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Jamestown, NY	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.01
Jefferson County, KY	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jefferson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Jefferson County; (part) Steubenville & Mingo Junction, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Jefferson County; (part), OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Johnstown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.01
Josephine County; Grants Pass, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Juneau; Mendenhall Valley Area, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kern County (Eastern Kern), CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01
Kern County (Eastern Kern), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01
King County; Kent, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
King County; Seattle, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Klamath County; Klamath Falls, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Klamath Falls Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Klamath Falls, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Knoxville, TN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.18	0.17	0.17	0.17	0.17	0.12	0.09	0.08
Knoxville-Sevierville-La Follette, TN	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.22	0.21	0.20	0.20	0.20	0.15	0.11	0.10
La Porte County; (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Lake County (part); Lakeview, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Lake County, OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.05	0.05	0.05	0.05	0.04	0.03	0.02
Lake County: (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.08	0.07	0.07	0.07	0.05	0.04	0.03
Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.05	0.05	0.04	0.04	0.03	0.02	0.02
Lake County; Polson, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake County; Ronan, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake Tahoe Nevada Area, NV	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake Tahoe North Shore Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake Tahoe South Shore Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Lancaster, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.10	0.10	0.10	0.10	0.07	0.05	0.05
Lancaster, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.10	0.10	0.10	0.10	0.07	0.05	0.05
Lane County (part); Oakridge, OR	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lane County; Eugene/Springfield, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.05	0.04	0.04	0.04	0.03	0.02	0.02
Las Vegas Area, NV	CO (1971 8-hour)	Maintenance, Serious	100	0	0.43	0.41	0.40	0.39	0.30	0.22	0.19
Las Vegas, NV	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.43	0.41	0.40	0.39	0.30	0.22	0.19
LaSalle County; Oglesby, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Laurel Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lebanon County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.03	0.03	0.03	0.02	0.02	0.01	0.01
Lemont, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.03	0.03	0.03	0.03	0.02	0.02	0.01

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				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Liberty-Clairton, PA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lincoln County; Libby and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Logan, UT-ID	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.03	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Longmont Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01
Lorain County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Los Angeles, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	3.41	3.26	3.18	3.13	2.35	1.75	1.49	1.49
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	0.21	0.20	0.19	0.19	0.14	0.11	0.09	0.09
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	0.21	0.20	0.19	0.19	0.14	0.11	0.09	0.09
Los Angeles-South Coast Air Basin Area, CA	CO (1971 8-hour)	Maintenance, Serious	100	0	3.42	3.26	3.18	3.13	2.35	1.75	1.49	1.49
Los Angeles-South Coast Air Basin Area, CA	NO ₂ (1971 Annual)	Maintenance, --	100	0	3.41	3.26	3.18	3.13	2.35	1.75	1.49	1.49
Los Angeles-South Coast Air Basin, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	3.41	3.26	3.18	3.13	2.35	1.75	1.49	1.49
Los Angeles-South Coast Air Basin, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	3.41	3.26	3.18	3.13	2.35	1.75	1.49	1.49
Los Angeles-South Coast Air Basin, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	3.41	3.26	3.18	3.13	2.35	1.75	1.49	1.49
Louisville, KY-IN	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.27	0.26	0.26	0.25	0.19	0.14	0.12	0.12
Lowell Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01
Lucas County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.08	0.08	0.07	0.07	0.06	0.04	0.03	0.03
Madison County; Granite City Township and Nameoki Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Manchester Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Manitowoc County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Maricopa and Pinal Counties; Phoenix Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	0.85	0.81	0.79	0.78	0.59	0.44	0.37	
Marion County: Lawrence, Washington, and Warrant Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.11	0.10	0.10	0.10	0.07	0.06	0.05	
Mariposa County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	
Mariposa County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	
Marshall, WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Medford Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01	
Memphis Area, TN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.21	0.20	0.20	0.19	0.15	0.11	0.09	
Memphis, TN-MS-AR	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.28	0.26	0.26	0.25	0.19	0.14	0.12	
Miami, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Miami, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Miami, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Milwaukee-Racine, WI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.27	0.26	0.25	0.25	0.19	0.14	0.12	
Minneapolis-St. Paul Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.70	0.67	0.66	0.65	0.49	0.36	0.31	
Missoula Area, MT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01	
Missoula county; Missoula and Vicinity, MT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01	
Modesto Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02	

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Mohave County (part); Bullhead City, AZ	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Mono County; Mammoth Lake Planning Area, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Mono County; Mono Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morenci, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morgan County, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Morongo Band of Mission Indians	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morongo Band of Mission Indians, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morristown Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Muscatine County; (part), IA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Muscatine, IA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Muskegon County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.04	0.04	0.03	0.03	0.03	0.03	0.02	0.02
Muskingum River, OH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nashua Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Nassau County, FL	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nevada County (Western part), CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.03	0.03	0.02	0.02	0.02	0.02	0.01	0.01
Nevada County (Western part), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	0.03	0.03	0.02	0.02	0.02	0.02	0.01	0.01
New Haven County, CT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
New Haven-Meriden-Waterbury Area, CT	CO (1971 8-hour)	Maintenance, --	100	0	0.18	0.17	0.17	0.17	0.17	0.12	0.09	0.08
New Manchester-Grant Magisterial District in Hancock County, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
New York County, NY	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.08	0.07	0.07	0.07	0.07	0.05	0.04	0.03
New York, NY-NJ-CT	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	2.90	2.77	2.70	2.66	2.00	1.48	1.26	
New York-N. New Jersey-Long Island Area, NY-NJ-CT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	1.59	1.52	1.48	1.46	1.10	0.82	0.69	
New York-N. New Jersey-Long Island, NY-NJ-CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	2.84	2.72	2.65	2.60	1.96	1.45	1.24	
New York-Northern New Jersey-Long Island, NY-NJ-CT	Ozone (2015 8-hour)	Nonattainment, Moderate	50	0	2.84	2.71	2.65	2.60	1.96	1.45	1.24	
NJ Portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00	
Nogales, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00	
Northern Milwaukee/Ozaukee Shoreline, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	
Northern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.34	0.32	0.31	0.31	0.23	0.17	0.15	
Oakridge, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Ogden Area, UT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	
Ogden Area, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	
Olmsted County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00	
Olmsted; City of Rochester, MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01	
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Pekin, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Penns Grove Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Peoria County: Hollis Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Peoria County: Peoria, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01
Perth Amboy Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Philadelphia-Camden County Area, PA-NJ	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.22	0.21	0.20	0.20	0.15	0.11	0.10	0.10
Philadelphia-Wilmington, PA-NJ-DE	PM _{2.5} (2006 24-hour)	Maintenance, Moderate for PA and DE; Subject to Former Subpart 1 for NJ	100	0	1.00	0.96	0.93	0.92	0.69	0.51	0.44	0.44
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	1.33	1.27	1.24	1.22	0.92	0.68	0.58	0.58
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	1.33	1.27	1.24	1.22	0.92	0.68	0.58	0.58
Phoenix Area, AZ	CO (1971 8-hour)	Maintenance, Serious	100	0	0.82	0.79	0.77	0.75	0.57	0.42	0.36	0.36
Phoenix-Mesa, AZ	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.86	0.82	0.80	0.78	0.59	0.44	0.37	0.37
Phoenix-Mesa, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.88	0.84	0.82	0.80	0.60	0.45	0.38	0.38
Pierce County; Tacoma, WA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pima County; Ajo Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pima County; Rillito Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Pinal and Gila Counties; Payson, AZ	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pinal County (part); West Pinal, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.06	0.06	0.06	0.06	0.04	0.03	0.03	0.03
Pitkin County; Aspen, CO	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Pittsburgh Area, PA	CO (1971 8-hour)	Maintenance, --	100	0	0.05	0.05	0.05	0.05	0.04	0.03	0.02	0.02

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				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Pittsburgh-Beaver Valley, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.45	0.43	0.42	0.41	0.31	0.23	0.20
Pittsburgh-Beaver Valley, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.41	0.39	0.38	0.38	0.28	0.21	0.18
Plumas County, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Polk County, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Portland Area: Portland Metro Service District Boundary, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.27	0.25	0.25	0.24	0.18	0.14	0.12
Power-Bannock Counties; Fort Hall Indian Reservation, ID	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Power-Bannock Counties; Portneuf Valley Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.02	0.02	0.01	0.01	0.01	0.01	0.01
Provo Area, UT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Provo, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	0.11	0.10	0.10	0.10	0.07	0.05	0.05
Prowers County; Lamar, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Raleigh-Durham Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.39	0.37	0.36	0.36	0.27	0.20	0.17
Ramsey County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Reading, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.08	0.08	0.08	0.08	0.06	0.04	0.04
Reno Area, NV	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.07	0.06	0.06	0.06	0.05	0.03	0.03
Rhineland, WI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Riverside County (Coachella Valley), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	0.10	0.10	0.10	0.09	0.07	0.05	0.04
Riverside County (Coachella Valley), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	0.10	0.10	0.10	0.09	0.07	0.05	0.04
Riverside County; Coachella Valley Planning Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	0.12	0.11	0.11	0.11	0.08	0.06	0.05

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Riverside, Los Angeles, Orange, and San Bernardino Counties; South Coast Air Basin, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	3.40	3.25	3.17	3.11	2.34	1.74	1.48
Rosebud County; Lame Deer, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Routt County (part); Steamboat Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Rusk and Panola Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sacramento Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.31	0.29	0.29	0.28	0.21	0.16	0.13
Sacramento County, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.28	0.27	0.27	0.26	0.20	0.15	0.12
Sacramento Metro, CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	0.50	0.48	0.47	0.46	0.34	0.26	0.22
Sacramento Metro, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	0.50	0.48	0.47	0.46	0.34	0.26	0.22
Sacramento, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.49	0.47	0.46	0.45	0.34	0.25	0.21
Salem Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	0.05	0.05	0.05	0.04	0.03	0.02	0.02
Salt Lake City Area, UT	CO (1971 8-hour)	Maintenance, --	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02
Salt Lake City, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	0.35	0.34	0.33	0.32	0.24	0.18	0.15
Salt Lake County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.22	0.21	0.20	0.20	0.15	0.11	0.09
Salt Lake County, UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.22	0.21	0.20	0.20	0.15	0.11	0.09
San Antonio, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.39	0.37	0.36	0.36	0.27	0.20	0.17
San Bernardino County (part); excluding Searles Valley Planning Area and South Coast Air Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.14	0.13	0.13	0.13	0.10	0.07	0.06
San Diego Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.72	0.69	0.67	0.66	0.50	0.37	0.31

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
San Diego County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.72	0.69	0.67	0.66	0.50	0.37	0.31
San Diego County, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	0.72	0.69	0.67	0.66	0.50	0.37	0.31
San Francisco Bay Area, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	1.44	1.37	1.34	1.32	0.99	0.74	0.63
San Francisco Bay Area, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.44	1.37	1.34	1.32	0.99	0.73	0.63
San Francisco Bay Area, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	1.45	1.39	1.35	1.33	1.00	0.74	0.63
San Francisco-Oakland-San Jose Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	1.33	1.27	1.24	1.21	0.91	0.68	0.58
San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.85	0.81	0.79	0.77	0.58	0.43	0.37
San Joaquin Valley, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	0.85	0.81	0.79	0.77	0.58	0.43	0.37
San Joaquin Valley, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	0.85	0.81	0.79	0.77	0.58	0.43	0.37
San Joaquin Valley, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	0.84	0.81	0.79	0.77	0.58	0.43	0.37
San Joaquin Valley, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.84	0.81	0.79	0.77	0.58	0.43	0.37
San Luis Obispo (Eastern part), CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
San Luis Obispo (Eastern San Luis Obispo), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
San Manuel, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
San Miguel County; Telluride, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sanders County (part); Thompson Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Santa Cruz County; Nogales Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Seaford, DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.05	0.05	0.05	0.05	0.04	0.03	0.02

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Seattle-Tacoma Area, WA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	0.62	0.59	0.57	0.56	0.43	0.32	0.27
Seattle-Tacoma, WA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.10	0.10	0.09	0.09	0.07	0.05	0.04
Sheboygan County, WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01
Sheboygan County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Sheridan County; City of Sheridan, WY	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Shoshone County (part); excluding Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Shoshone County; City of Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Silver Bow County; Butte, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Somerville Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Southern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.11	0.10	0.10	0.10	0.07	0.05	0.05
Southwest Indiana, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Spokane Area, WA	CO (1971 8-hour)	Maintenance, Serious	100	0	0.06	0.06	0.06	0.06	0.04	0.03	0.03
Spokane County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.06	0.06	0.06	0.06	0.04	0.03	0.03
Springfield Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.03	0.03	0.03	0.03	0.02	0.01	0.01
St. Bernard Parish, LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
St. Clair, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
St. Louis Area, MO	CO (1971 8-hour)	Maintenance, --	100	0	0.15	0.14	0.14	0.14	0.10	0.08	0.07
St. Louis, MO-IL	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.45	0.43	0.42	0.41	0.31	0.23	0.20
St. Louis-St. Charles-Farmington, MO-IL	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.52	0.49	0.48	0.47	0.36	0.26	0.23

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Steubenville, OH-WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Steubenville-Weirton, OH-WV	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01
Stockton Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.07	0.07	0.07	0.07	0.07	0.05	0.04	0.03
Sullivan County, TN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Sutter Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Syracuse Area; Onondaga County, NY	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.10	0.09	0.09	0.09	0.09	0.07	0.05	0.04
Tazewell County: Groveland Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Terre Haute, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Thurston County; Cities of Olympia, Tumwater, and Lacey, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Titus County, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Toms River Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tooele County (part), UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trenton Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Trona, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tucson Area, AZ	CO (1971 8-hour)	Maintenance, --	100	0	0.20	0.19	0.19	0.19	0.19	0.14	0.10	0.09
Tuolumne County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Tuscan Buttes, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tuscan Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Uinta Basin, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Union County; LaGrande, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Upper Green River Basin Area, WY	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Utah County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.11	0.10	0.10	0.10	0.07	0.05	0.05	0.05
Vancouver Area: Clark County (part), WA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.06	0.06	0.06	0.06	0.04	0.03	0.03	0.03
Ventura County, CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	0.18	0.18	0.17	0.17	0.13	0.09	0.09	0.08
Ventura County, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	0.18	0.18	0.17	0.17	0.13	0.09	0.09	0.08
Vermillion County; Part of Clinton Township, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vigo County, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.01
Walla Walla County; Wallula, WA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Waltham Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Warren County: Conewago Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Warren, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Washington Area, DC-MD-VA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.17	0.16	0.15	0.15	0.11	0.08	0.08	0.07
Washington, DC-MD-VA	Ozone (2008 8-hour)	Nonattainment (DC) Maintenance (MD, VA), Marginal	50	0	1.17	1.12	1.09	1.07	0.81	0.60	0.60	0.51
Washington, DC-MD-VA	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	1.17	1.12	1.09	1.07	0.81	0.60	0.60	0.51
Washoe County; Reno Planning Area, NV	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.07	0.07	0.06	0.06	0.05	0.04	0.04	0.03

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Wayne County; (part), MI	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01
West Central Pinal County, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
West Silver Valley, ID	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Williamson County, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01
Winston-Salem Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.09	0.08	0.08	0.08	0.06	0.04	0.04	0.04
Worcester Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02	0.02
Yakima Area, WA	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
Yakima County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01
Yuba City-Marysville, CA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02	0.02
Yuma County; Yuma Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.01
Yuma, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Table A-28. Changes in Emissions from U.S. Passenger Cars and Light Trucks by Nonattainment or Maintenance Area and Alternative, Direct and Indirect Impacts--Diesel Particulate Matter (DPM), 2025

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Ada County; Boise, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.10	0.10	0.09	0.09	0.06	0.05	0.05
Adams, Denver, and Boulder Counties; Denver Metropolitan Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	9.31	8.99	8.22	8.08	5.69	4.54	4.20
Ajo, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Albuquerque Area, NM	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.21	0.20	0.18	0.18	0.13	0.10	0.09
Allegan County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.20	0.19	0.18	0.18	0.12	0.10	0.09
Allegheny County Air Basin: Hazelwood Monitor, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.25	0.24	0.22	0.22	0.15	0.12	0.11
Allegheny County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	1.52	1.46	1.34	1.32	0.93	0.74	0.68
Allegheny County; The Area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.23	0.23	0.21	0.20	0.14	0.11	0.11
Allegheny, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.44	0.43	0.39	0.38	0.27	0.22	0.20
Allentown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.23	0.22	0.20	0.20	0.14	0.11	0.10
Allentown-Bethlehem-Easton, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.38	0.37	0.34	0.33	0.23	0.19	0.17
Alton Township, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	5.03	4.86	4.44	4.37	3.08	2.45	2.27
Amador County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.61	0.59	0.54	0.53	0.37	0.30	0.27
Anchorage Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Anchorage; Eagle River, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Anne Arundel County and Baltimore County, MD	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	1.05	1.01	0.92	0.91	0.64	0.51	0.47

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
AQCR 012: Portions of Grant County, NM	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AQCR 109-Millinocket, ME	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.11	0.10	0.09	0.09	0.06	0.05	0.05	0.05
AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington Counties (Minneapolis-St. Paul), MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	6.85	6.61	6.05	5.95	4.19	3.34	3.09	3.09
AQCR 237: Brown County: Green Bay Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.04	0.04	0.03	0.03	0.02	0.02	0.02	0.02
AQCR 238: Marathon County: Rothschild Subcity Area, Rib Mountain, Weston, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01
AQCR 238: Oneida County: Rhinelander Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AQCR 239: Milwaukee County: Milwaukee Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.60	0.58	0.53	0.52	0.37	0.29	0.27	0.27
AQCR 240: Dane County: Madison Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.42	0.41	0.37	0.37	0.26	0.21	0.19	0.19
Archuleta County; Pagosa Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.74	0.71	0.65	0.64	0.45	0.36	0.33	0.33
Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.37	0.36	0.33	0.32	0.23	0.18	0.17	0.17
Aroostock County; City of Presque Isle, ME	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01
Atlanta, GA	Ozone (2008 8-hour)	Maintenance, Moderate	100	0	0.11	0.11	0.10	0.10	0.07	0.05	0.05	0.05
Atlanta, GA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.11	0.11	0.10	0.10	0.07	0.05	0.05	0.05
Atlantic City Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bakersfield Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	1.61	1.55	1.42	1.39	0.98	0.78	0.73	0.73

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Baltimore Area, MD	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.19	0.18	0.17	0.17	0.12	0.09	0.09
Baltimore, MD	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	2.27	2.19	2.01	1.97	1.39	1.11	1.03
Baltimore, MD	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	2.27	2.19	2.01	1.97	1.39	1.11	1.03
Baton Rouge, LA	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	55.53	53.62	49.02	48.20	33.95	27.09	25.07
Beaver, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benton County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Berrien County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.27	0.26	0.24	0.24	0.17	0.13	0.12
Billings Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	4.87	4.70	4.30	4.23	2.98	2.38	2.20
Billings, MT	SO ₂ (2010 1-hour)	Maintenance, --	100	0	4.87	4.70	4.30	4.23	2.98	2.38	2.20
Birmingham, AL	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	2.07	1.99	1.82	1.79	1.26	1.01	0.93
Boise-Northern Ada County Area, ID	CO (1971 8-hour)	Maintenance, --	100	0	0.10	0.10	0.09	0.09	0.06	0.05	0.05
Bonner County; The Sandpoint Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Boston Area, MA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	1.00	0.97	0.88	0.87	0.61	0.49	0.45
Boyd County (part), KY	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	4.88	4.71	4.30	4.23	2.98	2.38	2.20
Brooke; Follansbee Area, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Burlington Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02
Butte County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.16	0.15	0.14	0.14	0.10	0.08	0.07
Calaveras County, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.58	0.56	0.52	0.51	0.36	0.29	0.26
Calaveras County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.58	0.56	0.52	0.51	0.36	0.29	0.26

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Campbell-Clermont Counties, KY-OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.07	0.07	0.06	0.06	0.04	0.03	0.03
Canton-Massillon, OH	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	2.54	2.46	2.25	2.21	1.55	1.24	1.15
Central New Hampshire, NH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Central Steptoe Valley, NV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Charleston, WV	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.62	0.60	0.55	0.54	0.38	0.30	0.28
Charlotte Area, NC	CO (1971 8-hour)	Maintenance, --	100	0	0.06	0.06	0.05	0.05	0.04	0.03	0.03
Charlotte-Rock Hill, NC-SC	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.35	0.34	0.31	0.30	0.21	0.17	0.16
Chicago, IL-IN-WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	43.57	42.07	38.46	37.82	26.64	21.25	19.67
Chicago-Naperville, IL-IN-WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	43.66	42.16	38.54	37.90	26.69	21.30	19.71
Chico (Butte County), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.16	0.15	0.14	0.14	0.10	0.08	0.07
Chico Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Chico, CA	PM _{2.5} (2006 24-hour)	Maintenance, Moderate	100	0	0.06	0.06	0.05	0.05	0.04	0.03	0.03
Cincinnati, OH-KY	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.91	0.88	0.81	0.79	0.56	0.44	0.41
Cincinnati, OH-KY-IN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	1.00	0.96	0.88	0.87	0.61	0.49	0.45
Clark County; Las Vegas Planning Area, NV	PM ₁₀ (1987 24-hour)	Maintenance, Serious	100	0	0.81	0.78	0.71	0.70	0.49	0.39	0.36
Cleveland Area, OH	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.63	0.61	0.56	0.55	0.39	0.31	0.29
Cleveland, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	4.03	3.89	3.56	3.50	2.46	1.97	1.82
Cleveland, OH	PM _{2.5} (2012 Annual)	Maintenance, Moderate	100	0	1.61	1.56	1.42	1.40	0.99	0.79	0.73
Cleveland-Akron-Lorain, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	4.96	4.79	4.38	4.31	3.03	2.42	2.24

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Cleveland-Akron-Lorain, OH	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	4.03	3.89	3.56	3.50	2.46	1.97	1.82
Cochise County; Paul Spur/Douglas Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Colorado Springs Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.67	0.65	0.59	0.58	0.41	0.33	0.30
Columbus, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.39	0.37	0.34	0.34	0.24	0.19	0.17
Columbus, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.15	0.15	0.14	0.13	0.09	0.07	0.07
Cook County; Lyons Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.34	1.29	1.18	1.16	0.82	0.65	0.60
Cook County; Southeast Chicago, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	33.30	32.16	29.40	28.90	20.36	16.25	15.04
Coshocton County; Franklin Township, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coso Junction, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	2.22	2.15	1.96	1.93	1.36	1.08	1.00
Cuyahoga County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Cuyahoga County, OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.63	0.61	0.56	0.55	0.39	0.31	0.29
Dallas-Fort Worth, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	3.77	3.64	3.33	3.27	2.31	1.84	1.70
Dallas-Fort Worth, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	3.77	3.64	3.33	3.27	2.31	1.84	1.70
Delaware County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	19.76	19.08	17.45	17.15	12.08	9.64	8.92
Denver Metro/North Front Range, CO	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	11.15	10.77	9.85	9.68	6.82	5.44	5.04
Denver-Boulder Area, CO	CO (1971 8-hour)	Maintenance, Serious	100	0	10.01	9.67	8.84	8.69	6.12	4.88	4.52
Denver-Boulder-Greeley-Ft Collins-Loveland, CO	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	11.15	10.77	9.85	9.68	6.82	5.44	5.04
Detroit Area, MI	CO (1971 8-hour)	Maintenance, --	100	0	1.97	1.91	1.74	1.71	1.21	0.96	0.89
Detroit, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	6.92	6.68	6.10	6.00	4.23	3.37	3.12

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Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
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Detroit, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	1.36	1.31	1.20	1.18	0.83	0.66	0.61
Detroit-Ann Arbor, MI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	6.92	6.68	6.10	6.00	4.23	3.37	3.12
Doña Ana County (Sunland Park Area), NM	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.96	1.90	1.73	1.70	1.20	0.96	0.89
Doña Ana County; Anthony, NM	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	1.96	1.90	1.73	1.70	1.20	0.96	0.89
Door County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.06	0.05	0.05	0.05	0.03	0.03	0.03
Douglas, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dukes County, MA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Duluth Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	1.87	1.80	1.65	1.62	1.14	0.91	0.84
East Chicago Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	32.07	30.96	28.31	27.83	19.60	15.64	14.48
East Helena Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
East Kern County Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	1.98	1.91	1.74	1.72	1.21	0.96	0.89
El Paso County, TX	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	1.97	1.90	1.74	1.71	1.21	0.96	0.89
El Paso, TX	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	1.96	1.90	1.73	1.70	1.20	0.96	0.89
Eugene-Springfield Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Evangeline Parish (Partial), LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Fairbanks Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	0.10	0.10	0.09	0.09	0.06	0.05	0.05
Fairbanks, AK	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	0.10	0.10	0.09	0.09	0.06	0.05	0.05
Flathead County; Columbia Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flathead County; Kalispell and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Flathead County; Whitefish and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fort Collins Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.14	0.13	0.12	0.12	0.08	0.07	0.06	0.06
Freehold Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Freestone and Anderson Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.11	0.10	0.09	0.09	0.07	0.05	0.05	0.05
Fremont County; Canon City Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.67	0.64	0.59	0.58	0.41	0.33	0.30	0.30
Fresno Area, CA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	0.53	0.51	0.47	0.46	0.32	0.26	0.24	0.24
Grants Pass Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Great Falls Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	0.58	0.56	0.51	0.50	0.35	0.28	0.26	0.26
Greater Connecticut, CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	0.26	0.25	0.23	0.22	0.16	0.13	0.12	0.12
Greater Connecticut, CT	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	0.26	0.25	0.23	0.22	0.16	0.13	0.12	0.12
Greeley Area, CO	CO (1971 8-hour)	Maintenance, --	100	0	7.43	7.17	6.56	6.45	4.54	3.62	3.35	3.35
Hancock and Brooke Counties (Part); The City of Weirton, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02	0.02
Hancock County (Part) The City of Weirton, including Butler and Clay: Magisterial Districts, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.23	0.22	0.20	0.20	0.14	0.11	0.10	0.10
Harrisburg-Lebanon-Carlisle-York, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.76	0.73	0.67	0.66	0.46	0.37	0.34	0.34
Hartford-New Britain-Middletown Area, CT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.07	0.06	0.06	0.06	0.04	0.03	0.03	0.03
Hayden, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.11	0.11	0.10	0.10	0.07	0.05	0.05	0.05
Hayden, AZ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.11	0.11	0.10	0.10	0.07	0.05	0.05	0.05

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Hayden, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.11	0.11	0.10	0.10	0.07	0.05	0.05
Hillsborough County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.57	0.55	0.51	0.50	0.35	0.28	0.26
Hillsborough-Polk County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.59	0.57	0.52	0.51	0.36	0.29	0.26
Houston-Galveston-Brazoria, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	122.02	117.82	107.71	105.91	74.59	59.52	55.09
Houston-Galveston-Brazoria, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	121.86	117.67	107.58	105.77	74.50	59.45	55.02
Humphreys County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huntington, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Imperial County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	2.02	1.95	1.78	1.75	1.23	0.98	0.91
Imperial County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	2.02	1.95	1.78	1.75	1.23	0.98	0.91
Imperial County, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.67	0.65	0.59	0.58	0.41	0.33	0.30
Imperial County, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.67	0.65	0.59	0.58	0.41	0.33	0.30
Imperial County; Imperial Valley Planning Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	2.02	1.95	1.78	1.75	1.23	0.98	0.91
Indian Wells, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	2.17	2.10	1.92	1.88	1.33	1.06	0.98
Indiana, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.92	0.88	0.81	0.79	0.56	0.45	0.41
Indianapolis Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Indianapolis, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Inyo County; Owens Valley Planning Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	0.86	0.83	0.76	0.75	0.52	0.42	0.39
Jackson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.76	0.73	0.67	0.66	0.46	0.37	0.34
Jackson County; Medford-Ashland (including White City), OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Jamestown, NY	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	2.12	2.05	1.87	1.84	1.30	1.04	0.96
Jefferson County, KY	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.06	0.05	0.05	0.05	0.03	0.03	0.03
Jefferson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.24	0.23	0.21	0.21	0.15	0.12	0.11
Jefferson County; (part) Steubenville & Mingo Junction, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02
Jefferson County; (part), OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Johnstown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.46	0.44	0.40	0.40	0.28	0.22	0.21
Josephine County; Grants Pass, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Juneau; Mendenhall Valley Area, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kern County (Eastern Kern), CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	18.13	17.51	16.01	15.74	11.09	8.85	8.19
Kern County (Eastern Kern), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	18.13	17.51	16.01	15.74	11.09	8.85	8.19
King County; Kent, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
King County; Seattle, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Klamath County; Klamath Falls, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Klamath Falls Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Klamath Falls, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Knoxville, TN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.12	0.12	0.11	0.10	0.07	0.06	0.05
Knoxville-Sevierville-La Follette, TN	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.51	0.49	0.45	0.44	0.31	0.25	0.23
La Porte County: (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	1.55	1.50	1.37	1.35	0.95	0.76	0.70
Lake County (part); Lakeview, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Lake County, OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.00	0.00	0.00	0.00
Lake County: (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	34.73	33.53	30.66	30.14	21.23	16.94	15.68
Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	34.72	33.53	30.65	30.14	21.23	16.94	15.68
Lake County; Polson, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake County; Ronan, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake Tahoe Nevada Area, NV	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake Tahoe North Shore Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02
Lake Tahoe South Shore Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.03	0.03	0.03	0.03	0.02	0.01	0.01
Lancaster, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.15	0.15	0.14	0.13	0.09	0.07	0.07
Lancaster, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.15	0.15	0.14	0.13	0.09	0.07	0.07
Lane County (part); Oakridge, OR	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lane County; Eugene/Springfield, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Las Vegas Area, NV	CO (1971 8-hour)	Maintenance, Serious	100	0	0.81	0.78	0.71	0.70	0.49	0.39	0.36
Las Vegas, NV	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.81	0.78	0.71	0.70	0.49	0.39	0.36
LaSalle County; Oglesby, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.18	0.18	0.16	0.16	0.11	0.09	0.08
Laurel Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	4.87	4.70	4.30	4.23	2.98	2.38	2.20
Lebanon County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.03	0.03	0.03	0.03	0.02	0.01	0.01
Lemont, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	8.58	8.29	7.58	7.45	5.25	4.19	3.88

Notes:

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Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
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Liberty-Clairton, PA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.23	0.23	0.21	0.20	0.14	0.11	0.11
Lincoln County; Libby and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Logan, UT-ID	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Longmont Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	2.35	2.27	2.08	2.04	1.44	1.15	1.06
Lorain County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Los Angeles, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	54.97	53.08	48.52	47.71	33.60	26.81	24.82
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	19.89	19.21	17.56	17.27	12.16	9.70	8.98
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	19.89	19.21	17.56	17.27	12.16	9.70	8.98
Los Angeles-South Coast Air Basin Area, CA	CO (1971 8-hour)	Maintenance, Serious	100	0	54.92	53.03	48.48	47.67	33.58	26.79	24.80
Los Angeles-South Coast Air Basin Area, CA	NO ₂ (1971 Annual)	Maintenance, --	100	0	54.93	53.04	48.49	47.67	33.58	26.79	24.80
Los Angeles-South Coast Air Basin, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	54.99	53.10	48.54	47.73	33.62	26.83	24.83
Los Angeles-South Coast Air Basin, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	54.96	53.07	48.52	47.70	33.60	26.81	24.82
Los Angeles-South Coast Air Basin, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	54.97	53.08	48.52	47.71	33.60	26.81	24.82
Louisville, KY-IN	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.20	0.20	0.18	0.18	0.12	0.10	0.09
Lowell Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.06	0.06	0.05	0.05	0.03	0.03	0.03
Lucas County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	4.33	4.18	3.82	3.75	2.64	2.11	1.95
Madison County; Granite City Township and Nameoki Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	5.11	4.93	4.51	4.44	3.12	2.49	2.31
Manchester Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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Manitowoc County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.09	0.09	0.08	0.08	0.06	0.05	0.04
Maricopa and Pinal Counties; Phoenix Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	0.18	0.17	0.16	0.16	0.11	0.09	0.08
Marion County: Lawrence, Washington, and Warrant Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.03	0.03	0.02	0.02	0.02	0.01	0.01
Mariposa County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Mariposa County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Marshall, WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	4.09	3.95	3.61	3.55	2.50	1.99	1.85
Medford Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Memphis Area, TN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	2.17	2.10	1.92	1.89	1.33	1.06	0.98
Memphis, TN-MS-AR	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	2.18	2.11	1.92	1.89	1.33	1.06	0.98
Miami, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.11	0.11	0.10	0.10	0.07	0.05	0.05
Miami, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Miami, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.11	0.11	0.10	0.10	0.07	0.05	0.05
Milwaukee-Racine, WI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.67	0.65	0.59	0.58	0.41	0.33	0.30
Minneapolis-St. Paul Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	6.86	6.62	6.06	5.95	4.19	3.35	3.10
Missoula Area, MT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.46	0.44	0.40	0.40	0.28	0.22	0.21
Missoula county; Missoula and Vicinity, MT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.46	0.44	0.40	0.40	0.28	0.22	0.21
Modesto Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.15	0.14	0.13	0.13	0.09	0.07	0.07

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Mohave County (part); Bullhead City, AZ	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.26	0.25	0.23	0.23	0.16	0.13	0.12
Mono County; Mammoth Lake Planning Area, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.18	0.18	0.16	0.16	0.11	0.09	0.08
Mono County; Mono Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.18	0.18	0.16	0.16	0.11	0.09	0.08
Morenci, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morgan County, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morongo Band of Mission Indians	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	0.71	0.68	0.62	0.61	0.43	0.34	0.32
Morongo Band of Mission Indians, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	0.71	0.68	0.62	0.61	0.43	0.34	0.32
Morristown Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.42	0.41	0.37	0.37	0.26	0.21	0.19
Muscatine County; (part), IA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Muscatine, IA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Muskegon County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.06	0.06	0.05	0.05	0.04	0.03	0.03
Muskingum River, OH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nashua Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	0.06	0.05	0.05	0.05	0.03	0.03	0.03
Nassau County, FL	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nevada County (Western part), CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.07	0.06	0.06	0.06	0.04	0.03	0.03
Nevada County (Western part), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	0.07	0.06	0.06	0.06	0.04	0.03	0.03
New Haven County, CT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
New Haven-Meriden-Waterbury Area, CT	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
New Manchester-Grant Magisterial District in Hancock County, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.04	0.04	0.03	0.03	0.02	0.02	0.02

Notes:

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NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
New York County, NY	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.22	0.21	0.19	0.19	0.13	0.11	0.10
New York, NY-NJ-CT	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	5.59	5.40	4.94	4.85	3.42	2.73	2.52
New York-N. New Jersey-Long Island Area, NY-NJ-CT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	5.24	5.06	4.62	4.55	3.20	2.55	2.36
New York-N. New Jersey-Long Island, NY-NJ-CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	5.66	5.47	5.00	4.91	3.46	2.76	2.56
New York-Northern New Jersey-Long Island, NY-NJ-CT	Ozone (2015 8-hour)	Nonattainment, Moderate	50	0	5.66	5.47	5.00	4.92	3.46	2.76	2.56
NJ Portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.42	0.41	0.37	0.37	0.26	0.21	0.19
Nogales, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Northern Milwaukee/Ozaukee Shoreline, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.45	0.44	0.40	0.39	0.28	0.22	0.20
Northern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	3.61	3.48	3.18	3.13	2.20	1.76	1.63
Oakridge, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ogden Area, UT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ogden Area, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Olmsted County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.14	0.13	0.12	0.12	0.08	0.07	0.06
Olmsted; City of Rochester, MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.14	0.13	0.12	0.12	0.08	0.07	0.06
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	1.34	1.30	1.19	1.17	0.82	0.66	0.61
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.34	1.30	1.19	1.17	0.82	0.66	0.61
Pekin, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.07	0.07	0.06	0.06	0.04	0.03	0.03

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Penns Grove Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Peoria County: Hollis Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.07	0.07	0.06	0.06	0.06	0.04	0.03	0.03
Peoria County: Peoria, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.09	0.08	0.08	0.07	0.07	0.05	0.04	0.04
Perth Amboy Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.54	0.52	0.47	0.47	0.47	0.33	0.26	0.24
Philadelphia-Camden County Area, PA-NJ	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	16.87	16.29	14.89	14.64	14.64	10.31	8.23	7.62
Philadelphia-Wilmington, PA-NJ-DE	PM _{2.5} (2006 24-hour)	Maintenance, Moderate for PA and DE; Subject to Former Subpart 1 for NJ	100	0	21.49	20.75	18.97	18.65	18.65	13.13	10.48	9.70
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	22.11	21.35	19.52	19.19	19.19	13.52	10.79	9.98
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	22.11	21.35	19.52	19.19	19.19	13.52	10.79	9.98
Phoenix Area, AZ	CO (1971 8-hour)	Maintenance, Serious	100	0	0.18	0.17	0.16	0.16	0.15	0.11	0.09	0.08
Phoenix-Mesa, AZ	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.18	0.17	0.16	0.16	0.16	0.11	0.09	0.08
Phoenix-Mesa, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.18	0.17	0.16	0.16	0.16	0.11	0.09	0.08
Pierce County; Tacoma, WA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.41	0.39	0.36	0.36	0.36	0.25	0.20	0.18
Pima County; Ajo Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pima County; Rillito Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.11	0.11	0.10	0.10	0.10	0.07	0.05	0.05
Pinal and Gila Counties; Payson, AZ	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pinal County (part); West Pinal, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.11	0.11	0.10	0.10	0.10	0.07	0.05	0.05
Pitkin County; Aspen, CO	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	2.36	2.28	2.08	2.08	2.05	1.44	1.15	1.07
Pittsburgh Area, PA	CO (1971 8-hour)	Maintenance, --	100	0	0.30	0.29	0.26	0.26	0.26	0.18	0.15	0.13

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Pittsburgh-Beaver Valley, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	7.56	7.30	6.67	6.56	4.62	3.69	3.41
Pittsburgh-Beaver Valley, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	7.17	6.92	6.33	6.22	4.38	3.50	3.24
Plumas County, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.10	0.10	0.09	0.09	0.06	0.05	0.04
Polk County, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Portland Area: Portland Metro Service District Boundary, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.06	0.05	0.05	0.05	0.03	0.03	0.03
Power-Bannock Counties; Fort Hall Indian Reservation, ID	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Power-Bannock Counties; Portneuf Valley Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Provo Area, UT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	0.12	0.12	0.11	0.11	0.08	0.06	0.06
Provo, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	2.91	2.81	2.57	2.53	1.78	1.42	1.31
Prowers County; Lamar, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Raleigh-Durham Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	2.07	1.99	1.82	1.79	1.26	1.01	0.93
Ramsey County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	5.54	5.35	4.89	4.81	3.39	2.70	2.50
Reading, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.14	0.14	0.12	0.12	0.09	0.07	0.06
Reno Area, NV	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rhineland, WI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Riverside County (Coachella Valley), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	2.26	2.18	2.00	1.96	1.38	1.10	1.02
Riverside County (Coachella Valley), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	2.26	2.18	2.00	1.96	1.38	1.10	1.02
Riverside County; Coachella Valley Planning Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	2.26	2.18	2.00	1.96	1.38	1.10	1.02

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Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Riverside, Los Angeles, Orange, and San Bernardino Counties; South Coast Air Basin, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	54.99	53.10	48.54	47.73	33.62	26.82	24.83
Rosebud County; Lame Deer, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Routt County (part); Steamboat Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	6.97	6.73	6.15	6.05	4.26	3.40	3.15
Rusk and Panola Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.18	0.18	0.16	0.16	0.11	0.09	0.08
Sacramento Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	2.94	2.84	2.60	2.55	1.80	1.44	1.33
Sacramento County, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	26.70	25.78	23.57	23.17	16.32	13.02	12.05
Sacramento Metro, CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	27.02	26.09	23.85	23.45	16.52	13.18	12.20
Sacramento Metro, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	27.02	26.09	23.85	23.45	16.52	13.18	12.20
Sacramento, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	27.02	26.09	23.85	23.45	16.52	13.18	12.20
Salem Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Salt Lake City Area, UT	CO (1971 8-hour)	Maintenance, --	100	0	3.59	3.47	3.17	3.12	2.19	1.75	1.62
Salt Lake City, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	3.61	3.48	3.18	3.13	2.20	1.76	1.63
Salt Lake County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	3.60	3.47	3.17	3.12	2.20	1.75	1.62
Salt Lake County, UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	3.60	3.47	3.17	3.12	2.20	1.75	1.62
San Antonio, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.59	0.57	0.52	0.51	0.36	0.29	0.27
San Bernardino County (part); excluding Searles Valley Planning Area and South Coast Air Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	19.05	18.40	16.82	16.54	11.65	9.29	8.60
San Diego Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	1.59	1.54	1.41	1.38	0.97	0.78	0.72

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San Diego County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	2.27	2.19	2.00	1.97	1.38	1.10	1.02
San Diego County, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	2.27	2.19	2.00	1.97	1.38	1.10	1.02
San Francisco Bay Area, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	28.11	27.14	24.81	24.39	17.18	13.71	12.69
San Francisco Bay Area, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	28.11	27.14	24.81	24.39	17.18	13.71	12.69
San Francisco Bay Area, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	28.11	27.14	24.81	24.40	17.18	13.71	12.69
San Francisco-Oakland-San Jose Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	27.49	26.54	24.26	23.86	16.80	13.41	12.41
San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	44.14	42.62	38.96	38.31	26.98	21.53	19.93
San Joaquin Valley, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	44.14	42.62	38.96	38.31	26.98	21.53	19.93
San Joaquin Valley, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	44.14	42.62	38.96	38.31	26.98	21.53	19.93
San Joaquin Valley, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	43.56	42.06	38.45	37.80	26.63	21.25	19.67
San Joaquin Valley, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	43.56	42.06	38.45	37.80	26.63	21.25	19.67
San Luis Obispo (Eastern part), CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	2.38	2.30	2.10	2.07	1.46	1.16	1.07
San Luis Obispo (Eastern San Luis Obispo), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	2.38	2.30	2.10	2.07	1.46	1.16	1.07
San Manuel, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.11	0.11	0.10	0.10	0.07	0.05	0.05
San Miguel County; Telluride, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.07	0.07	0.06	0.06	0.04	0.04	0.03
Sanders County (part); Thompson Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Santa Cruz County; Nogales Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Seaford, DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.04	0.04	0.03	0.03	0.02	0.02	0.02

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Seattle-Tacoma Area, WA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	0.41	0.39	0.36	0.35	0.25	0.20	0.18
Seattle-Tacoma, WA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.41	0.39	0.36	0.35	0.25	0.20	0.18
Sheboygan County, WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.14	0.13	0.12	0.12	0.08	0.07	0.06
Sheboygan County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.11	0.11	0.10	0.10	0.07	0.06	0.05
Sheridan County; City of Sheridan, WY	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.17	0.16	0.15	0.14	0.10	0.08	0.08
Shoshone County (part); excluding Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Shoshone County; City of Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Silver Bow County; Butte, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Somerville Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Southern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	2.91	2.81	2.57	2.53	1.78	1.42	1.31
Southwest Indiana, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.07	0.07	0.06	0.06	0.04	0.03	0.03
Spokane Area, WA	CO (1971 8-hour)	Maintenance, Serious	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Spokane County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Springfield Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.06	0.06	0.05	0.05	0.04	0.03	0.03
St. Bernard Parish, LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	17.28	16.69	15.25	15.00	10.56	8.43	7.80
St. Clair, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.33	0.32	0.29	0.28	0.20	0.16	0.15
St. Louis Area, MO	CO (1971 8-hour)	Maintenance, --	100	0	5.56	5.36	4.90	4.82	3.40	2.71	2.51
St. Louis, MO-IL	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	6.17	5.96	5.45	5.36	3.77	3.01	2.79
St. Louis-St. Charles-Farmington, MO-IL	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	6.46	6.23	5.70	5.60	3.95	3.15	2.91

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Steubenville, OH-WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.25	0.24	0.22	0.22	0.15	0.12	0.11
Steubenville-Weirton, OH-WV	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.07	0.07	0.06	0.06	0.04	0.03	0.03
Stockton Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.44	0.43	0.39	0.38	0.27	0.22	0.20
Sullivan County, TN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Sutter Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Syracuse Area; Onondaga County, NY	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02
Tazewell County: Groveland Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Terre Haute, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.13	0.12	0.11	0.11	0.08	0.06	0.06
Thurston County; Cities of Olympia, Tumwater, and Lacey, WA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Titus County, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Toms River Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tooele County (part), UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	2.29	2.21	2.02	1.99	1.40	1.12	1.04
Trenton Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02
Trona, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	2.17	2.10	1.92	1.88	1.33	1.06	0.98
Tucson Area, AZ	CO (1971 8-hour)	Maintenance, --	100	0	0.11	0.11	0.10	0.10	0.07	0.05	0.05
Tuolumne County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.33	0.32	0.29	0.29	0.20	0.16	0.15
Tuscan Buttes, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tuscan Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Uinta Basin, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	2.47	2.39	2.18	2.15	1.51	1.21	1.12
Union County; LaGrande, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Upper Green River Basin Area, WY	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	2.94	2.84	2.60	2.55	1.80	1.43	1.33
Utah County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	3.88	3.75	3.43	3.37	2.37	1.89	1.75
Vancouver Area: Clark County (part), WA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Ventura County, CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	18.12	17.50	16.00	15.73	11.08	8.84	8.18
Ventura County, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	18.12	17.50	16.00	15.73	11.08	8.84	8.18
Vermillion County; Part of Clinton Township, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.13	0.12	0.11	0.11	0.08	0.06	0.06
Vigo County, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.21	0.21	0.19	0.19	0.13	0.10	0.10
Walla Walla County; Wallula, WA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Waltham Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.06	0.05	0.05	0.05	0.03	0.03	0.03
Warren County: Conewago Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	1.43	1.38	1.26	1.24	0.87	0.70	0.65
Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	1.46	1.41	1.29	1.27	0.89	0.71	0.66
Warren, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	1.47	1.42	1.30	1.28	0.90	0.72	0.66
Washington Area, DC-MD-VA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.32	0.31	0.29	0.28	0.20	0.16	0.15
Washington, DC-MD-VA	Ozone (2008 8-hour)	Nonattainment (DC) Maintenance (MD, VA), Marginal	50	0	1.21	1.17	1.07	1.05	0.74	0.59	0.55
Washington, DC-MD-VA	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	1.21	1.17	1.07	1.05	0.74	0.59	0.55
Washoe County; Reno Planning Area, NV	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Wayne County; (part), MI	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.35	1.31	1.19	1.17	0.83	0.66	0.61	0.61
West Central Pinal County, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.11	0.11	0.10	0.10	0.07	0.05	0.05	0.05
West Silver Valley, ID	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Williamson County, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.08	0.07	0.07	0.07	0.05	0.04	0.03	0.03
Winston-Salem Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.15	0.14	0.13	0.13	0.09	0.07	0.07	0.07
Worcester Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.06	0.06	0.05	0.05	0.04	0.03	0.03	0.03
Yakima Area, WA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Yakima County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Yuba City-Marysville, CA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.27	0.26	0.24	0.24	0.17	0.13	0.12	0.12
Yuma County; Yuma Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.67	0.65	0.59	0.58	0.41	0.33	0.30	0.30
Yuma, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.67	0.65	0.59	0.58	0.41	0.33	0.30	0.30

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Table A-29. Changes in Emissions from U.S. Passenger Cars and Light Trucks by Nonattainment or Maintenance Area and Alternative, Direct and Indirect Impacts--Diesel Particulate Matter (DPM), 2035

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Ada County; Boise, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.31	0.30	0.28	0.26	0.20	0.15	0.13
Adams, Denver, and Boulder Counties; Denver Metropolitan Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	28.00	27.31	24.83	23.55	18.45	13.73	12.06
Ajo, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Albuquerque Area, NM	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.63	0.61	0.56	0.53	0.41	0.31	0.27
Allegan County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.61	0.59	0.54	0.51	0.40	0.30	0.26
Allegheny County Air Basin: Hazelwood Monitor, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.76	0.74	0.67	0.64	0.50	0.37	0.33
Allegheny County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	4.56	4.45	4.04	3.84	3.00	2.24	1.96
Allegheny County; The Area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.71	0.69	0.63	0.59	0.47	0.35	0.30
Allegheny, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	1.33	1.30	1.18	1.12	0.88	0.65	0.57
Allentown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.68	0.66	0.60	0.57	0.45	0.33	0.29
Allentown-Bethlehem-Easton, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	1.15	1.13	1.02	0.97	0.76	0.57	0.50
Alton Township, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	15.14	14.76	13.42	12.73	9.97	7.42	6.52
Amador County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.83	1.79	1.62	1.54	1.21	0.90	0.79
Anchorage Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Anchorage; Eagle River, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Anne Arundel County and Baltimore County, MD	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	3.15	3.07	2.79	2.65	2.07	1.54	1.35

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
AQCR 012: Portions of Grant County, NM	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AQCR 109-Millinocket, ME	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.32	0.31	0.28	0.27	0.21	0.16	0.14	0.14
AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington Counties (Minneapolis-St. Paul), MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	20.62	20.10	18.28	17.34	13.58	10.11	8.88	8.88
AQCR 237: Brown County: Green Bay Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.11	0.11	0.10	0.09	0.07	0.05	0.05	0.05
AQCR 238: Marathon County: Rothschild Subcity Area, Rib Mountain, Weston, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.05	0.05	0.05	0.04	0.04	0.03	0.02	0.02
AQCR 238: Oneida County: Rhinelander Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AQCR 239: Milwaukee County: Milwaukee Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	1.82	1.77	1.61	1.53	1.20	0.89	0.78	0.78
AQCR 240: Dane County: Madison Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	1.28	1.24	1.13	1.07	0.84	0.63	0.55	0.55
Archuleta County; Pagosa Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	2.22	2.17	1.97	1.87	1.46	1.09	0.96	0.96
Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	1.11	1.09	0.99	0.94	0.73	0.55	0.48	0.48
Aroostock County; City of Presque Isle, ME	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.07	0.07	0.06	0.06	0.05	0.04	0.03	0.03
Atlanta, GA	Ozone (2008 8-hour)	Maintenance, Moderate	100	0	0.35	0.34	0.31	0.30	0.23	0.17	0.15	0.15
Atlanta, GA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.35	0.34	0.31	0.29	0.23	0.17	0.15	0.15
Atlantic City Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bakersfield Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	4.83	4.71	4.29	4.07	3.18	2.37	2.08	2.08

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Baltimore Area, MD	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.58	0.56	0.51	0.48	0.38	0.28	0.25
Baltimore, MD	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	6.84	6.67	6.07	5.76	4.51	3.36	2.95
Baltimore, MD	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	6.84	6.67	6.07	5.76	4.51	3.36	2.95
Baton Rouge, LA	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	167.06	162.90	148.14	140.49	110.05	81.91	71.92
Beaver, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Benton County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Berrien County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.82	0.80	0.72	0.69	0.54	0.40	0.35
Billings Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	14.66	14.29	13.00	12.33	9.66	7.19	6.31
Billings, MT	SO ₂ (2010 1-hour)	Maintenance, --	100	0	14.66	14.29	13.00	12.33	9.66	7.19	6.31
Birmingham, AL	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	6.22	6.06	5.51	5.23	4.10	3.05	2.68
Boise-Northern Ada County Area, ID	CO (1971 8-hour)	Maintenance, --	100	0	0.31	0.30	0.28	0.26	0.20	0.15	0.13
Bonner County; The Sandpoint Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Boston Area, MA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	3.02	2.94	2.68	2.54	1.99	1.48	1.30
Boyd County (part), KY	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	14.67	14.30	13.01	12.33	9.66	7.19	6.31
Brooke; Follansbee Area, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Burlington Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.13	0.12	0.11	0.11	0.08	0.06	0.05
Butte County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.47	0.46	0.42	0.40	0.31	0.23	0.20
Calaveras County, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	1.76	1.72	1.56	1.48	1.16	0.86	0.76
Calaveras County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.76	1.72	1.56	1.48	1.16	0.86	0.76

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Campbell-Clermont Counties, KY-OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.20	0.20	0.18	0.17	0.13	0.10	0.09
Canton-Massillon, OH	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	7.65	7.46	6.79	6.44	5.04	3.75	3.29
Central New Hampshire, NH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Central Steptoe Valley, NV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Charleston, WV	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	1.87	1.83	1.66	1.57	1.23	0.92	0.81
Charlotte Area, NC	CO (1971 8-hour)	Maintenance, --	100	0	0.19	0.18	0.17	0.16	0.12	0.09	0.08
Charlotte-Rock Hill, NC-SC	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	1.05	1.03	0.93	0.88	0.69	0.52	0.45
Chicago, IL-IN-WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	131.10	127.83	116.25	110.25	86.36	64.28	56.44
Chicago-Naperville, IL-IN-WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	131.37	128.10	116.49	110.48	86.54	64.41	56.56
Chico (Butte County), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.47	0.46	0.42	0.40	0.31	0.23	0.20
Chico Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.02	0.02	0.01	0.01	0.01	0.01	0.01
Chico, CA	PM _{2.5} (2006 24-hour)	Maintenance, Moderate	100	0	0.18	0.17	0.16	0.15	0.12	0.09	0.08
Cincinnati, OH-KY	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	2.75	2.68	2.44	2.31	1.81	1.35	1.18
Cincinnati, OH-KY-IN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	3.00	2.93	2.66	2.53	1.98	1.47	1.29
Clark County; Las Vegas Planning Area, NV	PM ₁₀ (1987 24-hour)	Maintenance, Serious	100	0	2.43	2.37	2.16	2.05	1.60	1.19	1.05
Cleveland Area, OH	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	1.91	1.86	1.69	1.61	1.26	0.94	0.82
Cleveland, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	12.13	11.83	10.76	10.21	7.99	5.95	5.22
Cleveland, OH	PM _{2.5} (2012 Annual)	Maintenance, Moderate	100	0	4.86	4.74	4.31	4.09	3.20	2.38	2.09
Cleveland-Akron-Lorain, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	14.93	14.56	13.24	12.56	9.84	7.32	6.43

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Cleveland-Akron-Lorain, OH	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	12.13	11.83	10.76	10.20	7.99	5.95	5.22
Cochise County; Paul Spur/Douglas Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Colorado Springs Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	2.01	1.96	1.79	1.69	1.33	0.99	0.87
Columbus, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	1.17	1.14	1.04	0.98	0.77	0.57	0.50
Columbus, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.47	0.45	0.41	0.39	0.31	0.23	0.20
Cook County; Lyons Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	4.02	3.92	3.56	3.38	2.65	1.97	1.73
Cook County; Southeast Chicago, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	100.18	97.69	88.84	84.25	66.00	49.12	43.13
Coshocton County; Franklin Township, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Coso Junction, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	6.69	6.52	5.93	5.62	4.40	3.28	2.88
Cuyahoga County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Cuyahoga County, OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.91	1.86	1.69	1.61	1.26	0.94	0.82
Dallas-Fort Worth, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	11.37	11.08	10.08	9.56	7.49	5.57	4.89
Dallas-Fort Worth, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	11.37	11.08	10.08	9.56	7.49	5.57	4.89
Delaware County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	59.46	57.98	52.72	50.00	39.17	29.15	25.60
Denver Metro/North Front Range, CO	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	33.56	32.73	29.76	28.23	22.11	16.46	14.45
Denver-Boulder Area, CO	CO (1971 8-hour)	Maintenance, Serious	100	0	30.13	29.38	26.71	25.34	19.84	14.77	12.97
Denver-Boulder-Greeley-Ft Collins-Loveland, CO	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	33.56	32.73	29.76	28.23	22.11	16.46	14.45
Detroit Area, MI	CO (1971 8-hour)	Maintenance, --	100	0	5.94	5.79	5.27	4.99	3.91	2.91	2.56
Detroit, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	20.81	20.30	18.46	17.50	13.71	10.21	8.96

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Detroit, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	4.08	3.98	3.62	3.43	2.69	2.00	1.76
Detroit-Ann Arbor, MI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	20.82	20.30	18.46	17.51	13.71	10.21	8.96
Doña Ana County (Sunland Park Area), NM	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	5.90	5.76	5.24	4.97	3.89	2.90	2.54
Doña Ana County; Anthony, NM	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	5.90	5.76	5.24	4.97	3.89	2.90	2.54
Door County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.17	0.17	0.15	0.14	0.11	0.08	0.07
Douglas, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dukes County, MA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Duluth Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	5.62	5.48	4.98	4.72	3.70	2.75	2.42
East Chicago Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	96.47	94.07	85.54	81.13	63.55	47.30	41.53
East Helena Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
East Kern County Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	5.94	5.80	5.27	5.00	3.92	2.91	2.56
El Paso County, TX	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	5.93	5.78	5.26	4.99	3.91	2.91	2.55
El Paso, TX	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	5.91	5.76	5.24	4.97	3.89	2.90	2.54
Eugene-Springfield Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Evangeline Parish (Partial), LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Fairbanks Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	0.31	0.30	0.27	0.26	0.20	0.15	0.13
Fairbanks, AK	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	0.31	0.30	0.27	0.26	0.20	0.15	0.13
Flathead County; Columbia Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flathead County; Kalispell and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Flathead County; Whitefish and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fort Collins Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.42	0.41	0.37	0.35	0.28	0.20	0.18	0.18
Freehold Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Freestone and Anderson Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.32	0.32	0.29	0.27	0.21	0.16	0.14	0.14
Fremont County; Canon City Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	2.00	1.95	1.78	1.69	1.32	0.98	0.86	0.86
Fresno Area, CA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	1.59	1.55	1.41	1.34	1.05	0.78	0.69	0.69
Grants Pass Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Great Falls Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	1.74	1.69	1.54	1.46	1.14	0.85	0.75	0.75
Greater Connecticut, CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	0.78	0.76	0.69	0.66	0.51	0.38	0.34	0.34
Greater Connecticut, CT	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	0.78	0.76	0.69	0.66	0.51	0.38	0.34	0.34
Greeley Area, CO	CO (1971 8-hour)	Maintenance, --	100	0	22.35	21.80	19.82	18.80	14.72	10.96	9.62	9.62
Hancock and Brooke Counties (Part); The City of Weirton, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.12	0.12	0.11	0.10	0.08	0.06	0.05	0.05
Hancock County (Part) The City of Weirton, including Butler and Clay: Magisterial Districts, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.68	0.67	0.61	0.57	0.45	0.33	0.29	0.29
Harrisburg-Lebanon-Carlisle-York, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	2.27	2.22	2.02	1.91	1.50	1.12	0.98	0.98
Hartford-New Britain-Middletown Area, CT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.20	0.20	0.18	0.17	0.13	0.10	0.09	0.09
Hayden, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.33	0.33	0.30	0.28	0.22	0.16	0.14	0.14
Hayden, AZ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.33	0.33	0.30	0.28	0.22	0.16	0.14	0.14

Notes:

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Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Hayden, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.33	0.33	0.30	0.28	0.22	0.16	0.14
Hillsborough County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	1.73	1.68	1.53	1.45	1.14	0.85	0.74
Hillsborough-Polk County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	1.77	1.72	1.57	1.48	1.16	0.87	0.76
Houston-Galveston-Brazoria, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	367.11	357.96	325.54	308.73	241.83	179.99	158.04
Houston-Galveston-Brazoria, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	366.64	357.51	325.12	308.34	241.52	179.77	157.84
Humphreys County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huntington, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Imperial County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	6.06	5.91	5.38	5.10	3.99	2.97	2.61
Imperial County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	6.06	5.91	5.38	5.10	3.99	2.97	2.61
Imperial County, CA	PM _{2.5} (2006 24-hour)	Nonattainment, Moderate	100	0	2.02	1.97	1.79	1.70	1.33	0.99	0.87
Imperial County, CA	PM _{2.5} (2012 Annual)	Nonattainment, Moderate	100	0	2.02	1.97	1.79	1.70	1.33	0.99	0.87
Imperial County; Imperial Valley Planning Area, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Serious	70	0	6.06	5.91	5.38	5.10	3.99	2.97	2.61
Indian Wells, CA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	6.53	6.37	5.79	5.49	4.30	3.20	2.81
Indiana, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	2.75	2.69	2.44	2.32	1.81	1.35	1.19
Indianapolis Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Indianapolis, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.05	0.04	0.04	0.04	0.03	0.02	0.02
Inyo County; Owens Valley Planning Area, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Serious	70	0	2.58	2.52	2.29	2.17	1.70	1.27	1.11
Jackson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	2.28	2.22	2.02	1.91	1.50	1.12	0.98
Jackson County; Medford-Ashland (including White City), OR	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Jamestown, NY	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	6.39	6.23	5.67	5.37	4.21	3.13	2.75
Jefferson County, KY	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.17	0.17	0.15	0.14	0.11	0.08	0.07
Jefferson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.72	0.70	0.64	0.60	0.47	0.35	0.31
Jefferson County; (part) Steubenville & Mingo Junction, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.12	0.12	0.11	0.10	0.08	0.06	0.05
Jefferson County; (part), OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Johnstown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	1.38	1.34	1.22	1.16	0.91	0.68	0.59
Josephine County; Grants Pass, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Juneau; Mendenhall Valley Area, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kern County (Eastern Kern), CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	54.55	53.19	48.37	45.88	35.94	26.75	23.49
Kern County (Eastern Kern), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	54.55	53.19	48.37	45.88	35.94	26.75	23.49
King County; Kent, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
King County; Seattle, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Klamath County; Klamath Falls, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Klamath Falls Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Klamath Falls, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Knoxville, TN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.36	0.35	0.32	0.30	0.24	0.18	0.16
Knoxville-Sevierville-La Follette, TN	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	1.53	1.49	1.35	1.28	1.01	0.75	0.66
La Porte County; (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	4.67	4.56	4.14	3.93	3.08	2.29	2.01
Lake County (part); Lakeview, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Lake County, OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.02	0.02	0.02	0.01	0.01	0.01	0.01
Lake County: (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	104.48	101.88	92.65	87.87	68.83	51.23	44.98
Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	104.47	101.86	92.64	87.85	68.82	51.22	44.97
Lake County; Polson, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake County; Ronan, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake Tahoe Nevada Area, NV	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Lake Tahoe North Shore Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	0.13	0.13	0.12	0.11	0.09	0.07	0.06
Lake Tahoe South Shore Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.09	0.09	0.08	0.07	0.06	0.04	0.04
Lancaster, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.46	0.45	0.41	0.39	0.31	0.23	0.20
Lancaster, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.46	0.45	0.41	0.39	0.31	0.23	0.20
Lane County (part); Oakridge, OR	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lane County; Eugene/Springfield, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Las Vegas Area, NV	CO (1971 8-hour)	Maintenance, Serious	100	0	2.43	2.37	2.16	2.05	1.60	1.19	1.05
Las Vegas, NV	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	2.43	2.37	2.16	2.05	1.60	1.19	1.05
LaSalle County; Oglesby, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.55	0.53	0.48	0.46	0.36	0.27	0.23
Laurel Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	14.66	14.29	13.00	12.33	9.66	7.19	6.31
Lebanon County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.09	0.09	0.08	0.07	0.06	0.04	0.04
Lemont, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	25.82	25.18	22.90	21.71	17.01	12.66	11.12

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Liberty-Clairton, PA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.71	0.69	0.63	0.59	0.47	0.35	0.30
Lincoln County; Libby and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Logan, UT-ID	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Longmont Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	7.08	6.90	6.28	5.95	4.66	3.47	3.05
Lorain County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Los Angeles, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	165.41	161.29	146.68	139.11	108.96	81.10	71.21
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	59.85	58.36	53.07	50.33	39.42	29.34	25.77
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	59.85	58.36	53.07	50.33	39.42	29.34	25.76
Los Angeles-South Coast Air Basin Area, CA	CO (1971 8-hour)	Maintenance, Serious	100	0	165.27	161.16	146.56	138.99	108.87	81.03	71.15
Los Angeles-South Coast Air Basin Area, CA	NO ₂ (1971 Annual)	Maintenance, --	100	0	165.28	161.16	146.56	139.00	108.88	81.04	71.16
Los Angeles-South Coast Air Basin, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	165.48	161.36	146.74	139.17	109.01	81.13	71.24
Los Angeles-South Coast Air Basin, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	165.39	161.27	146.66	139.09	108.95	81.09	71.20
Los Angeles-South Coast Air Basin, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	165.41	161.29	146.68	139.11	108.96	81.10	71.21
Louisville, KY-IN	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.61	0.60	0.54	0.52	0.40	0.30	0.26
Lowell Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.17	0.17	0.15	0.14	0.11	0.08	0.07
Lucas County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	13.01	12.69	11.54	10.94	8.57	6.38	5.60
Madison County; Granite City Township and Nameoki Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	15.37	14.99	13.63	12.93	10.13	7.54	6.62
Manchester Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Manitowoc County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.28	0.28	0.25	0.24	0.19	0.14	0.12
Maricopa and Pinal Counties; Phoenix Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	0.55	0.54	0.49	0.46	0.36	0.27	0.24
Marion County: Lawrence, Washington, and Warrant Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.08	0.08	0.07	0.07	0.05	0.04	0.03
Mariposa County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.06	0.06	0.06	0.05	0.04	0.03	0.03
Mariposa County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.06	0.06	0.06	0.05	0.04	0.03	0.03
Marshall, WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	12.29	11.99	10.90	10.34	8.10	6.03	5.29
Medford Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Memphis Area, TN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	6.54	6.38	5.80	5.50	4.31	3.21	2.82
Memphis, TN-MS-AR	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	6.56	6.40	5.82	5.52	4.32	3.22	2.83
Miami, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.33	0.33	0.30	0.28	0.22	0.16	0.14
Miami, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Miami, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.33	0.33	0.30	0.28	0.22	0.16	0.14
Milwaukee-Racine, WI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	2.03	1.98	1.80	1.71	1.34	1.00	0.87
Minneapolis-St. Paul Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	20.65	20.13	18.31	17.36	13.60	10.12	8.89
Missoula Area, MT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	1.38	1.35	1.22	1.16	0.91	0.68	0.59
Missoula county; Missoula and Vicinity, MT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.38	1.35	1.22	1.16	0.91	0.68	0.59
Modesto Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.45	0.43	0.39	0.37	0.29	0.22	0.19

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Mohave County (part); Bullhead City, AZ	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.79	0.77	0.70	0.66	0.52	0.39	0.34
Mono County; Mammoth Lake Planning Area, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.55	0.54	0.49	0.47	0.36	0.27	0.24
Mono County; Mono Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.55	0.54	0.49	0.47	0.36	0.27	0.24
Morenci, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morgan County, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morongo Band of Mission Indians	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	2.13	2.07	1.88	1.79	1.40	1.04	0.92
Morongo Band of Mission Indians, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	2.13	2.07	1.88	1.79	1.40	1.04	0.92
Morristown Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	1.27	1.24	1.13	1.07	0.84	0.62	0.55
Muscatine County; (part), IA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Muscatine, IA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Muskegon County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.18	0.17	0.16	0.15	0.12	0.09	0.08
Muskingum River, OH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Nashua Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	0.17	0.16	0.15	0.14	0.11	0.08	0.07
Nassau County, FL	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nevada County (Western part), CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.20	0.19	0.17	0.17	0.13	0.10	0.08
Nevada County (Western part), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	0.20	0.19	0.17	0.17	0.13	0.10	0.08
New Haven County, CT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
New Haven-Meriden-Waterbury Area, CT	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
New Manchester-Grant Magisterial District in Hancock County, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.11	0.11	0.10	0.09	0.07	0.06	0.05

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
New York County, NY	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.66	0.64	0.59	0.56	0.44	0.32	0.28
New York, NY-NJ-CT	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	16.85	16.43	14.94	14.17	11.10	8.26	7.26
New York-N. New Jersey-Long Island Area, NY-NJ-CT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	15.77	15.38	13.99	13.26	10.39	7.73	6.79
New York-N. New Jersey-Long Island, NY-NJ-CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	17.06	16.64	15.13	14.35	11.24	8.37	7.35
New York-Northern New Jersey-Long Island, NY-NJ-CT	Ozone (2015 8-hour)	Nonattainment, Moderate	50	0	17.07	16.64	15.13	14.35	11.24	8.37	7.35
NJ Portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	1.27	1.24	1.13	1.07	0.84	0.62	0.55
Nogales, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Northern Milwaukee/Ozaukee Shoreline, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.36	1.33	1.21	1.15	0.90	0.67	0.59
Northern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	10.85	10.58	9.62	9.13	7.15	5.32	4.67
Oakridge, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ogden Area, UT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ogden Area, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Olmsted County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.42	0.41	0.37	0.35	0.27	0.20	0.18
Olmsted; City of Rochester, MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.42	0.41	0.37	0.35	0.27	0.20	0.18
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	4.04	3.94	3.58	3.40	2.66	1.98	1.74
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	4.04	3.94	3.58	3.40	2.66	1.98	1.74
Pekin, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.21	0.21	0.19	0.18	0.14	0.10	0.09

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Penns Grove Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.06	0.06	0.06	0.05	0.04	0.03	0.03
Peoria County: Hollis Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.21	0.21	0.19	0.18	0.14	0.10	0.09
Peoria County: Peoria, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.26	0.25	0.23	0.22	0.17	0.13	0.11
Perth Amboy Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	1.62	1.58	1.43	1.36	1.07	0.79	0.70
Philadelphia-Camden County Area, PA-NJ	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	50.76	49.50	45.01	42.69	33.44	24.89	21.85
Philadelphia-Wilmington, PA-NJ-DE	PM _{2.5} (2006 24-hour)	Maintenance, Moderate for PA and DE; Subject to Former Subpart 1 for NJ	100	0	64.65	63.04	57.33	54.37	42.59	31.70	27.83
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	66.54	64.88	59.01	55.96	43.83	32.63	28.65
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	66.54	64.88	59.01	55.96	43.83	32.63	28.65
Phoenix Area, AZ	CO (1971 8-hour)	Maintenance, Serious	100	0	0.54	0.53	0.48	0.46	0.36	0.27	0.23
Phoenix-Mesa, AZ	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.55	0.54	0.49	0.46	0.36	0.27	0.24
Phoenix-Mesa, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.55	0.54	0.49	0.47	0.36	0.27	0.24
Pierce County; Tacoma, WA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	1.23	1.20	1.09	1.03	0.81	0.60	0.53
Pima County; Ajo Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pima County; Rillito Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.33	0.33	0.30	0.28	0.22	0.16	0.14
Pinal and Gila Counties; Payson, AZ	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pinal County (part); West Pinal, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.34	0.33	0.30	0.29	0.22	0.17	0.15
Pitkin County; Aspen, CO	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	7.10	6.93	6.30	5.97	4.68	3.48	3.06
Pittsburgh Area, PA	CO (1971 8-hour)	Maintenance, --	100	0	0.90	0.88	0.80	0.76	0.59	0.44	0.39

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Pittsburgh-Beaver Valley, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	22.75	22.18	20.18	19.13	14.99	11.16	9.79
Pittsburgh-Beaver Valley, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	21.56	21.03	19.12	18.13	14.20	10.57	9.28
Plumas County, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.30	0.29	0.26	0.25	0.20	0.15	0.13
Polk County, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.04	0.04	0.04	0.03	0.03	0.02	0.02
Portland Area: Portland Metro Service District Boundary, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.17	0.17	0.15	0.15	0.11	0.08	0.07
Power-Bannock Counties; Fort Hall Indian Reservation, ID	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Power-Bannock Counties; Portneuf Valley Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Provo Area, UT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	0.37	0.36	0.33	0.31	0.24	0.18	0.16
Provo, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	8.76	8.54	7.77	7.37	5.77	4.30	3.77
Prowers County; Lamar, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02
Raleigh-Durham Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	6.22	6.06	5.51	5.23	4.10	3.05	2.68
Ramsey County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	16.67	16.26	14.79	14.02	10.98	8.18	7.18
Reading, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.42	0.41	0.37	0.36	0.28	0.21	0.18
Reno Area, NV	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rhineland, WI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Riverside County (Coachella Valley), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	6.81	6.64	6.04	5.73	4.48	3.34	2.93
Riverside County (Coachella Valley), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	6.81	6.64	6.04	5.73	4.48	3.34	2.93
Riverside County; Coachella Valley Planning Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	6.81	6.64	6.04	5.73	4.48	3.34	2.93

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Riverside, Los Angeles, Orange, and San Bernardino Counties; South Coast Air Basin, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	165.48	161.36	146.74	139.17	109.01	81.13	71.24
Rosebud County; Lame Deer, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Routt County (part); Steamboat Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	20.96	20.44	18.59	17.63	13.81	10.28	9.02
Rusk and Panola Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.55	0.53	0.48	0.46	0.36	0.27	0.24
Sacramento Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	8.85	8.63	7.85	7.45	5.83	4.34	3.81
Sacramento County, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	80.33	78.32	71.23	67.55	52.91	39.38	34.58
Sacramento Metro, CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	81.29	79.26	72.08	68.36	53.55	39.86	35.00
Sacramento Metro, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	81.29	79.26	72.08	68.36	53.55	39.86	35.00
Sacramento, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	81.29	79.26	72.08	68.36	53.55	39.86	35.00
Salem Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Salt Lake City Area, UT	CO (1971 8-hour)	Maintenance, --	100	0	10.80	10.53	9.58	9.08	7.11	5.29	4.65
Salt Lake City, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	10.85	10.58	9.62	9.13	7.15	5.32	4.67
Salt Lake County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	10.82	10.55	9.60	9.10	7.13	5.31	4.66
Salt Lake County, UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	10.82	10.55	9.60	9.10	7.13	5.31	4.66
San Antonio, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.77	1.73	1.57	1.49	1.17	0.87	0.76
San Bernardino County (part); excluding Searles Valley Planning Area and South Coast Air Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	57.32	55.89	50.83	48.21	37.76	28.10	24.68
San Diego Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	4.80	4.68	4.26	4.04	3.16	2.35	2.07

Notes:

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Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
San Diego County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	6.82	6.65	6.05	5.74	4.49	3.35	2.94
San Diego County, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	6.82	6.65	6.05	5.74	4.49	3.35	2.94
San Francisco Bay Area, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	84.57	82.47	75.00	71.12	55.71	41.47	36.41
San Francisco Bay Area, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	84.57	82.47	75.00	71.12	55.71	41.47	36.41
San Francisco Bay Area, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	84.57	82.47	75.00	71.13	55.71	41.47	36.41
San Francisco-Oakland-San Jose Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	82.70	80.64	73.34	69.55	54.48	40.55	35.60
San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	132.80	129.49	117.76	111.68	87.48	65.11	57.17
San Joaquin Valley, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	132.80	129.49	117.76	111.68	87.48	65.11	57.17
San Joaquin Valley, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	132.80	129.49	117.76	111.68	87.48	65.11	57.17
San Joaquin Valley, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	131.04	127.78	116.20	110.21	86.32	64.25	56.42
San Joaquin Valley, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	131.04	127.78	116.20	110.21	86.32	64.25	56.42
San Luis Obispo (Eastern part), CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	7.16	6.98	6.35	6.02	4.72	3.51	3.08
San Luis Obispo (Eastern San Luis Obispo), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	7.16	6.98	6.35	6.02	4.72	3.51	3.08
San Manuel, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.33	0.33	0.30	0.28	0.22	0.16	0.14
San Miguel County; Telluride, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.22	0.21	0.20	0.19	0.15	0.11	0.09
Sanders County (part); Thompson Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Santa Cruz County; Nogales Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Seaford, DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.12	0.12	0.11	0.10	0.08	0.06	0.05

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Seattle-Tacoma Area, WA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	1.23	1.20	1.09	1.03	0.81	0.60	0.53
Seattle-Tacoma, WA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	1.23	1.20	1.09	1.03	0.81	0.60	0.53
Sheboygan County, WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.41	0.40	0.37	0.35	0.27	0.20	0.18
Sheboygan County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.34	0.33	0.30	0.29	0.23	0.17	0.15
Sheridan County; City of Sheridan, WY	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.50	0.49	0.44	0.42	0.33	0.25	0.22
Shoshone County (part); excluding Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Shoshone County; City of Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Silver Bow County; Butte, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Somerville Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Southern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	8.76	8.54	7.77	7.37	5.77	4.30	3.77
Southwest Indiana, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.21	0.21	0.19	0.18	0.14	0.10	0.09
Spokane Area, WA	CO (1971 8-hour)	Maintenance, Serious	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Spokane County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Springfield Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.18	0.18	0.16	0.15	0.12	0.09	0.08
St. Bernard Parish, LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	51.99	50.69	46.10	43.72	34.24	25.49	22.38
St. Clair, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.98	0.96	0.87	0.83	0.65	0.48	0.42
St. Louis Area, MO	CO (1971 8-hour)	Maintenance, --	100	0	16.72	16.30	14.82	14.06	11.01	8.20	7.20
St. Louis, MO-IL	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	18.57	18.11	16.47	15.62	12.23	9.11	8.00
St. Louis-St. Charles-Farmington, MO-IL	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	19.43	18.94	17.23	16.34	12.80	9.52	8.36

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Steubenville, OH-WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.75	0.73	0.67	0.63	0.50	0.37	0.32
Steubenville-Weirton, OH-WV	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.22	0.21	0.19	0.18	0.14	0.11	0.09
Stockton Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	1.33	1.30	1.18	1.12	0.88	0.65	0.57
Sullivan County, TN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.03	0.03	0.02	0.02	0.02	0.01	0.01
Sutter Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Syracuse Area; Onondaga County, NY	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.14	0.13	0.12	0.11	0.09	0.07	0.06
Tazewell County: Groveland Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Terre Haute, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.38	0.37	0.34	0.32	0.25	0.19	0.17
Thurston County; Cities of Olympia, Tumwater, and Lacey, WA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Titus County, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01
Toms River Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tooele County (part), UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	6.90	6.73	6.12	5.80	4.55	3.38	2.97
Trenton Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.13	0.12	0.11	0.11	0.08	0.06	0.05
Trona, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	6.53	6.37	5.79	5.49	4.30	3.20	2.81
Tucson Area, AZ	CO (1971 8-hour)	Maintenance, --	100	0	0.33	0.33	0.30	0.28	0.22	0.16	0.14
Tuolumne County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.00	0.97	0.88	0.84	0.66	0.49	0.43
Tuscan Buttes, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tuscan Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Uinta Basin, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	7.44	7.26	6.60	6.26	4.90	3.65	3.20
Union County; LaGrande, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Upper Green River Basin Area, WY	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	8.85	8.63	7.84	7.44	5.83	4.34	3.81
Utah County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	11.69	11.40	10.36	9.83	7.70	5.73	5.03
Vancouver Area: Clark County (part), WA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.02	0.02	0.02	0.01	0.01	0.01	0.01
Ventura County, CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	54.53	53.17	48.35	45.86	35.92	26.74	23.48
Ventura County, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	54.53	53.17	48.36	45.86	35.92	26.74	23.48
Vermillion County; Part of Clinton Township, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.39	0.38	0.34	0.32	0.25	0.19	0.17
Vigo County, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.65	0.63	0.57	0.54	0.43	0.32	0.28
Walla Walla County; Wallula, WA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Waltham Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.17	0.17	0.15	0.14	0.11	0.08	0.07
Warren County: Conewago Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	4.30	4.19	3.81	3.62	2.83	2.11	1.85
Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	4.39	4.28	3.89	3.69	2.89	2.15	1.89
Warren, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	4.42	4.31	3.92	3.72	2.91	2.17	1.90
Washington Area, DC-MD-VA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.98	0.95	0.87	0.82	0.64	0.48	0.42
Washington, DC-MD-VA	Ozone (2008 8-hour)	Nonattainment (DC) Maintenance (MD, VA), Marginal	50	0	3.65	3.56	3.24	3.07	2.41	1.79	1.57
Washington, DC-MD-VA	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	3.66	3.56	3.24	3.07	2.41	1.79	1.57
Washoe County; Reno Planning Area, NV	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.01
Wayne County; (part), MI	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	4.07	3.97	3.61	3.42	2.68	1.99	1.75	
West Central Pinal County, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.33	0.33	0.30	0.28	0.22	0.16	0.14	
West Silver Valley, ID	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Williamson County, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.23	0.22	0.20	0.19	0.15	0.11	0.10	
Winston-Salem Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.44	0.43	0.39	0.37	0.29	0.22	0.19	
Worcester Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.18	0.18	0.16	0.16	0.12	0.09	0.08	
Yakima Area, WA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Yakima County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Yuba City-Marysville, CA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.82	0.80	0.73	0.69	0.54	0.40	0.35	
Yuma County; Yuma Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	2.02	1.97	1.79	1.70	1.33	0.99	0.87	
Yuma, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	2.02	1.97	1.79	1.70	1.33	0.99	0.87	

Notes:

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NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Table A-30. Changes in Emissions from U.S. Passenger Cars and Light Trucks by Nonattainment or Maintenance Area and Alternative, Direct and Indirect Impacts--Diesel Particulate Matter (DPM), 2050

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Ada County; Boise, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.35	0.34	0.31	0.29	0.22	0.17	0.12
Adams, Denver, and Boulder Counties; Denver Metropolitan Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	31.53	30.44	27.83	26.01	19.71	15.20	11.08
Ajo, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Albuquerque Area, NM	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.71	0.68	0.63	0.59	0.44	0.34	0.25
Allegan County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.68	0.66	0.60	0.56	0.43	0.33	0.24
Allegheny County Air Basin: Hazelwood Monitor, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.85	0.82	0.75	0.70	0.53	0.41	0.30
Allegheny County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	5.14	4.96	4.53	4.24	3.21	2.48	1.80
Allegheny County; The Area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.79	0.77	0.70	0.66	0.50	0.38	0.28
Allegheny, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	1.50	1.45	1.32	1.24	0.94	0.72	0.53
Allentown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.76	0.74	0.67	0.63	0.48	0.37	0.27
Allentown-Bethlehem-Easton, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	1.30	1.25	1.15	1.07	0.81	0.63	0.46
Alton Township, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	17.04	16.45	15.04	14.06	10.65	8.22	5.99
Amador County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	2.06	1.99	1.82	1.70	1.29	0.99	0.72
Anchorage Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Anchorage; Eagle River, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Anne Arundel County and Baltimore County, MD	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	3.54	3.42	3.13	2.92	2.21	1.71	1.24

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
AQCR 012: Portions of Grant County, NM	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AQCR 109-Millinocket, ME	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.36	0.35	0.32	0.30	0.23	0.17	0.13	0.13
AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington Counties (Minneapolis-St. Paul), MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	23.21	22.41	20.49	19.15	14.51	11.19	8.15	8.15
AQCR 237: Brown County: Green Bay Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.12	0.12	0.11	0.10	0.08	0.06	0.04	0.04
AQCR 238: Marathon County: Rothschild Subcity Area, Rib Mountain, Weston, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.06	0.06	0.05	0.05	0.04	0.03	0.02	0.02
AQCR 238: Oneida County: Rhinelander Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AQCR 239: Milwaukee County: Milwaukee Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	2.05	1.98	1.81	1.69	1.28	0.99	0.72	0.72
AQCR 240: Dane County: Madison Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	1.44	1.39	1.27	1.18	0.90	0.69	0.50	0.50
Archuleta County; Pagosa Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	2.50	2.41	2.21	2.06	1.56	1.21	0.88	0.88
Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	1.25	1.21	1.11	1.03	0.78	0.60	0.44	0.44
Aroostock County; City of Presque Isle, ME	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.08	0.08	0.07	0.07	0.05	0.04	0.03	0.03
Atlanta, GA	Ozone (2008 8-hour)	Maintenance, Moderate	100	0	0.40	0.39	0.35	0.33	0.25	0.19	0.14	0.14
Atlanta, GA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.40	0.38	0.35	0.33	0.25	0.19	0.14	0.14
Atlantic City Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bakersfield Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	5.44	5.25	4.80	4.49	3.40	2.62	1.91	1.91

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Baltimore Area, MD	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.65	0.63	0.57	0.53	0.40	0.31	0.23
Baltimore, MD	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	7.71	7.44	6.80	6.36	4.82	3.71	2.71
Baltimore, MD	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	7.71	7.44	6.80	6.36	4.82	3.71	2.71
Baton Rouge, LA	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	188.09	181.57	166.01	155.15	117.57	90.66	66.07
Beaver, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Benton County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Berrien County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.92	0.89	0.81	0.76	0.57	0.44	0.32
Billings Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	16.50	15.93	14.57	13.61	10.32	7.96	5.80
Billings, MT	SO ₂ (2010 1-hour)	Maintenance, --	100	0	16.50	15.93	14.57	13.61	10.32	7.96	5.80
Birmingham, AL	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	7.00	6.76	6.18	5.77	4.38	3.37	2.46
Boise-Northern Ada County Area, ID	CO (1971 8-hour)	Maintenance, --	100	0	0.35	0.34	0.31	0.29	0.22	0.17	0.12
Bonner County; The Sandpoint Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Boston Area, MA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	3.40	3.28	3.00	2.80	2.12	1.64	1.19
Boyd County (part), KY	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	16.51	15.94	14.58	13.62	10.32	7.96	5.80
Brooke; Follansbee Area, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.02	0.02	0.01	0.01	0.01	0.01	0.01
Burlington Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.14	0.14	0.13	0.12	0.09	0.07	0.05
Butte County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.53	0.52	0.47	0.44	0.33	0.26	0.19
Calaveras County, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	1.98	1.91	1.75	1.63	1.24	0.95	0.70
Calaveras County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.98	1.91	1.75	1.63	1.24	0.95	0.70

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NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Campbell-Clermont Counties, KY-OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.23	0.22	0.20	0.19	0.14	0.11	0.08
Canton-Massillon, OH	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	8.62	8.32	7.60	7.11	5.39	4.15	3.03
Central New Hampshire, NH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Central Steptoe Valley, NV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Charleston, WV	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	2.11	2.04	1.86	1.74	1.32	1.02	0.74
Charlotte Area, NC	CO (1971 8-hour)	Maintenance, --	100	0	0.21	0.21	0.19	0.18	0.13	0.10	0.08
Charlotte-Rock Hill, NC-SC	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	1.19	1.14	1.05	0.98	0.74	0.57	0.42
Chicago, IL-IN-WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	147.60	142.49	130.28	121.75	92.26	71.15	51.85
Chicago-Naperville, IL-IN-WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	147.91	142.78	130.55	122.01	92.45	71.30	51.96
Chico (Butte County), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.53	0.52	0.47	0.44	0.33	0.26	0.19
Chico Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Chico, CA	PM _{2.5} (2006 24-hour)	Maintenance, Moderate	100	0	0.20	0.19	0.18	0.16	0.12	0.10	0.07
Cincinnati, OH-KY	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	3.09	2.99	2.73	2.55	1.93	1.49	1.09
Cincinnati, OH-KY-IN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	3.38	3.27	2.99	2.79	2.11	1.63	1.19
Clark County; Las Vegas Planning Area, NV	PM ₁₀ (1987 24-hour)	Maintenance, Serious	100	0	2.74	2.64	2.42	2.26	1.71	1.32	0.96
Cleveland Area, OH	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	2.15	2.08	1.90	1.77	1.34	1.04	0.76
Cleveland, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	13.66	13.19	12.06	11.27	8.54	6.59	4.80
Cleveland, OH	PM _{2.5} (2012 Annual)	Maintenance, Moderate	100	0	5.47	5.28	4.83	4.51	3.42	2.64	1.92
Cleveland-Akron-Lorain, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	16.81	16.23	14.84	13.87	10.51	8.10	5.91

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
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Cleveland-Akron-Lorain, OH	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	13.66	13.19	12.06	11.27	8.54	6.59	4.80
Cochise County; Paul Spur/Douglas Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Colorado Springs Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	2.27	2.19	2.00	1.87	1.42	1.09	0.80
Columbus, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	1.32	1.27	1.16	1.09	0.82	0.64	0.46
Columbus, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.53	0.51	0.46	0.43	0.33	0.25	0.18
Cook County; Lyons Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	4.53	4.37	3.99	3.73	2.83	2.18	1.59
Cook County; Southeast Chicago, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	112.80	108.89	99.56	93.04	70.51	54.37	39.62
Coshocton County; Franklin Township, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Coso Junction, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	7.53	7.27	6.64	6.21	4.71	3.63	2.64
Cuyahoga County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01
Cuyahoga County, OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	2.15	2.08	1.90	1.77	1.34	1.04	0.76
Dallas-Fort Worth, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	12.80	12.36	11.30	10.56	8.00	6.17	4.50
Dallas-Fort Worth, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	12.80	12.36	11.30	10.56	8.00	6.17	4.50
Delaware County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	66.94	64.62	59.08	55.22	41.84	32.27	23.52
Denver Metro/North Front Range, CO	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	37.79	36.48	33.35	31.17	23.62	18.22	13.27
Denver-Boulder Area, CO	CO (1971 8-hour)	Maintenance, Serious	100	0	33.92	32.74	29.94	27.98	21.20	16.35	11.92
Denver-Boulder-Greeley-Ft Collins-Loveland, CO	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	37.79	36.48	33.35	31.17	23.62	18.22	13.27
Detroit Area, MI	CO (1971 8-hour)	Maintenance, --	100	0	6.69	6.46	5.90	5.52	4.18	3.22	2.35
Detroit, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	23.44	22.62	20.69	19.33	14.65	11.30	8.23

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Detroit, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	4.59	4.43	4.05	3.79	2.87	2.21	1.61
Detroit-Ann Arbor, MI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	23.44	22.63	20.69	19.33	14.65	11.30	8.23
Doña Ana County (Sunland Park Area), NM	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	6.65	6.42	5.87	5.48	4.16	3.20	2.34
Doña Ana County; Anthony, NM	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	6.65	6.42	5.87	5.48	4.16	3.20	2.34
Door County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.19	0.18	0.17	0.16	0.12	0.09	0.07
Douglas, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dukes County, MA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Duluth Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	6.32	6.11	5.58	5.22	3.95	3.05	2.22
East Chicago Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	108.61	104.85	95.86	89.59	67.89	52.35	38.15
East Helena Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
East Kern County Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	6.69	6.46	5.91	5.52	4.18	3.23	2.35
El Paso County, TX	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	6.68	6.45	5.89	5.51	4.17	3.22	2.35
El Paso, TX	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	6.65	6.42	5.87	5.49	4.16	3.21	2.34
Eugene-Springfield Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Evangeline Parish (Partial), LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Fairbanks Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	0.35	0.34	0.31	0.29	0.22	0.17	0.12
Fairbanks, AK	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	0.35	0.34	0.31	0.29	0.22	0.17	0.12
Flathead County; Columbia Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flathead County; Kalispell and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Flathead County; Whitefish and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fort Collins Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.47	0.45	0.42	0.39	0.29	0.23	0.17	0.17
Freehold Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Freestone and Anderson Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.36	0.35	0.32	0.30	0.23	0.18	0.13	0.13
Fremont County; Canon City Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	2.26	2.18	1.99	1.86	1.41	1.09	0.79	0.79
Fresno Area, CA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	1.79	1.73	1.58	1.48	1.12	0.86	0.63	0.63
Grants Pass Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Great Falls Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	1.96	1.89	1.73	1.61	1.22	0.94	0.69	0.69
Greater Connecticut, CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	0.88	0.85	0.77	0.72	0.55	0.42	0.31	0.31
Greater Connecticut, CT	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	0.88	0.85	0.77	0.72	0.55	0.42	0.31	0.31
Greeley Area, CO	CO (1971 8-hour)	Maintenance, --	100	0	25.17	24.29	22.21	20.76	15.73	12.13	8.84	8.84
Hancock and Brooke Counties (Part); The City of Weirton, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.14	0.13	0.12	0.12	0.09	0.07	0.05	0.05
Hancock County (Part) The City of Weirton, including Butler and Clay: Magisterial Districts, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.77	0.74	0.68	0.63	0.48	0.37	0.27	0.27
Harrisburg-Lebanon-Carlisle-York, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	2.56	2.47	2.26	2.11	1.60	1.23	0.90	0.90
Hartford-New Britain-Middletown Area, CT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.23	0.22	0.20	0.19	0.14	0.11	0.08	0.08
Hayden, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.38	0.36	0.33	0.31	0.23	0.18	0.13	0.13
Hayden, AZ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.38	0.36	0.33	0.31	0.23	0.18	0.13	0.13

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Hayden, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.38	0.36	0.33	0.31	0.23	0.18	0.13
Hillsborough County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	1.95	1.88	1.72	1.60	1.22	0.94	0.68
Hillsborough-Polk County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	1.99	1.92	1.75	1.64	1.24	0.96	0.70
Houston-Galveston-Brazoria, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	413.33	399.00	364.81	340.94	258.36	199.23	145.20
Houston-Galveston-Brazoria, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	412.81	398.49	364.35	340.51	258.03	198.98	145.01
Humphreys County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huntington, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Imperial County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	6.83	6.59	6.02	5.63	4.27	3.29	2.40
Imperial County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	6.83	6.59	6.02	5.63	4.27	3.29	2.40
Imperial County, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	2.28	2.20	2.01	1.88	1.42	1.10	0.80
Imperial County, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	2.28	2.20	2.01	1.88	1.42	1.10	0.80
Imperial County; Imperial Valley Planning Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	6.83	6.59	6.02	5.63	4.27	3.29	2.40
Indian Wells, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	7.35	7.10	6.49	6.07	4.60	3.54	2.58
Indiana, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	3.10	2.99	2.74	2.56	1.94	1.49	1.09
Indianapolis Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Indianapolis, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.05	0.05	0.05	0.04	0.03	0.02	0.02
Inyo County; Owens Valley Planning Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	2.91	2.81	2.57	2.40	1.82	1.40	1.02
Jackson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	2.56	2.47	2.26	2.11	1.60	1.23	0.90
Jackson County; Medford-Ashland (including White City), OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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Jamestown, NY	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	7.19	6.94	6.35	5.93	4.50	3.47	2.53
Jefferson County, KY	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.19	0.19	0.17	0.16	0.12	0.09	0.07
Jefferson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.81	0.78	0.71	0.67	0.51	0.39	0.28
Jefferson County; (part) Steubenville & Mingo Junction, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.14	0.13	0.12	0.12	0.09	0.07	0.05
Jefferson County; (part), OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.02	0.02	0.01	0.01	0.01	0.01	0.01
Johnstown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	1.55	1.50	1.37	1.28	0.97	0.75	0.54
Josephine County; Grants Pass, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Juneau; Mendenhall Valley Area, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kern County (Eastern Kern), CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	61.42	59.29	54.21	50.66	38.39	29.61	21.58
Kern County (Eastern Kern), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	61.42	59.29	54.21	50.66	38.39	29.61	21.58
King County; Kent, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
King County; Seattle, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Klamath County; Klamath Falls, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Klamath Falls Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Klamath Falls, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Knoxville, TN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.41	0.39	0.36	0.34	0.25	0.20	0.14
Knoxville-Sevierville-La Follette, TN	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	1.72	1.66	1.52	1.42	1.07	0.83	0.60
La Porte County; (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	5.26	5.08	4.64	4.34	3.29	2.54	1.85
Lake County (part); Lakeview, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Lake County, OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Lake County: (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	117.64	113.56	103.83	97.03	73.53	56.70	41.32
Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	117.62	113.54	103.81	97.02	73.52	56.69	41.32
Lake County; Polson, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake County; Ronan, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake Tahoe Nevada Area, NV	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Lake Tahoe North Shore Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	0.15	0.14	0.13	0.12	0.09	0.07	0.05
Lake Tahoe South Shore Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.10	0.10	0.09	0.08	0.06	0.05	0.04
Lancaster, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.52	0.50	0.46	0.43	0.33	0.25	0.18
Lancaster, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.52	0.50	0.46	0.43	0.33	0.25	0.18
Lane County (part); Oakridge, OR	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lane County; Eugene/Springfield, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Las Vegas Area, NV	CO (1971 8-hour)	Maintenance, Serious	100	0	2.74	2.65	2.42	2.26	1.71	1.32	0.96
Las Vegas, NV	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	2.74	2.64	2.42	2.26	1.71	1.32	0.96
LaSalle County; Oglesby, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.61	0.59	0.54	0.51	0.38	0.30	0.22
Laurel Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	16.50	15.93	14.57	13.61	10.32	7.96	5.80
Lebanon County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.10	0.10	0.09	0.08	0.06	0.05	0.04
Lemont, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	29.07	28.06	25.66	23.98	18.17	14.01	10.21

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Liberty-Clairton, PA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.79	0.77	0.70	0.66	0.50	0.38	0.28
Lincoln County; Libby and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Logan, UT-ID	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Longmont Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	7.97	7.69	7.03	6.57	4.98	3.84	2.80
Lorain County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Los Angeles, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	186.24	179.78	164.38	153.62	116.41	89.77	65.42
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	67.38	65.04	59.47	55.58	42.12	32.48	23.67
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	67.38	65.04	59.47	55.58	42.12	32.48	23.67
Los Angeles-South Coast Air Basin Area, CA	CO (1971 8-hour)	Maintenance, Serious	100	0	186.09	179.64	164.25	153.50	116.32	89.70	65.37
Los Angeles-South Coast Air Basin Area, CA	NO ₂ (1971 Annual)	Maintenance, --	100	0	186.10	179.64	164.25	153.51	116.32	89.70	65.37
Los Angeles-South Coast Air Basin, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	186.32	179.86	164.45	153.69	116.46	89.81	65.45
Los Angeles-South Coast Air Basin, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	186.22	179.76	164.36	153.61	116.40	89.76	65.42
Los Angeles-South Coast Air Basin, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	186.24	179.78	164.38	153.62	116.41	89.77	65.42
Louisville, KY-IN	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.69	0.67	0.61	0.57	0.43	0.33	0.24
Lowell Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.19	0.19	0.17	0.16	0.12	0.09	0.07
Lucas County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	14.65	14.14	12.93	12.09	9.16	7.06	5.15
Madison County; Granite City Township and Nameoki Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	17.31	16.71	15.28	14.28	10.82	8.34	6.08
Manchester Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Manitowoc County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.32	0.31	0.28	0.26	0.20	0.15	0.11
Maricopa and Pinal Counties; Phoenix Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	0.62	0.60	0.55	0.51	0.39	0.30	0.22
Marion County: Lawrence, Washington, and Warrant Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.09	0.09	0.08	0.07	0.06	0.04	0.03
Mariposa County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.07	0.07	0.06	0.06	0.04	0.03	0.02
Mariposa County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.07	0.07	0.06	0.06	0.04	0.03	0.02
Marshall, WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	13.84	13.36	12.22	11.42	8.65	6.67	4.86
Medford Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Memphis Area, TN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	7.37	7.11	6.50	6.08	4.61	3.55	2.59
Memphis, TN-MS-AR	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	7.39	7.13	6.52	6.09	4.62	3.56	2.60
Miami, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.38	0.36	0.33	0.31	0.23	0.18	0.13
Miami, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Miami, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.38	0.36	0.33	0.31	0.23	0.18	0.13
Milwaukee-Racine, WI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	2.29	2.21	2.02	1.89	1.43	1.10	0.80
Minneapolis-St. Paul Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	23.25	22.44	20.52	19.18	14.53	11.21	8.17
Missoula Area, MT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	1.55	1.50	1.37	1.28	0.97	0.75	0.55
Missoula county; Missoula and Vicinity, MT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.55	1.50	1.37	1.28	0.97	0.75	0.55
Modesto Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.50	0.48	0.44	0.41	0.31	0.24	0.18

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Mohave County (part); Bullhead City, AZ	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.89	0.86	0.78	0.73	0.55	0.43	0.31
Mono County; Mammoth Lake Planning Area, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.62	0.60	0.55	0.51	0.39	0.30	0.22
Mono County; Mono Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.62	0.60	0.55	0.51	0.39	0.30	0.22
Morenci, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morgan County, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morongo Band of Mission Indians	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	2.39	2.31	2.11	1.97	1.50	1.15	0.84
Morongo Band of Mission Indians, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	2.39	2.31	2.11	1.97	1.50	1.15	0.84
Morristown Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	1.43	1.38	1.26	1.18	0.89	0.69	0.50
Muscatine County; (part), IA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Muscatine, IA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Muskegon County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.20	0.19	0.18	0.17	0.13	0.10	0.07
Muskingum River, OH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Nashua Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	0.19	0.18	0.17	0.15	0.12	0.09	0.07
Nassau County, FL	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nevada County (Western part), CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.22	0.21	0.20	0.18	0.14	0.11	0.08
Nevada County (Western part), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	0.22	0.21	0.20	0.18	0.14	0.11	0.08
New Haven County, CT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
New Haven-Meriden-Waterbury Area, CT	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
New Manchester-Grant Magisterial District in Hancock County, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.13	0.12	0.11	0.10	0.08	0.06	0.04

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
New York County, NY	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.74	0.72	0.66	0.61	0.47	0.36	0.26
New York, NY-NJ-CT	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	18.98	18.32	16.75	15.65	11.86	9.15	6.67
New York-N. New Jersey-Long Island Area, NY-NJ-CT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	17.76	17.14	15.68	14.65	11.10	8.56	6.24
New York-N. New Jersey-Long Island, NY-NJ-CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	19.22	18.55	16.96	15.85	12.01	9.26	6.75
New York-Northern New Jersey-Long Island, NY-NJ-CT	Ozone (2015 8-hour)	Nonattainment, Moderate	50	0	19.22	18.55	16.96	15.85	12.01	9.26	6.75
NJ Portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	1.43	1.38	1.26	1.18	0.89	0.69	0.50
Nogales, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Northern Milwaukee/Ozaukee Shoreline, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.53	1.48	1.35	1.27	0.96	0.74	0.54
Northern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	12.22	11.79	10.78	10.08	7.64	5.89	4.29
Oakridge, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ogden Area, UT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ogden Area, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Olmsted County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.47	0.45	0.41	0.39	0.29	0.23	0.16
Olmsted; City of Rochester, MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.47	0.45	0.41	0.39	0.29	0.23	0.17
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	4.55	4.39	4.02	3.75	2.84	2.19	1.60
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	4.55	4.39	4.02	3.75	2.84	2.19	1.60
Pekin, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.24	0.23	0.21	0.20	0.15	0.12	0.08

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Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Penns Grove Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.07	0.07	0.06	0.06	0.04	0.03	0.02
Peoria County: Hollis Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.24	0.23	0.21	0.20	0.15	0.12	0.08
Peoria County: Peoria, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.29	0.28	0.25	0.24	0.18	0.14	0.10
Perth Amboy Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	1.82	1.76	1.61	1.50	1.14	0.88	0.64
Philadelphia-Camden County Area, PA-NJ	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	57.15	55.17	50.44	47.14	35.72	27.55	20.08
Philadelphia-Wilmington, PA-NJ-DE	PM _{2.5} (2006 24-hour)	Maintenance, Moderate for PA and DE; Subject to Former Subpart 1 for NJ	100	0	72.79	70.27	64.25	60.04	45.50	35.09	25.57
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	74.92	72.32	66.13	61.80	46.83	36.11	26.32
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	74.92	72.32	66.13	61.80	46.83	36.11	26.32
Phoenix Area, AZ	CO (1971 8-hour)	Maintenance, Serious	100	0	0.61	0.59	0.54	0.51	0.38	0.30	0.22
Phoenix-Mesa, AZ	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.62	0.60	0.55	0.51	0.39	0.30	0.22
Phoenix-Mesa, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.62	0.60	0.55	0.51	0.39	0.30	0.22
Pierce County; Tacoma, WA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	1.39	1.34	1.22	1.14	0.87	0.67	0.49
Pima County; Ajo Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pima County; Rillito Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.38	0.36	0.33	0.31	0.23	0.18	0.13
Pinal and Gila Counties; Payson, AZ	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pinal County (part); West Pinal, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.38	0.37	0.34	0.32	0.24	0.18	0.13
Pitkin County; Aspen, CO	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	8.00	7.72	7.06	6.60	5.00	3.86	2.81
Pittsburgh Area, PA	CO (1971 8-hour)	Maintenance, --	100	0	1.01	0.98	0.89	0.83	0.63	0.49	0.36

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Pittsburgh-Beaver Valley, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	25.62	24.73	22.61	21.13	16.01	12.35	9.00
Pittsburgh-Beaver Valley, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	24.28	23.44	21.43	20.03	15.18	11.70	8.53
Plumas County, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.34	0.32	0.30	0.28	0.21	0.16	0.12
Polk County, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.05	0.04	0.04	0.04	0.03	0.02	0.02
Portland Area: Portland Metro Service District Boundary, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.20	0.19	0.17	0.16	0.12	0.09	0.07
Power-Bannock Counties; Fort Hall Indian Reservation, ID	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Power-Bannock Counties; Portneuf Valley Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Provo Area, UT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	0.41	0.39	0.36	0.34	0.26	0.20	0.14
Provo, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	9.86	9.52	8.71	8.14	6.17	4.75	3.47
Prowers County; Lamar, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.05	0.05	0.04	0.04	0.03	0.02	0.02
Raleigh-Durham Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	7.00	6.76	6.18	5.78	4.38	3.38	2.46
Ramsey County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	18.77	18.12	16.57	15.49	11.73	9.05	6.59
Reading, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.48	0.46	0.42	0.39	0.30	0.23	0.17
Reno Area, NV	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rhineland, WI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Riverside County (Coachella Valley), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	7.66	7.40	6.77	6.32	4.79	3.69	2.69
Riverside County (Coachella Valley), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	7.66	7.40	6.77	6.32	4.79	3.69	2.69
Riverside County; Coachella Valley Planning Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	7.67	7.40	6.77	6.32	4.79	3.69	2.69

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Riverside, Los Angeles, Orange, and San Bernardino Counties; South Coast Air Basin, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	186.32	179.86	164.45	153.69	116.46	89.81	65.45
Rosebud County; Lame Deer, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.03	0.02	0.02	0.02	0.02	0.01	0.01
Routt County (part); Steamboat Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	23.60	22.78	20.83	19.46	14.75	11.37	8.29
Rusk and Panola Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.62	0.59	0.54	0.51	0.38	0.30	0.22
Sacramento Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	9.97	9.62	8.80	8.22	6.23	4.81	3.50
Sacramento County, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	90.44	87.30	79.82	74.60	56.53	43.59	31.77
Sacramento Metro, CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	91.52	88.35	80.78	75.49	57.21	44.12	32.15
Sacramento Metro, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	91.52	88.35	80.78	75.49	57.21	44.12	32.15
Sacramento, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	91.52	88.35	80.78	75.50	57.21	44.12	32.15
Salem Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Salt Lake City Area, UT	CO (1971 8-hour)	Maintenance, --	100	0	12.16	11.74	10.73	10.03	7.60	5.86	4.27
Salt Lake City, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	12.22	11.79	10.78	10.08	7.64	5.89	4.29
Salt Lake County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	12.18	11.76	10.75	10.05	7.62	5.87	4.28
Salt Lake County, UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	12.18	11.76	10.75	10.05	7.62	5.87	4.28
San Antonio, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.99	1.92	1.76	1.64	1.25	0.96	0.70
San Bernardino County (part); excluding Searles Valley Planning Area and South Coast Air Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	64.54	62.30	56.96	53.23	40.34	31.11	22.67
San Diego Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	5.41	5.22	4.77	4.46	3.38	2.61	1.90

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
San Diego County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	7.68	7.42	6.78	6.34	4.80	3.70	2.70
San Diego County, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	7.68	7.42	6.78	6.34	4.80	3.70	2.70
San Francisco Bay Area, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	95.22	91.92	84.04	78.55	59.52	45.90	33.45
San Francisco Bay Area, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	95.22	91.92	84.04	78.55	59.52	45.90	33.45
San Francisco Bay Area, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	95.22	91.92	84.05	78.55	59.52	45.90	33.45
San Francisco-Oakland-San Jose Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	93.12	89.89	82.19	76.81	58.20	44.88	32.71
San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	149.52	144.34	131.97	123.33	93.46	72.07	52.52
San Joaquin Valley, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	149.52	144.34	131.97	123.33	93.46	72.07	52.52
San Joaquin Valley, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	149.52	144.34	131.97	123.33	93.46	72.07	52.52
San Joaquin Valley, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	147.54	142.43	130.22	121.70	92.22	71.12	51.83
San Joaquin Valley, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	147.54	142.43	130.22	121.70	92.22	71.12	51.83
San Luis Obispo (Eastern part), CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	8.06	7.78	7.12	6.65	5.04	3.89	2.83
San Luis Obispo (Eastern San Luis Obispo), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	8.06	7.78	7.12	6.65	5.04	3.89	2.83
San Manuel, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.38	0.36	0.33	0.31	0.24	0.18	0.13
San Miguel County; Telluride, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.25	0.24	0.22	0.20	0.16	0.12	0.09
Sanders County (part); Thompson Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Santa Cruz County; Nogales Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Seaford, DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.13	0.13	0.12	0.11	0.08	0.06	0.05

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Seattle-Tacoma Area, WA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	1.39	1.34	1.22	1.14	0.87	0.67	0.49
Seattle-Tacoma, WA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	1.39	1.34	1.22	1.14	0.87	0.67	0.49
Sheboygan County, WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.47	0.45	0.41	0.38	0.29	0.22	0.16
Sheboygan County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.39	0.37	0.34	0.32	0.24	0.19	0.14
Sheridan County; City of Sheridan, WY	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.56	0.54	0.50	0.47	0.35	0.27	0.20
Shoshone County (part); excluding Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Shoshone County; City of Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Silver Bow County; Butte, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Somerville Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Southern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	9.86	9.52	8.71	8.14	6.17	4.75	3.47
Southwest Indiana, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.24	0.23	0.21	0.20	0.15	0.12	0.08
Spokane Area, WA	CO (1971 8-hour)	Maintenance, Serious	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Spokane County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Springfield Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.20	0.20	0.18	0.17	0.13	0.10	0.07
St. Bernard Parish, LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	58.53	56.50	51.66	48.28	36.59	28.21	20.56
St. Clair, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	1.11	1.07	0.98	0.91	0.69	0.53	0.39
St. Louis Area, MO	CO (1971 8-hour)	Maintenance, --	100	0	18.82	18.17	16.61	15.53	11.76	9.07	6.61
St. Louis, MO-IL	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	20.91	20.19	18.46	17.25	13.07	10.08	7.35
St. Louis-St. Charles-Farmington, MO-IL	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	21.87	21.11	19.30	18.04	13.67	10.54	7.68

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
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Steubenville, OH-WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.85	0.82	0.75	0.70	0.53	0.41	0.30
Steubenville-Weirton, OH-WV	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.24	0.23	0.21	0.20	0.15	0.12	0.09
Stockton Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	1.50	1.44	1.32	1.23	0.94	0.72	0.53
Sullivan County, TN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.03	0.03	0.03	0.02	0.02	0.01	0.01
Sutter Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Syracuse Area; Onondaga County, NY	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.15	0.15	0.14	0.13	0.10	0.07	0.05
Tazewell County: Groveland Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Terre Haute, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.43	0.42	0.38	0.36	0.27	0.21	0.15
Thurston County; Cities of Olympia, Tumwater, and Lacey, WA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Titus County, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.03	0.03	0.02	0.02	0.02	0.01	0.01
Toms River Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tooele County (part), UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	7.77	7.50	6.86	6.41	4.86	3.75	2.73
Trenton Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.14	0.14	0.13	0.12	0.09	0.07	0.05
Trona, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	7.35	7.10	6.49	6.06	4.60	3.54	2.58
Tucson Area, AZ	CO (1971 8-hour)	Maintenance, --	100	0	0.38	0.36	0.33	0.31	0.23	0.18	0.13
Tuolumne County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.12	1.08	0.99	0.93	0.70	0.54	0.39
Tuscan Buttes, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tuscan Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
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Uinta Basin, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	8.38	8.09	7.40	6.91	5.24	4.04	2.94
Union County; LaGrande, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Upper Green River Basin Area, WY	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	9.96	9.61	8.79	8.22	6.23	4.80	3.50
Utah County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	13.16	12.70	11.61	10.85	8.23	6.34	4.62
Vancouver Area: Clark County (part), WA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Ventura County, CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	61.40	59.27	54.19	50.64	38.38	29.59	21.57
Ventura County, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	61.40	59.27	54.19	50.64	38.38	29.59	21.57
Vermillion County; Part of Clinton Township, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.43	0.42	0.38	0.36	0.27	0.21	0.15
Vigo County, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.73	0.70	0.64	0.60	0.46	0.35	0.26
Walla Walla County; Wallula, WA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Waltham Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.19	0.18	0.17	0.16	0.12	0.09	0.07
Warren County: Conewago Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	4.84	4.67	4.27	3.99	3.03	2.33	1.70
Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	4.94	4.77	4.36	4.08	3.09	2.38	1.74
Warren, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	4.98	4.81	4.39	4.11	3.11	2.40	1.75
Washington Area, DC-MD-VA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	1.10	1.06	0.97	0.91	0.69	0.53	0.39
Washington, DC-MD-VA	Ozone (2008 8-hour)	Nonattainment (DC) Maintenance (MD, VA), Marginal	50	0	4.12	3.97	3.63	3.40	2.57	1.98	1.45
Washington, DC-MD-VA	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	4.12	3.97	3.63	3.40	2.57	1.98	1.45
Washoe County; Reno Planning Area, NV	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.04	0.04	0.03	0.03	0.02	0.02	0.01
Wayne County; (part), MI	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	4.58	4.42	4.04	3.78	2.86	2.21	1.61
West Central Pinal County, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.38	0.36	0.33	0.31	0.24	0.18	0.13
West Silver Valley, ID	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Williamson County, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.26	0.25	0.23	0.21	0.16	0.12	0.09
Winston-Salem Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.50	0.48	0.44	0.41	0.31	0.24	0.18
Worcester Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.21	0.20	0.18	0.17	0.13	0.10	0.07
Yakima Area, WA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Yakima County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Yuba City-Marysville, CA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.92	0.89	0.82	0.76	0.58	0.45	0.32
Yuma County; Yuma Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	2.27	2.20	2.01	1.88	1.42	1.10	0.80
Yuma, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	2.27	2.20	2.01	1.88	1.42	1.10	0.80

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Table A-31. Changes in Emissions from U.S. Passenger Cars and Light Trucks by Nonattainment or Maintenance Area and Alternative, Direct and Indirect Impacts--Formaldehyde, 2025

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Ada County; Boise, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.03	-0.03	-0.03	-0.03	-0.03	-0.02	-0.02	-0.02
Adams, Denver, and Boulder Counties; Denver Metropolitan Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.08	0.08	0.07	0.07	0.04	0.05	0.01	
Ajo, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Albuquerque Area, NM	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.06	-0.06	-0.05	-0.05	-0.04	-0.03	-0.03	
Allegan County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Allegheny County Air Basin: Hazelwood Monitor, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Allegheny County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.06	0.06	0.05	0.05	0.03	0.04	0.01	
Allegheny County; The Area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.00	0.01	0.00	
Allegheny, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.07	0.07	0.06	0.06	0.04	0.04	0.02	
Allentown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-0.04	-0.04	-0.04	-0.03	-0.03	-0.02	-0.02	
Allentown-Bethlehem-Easton, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-0.05	-0.05	-0.04	-0.04	-0.03	-0.03	-0.02	
Alton Township, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.14	0.14	0.12	0.12	0.08	0.08	0.05	
Amador County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Anchorage Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
Anchorage; Eagle River, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Anne Arundel County and Baltimore County, MD	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.09	-0.08	-0.08	-0.07	-0.05	-0.05	-0.04	

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
AQCR 012: Portions of Grant County, NM	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AQCR 109-Millinocket, ME	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington Counties (Minneapolis-St. Paul), MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.23	-0.22	-0.20	-0.20	-0.15	-0.13	-0.11	
AQCR 237: Brown County: Green Bay Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AQCR 238: Marathon County: Rothschild Subcity Area, Rib Mountain, Weston, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.02	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
AQCR 238: Oneida County: Rhinelander Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.01	-0.01	0.00	0.00	0.00	0.00	0.00	0.00
AQCR 239: Milwaukee County: Milwaukee Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.06	-0.06	-0.05	-0.05	-0.04	-0.03	-0.03	-0.03
AQCR 240: Dane County: Madison Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.05	-0.05	-0.04	-0.04	-0.03	-0.03	-0.03	-0.02
Archuleta County; Pagosa Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.20	0.20	0.18	0.18	0.11	0.12	0.12	0.07
Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.05	0.05	0.05	0.05	0.03	0.03	0.03	0.02
Aroostock County; City of Presque Isle, ME	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Atlanta, GA	Ozone (2008 8-hour)	Maintenance, Moderate	100	0	-0.51	-0.49	-0.45	-0.44	-0.32	-0.29	-0.29	-0.24
Atlanta, GA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.40	-0.38	-0.35	-0.34	-0.25	-0.22	-0.22	-0.19
Atlantic City Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bakersfield Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.01

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Baltimore Area, MD	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Baltimore, MD	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	-0.21	-0.20	-0.19	-0.18	-0.14	-0.12	-0.10	
Baltimore, MD	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	-0.22	-0.20	-0.19	-0.18	-0.14	-0.12	-0.11	
Baton Rouge, LA	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-0.04	-0.04	-0.04	-0.03	-0.03	-0.02	-0.02	
Beaver, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Benton County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Berrien County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01	
Billings Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00	
Billings, MT	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Birmingham, AL	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-0.04	-0.04	-0.04	-0.04	-0.03	-0.02	-0.03	
Boise-Northern Ada County Area, ID	CO (1971 8-hour)	Maintenance, --	100	0	-0.03	-0.03	-0.03	-0.03	-0.02	-0.02	-0.02	
Bonner County; The Sandpoint Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Boston Area, MA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.06	-0.05	-0.05	-0.05	-0.04	-0.03	-0.03	
Boyd County (part), KY	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.05	0.05	0.04	0.04	0.03	0.03	0.02	
Brooke; Follansbee Area, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Burlington Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Butte County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00	
Calaveras County, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Calaveras County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Campbell-Clermont Counties, KY-OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Canton-Massillon, OH	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-0.03	-0.03	-0.03	-0.03	-0.03	-0.02	-0.02	-0.01
Central New Hampshire, NH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
Central Steptoe Valley, NV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Charleston, WV	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.14	0.14	0.13	0.12	0.08	0.09	0.09	0.05
Charlotte Area, NC	CO (1971 8-hour)	Maintenance, --	100	0	-0.14	-0.14	-0.13	-0.12	-0.09	-0.08	-0.08	-0.07
Charlotte-Rock Hill, NC-SC	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-0.24	-0.22	-0.21	-0.20	-0.15	-0.13	-0.13	-0.11
Chicago, IL-IN-WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.56	-0.54	-0.50	-0.48	-0.36	-0.32	-0.32	-0.27
Chicago-Naperville, IL-IN-WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-0.62	-0.59	-0.54	-0.53	-0.39	-0.35	-0.35	-0.29
Chico (Butte County), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
Chico Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00	0.00
Chico, CA	PM _{2.5} (2006 24-hour)	Maintenance, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
Cincinnati, OH-KY	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.19	-0.18	-0.17	-0.16	-0.12	-0.11	-0.11	-0.09
Cincinnati, OH-KY-IN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-0.20	-0.19	-0.18	-0.17	-0.13	-0.11	-0.11	-0.09
Clark County; Las Vegas Planning Area, NV	PM ₁₀ (1987 24-hour)	Maintenance, Serious	100	0	-0.18	-0.17	-0.16	-0.15	-0.11	-0.10	-0.10	-0.08
Cleveland Area, OH	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.11	-0.10	-0.09	-0.09	-0.07	-0.06	-0.06	-0.05
Cleveland, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.26	-0.25	-0.23	-0.22	-0.16	-0.15	-0.15	-0.12
Cleveland, OH	PM _{2.5} (2012 Annual)	Maintenance, Moderate	100	0	-0.13	-0.13	-0.12	-0.11	-0.08	-0.07	-0.07	-0.06
Cleveland-Akron-Lorain, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-0.25	-0.23	-0.22	-0.21	-0.15	-0.14	-0.14	-0.12

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Cleveland-Akron-Lorain, OH	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-0.25	-0.24	-0.22	-0.21	-0.16	-0.14	-0.12
Cochise County; Paul Spur/Douglas Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Colorado Springs Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.04	-0.04	-0.04	-0.04	-0.03	-0.02	-0.02
Columbus, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-0.18	-0.17	-0.16	-0.15	-0.11	-0.10	-0.08
Columbus, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.17	-0.16	-0.15	-0.14	-0.10	-0.09	-0.08
Cook County; Lyons Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cook County; Southeast Chicago, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coshocton County; Franklin Township, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coso Junction, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.07	0.07	0.07	0.06	0.04	0.04	0.03
Cuyahoga County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.08	-0.08	-0.07	-0.07	-0.05	-0.05	-0.04
Cuyahoga County, OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.11	-0.10	-0.09	-0.09	-0.07	-0.06	-0.05
Dallas-Fort Worth, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-0.58	-0.55	-0.51	-0.49	-0.37	-0.32	-0.28
Dallas-Fort Worth, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.57	-0.54	-0.51	-0.49	-0.37	-0.32	-0.28
Delaware County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	-0.01
Denver Metro/North Front Range, CO	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.04	-0.03	-0.03	-0.03	-0.04	-0.01	-0.05
Denver-Boulder Area, CO	CO (1971 8-hour)	Maintenance, Serious	100	0	-0.01	-0.01	-0.01	-0.01	-0.02	0.00	-0.03
Denver-Boulder-Greeley-Ft Collins-Loveland, CO	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-0.04	-0.03	-0.03	-0.03	-0.04	-0.01	-0.05
Detroit Area, MI	CO (1971 8-hour)	Maintenance, --	100	0	-0.03	-0.03	-0.03	-0.03	-0.03	-0.01	-0.03
Detroit, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.28	-0.26	-0.25	-0.24	-0.18	-0.15	-0.14

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Detroit, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.08	0.08	0.07	0.07	0.05	0.05	0.03
Detroit-Ann Arbor, MI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-0.28	-0.27	-0.25	-0.24	-0.18	-0.15	-0.15
Doña Ana County (Sunland Park Area), NM	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Doña Ana County; Anthony, NM	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.02	0.01	0.01	0.01	0.01	0.01	0.01
Door County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Douglas, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dukes County, MA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Duluth Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
East Chicago Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
East Helena Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
East Kern County Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	0.07	0.07	0.06	0.06	0.04	0.04	0.03
El Paso County, TX	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.03	-0.03	-0.03	-0.03	-0.02	-0.02	-0.02
El Paso, TX	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Eugene-Springfield Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
Evangeline Parish (Partial), LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fairbanks Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fairbanks, AK	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flathead County; Columbia Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flathead County; Kalispell and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Flathead County; Whitefish and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fort Collins Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Freehold Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Freestone and Anderson Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Fremont County; Canon City Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
Fresno Area, CA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	-0.04	-0.04	-0.04	-0.04	-0.03	-0.02	-0.02	-0.02
Grants Pass Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Great Falls Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Greater Connecticut, CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	-0.14	-0.13	-0.12	-0.12	-0.09	-0.08	-0.06	-0.06
Greater Connecticut, CT	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	-0.14	-0.13	-0.12	-0.12	-0.09	-0.08	-0.06	-0.06
Greeley Area, CO	CO (1971 8-hour)	Maintenance, --	100	0	0.22	0.21	0.19	0.19	0.12	0.13	0.07	0.07
Hancock and Brooke Counties (Part); The City of Weirton, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hancock County (Part) The City of Weirton, including Butler and Clay: Magisterial Districts, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.07	0.07	0.06	0.06	0.04	0.04	0.02	0.02
Harrisburg-Lebanon-Carlisle-York, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-0.08	-0.07	-0.07	-0.07	-0.05	-0.04	-0.04	-0.04
Hartford-New Britain-Middletown Area, CT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.10	-0.09	-0.09	-0.08	-0.06	-0.06	-0.05	-0.05
Hayden, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hayden, AZ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Hayden, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hillsborough County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hillsborough-Polk County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Houston-Galveston-Brazoria, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-0.14	-0.13	-0.13	-0.12	-0.12	-0.06	-0.12	
Houston-Galveston-Brazoria, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.14	-0.13	-0.13	-0.12	-0.12	-0.06	-0.11	
Humphreys County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huntington, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Imperial County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	-0.01	
Imperial County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	-0.01	
Imperial County, CA	PM _{2.5} (2006 24-hour)	Nonattainment, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	
Imperial County, CA	PM _{2.5} (2012 Annual)	Nonattainment, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	
Imperial County; Imperial Valley Planning Area, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Serious	70	0	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	-0.01	
Indian Wells, CA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.07	0.07	0.06	0.06	0.04	0.04	0.02	
Indiana, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.20	0.19	0.18	0.17	0.11	0.12	0.07	
Indianapolis Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Indianapolis, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.04	-0.04	-0.04	-0.04	-0.03	-0.03	-0.02	
Inyo County; Owens Valley Planning Area, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Serious	70	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00	
Jackson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Jackson County; Medford-Ashland (including White City), OR	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Jamestown, NY	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Jefferson County, KY	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jefferson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jefferson County; (part) Steubenville & Mingo Junction, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jefferson County; (part), OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Johnstown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.13	0.12	0.11	0.11	0.07	0.08	0.05	0.05
Josephine County; Grants Pass, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Juneau; Mendenhall Valley Area, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kern County (Eastern Kern), CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	0.20	0.19	0.18	0.17	0.11	0.12	0.07	0.07
Kern County (Eastern Kern), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	0.20	0.19	0.18	0.17	0.11	0.12	0.07	0.07
King County; Kent, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
King County; Seattle, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Klamath County; Klamath Falls, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Klamath Falls Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Klamath Falls, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	-0.01	-0.01	0.00	0.00	0.00	0.00	0.00	0.00
Knoxville, TN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-0.06	-0.06	-0.05	-0.05	-0.04	-0.03	-0.03	-0.03
Knoxville-Sevierville-La Follette, TN	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-0.06	-0.06	-0.05	-0.05	-0.04	-0.03	-0.03	-0.03
La Porte County: (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake County (part); Lakeview, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Lake County, OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
Lake County: (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake County; Polson, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake County; Ronan, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake Tahoe Nevada Area, NV	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake Tahoe North Shore Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake Tahoe South Shore Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lancaster, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-0.04	-0.04	-0.03	-0.03	-0.03	-0.02	-0.02	-0.02
Lancaster, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-0.04	-0.04	-0.03	-0.03	-0.03	-0.02	-0.02	-0.02
Lane County (part); Oakridge, OR	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lane County; Eugene/Springfield, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
Las Vegas Area, NV	CO (1971 8-hour)	Maintenance, Serious	100	0	-0.18	-0.17	-0.16	-0.15	-0.15	-0.11	-0.10	-0.08
Las Vegas, NV	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.18	-0.17	-0.16	-0.15	-0.15	-0.11	-0.10	-0.08
LaSalle County; Oglesby, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Laurel Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lebanon County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Lemont, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.01	0.00

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Liberty-Clairton, PA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.01	0.00
Lincoln County; Libby and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Logan, UT-ID	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
Longmont Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.14	0.13	0.12	0.12	0.12	0.08	0.08	0.05
Lorain County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Los Angeles, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	-1.17	-1.11	-1.04	-1.00	-1.00	-0.75	-0.65	-0.57
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	0.13	0.13	0.11	0.11	0.11	0.07	0.08	0.04
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	0.13	0.13	0.11	0.11	0.11	0.07	0.08	0.04
Los Angeles-South Coast Air Basin Area, CA	CO (1971 8-hour)	Maintenance, Serious	100	0	-1.18	-1.12	-1.04	-1.00	-1.00	-0.75	-0.65	-0.57
Los Angeles-South Coast Air Basin Area, CA	NO ₂ (1971 Annual)	Maintenance, --	100	0	-1.18	-1.12	-1.04	-1.00	-1.00	-0.75	-0.65	-0.57
Los Angeles-South Coast Air Basin, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	-1.17	-1.11	-1.04	-1.00	-1.00	-0.75	-0.65	-0.57
Los Angeles-South Coast Air Basin, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	-1.17	-1.11	-1.03	-1.00	-1.00	-0.75	-0.65	-0.57
Los Angeles-South Coast Air Basin, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	-1.17	-1.11	-1.04	-1.00	-1.00	-0.75	-0.65	-0.57
Louisville, KY-IN	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.10	-0.10	-0.09	-0.09	-0.09	-0.06	-0.06	-0.05
Lowell Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
Lucas County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.03	-0.03	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01
Madison County; Granite City Township and Nameoki Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.14	0.13	0.12	0.12	0.12	0.08	0.08	0.05
Manchester Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Manitowoc County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maricopa and Pinal Counties; Phoenix Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	-0.35	-0.33	-0.31	-0.30	-0.22	-0.20	-0.16	-0.16
Marion County: Lawrence, Washington, and Warrant Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.04	-0.04	-0.03	-0.03	-0.02	-0.02	-0.02	-0.02
Mariposa County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mariposa County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Marshall, WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Medford Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00	0.00
Memphis Area, TN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.09	-0.08	-0.08	-0.07	-0.05	-0.05	-0.04	-0.04
Memphis, TN-MS-AR	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-0.11	-0.11	-0.10	-0.10	-0.07	-0.06	-0.05	-0.05
Miami, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Miami, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Miami, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Milwaukee-Racine, WI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-0.11	-0.11	-0.10	-0.10	-0.07	-0.06	-0.05	-0.05
Minneapolis-St. Paul Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.24	-0.23	-0.21	-0.20	-0.15	-0.13	-0.12	-0.12
Missoula Area, MT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00	0.00
Missoula county; Missoula and Vicinity, MT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00	0.00
Modesto Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01	-0.01

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Mohave County (part); Bullhead City, AZ	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mono County; Mammoth Lake Planning Area, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mono County; Mono Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morenci, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morgan County, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morongo Band of Mission Indians	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morongo Band of Mission Indians, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morristown Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Muscatine County; (part), IA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Muscatine, IA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Muskegon County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Muskingum River, OH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nashua Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00	0.00
Nassau County, FL	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nevada County (Western part), CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
Nevada County (Western part), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
New Haven County, CT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
New Haven-Meriden-Waterbury Area, CT	CO (1971 8-hour)	Maintenance, --	100	0	-0.08	-0.07	-0.07	-0.06	-0.05	-0.04	-0.04	-0.04
New Manchester-Grant Magisterial District in Hancock County, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
New York County, NY	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.03	-0.03	-0.03	-0.03	-0.03	-0.02	-0.02	-0.01
New York, NY-NJ-CT	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-1.14	-1.08	-1.01	-0.97	-0.97	-0.71	-0.64	-0.54
New York-N. New Jersey-Long Island Area, NY-NJ-CT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	-0.65	-0.62	-0.58	-0.56	-0.56	-0.41	-0.37	-0.30
New York-N. New Jersey-Long Island, NY-NJ-CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	-1.11	-1.06	-0.98	-0.95	-0.95	-0.70	-0.62	-0.52
New York-Northern New Jersey-Long Island, NY-NJ-CT	Ozone (2015 8-hour)	Nonattainment, Moderate	50	0	-1.11	-1.06	-0.98	-0.95	-0.95	-0.70	-0.62	-0.52
NJ Portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nogales, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Northern Milwaukee/Ozaukee Shoreline, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.01	-0.01	0.00	0.00	0.00	0.00	0.00	0.00
Northern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.13	-0.13	-0.12	-0.11	-0.11	-0.08	-0.07	-0.06
Oakridge, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ogden Area, UT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.01	-0.01	0.00	0.00	0.00	0.00	0.00	0.00
Ogden Area, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.01	-0.01	0.00	0.00	0.00	0.00	0.00	0.00
Olmsted County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Olmsted; City of Rochester, MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.01	-0.01	-0.01	0.00	0.00	0.00	0.00	0.00
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.01	0.00
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.01	0.00
Pekin, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Penns Grove Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Peoria County: Hollis Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Peoria County: Peoria, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00	0.00
Perth Amboy Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Philadelphia-Camden County Area, PA-NJ	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.07	-0.06	-0.06	-0.06	-0.04	-0.04	-0.04	-0.03
Philadelphia-Wilmington, PA-NJ-DE	PM2.5 (2006 24-hour)	Maintenance, Moderate for PA and DE; Subject to Former Subpart 1 for NJ	100	0	-0.27	-0.26	-0.24	-0.23	-0.18	-0.15	-0.15	-0.14
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-0.41	-0.39	-0.36	-0.35	-0.26	-0.22	-0.22	-0.21
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	-0.41	-0.39	-0.36	-0.35	-0.26	-0.22	-0.22	-0.21
Phoenix Area, AZ	CO (1971 8-hour)	Maintenance, Serious	100	0	-0.34	-0.32	-0.30	-0.29	-0.21	-0.19	-0.19	-0.16
Phoenix-Mesa, AZ	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-0.35	-0.34	-0.31	-0.30	-0.22	-0.20	-0.20	-0.16
Phoenix-Mesa, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.36	-0.34	-0.32	-0.31	-0.23	-0.20	-0.20	-0.17
Pierce County; Tacoma, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pima County; Ajo Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pima County; Rillito Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pinal and Gila Counties; Payson, AZ	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pinal County (part); West Pinal, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.03	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01
Pitkin County; Aspen, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.37	0.36	0.33	0.32	0.21	0.22	0.22	0.13
Pittsburgh Area, PA	CO (1971 8-hour)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Pittsburgh-Beaver Valley, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.25	0.24	0.22	0.22	0.13	0.16	0.07
Pittsburgh-Beaver Valley, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.23	0.23	0.21	0.20	0.12	0.15	0.07
Plumas County, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Polk County, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Portland Area: Portland Metro Service District Boundary, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.11	-0.11	-0.10	-0.10	-0.07	-0.06	-0.05
Power-Bannock Counties; Fort Hall Indian Reservation, ID	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Power-Bannock Counties; Portneuf Valley Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
Provo Area, UT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00
Provo, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	-0.04	-0.04	-0.03	-0.03	-0.02	-0.02	-0.02
Prowers County; Lamar, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Raleigh-Durham Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.12	-0.11	-0.10	-0.10	-0.08	-0.06	-0.06
Ramsey County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.05	0.05	0.04	0.04	0.03	0.03	0.02
Reading, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
Reno Area, NV	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.03	-0.03	-0.03	-0.02	-0.02	-0.02	-0.01
Rhineland, WI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Riverside County (Coachella Valley), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	-0.03	-0.03	-0.03	-0.03	-0.02	-0.02	-0.02
Riverside County (Coachella Valley), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	-0.03	-0.03	-0.03	-0.03	-0.02	-0.02	-0.02
Riverside County; Coachella Valley Planning Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	-0.04	-0.04	-0.04	-0.03	-0.03	-0.02	-0.02

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Riverside, Los Angeles, Orange, and San Bernardino Counties; South Coast Air Basin, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	-1.16	-1.11	-1.03	-0.99	-0.74	-0.65	-0.57
Rosebud County; Lame Deer, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Routt County (part); Steamboat Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.44	0.42	0.39	0.38	0.25	0.26	0.16
Rusk and Panola Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.04	0.04	0.04	0.04	0.02	0.03	0.01
Sacramento Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.09	-0.08	-0.08	-0.07	-0.06	-0.05	-0.04
Sacramento County, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.03	0.03	0.02	0.02	0.01	0.02	0.00
Sacramento Metro, CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	-0.06	-0.05	-0.05	-0.05	-0.05	-0.03	-0.04
Sacramento Metro, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	-0.06	-0.05	-0.05	-0.05	-0.05	-0.03	-0.04
Sacramento, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	-0.05	-0.05	-0.05	-0.04	-0.04	-0.02	-0.04
Salem Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01
Salt Lake City Area, UT	CO (1971 8-hour)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00
Salt Lake City, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	-0.14	-0.13	-0.12	-0.12	-0.09	-0.08	-0.07
Salt Lake County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.08	-0.08	-0.07	-0.07	-0.05	-0.05	-0.04
Salt Lake County, UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	-0.08	-0.08	-0.07	-0.07	-0.05	-0.05	-0.04
San Antonio, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.16	-0.15	-0.14	-0.14	-0.10	-0.09	-0.07
San Bernardino County (part); excluding Searles Valley Planning Area and South Coast Air Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.16	0.15	0.14	0.14	0.08	0.10	0.05
San Diego Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.29	-0.27	-0.25	-0.25	-0.18	-0.16	-0.13

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
San Diego County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-0.29	-0.28	-0.26	-0.25	-0.18	-0.16	-0.14
San Diego County, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	-0.29	-0.27	-0.25	-0.25	-0.18	-0.16	-0.14
San Francisco Bay Area, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	-0.50	-0.48	-0.44	-0.43	-0.32	-0.28	-0.24
San Francisco Bay Area, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.50	-0.47	-0.44	-0.43	-0.32	-0.28	-0.24
San Francisco Bay Area, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	-0.51	-0.48	-0.45	-0.43	-0.32	-0.28	-0.25
San Francisco-Oakland-San Jose Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.45	-0.43	-0.40	-0.39	-0.29	-0.25	-0.22
San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	-0.02	-0.02	-0.02	-0.01	-0.03	0.00	-0.04
San Joaquin Valley, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	-0.02	-0.02	-0.02	-0.01	-0.03	0.00	-0.04
San Joaquin Valley, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	-0.02	-0.02	-0.02	-0.01	-0.03	0.00	-0.04
San Joaquin Valley, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	-0.04	-0.04	-0.04	-0.03	-0.05	-0.01	-0.05
San Joaquin Valley, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	-0.04	-0.04	-0.04	-0.03	-0.05	-0.01	-0.05
San Luis Obispo (Eastern part), CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.09	0.09	0.08	0.08	0.05	0.05	0.03
San Luis Obispo (Eastern San Luis Obispo), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.09	0.09	0.08	0.08	0.05	0.05	0.03
San Manuel, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
San Miguel County; Telluride, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Sanders County (part); Thompson Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Santa Cruz County; Nogales Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Seaford, DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Seattle-Tacoma Area, WA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	-0.26	-0.25	-0.23	-0.22	-0.16	-0.15	-0.12
Seattle-Tacoma, WA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-0.04	-0.04	-0.04	-0.04	-0.03	-0.02	-0.02
Sheboygan County, WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00
Sheboygan County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sheridan County; City of Sheridan, WY	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Shoshone County (part); excluding Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Shoshone County; City of Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Silver Bow County; Butte, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Somerville Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Southern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.04	-0.04	-0.03	-0.03	-0.02	-0.02	-0.02
Southwest Indiana, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Spokane Area, WA	CO (1971 8-hour)	Maintenance, Serious	100	0	-0.03	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01
Spokane County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.03	-0.03	-0.02	-0.02	-0.02	-0.02	-0.01
Springfield Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
St. Bernard Parish, LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.07	0.06	0.06	0.06	0.04	0.04	0.02
St. Clair, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
St. Louis Area, MO	CO (1971 8-hour)	Maintenance, --	100	0	0.08	0.08	0.07	0.07	0.04	0.05	0.02
St. Louis, MO-IL	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.05	-0.04	-0.04	-0.04	-0.04	-0.02	-0.04
St. Louis-St. Charles-Farmington, MO-IL	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	-0.07	-0.07	-0.06	-0.06	-0.05	-0.04	-0.05

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Steubenville, OH-WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.07	0.06	0.06	0.06	0.04	0.04	0.02
Steubenville-Weirton, OH-WV	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00
Stockton Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.03	-0.03	-0.03	-0.03	-0.02	-0.02	-0.01
Sullivan County, TN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sutter Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Syracuse Area; Onondaga County, NY	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.03	-0.03	-0.03	-0.03	-0.02	-0.02	-0.02
Tazewell County: Groveland Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Terre Haute, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	-0.01	-0.01	0.00	0.00	0.00	0.00	0.00
Thurston County; Cities of Olympia, Tumwater, and Lacey, WA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00
Titus County, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Toms River Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tooele County (part), UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Trenton Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
Trona, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.07	0.07	0.07	0.06	0.04	0.04	0.03
Tucson Area, AZ	CO (1971 8-hour)	Maintenance, --	100	0	-0.09	-0.08	-0.08	-0.07	-0.05	-0.05	-0.04
Tuolumne County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
Tuscan Buttes, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tuscan Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Uinta Basin, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.10	0.09	0.08	0.08	0.05	0.06	0.03
Union County; LaGrande, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Upper Green River Basin Area, WY	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.27	0.27	0.24	0.24	0.15	0.17	0.10
Utah County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.04	-0.03	-0.03	-0.03	-0.02	-0.02	-0.02
Vancouver Area: Clark County (part), WA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.03	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01
Ventura County, CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	0.19	0.18	0.17	0.16	0.10	0.12	0.06
Ventura County, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	0.19	0.18	0.17	0.16	0.10	0.12	0.06
Vermillion County; Part of Clinton Township, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vigo County, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Walla Walla County; Wallula, WA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Waltham Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Warren County: Conewago Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Warren, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Washington Area, DC-MD-VA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.05	-0.05	-0.05	-0.05	-0.03	-0.03	-0.03
Washington, DC-MD-VA	Ozone (2008 8-hour)	Nonattainment (DC) Maintenance (MD, VA), Marginal	50	0	-0.46	-0.44	-0.41	-0.39	-0.29	-0.26	-0.22
Washington, DC-MD-VA	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	-0.46	-0.44	-0.41	-0.39	-0.29	-0.26	-0.22
Washoe County; Reno Planning Area, NV	PM10 (1987 24-hour)	Maintenance, Serious	100	0	-0.03	-0.03	-0.03	-0.02	-0.02	-0.02	-0.01

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	-0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Wayne County; (part), MI	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.10	0.10	0.09	0.09	0.06	0.06	0.06	0.04
West Central Pinal County, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
West Silver Valley, ID	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Williamson County, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Winston-Salem Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	-0.03	-0.03	-0.03	-0.03	-0.02	-0.02	-0.02	-0.02
Worcester Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	-0.02	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Yakima Area, WA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Yakima County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00
Yuba City-Marysville, CA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00	0.00
Yuma County; Yuma Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Yuma, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00	0.00

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Table A-32. Changes in Emissions from U.S. Passenger Cars and Light Trucks by Nonattainment or Maintenance Area and Alternative, Direct and Indirect Impacts--Formaldehyde, 2035

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Ada County; Boise, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Adams, Denver, and Boulder Counties; Denver Metropolitan Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.73	0.72	0.65	0.62	0.47	0.43	0.28
Ajo, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Albuquerque Area, NM	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.02	0.02	0.03	0.03	0.02	0.02	0.02
Allegan County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Allegheny County Air Basin: Hazelwood Monitor, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.03	0.03	0.03	0.03	0.02	0.02	0.01
Allegheny County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.48	0.47	0.42	0.40	0.30	0.28	0.18
Allegheny County; The Area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.03	0.03	0.03	0.03	0.02	0.02	0.01
Allegheny, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.25	0.24	0.22	0.21	0.16	0.14	0.09
Allentown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.05	0.05	0.05	0.05	0.04	0.03	0.02
Allentown-Bethlehem-Easton, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.06	0.06	0.05	0.05	0.04	0.04	0.03
Alton Township, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.43	0.42	0.38	0.36	0.27	0.24	0.16
Amador County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Anchorage Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Anchorage; Eagle River, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Anne Arundel County and Baltimore County, MD	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.09	0.09	0.09	0.08	0.06	0.06	0.04

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
AQCR 012: Portions of Grant County, NM	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AQCR 109-Millinocket, ME	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington Counties (Minneapolis-St. Paul), MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.25	0.26	0.24	0.24	0.18	0.18	0.12	
AQCR 237: Brown County: Green Bay Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AQCR 238: Marathon County: Rothschild Subcity Area, Rib Mountain, Weston, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00
AQCR 238: Oneida County: Rhinelander Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AQCR 239: Milwaukee County: Milwaukee Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.01	0.02	0.01	0.01
AQCR 240: Dane County: Madison Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01
Archuleta County; Pagosa Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.64	0.62	0.56	0.53	0.40	0.36	0.23	0.23
Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.16	0.16	0.14	0.14	0.10	0.09	0.06	0.06
Aroostock County; City of Presque Isle, ME	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Atlanta, GA	Ozone (2008 8-hour)	Maintenance, Moderate	100	0	0.26	0.27	0.26	0.26	0.20	0.21	0.15	0.15
Atlanta, GA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.23	0.23	0.23	0.22	0.17	0.18	0.13	0.13
Atlantic City Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bakersfield Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	0.24	0.23	0.21	0.20	0.15	0.14	0.09	0.09

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Baltimore Area, MD	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Baltimore, MD	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	0.24	0.24	0.23	0.22	0.17	0.17	0.17	0.12
Baltimore, MD	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	0.24	0.24	0.23	0.22	0.17	0.17	0.17	0.12
Baton Rouge, LA	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.15	0.15	0.14	0.13	0.10	0.10	0.09	0.06
Beaver, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benton County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Berrien County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01
Billings Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Billings, MT	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Birmingham, AL	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.23	0.22	0.21	0.20	0.15	0.14	0.14	0.09
Boise-Northern Ada County Area, ID	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Bonner County; The Sandpoint Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Boston Area, MA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.02	0.01
Boyd County (part), KY	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.16	0.15	0.14	0.13	0.10	0.09	0.09	0.06
Brooke; Follansbee Area, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Burlington Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Butte County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.04	0.04	0.03	0.03	0.02	0.02	0.02	0.02
Calaveras County, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Calaveras County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Campbell-Clermont Counties, KY-OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Canton-Massillon, OH	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Central New Hampshire, NH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Central Steptoe Valley, NV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Charleston, WV	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.54	0.53	0.48	0.45	0.34	0.31	0.20	0.20
Charlotte Area, NC	CO (1971 8-hour)	Maintenance, --	100	0	0.05	0.05	0.05	0.05	0.04	0.04	0.03	0.03
Charlotte-Rock Hill, NC-SC	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.18	0.18	0.18	0.17	0.13	0.13	0.10	0.10
Chicago, IL-IN-WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.29	0.30	0.30	0.30	0.23	0.24	0.17	0.17
Chicago-Naperville, IL-IN-WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.31	0.32	0.32	0.32	0.24	0.26	0.19	0.19
Chico (Butte County), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.04	0.04	0.03	0.03	0.02	0.02	0.02	0.02
Chico Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chico, CA	PM _{2.5} (2006 24-hour)	Maintenance, Moderate	100	0	0.04	0.04	0.03	0.03	0.02	0.02	0.02	0.02
Cincinnati, OH-KY	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.06	0.06	0.06	0.06	0.05	0.06	0.04	0.04
Cincinnati, OH-KY-IN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.06	0.06	0.07	0.07	0.05	0.06	0.04	0.04
Clark County; Las Vegas Planning Area, NV	PM ₁₀ (1987 24-hour)	Maintenance, Serious	100	0	0.06	0.06	0.06	0.06	0.05	0.05	0.04	0.04
Cleveland Area, OH	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.02
Cleveland, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.08	0.08	0.09	0.09	0.07	0.08	0.06	0.06
Cleveland, OH	PM _{2.5} (2012 Annual)	Maintenance, Moderate	100	0	0.04	0.04	0.04	0.04	0.03	0.04	0.03	0.03
Cleveland-Akron-Lorain, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.16	0.16	0.16	0.15	0.12	0.12	0.09	0.09

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Cleveland-Akron-Lorain, OH	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.08	0.08	0.08	0.08	0.08	0.07	0.07	0.06
Cochise County; Paul Spur/Douglas Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Colorado Springs Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.04	0.04	0.04	0.04	0.04	0.03	0.03	0.02
Columbus, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.08	0.09	0.09	0.09	0.09	0.07	0.07	0.05
Columbus, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.08	0.08	0.08	0.08	0.08	0.06	0.07	0.05
Cook County; Lyons Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.01
Cook County; Southeast Chicago, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.04	0.04	0.03	0.03	0.03	0.02	0.02	0.01
Coshocton County; Franklin Township, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coso Junction, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.23	0.22	0.20	0.19	0.19	0.14	0.13	0.08
Cuyahoga County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.02	0.03	0.03	0.03	0.03	0.02	0.02	0.02
Cuyahoga County, OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.02
Dallas-Fort Worth, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.61	0.61	0.58	0.57	0.57	0.43	0.43	0.30
Dallas-Fort Worth, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.61	0.61	0.58	0.56	0.56	0.43	0.43	0.30
Delaware County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.09	0.09	0.08	0.08	0.08	0.06	0.05	0.04
Denver Metro/North Front Range, CO	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.96	0.95	0.86	0.83	0.83	0.62	0.58	0.39
Denver-Boulder Area, CO	CO (1971 8-hour)	Maintenance, Serious	100	0	0.80	0.78	0.72	0.68	0.68	0.51	0.48	0.32
Denver-Boulder-Greeley-Ft Collins-Loveland, CO	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.96	0.95	0.86	0.83	0.83	0.62	0.58	0.39
Detroit Area, MI	CO (1971 8-hour)	Maintenance, --	100	0	0.40	0.40	0.36	0.35	0.35	0.26	0.24	0.16
Detroit, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.57	0.57	0.53	0.51	0.51	0.39	0.37	0.26

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Detroit, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.33	0.32	0.29	0.27	0.21	0.19	0.12
Detroit-Ann Arbor, MI	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.57	0.57	0.53	0.51	0.39	0.37	0.26
Doña Ana County (Sunland Park Area), NM	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.05	0.05	0.04	0.04	0.03	0.03	0.02
Doña Ana County; Anthony, NM	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.05	0.05	0.04	0.04	0.03	0.03	0.02
Door County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Douglas, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dukes County, MA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Duluth Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
East Chicago Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
East Helena Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
East Kern County Area, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Serious	70	0	0.23	0.22	0.20	0.19	0.14	0.13	0.08
El Paso County, TX	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.06	0.06	0.06	0.06	0.04	0.04	0.03
El Paso, TX	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.05	0.05	0.04	0.04	0.03	0.03	0.02
Eugene-Springfield Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.00	0.01	0.00
Evangeline Parish (Partial), LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fairbanks Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fairbanks, AK	PM _{2.5} (2006 24-hour)	Nonattainment, Serious	70	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flathead County; Columbia Falls and Vicinity, MT	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flathead County; Kalispell and Vicinity, MT	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Flathead County; Whitefish and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fort Collins Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.01	0.00
Freehold Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Freestone and Anderson Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.05	0.05	0.04	0.04	0.04	0.03	0.03	0.02
Fremont County; Canon City Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.01
Fresno Area, CA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	0.04	0.04	0.04	0.04	0.03	0.03	0.03	0.02
Grants Pass Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Great Falls Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Greater Connecticut, CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	0.05	0.06	0.06	0.06	0.06	0.04	0.05	0.04
Greater Connecticut, CT	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	0.05	0.06	0.06	0.06	0.06	0.04	0.05	0.04
Greeley Area, CO	CO (1971 8-hour)	Maintenance, --	100	0	0.77	0.75	0.67	0.64	0.64	0.48	0.43	0.28
Hancock and Brooke Counties (Part); The City of Weirton, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hancock County (Part) The City of Weirton, including Butler and Clay: Magisterial Districts, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.22	0.21	0.19	0.18	0.18	0.14	0.12	0.08
Harrisburg-Lebanon-Carlisle-York, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.10	0.10	0.09	0.09	0.09	0.07	0.07	0.05
Hartford-New Britain-Middletown Area, CT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.03	0.03	0.03	0.03	0.03	0.02	0.03	0.02
Hayden, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hayden, AZ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Hayden, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hillsborough County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Hillsborough-Polk County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Houston-Galveston-Brazoria, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	1.61	1.59	1.45	1.39	1.05	0.98	0.66	0.66
Houston-Galveston-Brazoria, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.55	1.53	1.40	1.34	1.01	0.94	0.63	0.63
Humphreys County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huntington, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Imperial County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.03	0.03	0.03	0.03	0.02	0.02	0.01	0.01
Imperial County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.03	0.03	0.03	0.03	0.02	0.02	0.01	0.01
Imperial County, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Imperial County, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Imperial County; Imperial Valley Planning Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	0.03	0.03	0.03	0.03	0.02	0.02	0.01	0.01
Indian Wells, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.23	0.22	0.20	0.19	0.14	0.13	0.08	0.08
Indiana, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.64	0.62	0.56	0.53	0.40	0.36	0.24	0.24
Indianapolis Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Indianapolis, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.03	0.03	0.03	0.03	0.02	0.02	0.01	0.01
Inyo County; Owens Valley Planning Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01
Jackson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jackson County; Medford-Ashland (including White City), OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Jamestown, NY	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.12	0.11	0.10	0.10	0.07	0.07	0.04
Jefferson County, KY	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jefferson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jefferson County; (part) Steubenville & Mingo Junction, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jefferson County; (part), OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Johnstown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.44	0.43	0.38	0.36	0.27	0.25	0.16
Josephine County; Grants Pass, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Juneau; Mendenhall Valley Area, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kern County (Eastern Kern), CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	0.65	0.63	0.57	0.54	0.40	0.36	0.24
Kern County (Eastern Kern), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	0.65	0.63	0.57	0.54	0.40	0.36	0.24
King County; Kent, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
King County; Seattle, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Klamath County; Klamath Falls, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Klamath Falls Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Klamath Falls, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Knoxville, TN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.06	0.06	0.06	0.06	0.05	0.04	0.03
Knoxville-Sevierville-La Follette, TN	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.12	0.12	0.11	0.10	0.08	0.08	0.05
La Porte County; (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Lake County (part); Lakeview, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Lake County, OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Lake County: (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.06	0.06	0.05	0.05	0.04	0.04	0.04	0.02
Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.05	0.05	0.04	0.04	0.03	0.03	0.03	0.02
Lake County; Polson, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake County; Ronan, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake Tahoe Nevada Area, NV	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake Tahoe North Shore Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake Tahoe South Shore Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lancaster, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.01
Lancaster, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.01
Lane County (part); Oakridge, OR	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lane County; Eugene/Springfield, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.01	0.00
Las Vegas Area, NV	CO (1971 8-hour)	Maintenance, Serious	100	0	0.06	0.06	0.06	0.06	0.06	0.05	0.05	0.04
Las Vegas, NV	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.06	0.06	0.06	0.06	0.06	0.05	0.05	0.04
LaSalle County; Oglesby, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
Laurel Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lebanon County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.00	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Lemont, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.07	0.07	0.06	0.06	0.06	0.04	0.04	0.03

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Liberty-Clairton, PA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.01
Lincoln County; Libby and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Logan, UT-ID	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Longmont Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.45	0.44	0.40	0.38	0.28	0.25	0.17	
Lorain County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Los Angeles, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	1.20	1.21	1.15	1.12	0.85	0.85	0.59	
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	0.69	0.68	0.61	0.58	0.44	0.40	0.26	
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	0.69	0.68	0.61	0.58	0.44	0.40	0.26	
Los Angeles-South Coast Air Basin Area, CA	CO (1971 8-hour)	Maintenance, Serious	100	0	1.19	1.20	1.14	1.11	0.85	0.84	0.59	
Los Angeles-South Coast Air Basin Area, CA	NO ₂ (1971 Annual)	Maintenance, --	100	0	1.19	1.20	1.14	1.11	0.85	0.84	0.59	
Los Angeles-South Coast Air Basin, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	1.20	1.21	1.15	1.12	0.85	0.85	0.59	
Los Angeles-South Coast Air Basin, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	1.20	1.21	1.15	1.12	0.85	0.85	0.59	
Los Angeles-South Coast Air Basin, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	1.20	1.21	1.15	1.12	0.85	0.85	0.59	
Louisville, KY-IN	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.07	0.07	0.07	0.07	0.05	0.05	0.04	
Lowell Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Lucas County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.03	0.03	0.03	0.03	0.02	0.02	0.01	
Madison County; Granite City Township and Nameoki Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.44	0.42	0.38	0.36	0.27	0.24	0.16	
Manchester Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

Notes:

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NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Manitowoc County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maricopa and Pinal Counties; Phoenix Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	0.10	0.10	0.11	0.11	0.09	0.10	0.07	
Marion County: Lawrence, Washington, and Warrant Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.04	0.04	0.03	0.03	0.03	0.03	0.02	
Mariposa County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mariposa County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Marshall, WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.05	0.05	0.04	0.04	0.03	0.03	0.02	
Medford Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Memphis Area, TN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.03	0.04	0.04	0.04	0.03	0.03	0.02	
Memphis, TN-MS-AR	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.04	0.05	0.05	0.05	0.04	0.04	0.03	
Miami, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Miami, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Miami, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Milwaukee-Racine, WI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.03	0.03	0.04	0.04	0.03	0.03	0.02	
Minneapolis-St. Paul Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.26	0.26	0.25	0.24	0.18	0.18	0.13	
Missoula Area, MT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Missoula county; Missoula and Vicinity, MT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Modesto Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.01	0.01	0.01	0.01	0.00	0.01	0.00	

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Mohave County (part); Bullhead City, AZ	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Mono County; Mammoth Lake Planning Area, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mono County; Mono Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morenci, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morgan County, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morongo Band of Mission Indians	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01
Morongo Band of Mission Indians, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01
Morristown Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Muscatine County; (part), IA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Muscatine, IA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Muskegon County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Muskingum River, OH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nashua Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nassau County, FL	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nevada County (Western part), CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nevada County (Western part), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
New Haven County, CT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
New Haven-Meriden-Waterbury Area, CT	CO (1971 8-hour)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
New Manchester-Grant Magisterial District in Hancock County, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
New York County, NY	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
New York, NY-NJ-CT	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.58	0.60	0.59	0.59	0.45	0.48	0.34	0.34
New York-N. New Jersey-Long Island Area, NY-NJ-CT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	0.24	0.25	0.26	0.26	0.20	0.22	0.16	0.16
New York-N. New Jersey-Long Island, NY-NJ-CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	0.58	0.60	0.59	0.59	0.45	0.47	0.34	0.34
New York-Northern New Jersey-Long Island, NY-NJ-CT	Ozone (2015 8-hour)	Nonattainment, Moderate	50	0	0.58	0.60	0.59	0.59	0.45	0.47	0.34	0.34
NJ Portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nogales, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Northern Milwaukee/Ozaukee Shoreline, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Northern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.06	0.07	0.06	0.06	0.05	0.05	0.04	0.04
Oakridge, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ogden Area, UT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ogden Area, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Olmsted County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Olmsted; City of Rochester, MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.03	0.03	0.02	0.02	0.02	0.01	0.01	0.01
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.03	0.03	0.02	0.02	0.02	0.01	0.01	0.01
Pekin, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00

Notes:

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Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Penns Grove Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Peoria County: Hollis Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Peoria County: Peoria, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Perth Amboy Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Philadelphia-Camden County Area, PA-NJ	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.10	0.10	0.10	0.09	0.07	0.07	0.07	0.05
Philadelphia-Wilmington, PA-NJ-DE	PM _{2.5} (2006 24-hour)	Maintenance, Moderate for PA and DE; Subject to Former Subpart 1 for NJ	100	0	0.57	0.57	0.53	0.51	0.39	0.37	0.37	0.25
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.62	0.62	0.58	0.56	0.43	0.41	0.41	0.29
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	0.62	0.62	0.58	0.56	0.43	0.41	0.41	0.29
Phoenix Area, AZ	CO (1971 8-hour)	Maintenance, Serious	100	0	0.09	0.10	0.10	0.11	0.08	0.09	0.09	0.07
Phoenix-Mesa, AZ	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.10	0.10	0.11	0.11	0.09	0.10	0.10	0.07
Phoenix-Mesa, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.10	0.11	0.11	0.11	0.09	0.10	0.10	0.08
Pierce County; Tacoma, WA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pima County; Ajo Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pima County; Rillito Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pinal and Gila Counties; Payson, AZ	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pinal County (part); West Pinal, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Pitkin County; Aspen, CO	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	1.15	1.12	1.01	0.96	0.72	0.65	0.65	0.42
Pittsburgh Area, PA	CO (1971 8-hour)	Maintenance, --	100	0	0.04	0.04	0.04	0.03	0.03	0.03	0.02	0.02

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Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Pittsburgh-Beaver Valley, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	1.40	1.37	1.24	1.18	0.88	0.80	0.53
Pittsburgh-Beaver Valley, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	1.28	1.26	1.14	1.08	0.81	0.74	0.49
Plumas County, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Polk County, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Portland Area: Portland Metro Service District Boundary, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.03	0.03	0.03	0.03	0.03	0.03	0.02
Power-Bannock Counties; Fort Hall Indian Reservation, ID	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Power-Bannock Counties; Portneuf Valley Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Provo Area, UT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Provo, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	0.03	0.04	0.03	0.03	0.02	0.02	0.02
Prowers County; Lamar, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Raleigh-Durham Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.19	0.19	0.18	0.17	0.13	0.12	0.09
Ramsey County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.15	0.15	0.14	0.13	0.10	0.09	0.06
Reading, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.05	0.05	0.05	0.05	0.04	0.03	0.02
Reno Area, NV	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Rhineland, WI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Riverside County (Coachella Valley), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	0.04	0.04	0.04	0.04	0.03	0.03	0.02
Riverside County (Coachella Valley), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	0.04	0.04	0.04	0.04	0.03	0.03	0.02
Riverside County; Coachella Valley Planning Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	0.04	0.04	0.04	0.04	0.03	0.03	0.02

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Riverside, Los Angeles, Orange, and San Bernardino Counties; South Coast Air Basin, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	1.20	1.21	1.15	1.12	0.85	0.84	0.59
Rosebud County; Lame Deer, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Routt County (part); Steamboat Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.36	1.33	1.20	1.13	0.85	0.76	0.50
Rusk and Panola Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.13	0.13	0.11	0.11	0.08	0.07	0.05
Sacramento Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.17	0.17	0.16	0.15	0.12	0.11	0.08
Sacramento County, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.48	0.47	0.43	0.41	0.31	0.28	0.19
Sacramento Metro, CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	0.52	0.52	0.47	0.45	0.34	0.32	0.21
Sacramento Metro, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	0.52	0.52	0.47	0.45	0.34	0.32	0.21
Sacramento, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.52	0.51	0.47	0.45	0.34	0.32	0.21
Salem Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.00	0.01	0.00
Salt Lake City Area, UT	CO (1971 8-hour)	Maintenance, --	100	0	0.03	0.03	0.03	0.02	0.02	0.02	0.01
Salt Lake City, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	0.06	0.07	0.07	0.07	0.05	0.05	0.04
Salt Lake County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.05	0.05	0.05	0.05	0.04	0.04	0.03
Salt Lake County, UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.05	0.05	0.05	0.05	0.04	0.04	0.03
San Antonio, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.06	0.06	0.07	0.07	0.05	0.05	0.04
San Bernardino County (part); excluding Searles Valley Planning Area and South Coast Air Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.68	0.66	0.60	0.57	0.43	0.39	0.26
San Diego Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.13	0.13	0.13	0.13	0.10	0.11	0.08

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
San Diego County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.13	0.13	0.13	0.13	0.13	0.10	0.11	0.08
San Diego County, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	0.13	0.13	0.13	0.13	0.13	0.10	0.11	0.08
San Francisco Bay Area, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.49	0.49	0.47	0.45	0.35	0.35	0.35	0.24
San Francisco Bay Area, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.49	0.49	0.47	0.45	0.35	0.35	0.35	0.24
San Francisco Bay Area, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.49	0.49	0.47	0.46	0.35	0.35	0.35	0.24
San Francisco-Oakland-San Jose Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.47	0.47	0.45	0.44	0.33	0.33	0.33	0.23
San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	1.12	1.11	1.01	0.96	0.73	0.67	0.67	0.45
San Joaquin Valley, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	1.12	1.11	1.01	0.96	0.73	0.67	0.67	0.45
San Joaquin Valley, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	1.12	1.11	1.01	0.96	0.73	0.67	0.67	0.45
San Joaquin Valley, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	1.06	1.04	0.95	0.91	0.69	0.64	0.64	0.43
San Joaquin Valley, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	1.06	1.04	0.95	0.91	0.69	0.64	0.64	0.43
San Luis Obispo (Eastern part), CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.28	0.27	0.25	0.23	0.18	0.16	0.16	0.10
San Luis Obispo (Eastern San Luis Obispo), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.28	0.27	0.25	0.23	0.18	0.16	0.16	0.10
San Manuel, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
San Miguel County; Telluride, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.01
Sanders County (part); Thompson Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Santa Cruz County; Nogales Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Seaford, DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Seattle-Tacoma Area, WA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	0.07	0.08	0.08	0.08	0.08	0.06	0.07	0.05
Seattle-Tacoma, WA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Sheboygan County, WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sheboygan County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sheridan County; City of Sheridan, WY	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.01
Shoshone County (part); excluding Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Shoshone County; City of Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Silver Bow County; Butte, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Somerville Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Southern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.03	0.04	0.03	0.03	0.03	0.02	0.02	0.02
Southwest Indiana, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.01
Spokane Area, WA	CO (1971 8-hour)	Maintenance, Serious	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Spokane County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Springfield Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
St. Bernard Parish, LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.21	0.20	0.18	0.17	0.13	0.12	0.12	0.08
St. Clair, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.03	0.03	0.02	0.02	0.02	0.02	0.01	0.01
St. Louis Area, MO	CO (1971 8-hour)	Maintenance, --	100	0	0.45	0.45	0.40	0.38	0.29	0.26	0.26	0.17
St. Louis, MO-IL	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.50	0.49	0.45	0.43	0.32	0.30	0.30	0.20
St. Louis-St. Charles-Farmington, MO-IL	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.51	0.50	0.46	0.44	0.33	0.31	0.31	0.21

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Steubenville, OH-WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.22	0.22	0.19	0.18	0.14	0.12	0.08
Steubenville-Weirton, OH-WV	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Stockton Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Sullivan County, TN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sutter Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Syracuse Area; Onondaga County, NY	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.04	0.04	0.03	0.03	0.03	0.03	0.02
Tazewell County: Groveland Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Terre Haute, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Thurston County; Cities of Olympia, Tumwater, and Lacey, WA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Titus County, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Toms River Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tooele County (part), UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Trenton Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trona, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.23	0.22	0.20	0.19	0.14	0.13	0.08
Tucson Area, AZ	CO (1971 8-hour)	Maintenance, --	100	0	0.02	0.03	0.03	0.03	0.02	0.02	0.02
Tuolumne County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tuscan Buttes, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tuscan Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Uinta Basin, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.31	0.30	0.27	0.26	0.19	0.17	0.11
Union County; LaGrande, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Upper Green River Basin Area, WY	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.86	0.83	0.75	0.71	0.53	0.48	0.31
Utah County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.04	0.04	0.04	0.04	0.03	0.03	0.02
Vancouver Area: Clark County (part), WA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Ventura County, CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	0.84	0.82	0.74	0.70	0.53	0.48	0.31
Ventura County, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	0.84	0.82	0.74	0.70	0.53	0.48	0.31
Vermillion County; Part of Clinton Township, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vigo County, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.03	0.03	0.03	0.03	0.02	0.02	0.01
Walla Walla County; Wallula, WA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Waltham Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Warren County: Conewago Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.07	0.07	0.07	0.06	0.05	0.04	0.03
Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.07	0.07	0.07	0.06	0.05	0.04	0.03
Warren, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.07	0.07	0.07	0.06	0.05	0.04	0.03
Washington Area, DC-MD-VA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.07	0.07	0.06	0.06	0.05	0.05	0.03
Washington, DC-MD-VA	Ozone (2008 8-hour)	Nonattainment (DC) Maintenance (MD, VA), Marginal	50	0	0.23	0.24	0.24	0.23	0.18	0.19	0.14
Washington, DC-MD-VA	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	0.23	0.24	0.24	0.23	0.18	0.19	0.14
Washoe County; Reno Planning Area, NV	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Wayne County; (part), MI	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.32	0.32	0.28	0.27	0.20	0.18	0.12	0.12
West Central Pinal County, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
West Silver Valley, ID	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Williamson County, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01
Winston-Salem Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01
Worcester Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00
Yakima Area, WA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Yakima County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Yuba City-Marysville, CA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.04	0.04	0.04	0.03	0.03	0.02	0.02	0.02
Yuma County; Yuma Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Yuma, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Table A-33. Changes in Emissions from U.S. Passenger Cars and Light Trucks by Nonattainment or Maintenance Area and Alternative, Direct and Indirect Impacts--Formaldehyde, 2050

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Ada County; Boise, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.13	0.12	0.12	0.12	0.12	0.09	0.07	0.06
Adams, Denver, and Boulder Counties; Denver Metropolitan Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.66	1.59	1.50	1.44	1.08	0.83	0.63	
Ajo, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Albuquerque Area, NM	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.25	0.24	0.23	0.23	0.17	0.13	0.11	
Allegan County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.05	0.05	0.04	0.04	0.03	0.02	0.02	
Allegheny County Air Basin: Hazelwood Monitor, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.08	0.07	0.07	0.07	0.05	0.04	0.03	
Allegheny County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	1.06	1.01	0.95	0.91	0.69	0.53	0.40	
Allegheny County; The Area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.05	0.05	0.05	0.05	0.03	0.03	0.02	
Allegheny, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.43	0.41	0.39	0.36	0.27	0.21	0.15	
Allentown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.26	0.25	0.24	0.23	0.17	0.13	0.11	
Allentown-Bethlehem-Easton, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.29	0.28	0.27	0.26	0.20	0.15	0.12	
Alton Township, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.70	0.67	0.62	0.58	0.44	0.34	0.24	
Amador County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.03	0.03	0.03	0.03	0.02	0.02	0.01	
Anchorage Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02	
Anchorage; Eagle River, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Anne Arundel County and Baltimore County, MD	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.50	0.47	0.46	0.45	0.34	0.25	0.21	

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
AQCR 012: Portions of Grant County, NM	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01
AQCR 109-Millinocket, ME	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.08	0.07	0.07	0.07	0.07	0.05	0.04	0.03
AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington Counties (Minneapolis-St. Paul), MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	1.36	1.31	1.26	1.23	0.93	0.69	0.58	
AQCR 237: Brown County: Green Bay Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AQCR 238: Marathon County: Rothschild Subcity Area, Rib Mountain, Weston, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.06	0.06	0.06	0.06	0.04	0.03	0.03	
AQCR 238: Oneida County: Rhinelander Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01	
AQCR 239: Milwaukee County: Milwaukee Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.22	0.21	0.21	0.20	0.15	0.11	0.10	
AQCR 240: Dane County: Madison Subcity Area, WI	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.20	0.19	0.18	0.18	0.14	0.10	0.09	
Archuleta County; Pagosa Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.03	0.99	0.92	0.87	0.65	0.51	0.36	
Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.27	0.26	0.24	0.22	0.17	0.13	0.09	
Aroostock County; City of Presque Isle, ME	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	
Atlanta, GA	Ozone (2008 8-hour)	Maintenance, Moderate	100	0	2.24	2.15	2.08	2.05	1.55	1.14	0.98	
Atlanta, GA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.81	1.73	1.68	1.65	1.25	0.92	0.79	
Atlantic City Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	
Bakersfield Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	0.52	0.50	0.47	0.45	0.34	0.26	0.19	

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Baltimore Area, MD	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Baltimore, MD	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	1.27	1.22	1.18	1.15	0.87	0.65	0.54	0.54
Baltimore, MD	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	1.28	1.23	1.18	1.16	0.87	0.65	0.54	0.54
Baton Rouge, LA	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.51	0.49	0.47	0.45	0.34	0.26	0.21	0.21
Beaver, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Benton County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Berrien County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.09	0.09	0.09	0.09	0.06	0.05	0.04	0.04
Billings Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	0.03	0.03	0.03	0.03	0.02	0.01	0.01	0.01
Billings, MT	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Birmingham, AL	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.72	0.69	0.66	0.64	0.48	0.36	0.29	0.29
Boise-Northern Ada County Area, ID	CO (1971 8-hour)	Maintenance, --	100	0	0.13	0.12	0.12	0.12	0.09	0.07	0.06	0.06
Bonner County; The Sandpoint Area, ID	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Boston Area, MA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.22	0.21	0.20	0.20	0.15	0.11	0.10	0.10
Boyd County (part), KY	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.25	0.24	0.22	0.21	0.16	0.12	0.09	0.09
Brooke; Follansbee Area, WV	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Burlington Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Butte County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.12	0.12	0.11	0.11	0.08	0.06	0.05	0.05
Calaveras County, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Calaveras County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Campbell-Clermont Counties, KY-OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Canton-Massillon, OH	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.13	0.13	0.12	0.12	0.09	0.07	0.06	0.06
Central New Hampshire, NH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.07	0.06	0.06	0.06	0.05	0.03	0.03	0.03
Central Steptoe Valley, NV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
Charleston, WV	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.97	0.93	0.86	0.82	0.62	0.48	0.35	0.35
Charlotte Area, NC	CO (1971 8-hour)	Maintenance, --	100	0	0.56	0.53	0.52	0.51	0.39	0.28	0.25	0.25
Charlotte-Rock Hill, NC-SC	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	1.19	1.14	1.10	1.08	0.82	0.61	0.51	0.51
Chicago, IL-IN-WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	2.49	2.38	2.31	2.27	1.72	1.27	1.09	1.09
Chicago-Naperville, IL-IN-WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	2.70	2.58	2.51	2.46	1.86	1.38	1.18	1.18
Chico (Butte County), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.12	0.12	0.11	0.11	0.08	0.06	0.05	0.05
Chico Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.03	0.03	0.03	0.02	0.02	0.01	0.01	0.01
Chico, CA	PM _{2.5} (2006 24-hour)	Maintenance, Moderate	100	0	0.12	0.12	0.11	0.11	0.08	0.06	0.05	0.05
Cincinnati, OH-KY	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.74	0.70	0.69	0.68	0.51	0.38	0.33	0.33
Cincinnati, OH-KY-IN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.77	0.74	0.72	0.71	0.54	0.39	0.34	0.34
Clark County; Las Vegas Planning Area, NV	PM ₁₀ (1987 24-hour)	Maintenance, Serious	100	0	0.69	0.66	0.64	0.63	0.48	0.35	0.30	0.30
Cleveland Area, OH	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.40	0.38	0.38	0.37	0.28	0.21	0.18	0.18
Cleveland, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.00	0.95	0.93	0.91	0.69	0.51	0.44	0.44
Cleveland, OH	PM _{2.5} (2012 Annual)	Maintenance, Moderate	100	0	0.50	0.48	0.47	0.46	0.35	0.26	0.22	0.22
Cleveland-Akron-Lorain, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	1.16	1.10	1.07	1.05	0.79	0.59	0.50	0.50

Notes:

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				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Cleveland-Akron-Lorain, OH	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.97	0.92	0.90	0.88	0.67	0.49	0.43
Cochise County; Paul Spur/Douglas Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Colorado Springs Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.23	0.22	0.21	0.21	0.16	0.12	0.10
Columbus, OH	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.76	0.73	0.71	0.69	0.52	0.39	0.33
Columbus, OH	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.72	0.68	0.66	0.65	0.49	0.36	0.31
Cook County; Lyons Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.07	0.07	0.07	0.06	0.05	0.04	0.03
Cook County; Southeast Chicago, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.09	0.09	0.08	0.08	0.06	0.04	0.03
Coshocton County; Franklin Township, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coso Junction, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.37	0.35	0.33	0.31	0.23	0.18	0.13
Cuyahoga County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.32	0.30	0.30	0.29	0.22	0.16	0.14
Cuyahoga County, OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.40	0.38	0.38	0.37	0.28	0.21	0.18
Dallas-Fort Worth, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	3.35	3.21	3.10	3.03	2.29	1.70	1.42
Dallas-Fort Worth, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	3.32	3.18	3.07	3.00	2.26	1.68	1.41
Delaware County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.26	0.24	0.23	0.22	0.17	0.13	0.10
Denver Metro/North Front Range, CO	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	2.60	2.49	2.36	2.28	1.71	1.30	1.02
Denver-Boulder Area, CO	CO (1971 8-hour)	Maintenance, Serious	100	0	2.11	2.02	1.91	1.84	1.39	1.05	0.82
Denver-Boulder-Greeley-Ft Collins-Loveland, CO	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	2.60	2.49	2.36	2.28	1.71	1.30	1.02
Detroit Area, MI	CO (1971 8-hour)	Maintenance, --	100	0	1.14	1.09	1.04	1.00	0.75	0.57	0.45
Detroit, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	2.34	2.24	2.15	2.09	1.58	1.18	0.97

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Detroit, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.59	0.57	0.53	0.50	0.38	0.29	0.21
Detroit-Ann Arbor, MI	PM _{2.5} (2006 24-hour)	Maintenance, Former Subpart 1	100	0	2.35	2.25	2.15	2.09	1.58	1.18	0.97
Doña Ana County (Sunland Park Area), NM	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.08	0.08	0.07	0.07	0.05	0.04	0.03
Doña Ana County; Anthony, NM	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.08	0.08	0.07	0.07	0.05	0.04	0.03
Door County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Douglas, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Dukes County, MA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Duluth Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02
East Chicago Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01
East Helena Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
East Kern County Area, CA	PM ₁₀ (1987 24-hour)	Nonattainment, Serious	70	0	0.38	0.36	0.33	0.32	0.24	0.19	0.13
El Paso County, TX	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.26	0.25	0.24	0.23	0.17	0.13	0.11
El Paso, TX	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.09	0.08	0.08	0.07	0.06	0.04	0.03
Eugene-Springfield Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	0.07	0.07	0.07	0.07	0.05	0.04	0.03
Evangeline Parish (Partial), LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fairbanks Area, AK	CO (1971 8-hour)	Maintenance, Serious	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fairbanks, AK	PM _{2.5} (2006 24-hour)	Nonattainment, Serious	70	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Flathead County; Columbia Falls and Vicinity, MT	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flathead County; Kalispell and Vicinity, MT	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Flathead County; Whitefish and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fort Collins Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.05	0.05	0.05	0.05	0.04	0.03	0.02	0.02
Freehold Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Freestone and Anderson Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.08	0.08	0.07	0.07	0.05	0.04	0.03	0.03
Fremont County; Canon City Area, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.06	0.06	0.06	0.06	0.04	0.03	0.02	0.02
Fresno Area, CA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	0.23	0.22	0.21	0.20	0.15	0.11	0.10	0.10
Grants Pass Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Great Falls Area, MT	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Greater Connecticut, CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	0.57	0.54	0.53	0.52	0.39	0.29	0.25	0.25
Greater Connecticut, CT	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	0.57	0.54	0.53	0.52	0.39	0.29	0.25	0.25
Greeley Area, CO	CO (1971 8-hour)	Maintenance, --	100	0	1.32	1.27	1.18	1.12	0.84	0.65	0.47	0.47
Hancock and Brooke Counties (Part); The City of Weirton, WV	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
Hancock County (Part) The City of Weirton, including Butler and Clay: Magisterial Districts, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.35	0.34	0.32	0.30	0.22	0.17	0.12	0.12
Harrisburg-Lebanon-Carlisle-York, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.49	0.47	0.45	0.44	0.33	0.25	0.21	0.21
Hartford-New Britain-Middletown Area, CT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.37	0.36	0.35	0.34	0.26	0.19	0.17	0.17
Hayden, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hayden, AZ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Hayden, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hillsborough County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01
Hillsborough-Polk County, FL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Houston-Galveston-Brazoria, TX	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	4.61	4.42	4.20	4.05	3.05	2.31	1.83	
Houston-Galveston-Brazoria, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	4.47	4.28	4.07	3.93	2.96	2.24	1.77	
Humphreys County; (part) TVA Johnsonville, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	
Huntington, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Imperial County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.11	0.11	0.10	0.10	0.07	0.06	0.04	
Imperial County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.11	0.11	0.10	0.10	0.07	0.06	0.04	
Imperial County, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.06	0.05	0.05	0.05	0.04	0.03	0.03	
Imperial County, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.06	0.05	0.05	0.05	0.04	0.03	0.03	
Imperial County; Imperial Valley Planning Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	0.11	0.10	0.10	0.10	0.07	0.05	0.04	
Indian Wells, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.38	0.36	0.34	0.32	0.24	0.19	0.13	
Indiana, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	1.05	1.01	0.94	0.89	0.66	0.52	0.37	
Indianapolis Area, IN	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Indianapolis, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.22	0.21	0.20	0.20	0.15	0.11	0.09	
Inyo County; Owens Valley Planning Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	0.04	0.04	0.04	0.03	0.03	0.02	0.01	
Jackson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01	
Jackson County; Medford-Ashland (including White City), OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.05	0.05	0.05	0.05	0.04	0.03	0.02	

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Jamestown, NY	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.23	0.22	0.21	0.20	0.15	0.11	0.08
Jefferson County, KY	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jefferson County, MO	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.02	0.01	0.01	0.01	0.01	0.01	0.01
Jefferson County; (part) Steubenville & Mingo Junction, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Jefferson County; (part), OH	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Johnstown, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.74	0.71	0.66	0.62	0.47	0.36	0.26
Josephine County; Grants Pass, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Juneau; Mendenhall Valley Area, AK	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kern County (Eastern Kern), CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	1.07	1.03	0.95	0.90	0.67	0.53	0.38
Kern County (Eastern Kern), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	1.07	1.03	0.95	0.90	0.67	0.53	0.38
King County; Kent, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
King County; Seattle, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Klamath County; Klamath Falls, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Klamath Falls Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Klamath Falls, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Knoxville, TN	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.36	0.34	0.33	0.32	0.24	0.18	0.15
Knoxville-Sevierville-La Follette, TN	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.49	0.47	0.45	0.44	0.33	0.25	0.20
La Porte County; (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.03	0.03	0.03	0.03	0.02	0.01	0.01
Lake County (part); Lakeview, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Lake County, OH	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.09	0.08	0.08	0.08	0.06	0.04	0.04
Lake County: (part), IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.19	0.18	0.17	0.17	0.13	0.10	0.08
Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.14	0.13	0.12	0.12	0.09	0.07	0.05
Lake County; Polson, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake County; Ronan, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake Tahoe Nevada Area, NV	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Lake Tahoe North Shore Area, CA	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake Tahoe South Shore Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Lancaster, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.19	0.18	0.17	0.17	0.13	0.10	0.08
Lancaster, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.19	0.18	0.17	0.17	0.13	0.10	0.08
Lane County (part); Oakridge, OR	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lane County; Eugene/Springfield, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.07	0.07	0.07	0.07	0.05	0.04	0.03
Las Vegas Area, NV	CO (1971 8-hour)	Maintenance, Serious	100	0	0.69	0.66	0.64	0.63	0.48	0.35	0.31
Las Vegas, NV	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.69	0.66	0.64	0.63	0.48	0.35	0.30
LaSalle County; Oglesby, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Laurel Area, MT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lebanon County, PA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.05	0.04	0.04	0.04	0.03	0.02	0.02
Lemont, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.16	0.15	0.14	0.14	0.10	0.08	0.06

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Liberty-Clairton, PA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.05	0.05	0.05	0.05	0.05	0.03	0.03	0.02
Lincoln County; Libby and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Logan, UT-ID	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.04	0.04	0.04	0.04	0.04	0.03	0.02	0.02
Longmont Area, CO	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.75	0.72	0.67	0.63	0.63	0.47	0.37	0.26
Lorain County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Los Angeles, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	6.70	6.41	6.19	6.05	6.05	4.57	3.40	2.85
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	1.39	1.34	1.25	1.20	1.20	0.90	0.69	0.52
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	1.39	1.34	1.25	1.20	1.20	0.90	0.69	0.52
Los Angeles-South Coast Air Basin Area, CA	CO (1971 8-hour)	Maintenance, Serious	100	0	6.68	6.39	6.17	6.03	6.03	4.56	3.39	2.84
Los Angeles-South Coast Air Basin Area, CA	NO ₂ (1971 Annual)	Maintenance, --	100	0	6.68	6.39	6.17	6.03	6.03	4.56	3.39	2.84
Los Angeles-South Coast Air Basin, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	6.70	6.41	6.19	6.05	6.05	4.57	3.40	2.85
Los Angeles-South Coast Air Basin, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	6.70	6.41	6.19	6.04	6.04	4.57	3.40	2.85
Los Angeles-South Coast Air Basin, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	6.70	6.41	6.19	6.05	6.05	4.57	3.40	2.85
Louisville, KY-IN	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.50	0.47	0.46	0.45	0.45	0.34	0.25	0.21
Lowell Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.01
Lucas County (part), OH	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.16	0.15	0.14	0.14	0.14	0.11	0.08	0.07
Madison County; Granite City Township and Nameoki Township, IL	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.71	0.68	0.63	0.60	0.60	0.45	0.35	0.25
Manchester Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	0.04	0.04	0.03	0.03	0.03	0.03	0.02	0.02

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Manitowoc County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Maricopa and Pinal Counties; Phoenix Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	1.33	1.27	1.24	1.22	0.92	0.68	0.59
Marion County: Lawrence, Washington, and Warrant Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.21	0.20	0.19	0.19	0.14	0.11	0.09
Mariposa County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Mariposa County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Marshall, WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.09	0.08	0.08	0.07	0.05	0.04	0.03
Medford Area, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.03	0.03	0.03	0.02	0.02	0.01	0.01
Memphis Area, TN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.35	0.34	0.33	0.32	0.24	0.18	0.15
Memphis, TN-MS-AR	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	0.46	0.44	0.42	0.42	0.32	0.23	0.20
Miami, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Miami, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Miami, AZ	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Milwaukee-Racine, WI	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.43	0.41	0.40	0.39	0.30	0.22	0.19
Minneapolis-St. Paul Area, MN	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	1.40	1.34	1.29	1.26	0.95	0.71	0.59
Missoula Area, MT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.03	0.03	0.02	0.02	0.02	0.01	0.01
Missoula county; Missoula and Vicinity, MT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.03	0.03	0.02	0.02	0.02	0.01	0.01
Modesto Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.07	0.07	0.07	0.06	0.05	0.04	0.03

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Mohave County (part); Bullhead City, AZ	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.03	0.03	0.03	0.03	0.03	0.02	0.01	0.01
Mono County; Mammoth Lake Planning Area, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Mono County; Mono Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morenci, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Morgan County, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Morongo Band of Mission Indians	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	0.03	0.03	0.02	0.02	0.02	0.02	0.01	0.01
Morongo Band of Mission Indians, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	0.03	0.03	0.02	0.02	0.02	0.02	0.01	0.01
Morristown Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Muscatine County; (part), IA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Muscatine, IA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Muskegon County, MI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.06	0.06	0.06	0.06	0.05	0.04	0.03	0.03
Muskingum River, OH	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nashua Area, NH	CO (1971 8-hour)	Maintenance, --	100	0	0.03	0.03	0.03	0.03	0.03	0.02	0.01	0.01
Nassau County, FL	SO ₂ (2010 1-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nevada County (Western part), CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.04	0.04	0.04	0.04	0.04	0.03	0.02	0.02
Nevada County (Western part), CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	0.04	0.04	0.04	0.04	0.04	0.03	0.02	0.02
New Haven County, CT	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
New Haven-Meriden-Waterbury Area, CT	CO (1971 8-hour)	Maintenance, --	100	0	0.29	0.27	0.27	0.27	0.26	0.20	0.15	0.13
New Manchester-Grant Magisterial District in Hancock County, WV	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM₁₀ = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
New York County, NY	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.12	0.12	0.11	0.11	0.08	0.06	0.05
New York, NY-NJ-CT	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	5.00	4.78	4.64	4.55	3.44	2.54	2.18
New York-N. New Jersey-Long Island Area, NY-NJ-CT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	2.61	2.50	2.43	2.39	1.81	1.33	1.15
New York-N. New Jersey-Long Island, NY-NJ-CT	Ozone (2008 8-hour)	Nonattainment, Moderate	50	0	4.92	4.70	4.56	4.48	3.39	2.50	2.14
New York-Northern New Jersey-Long Island, NY-NJ-CT	Ozone (2015 8-hour)	Nonattainment, Moderate	50	0	4.91	4.70	4.56	4.48	3.38	2.50	2.14
NJ Portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Nogales, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Northern Milwaukee/Ozaukee Shoreline, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.03	0.02	0.02	0.02	0.02	0.01	0.01
Northern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.57	0.54	0.53	0.52	0.39	0.29	0.25
Oakridge, OR	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ogden Area, UT	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Ogden Area, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Olmsted County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.03	0.03	0.03	0.02	0.02	0.01	0.01
Olmsted; City of Rochester, MN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.05	0.05	0.05	0.05	0.04	0.03	0.02
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.01
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.01
Pekin, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01

Notes:

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NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Penns Grove Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Peoria County: Hollis Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Peoria County: Peoria, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.04	0.04	0.04	0.04	0.03	0.02	0.02	0.02
Perth Amboy Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.04	0.04	0.03	0.03	0.02	0.02	0.02	0.01
Philadelphia-Camden County Area, PA-NJ	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.47	0.45	0.44	0.42	0.32	0.24	0.20	0.20
Philadelphia-Wilmington, PA-NJ-DE	PM _{2.5} (2006 24-hour)	Maintenance, Moderate for PA and DE; Subject to Former Subpart 1 for NJ	100	0	2.32	2.22	2.13	2.07	1.56	1.17	0.96	0.96
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	2.85	2.73	2.63	2.56	1.93	1.44	1.19	1.19
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	2.85	2.73	2.63	2.56	1.93	1.44	1.19	1.19
Phoenix Area, AZ	CO (1971 8-hour)	Maintenance, Serious	100	0	1.28	1.22	1.19	1.17	0.89	0.65	0.57	0.57
Phoenix-Mesa, AZ	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	1.33	1.27	1.24	1.22	0.93	0.68	0.59	0.59
Phoenix-Mesa, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.37	1.31	1.28	1.26	0.95	0.70	0.61	0.61
Pierce County; Tacoma, WA	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pima County; Ajo Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pima County; Rillito Planning Area, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01
Pinal and Gila Counties; Payson, AZ	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
Pinal County (part); West Pinal, AZ	PM ₁₀ (1987 24-hour)	Nonattainment, Moderate	100	0	0.10	0.09	0.09	0.09	0.07	0.05	0.04	0.04
Pitkin County; Aspen, CO	PM ₁₀ (1987 24-hour)	Maintenance, Moderate	100	0	1.85	1.78	1.65	1.56	1.17	0.91	0.65	0.65
Pittsburgh Area, PA	CO (1971 8-hour)	Maintenance, --	100	0	0.14	0.13	0.12	0.12	0.09	0.07	0.06	0.06

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Pittsburgh-Beaver Valley, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	2.85	2.74	2.57	2.45	1.84	1.42	1.06
Pittsburgh-Beaver Valley, PA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	2.62	2.51	2.36	2.25	1.69	1.30	0.97
Plumas County, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Polk County, TN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Portland Area: Portland Metro Service District Boundary, OR	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.42	0.40	0.39	0.39	0.29	0.22	0.19
Power-Bannock Counties; Fort Hall Indian Reservation, ID	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Power-Bannock Counties; Portneuf Valley Area, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.03	0.02	0.02	0.02	0.02	0.01	0.01
Provo Area, UT	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	0.03	0.03	0.03	0.03	0.02	0.02	0.01
Provo, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	0.20	0.19	0.19	0.18	0.14	0.10	0.09
Prowers County; Lamar, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Raleigh-Durham Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.84	0.81	0.78	0.76	0.57	0.43	0.35
Ramsey County; (part), MN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.25	0.24	0.22	0.21	0.16	0.12	0.09
Reading, PA	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.20	0.19	0.18	0.18	0.13	0.10	0.08
Reno Area, NV	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.11	0.10	0.10	0.10	0.07	0.05	0.05
Rhineland, WI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.00
Riverside County (Coachella Valley), CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	0.21	0.20	0.19	0.19	0.14	0.11	0.09
Riverside County (Coachella Valley), CA	Ozone (2015 8-hour)	Nonattainment, Severe-15	25	0	0.21	0.20	0.19	0.19	0.14	0.11	0.09
Riverside County; Coachella Valley Planning Area, CA	PM10 (1987 24-hour)	Nonattainment, Serious	70	0	0.24	0.23	0.22	0.21	0.16	0.12	0.10

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Riverside, Los Angeles, Orange, and San Bernardino Counties; South Coast Air Basin, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	6.67	6.38	6.16	6.02	4.55	3.38	2.84
Rosebud County; Lame Deer, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Routt County (part); Steamboat Springs, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	2.19	2.11	1.95	1.84	1.38	1.08	0.76
Rusk and Panola Counties, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.21	0.20	0.19	0.18	0.13	0.10	0.07
Sacramento Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.70	0.67	0.64	0.63	0.47	0.35	0.29
Sacramento County, CA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	1.17	1.12	1.06	1.02	0.76	0.58	0.45
Sacramento Metro, CA	Ozone (2008 8-hour)	Nonattainment, Severe-15	25	0	1.54	1.47	1.40	1.35	1.02	0.77	0.61
Sacramento Metro, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	1.54	1.47	1.40	1.35	1.02	0.77	0.61
Sacramento, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	1.52	1.46	1.38	1.34	1.01	0.76	0.60
Salem Area, OR	CO (1971 8-hour)	Maintenance, --	100	0	0.08	0.07	0.07	0.07	0.05	0.04	0.03
Salt Lake City Area, UT	CO (1971 8-hour)	Maintenance, --	100	0	0.10	0.09	0.09	0.09	0.07	0.05	0.04
Salt Lake City, UT	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	0.60	0.57	0.55	0.54	0.41	0.30	0.26
Salt Lake County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.38	0.36	0.35	0.34	0.26	0.19	0.16
Salt Lake County, UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.38	0.36	0.35	0.34	0.26	0.19	0.16
San Antonio, TX	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.65	0.62	0.60	0.59	0.45	0.33	0.28
San Bernardino County (part); excluding Searles Valley Planning Area and South Coast Air Basin, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	1.28	1.23	1.15	1.09	0.82	0.63	0.47
San Diego Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	1.21	1.16	1.12	1.10	0.83	0.62	0.53

Notes:

^a Nonattainment or maintenance status as of 7/9/2019. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
San Diego County, CA	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	1.21	1.16	1.13	1.11	0.84	0.62	0.53
San Diego County, CA	Ozone (2015 8-hour)	Nonattainment, Moderate	100	0	1.21	1.16	1.12	1.10	0.84	0.62	0.53
San Francisco Bay Area, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	2.79	2.67	2.58	2.52	1.90	1.42	1.19
San Francisco Bay Area, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	2.79	2.67	2.58	2.52	1.90	1.41	1.19
San Francisco Bay Area, CA	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	2.81	2.69	2.60	2.54	1.92	1.43	1.20
San Francisco-Oakland-San Jose Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	2.61	2.50	2.41	2.35	1.78	1.32	1.11
San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	2.98	2.86	2.71	2.61	1.96	1.49	1.17
San Joaquin Valley, CA	Ozone (2008 8-hour)	Nonattainment, Extreme	10	0	2.98	2.86	2.71	2.61	1.96	1.49	1.17
San Joaquin Valley, CA	Ozone (2015 8-hour)	Nonattainment, Extreme	10	0	2.98	2.86	2.71	2.61	1.96	1.49	1.17
San Joaquin Valley, CA	PM2.5 (2006 24-hour)	Nonattainment, Serious	70	0	2.88	2.76	2.62	2.52	1.90	1.44	1.13
San Joaquin Valley, CA	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	2.88	2.76	2.62	2.52	1.90	1.44	1.13
San Luis Obispo (Eastern part), CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.45	0.44	0.40	0.38	0.29	0.22	0.16
San Luis Obispo (Eastern San Luis Obispo), CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.45	0.44	0.40	0.38	0.29	0.22	0.16
San Manuel, AZ	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
San Miguel County; Telluride, CO	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.05	0.04	0.04	0.04	0.03	0.02	0.02
Sanders County (part); Thompson Falls and Vicinity, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Santa Cruz County; Nogales Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Seaford, DE	Ozone (2008 8-hour)	Nonattainment, Marginal	50	0	0.09	0.09	0.08	0.08	0.06	0.05	0.04

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 microns; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Seattle-Tacoma Area, WA	CO (1971 8-hour)	Maintenance, Moderate > 12.7ppm	100	0	0.98	0.94	0.91	0.90	0.68	0.50	0.43
Seattle-Tacoma, WA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.16	0.16	0.15	0.15	0.11	0.08	0.07
Sheboygan County, WI	Ozone (2008 8-hour)	Nonattainment, Moderate	100	0	0.04	0.04	0.04	0.03	0.03	0.02	0.02
Sheboygan County, WI	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Sheridan County; City of Sheridan, WY	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.05	0.05	0.05	0.04	0.03	0.03	0.02
Shoshone County (part); excluding Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Shoshone County; City of Pinehurst, ID	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Silver Bow County; Butte, MT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Somerville Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Southern Wasatch Front, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.20	0.19	0.19	0.18	0.14	0.10	0.09
Southwest Indiana, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.05	0.04	0.04	0.04	0.03	0.02	0.02
Spokane Area, WA	CO (1971 8-hour)	Maintenance, Serious	100	0	0.10	0.10	0.09	0.09	0.07	0.05	0.04
Spokane County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.10	0.10	0.10	0.09	0.07	0.05	0.05
Springfield Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.05	0.04	0.04	0.04	0.03	0.02	0.02
St. Bernard Parish, LA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.34	0.33	0.30	0.29	0.22	0.17	0.12
St. Clair, MI	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.06	0.05	0.05	0.05	0.04	0.03	0.02
St. Louis Area, MO	CO (1971 8-hour)	Maintenance, --	100	0	0.94	0.90	0.85	0.81	0.61	0.47	0.35
St. Louis, MO-IL	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	1.43	1.37	1.30	1.26	0.95	0.72	0.57
St. Louis-St. Charles-Farmington, MO-IL	Ozone (2008 8-hour)	Maintenance, Marginal	100	0	1.54	1.47	1.40	1.35	1.02	0.77	0.61

Notes:

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^b Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

NAAQS = National Ambient Air Quality Standard; CO = carbon monoxide; NO₂ = nitrogen dioxide; PM2.5 = particulate matter with a nominal aerodynamic diameter equal to or less than 2.5 microns; PM10 = particulate matter with a nominal aerodynamic diameter equal to or less than 10 micron; SO₂ = sulfur dioxide

Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Steubenville, OH-WV	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.37	0.36	0.33	0.31	0.24	0.18	0.13
Steubenville-Weirton, OH-WV	PM2.5 (2006 24-hour)	Maintenance, Former Subpart 1	100	0	0.05	0.04	0.04	0.04	0.03	0.02	0.02
Stockton Area, CA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.12	0.11	0.11	0.11	0.08	0.06	0.05
Sullivan County, TN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Sutter Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.02	0.02	0.02	0.01	0.01	0.01	0.01
Syracuse Area; Onondaga County, NY	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.19	0.18	0.18	0.17	0.13	0.10	0.08
Tazewell County: Groveland Twp, IL	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Terre Haute, IN	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.03	0.03	0.03	0.02	0.02	0.01	0.01
Thurston County; Cities of Olympia, Tumwater, and Lacey, WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.03	0.03	0.03	0.03	0.02	0.02	0.01
Titus County, TX	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Toms River Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tooele County (part), UT	SO ₂ (1971 24-hour/Annual)	Nonattainment, --	100	0	0.04	0.04	0.03	0.03	0.02	0.02	0.01
Trenton Area, NJ	CO (1971 8-hour)	Maintenance, --	100	0	0.03	0.03	0.03	0.03	0.02	0.01	0.01
Trona, CA	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.37	0.35	0.33	0.31	0.23	0.18	0.13
Tucson Area, AZ	CO (1971 8-hour)	Maintenance, --	100	0	0.32	0.31	0.30	0.30	0.22	0.16	0.14
Tuolumne County, CA	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01
Tuscan Buttes, CA	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tuscan Buttes, CA	Ozone (2015 8-hour)	Nonattainment, Marginal (Rural Transport)	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)							
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Uinta Basin, UT	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.51	0.49	0.45	0.43	0.32	0.25	0.18
Union County; LaGrande, OR	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Upper Green River Basin Area, WY	Ozone (2008 8-hour)	Nonattainment, Marginal	100	0	1.38	1.33	1.23	1.16	0.87	0.68	0.48
Utah County, UT	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.21	0.20	0.20	0.19	0.14	0.11	0.09
Vancouver Area: Clark County (part), WA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.10	0.10	0.09	0.09	0.07	0.05	0.04
Ventura County, CA	Ozone (2008 8-hour)	Nonattainment, Serious	50	0	1.59	1.53	1.43	1.36	1.02	0.79	0.58
Ventura County, CA	Ozone (2015 8-hour)	Nonattainment, Serious	50	0	1.59	1.53	1.43	1.36	1.02	0.79	0.58
Vermillion County; Part of Clinton Township, IN	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Vigo County, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.10	0.09	0.09	0.08	0.06	0.05	0.04
Walla Walla County; Wallula, WA	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Waltham Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Warren County: Conewago Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.12	0.12	0.11	0.10	0.08	0.06	0.04
Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.13	0.12	0.11	0.11	0.08	0.06	0.04
Warren, PA	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.13	0.12	0.11	0.11	0.08	0.06	0.04
Washington Area, DC-MD-VA	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.34	0.32	0.31	0.30	0.23	0.17	0.14
Washington, DC-MD-VA	Ozone (2008 8-hour)	Nonattainment (DC) Maintenance (MD, VA), Marginal	50	0	2.01	1.92	1.87	1.83	1.38	1.02	0.88
Washington, DC-MD-VA	Ozone (2015 8-hour)	Nonattainment, Marginal	50	0	2.01	1.92	1.87	1.83	1.39	1.02	0.88
Washoe County; Reno Planning Area, NV	PM10 (1987 24-hour)	Maintenance, Serious	100	0	0.11	0.10	0.10	0.10	0.08	0.06	0.05

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Appendix A Air Quality Nonattainment Area Results

Nonattainment or Maintenance Area	NAAQS Pollutant (Standard)	Status, Severity Classification ^a	General Conformity Threshold ^b	Emissions Changes by Alternative (tons per year)								
				Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	
Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN	SO ₂ (1971 24-hour/Annual)	Maintenance, --	100	0	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Wayne County; (part), MI	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.53	0.51	0.48	0.45	0.34	0.26	0.19	0.19
West Central Pinal County, AZ	PM2.5 (2006 24-hour)	Nonattainment, Moderate	100	0	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01
West Silver Valley, ID	PM2.5 (2012 Annual)	Nonattainment, Moderate	100	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Williamson County, IL	SO ₂ (2010 1-hour)	Nonattainment, --	100	0	0.05	0.05	0.05	0.05	0.04	0.03	0.02	0.02
Winston-Salem Area, NC	CO (1971 8-hour)	Maintenance, Moderate <= 12.7ppm	100	0	0.16	0.15	0.14	0.14	0.11	0.08	0.07	0.07
Worcester Area, MA	CO (1971 8-hour)	Maintenance, --	100	0	0.06	0.06	0.06	0.06	0.04	0.03	0.03	0.03
Yakima Area, WA	CO (1971 8-hour)	Maintenance, --	100	0	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Yakima County; (part), WA	PM10 (1987 24-hour)	Maintenance, Moderate	100	0	0.03	0.03	0.03	0.03	0.02	0.02	0.01	0.01
Yuba City-Marysville, CA	PM2.5 (2006 24-hour)	Maintenance, Moderate	100	0	0.12	0.12	0.11	0.11	0.08	0.06	0.05	0.05
Yuma County; Yuma Planning Area, AZ	PM10 (1987 24-hour)	Nonattainment, Moderate	100	0	0.05	0.05	0.05	0.05	0.04	0.03	0.02	0.02
Yuma, AZ	Ozone (2015 8-hour)	Nonattainment, Marginal	100	0	0.03	0.02	0.02	0.02	0.02	0.01	0.01	0.01

Notes:

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APPENDIX B

Sources Identified in Public Comments

B.1 Sources Identified in Scoping Comments

Table B-1 provides a list of references cited in scoping comments. NHTSA has reviewed all comments received by the agency during the public comment period and considered all appropriate sources cited in developing the Final EIS.

Table B-1. Sources Identified in Scoping Comments

Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0003	Samuel Brown	Yang, Z., and A. Bandivadekar. 2017. 2017 Global Update: Light-Duty Vehicle Greenhouse Gas and Fuel Economy Standards. The International Council on Clean Transportation. Available at: http://www.theicct.org/LDV-GHG-FE-standards-2017-global-update . Accessed: November 20, 2017.	Examines how the greenhouse gas and fuel economy standards have changed over time and how the auto industry has reacted in different regions, compares characteristics of vehicle fleets in major markets, and estimates the policy impacts of fuel economy standards on transport greenhouse gas emission levels around the world.	No	No
NHTSA-2017-0069-0015	Rachel Morrison	American Council for an Energy-Efficient Economy. 2017. Automobiles & the Environment. <i>Greener Cars.org</i> . Available at: https://greenercars.org/why-buy-green/automobiles-environment . Accessed: July 28, 2017.	Examines the various impacts automobiles have on the environment from cradle to grave.	No	No

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NHTSA-2017-0069-0015	Rachel Morrison	Society, National Geographic. Buying Guide—Car Environmental Impact—National Geographic's Green Guide. <i>National Geographic</i> . N.p., n.d. Web. 28 July 2017. Available at: https://www.nationalgeographic.com/environment/green-guide/buying-guides/car/environmental-impact/ . Accessed: November 20, 2017.	Describes the impacts cars have on the environment, including the environmental impacts production, fuel production, and transportation have on air quality.	No	No
NHTSA-2017-0069-0063	Laura Zurfluh	NJ.com. 2011. Lives lost: The New Jersey Victims of Hurricane Irene. Available at: http://www.nj.com/news/index.ssf/2011/09/nj_victims_of_hurricane_irene.html . Accessed: November 20, 2017.	Discusses the impact of Hurricane Irene on New Jersey.	No	No
NHTSA-2017-0069-0063	Laura Zurfluh	NJ.com. 2012. Remembering New Jersey's 40 Victims of Hurricane Sandy. Available at: http://www.nj.com/news/index.ssf/2012/12/hurricane_sandy_victims_from_n.html . Accessed: November 20, 2017.	Discusses the impact of Hurricane Sandy on New Jersey.	No	No
NHTSA-2017-0069-0063	Laura Zurfluh	World Resources Institute. 2012. Impacts of Hurricane Sandy and the Climate Change Connection. Available at: https://www.wri.org/sites/default/files/pdf/sandy_fact_sheet.pdf . Accessed: November 20, 2017.	Highlights the historical magnitude of Hurricane Sandy and estimated losses.	No	No
NHTSA-2017-0069-0063	Laura Zurfluh	Climate Central. 2012. Hurricane Irene Ranked Most Costly Category 1 Storm. Available at: http://www.climatecentral.org/news/hurricane-irene-ranked-most-costly-category-1-storm . Accessed: November 20, 2017.	Discusses the economic impact of Hurricane Irene.	No	No

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NHTSA-2017-0069-0063	Laura Zurfluh	U.S. Department of Commerce. 2013. Economic Impact of Hurricane Sandy. Available at: https://www.esa.gov/sites/default/files/sandyfinal101713.pdf . Accessed: November 20, 2017.	Discusses the economic impacts of Hurricane Sandy.	No	No
NHTSA-2017-0069-0063	Laura Zurfluh	Natural Resources Defense Council. 2017. U.S. Clean Energy Jobs Surpass Fossil Fuel Employment. Available at: https://www.nrdc.org/experts/lara-ettenson/us-clean-energy-jobs-surpass-fossil-fuel-employment . Accessed: November 20, 2017.	Reports on jobs numbers in the clean energy industry.	No	No
NHTSA-2017-0069-0063	Laura Zurfluh	Citizens' Climate Lobby. 2017. Carbon Fee and Dividend Policy and FAQs. Available at: https://citizensclimatelobby.org/carbon-fee-and-dividend/ . Accessed: November 20, 2017.	Provides full text version of Citizens' Climate Lobby's preferred climate solution, known as Carbon Fee and Dividend.	No	No
NHTSA-2017-0069-0071	Jennifer Michael	Stewart, J. 2017. Mazda's Crafty New Engine Makes More Miles from Less Fuel. <i>Wired</i> . Available at: https://www.wired.com/story/mazda-injection-compression-skyactivx-engine/ . Accessed: November 20, 2017.	Reports on Mazda's new engine technology.	No	No
NHTSA-2017-0069-0074	Esther Babson, American Security Project	American Security Project. 2011. ASP Welcomes the Corporate Average Fuel Economy (CAFE) Standards Announced Today. Available at: https://www.americansecurityproject.org/asp-welcomes-the-corporate-average-fuel-economy-cafe-standards-announced-today/ . Accessed: November 20, 2017.	Discusses support for CAFE standards announced in 2011.	No	No

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NHTSA-2017-0069-0077	Gina Oliver, American Chemistry Council	American Chemistry Council. 2014. Plastics and Polymer Composites for Automotive Markets Technology Roadmap. Available at: http://plastics-car.com/Tomorrows-Automobiles/Plastics-and-Polymer-Composites-Technology-Roadmap . Accessed: November 20, 2017.	Synthesizes the findings from a 2001 report and sets a path forward for the plastics and polymer composites industry and automotive industry through 2030.	No	No
NHTSA-2017-0069-0077	Gina Oliver, American Chemistry Council	American Chemistry Council. 2016. Plastics and Polymer Composites in Light Vehicles Report, 2016. Available at: https://plastics-car.com/lightvehiclereport . Accessed: November 20, 2017.	Presents the latest results of an assessment of the chemistry and other materials that make up light vehicles, a major end-use customer for American chemistry.	No	No
NHTSA-2017-0069-0077	Gina Oliver, American Chemistry Council	Brecher, A., J. Brewer, S. Summers, and S. Patel. Characterizing and Enhancing the Safety of Future Plastic and Composite Intensive Vehicles (PCIVs). Volpe National Transportation Systems Center National Highway Traffic Safety Administration. Available at: http://www-nrd.nhtsa.dot.gov/pdf/esv/esv21/09-0316.pdf . Accessed: November 20, 2017.	Concentrates on safety-related research issues, assuming that other potential barriers to deployment of plastics and composites intensive vehicles (e.g., economic viability, manufacturability, sustainability) will be resolved.	No	No

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NHTSA-2017-0069-0077	Gina Oliver, American Chemistry Council	National Highway Traffic Safety Administration. 2007. A Safety Roadmap for Future Plastics and Composites Intensive Vehicles (DOT HS 810 863). Available at: https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/810863.pdf . Accessed: November 20, 2017.	Summarizes the approach, activities, and results of a study to evaluate the potential safety benefits of plastics and composites intensive vehicles to enable their deployment by 2020.	No	No
NHTSA-2017-0069-0077	Gina Oliver, American Chemistry Council	National Highway Traffic Safety Administration. 2012. Investigation of Opportunities for Lightweight Vehicles Using Advanced Plastics and Composites (DOT HS 811 692). Available at: https://www.nhtsa.gov/DOT/NHTSA/NVS/Crashworthiness/Plastics/811692.pdf . Accessed: November 20, 2017.	Reviews the literature on the characteristics and mechanics of plastics and composites, the applicability of advanced plastics and composites to automotive components, and the capabilities and limitations of simulations to composite analysis.	No	No
NHTSA-2017-0069-0077	Gina Oliver, American Chemistry Council	National Highway Traffic Safety Administration. 2017. High Performance Computing Studies (DOT HS 812 404). Available at: https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/812404_computingstudiesreport.pdf . Accessed: November 20, 2017.	Investigates thermoplastic carbon fiber reinforced materials for vehicle sideframe structures, created requirements, and defined assessment strategies.	No	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0083	Marguerite Moran	Cooper, M. 2017. Pocketbook Savings, Macroeconomic Growth and Other Public Benefits of Fuel Economy Standards: Benefit-Cost Analysis of Four Decades of Rules Shows They have Delivered Trillions of Dollars of Economic Value to Consumer and the Nation. <i>ConsumerFed</i> . Available at: http://consumerfed.org/wp-content/uploads/2017/07/benefits-of-fuel-economy-standards.pdf . Accessed: November 20, 2017.	Analyzes the 40-year history of fuel economy standards and looks at the vehicles to which manufacturers have had a chance to make fuel economy improvements and those being totally revised in 2017, comparing the price and fuel efficiency of these vehicles with their 2011 counterparts (the year before the new standards were implemented).	No	No
NHTSA-2017-0069-0083	Marguerite Moran	Levy, J., J. J. Buonocore, and K. von Stackelberg. 2010. Evaluation of the Public Health Impacts of Traffic Congestion: A Health Risk Assessment. <i>NCBI</i> . Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2987789/ . Accessed: November 20, 2017.	Evaluates the public health impacts of ambient exposures to fine particulate matter (PM2.5) concentrations associated with a business-as-usual scenario of predicted traffic congestion.	Yes	No
NHTSA-2017-0069-0085	Marguerite Moran	Consumers Union. 2017. Nearly 9 in 10 Americans Want Automakers to Raise Fuel Efficiency, According to Latest Consumers Union Survey. Available at: http://consumersunion.org/news/2017-fuel-economy-survey/ . Accessed: November 20, 2017.	Describes the results of a national survey of Americans on whether or not they want increased fuel efficiency.	No	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0086	Michael Geller, Manufacturers of Emission Controls Association	Automotive News. 2015. Delphi, GM Ready Advanced Cylinder Deactivation. Available at: http://www.autonews.com/article/20150915/OEM04/150919888/delphi-gm-ready-%20advanced-cylinder-deactivation . Accessed: November 20, 2017.	Discusses the development of a new technology, Dynamic Skip Fire, which increases fuel efficiency for General Motors vehicles.	No	No
NHTSA-2017-0069-0086	Michael Geller, Manufacturers of Emission Controls Association	Martec. 2016. Diesel Engine Technology and the Midterm Evaluation: An Analysis of Compliance Costs and Benefits. Available at: https://www.martecgroup.com/wp-content/uploads/2016/05/The-Martec-Group-White-Paper-Diesel-Engine-Technology-and-the-Midterm-Evaluation-Summer-2016.pdf . Accessed: November 20, 2017.	Provides updated cost/benefit analysis information for light-duty diesel cars and trucks during the 2016 Technical Assessment Report process.	No	No
NHTSA-2017-0069-0086	Michael Geller, Manufacturers of Emission Controls Association	California Air Resources Board. 2017. California's Advanced Clean Cars Midterm Review. Available at: https://www.arb.ca.gov/msprog/acc/mtr/acc_mtr_final_report_full.pdf . Accessed: November 20, 2017.	Discusses California Air Resources Board staff reviews specific to the California standards: the zero-emissions vehicle regulation, the 1-milligram-per-mile particulate matter emission standard, and a general review of the format of the greenhouse gas standards.	No	No

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NHTSA-2017-0069-0087	Christopher Miller, Advanced Engine Systems Institute	World Weather Attribution. 2017. European Heat, June 2017. Available at: https://www.climatecentral.org/analyses/europe-heat-june-2017/ . Accessed: November 20, 2017. (Link no longer active).	Provides an overview of weather in 2017 in Europe and assesses if human-caused climate change played a role in the weather experienced in June 2017.	No	No
NHTSA-2017-0069-0091	Robert Atkinson, VNG.co LLC	California Air Resources Board. 2015. Proposed Re-Adoption of the California Low Carbon Fuel Standard. Available at: http://www.arb.ca.gov/regact/2015/lcfs2015/lcfs15isor.pdf . (Link no longer active).	Unable to locate article.	No	No
NHTSA-2017-0069-0091	Robert Atkinson, VNG.co LLC	U.S. Environmental Protection Agency. 2017. Overview of Greenhouse Gases. Available at: https://www.epa.gov/ghgemissions/overview-greenhouse-gases#methane . Accessed: November 20, 2017.	Provides an overview of greenhouse gases and methane's involvement.	No	No
NHTSA-2017-0069-0091	Robert Atkinson, VNG.co LLC	U.S. Bureau of Economic Analysis. 2017. Auto and Truck Seasonal Adjustment. Available at: https://www.bea.gov/national/xls/gap_hist.xlsx . Accessed: November 20, 2017.	Provides unit data on unadjusted and seasonally adjusted auto and truck sales.	No	No
NHTSA-2017-0069-0091	Robert Atkinson, VNG.co LLC	Kent, S. 2017. Shell Sees Future of 'Lower Forever' Oil Prices. Available at: http://www.marketwatch.com/story/shell-sees-future-of-lower-forever-oil-prices-2017-07-27 . Accessed: November 20, 2017.	Discusses Shell Oil's prediction of permanently decreased oil prices and future declining demand.	No	No

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NHTSA-2017-0069-0091	Robert Atkinson, VNG.co LLC	Oak Ridge National Laboratory. 2016. Transportation Energy Databook 2016. Available at: http://cta.ornl.gov/data/index.shtml . Accessed: November 20, 2017.	Provides a compendium of data on transportation with an emphasis on energy.	No	No
NHTSA-2017-0069-0091	Robert Atkinson, VNG.co LLC	Couch, P. 2016. RNG in California: More Than You Think. Fleets and Fuels. Available at: http://www.fleetsandfuels.com/fuels/cng/2016/04/rng-in-california-more-than-you-think/ . Accessed: November 20, 2017. (Link no longer active).	Discusses the amount of renewable natural gas in use in California.	No	No
NHTSA-2017-0069-0091	Robert Atkinson, VNG.co LLC	American Gas Foundation. 2011. The Potential for Renewable Gas: Biogas Derived from Biomass Feedstocks and Upgraded to Pipeline Quality. Available at: http://www.gasfoundation.org/researchstudies/agf-renewable-gas-assessment-report-110901.pdf . Accessed: November 20, 2017.	Analyzes the overall impact of renewable gas on annual energy production, reduction in new carbon dioxide emissions, and job creation.	No	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0091	Robert Atkinson, VNG.co LLC	Gladstein, Neandross and Associates. 2016. Game-Changer: Next Generation Heavy Duty Natural Gas Engines Fueled By Renewable Natural Gas. Available at: http://ngvgamechanger.com/pdfs/GameChanger_FullReport.pdf . Accessed: November 20, 2017.	Explores the need—and approaches—to start deploying zero-emission and near-zero-emission heavy-duty vehicle technologies immediately on a wide-scale basis in the United States.	No	No
NHTSA-2017-0069-0091	Robert Atkinson, VNG.co LLC	National Petroleum Council. 2012. Renewable Natural Gas for Transportation: An Overview of the Feedstock Capacity, Economics, and GHG Emission Reduction Benefits of RNG as a Low-Carbon Fuel. Available at: http://www.npc.org/reports/FTF_Topic_papers/22-RNG.pdf . Accessed: November 20, 2017.	Assesses the potential for renewable natural gas as a transportation fuel in terms of feedstock capacity, cost estimates, and lifecycle greenhouse gas emission reductions.	No	No
NHTSA-2017-0069-0091	Robert Atkinson, VNG.co LLC	Krauss, C. 2008. Surge in Natural Gas Has Utah Driving Cheaply. <i>The New York Times</i> . Available at: http://www.nytimes.com/2008/08/30/business/30gascars.html . Accessed: November 20, 2017.	Discusses the progress of Utah in obtaining consumer interest in the idea of running cars on clean natural gas.	No	No
NHTSA-2017-0069-0091	Robert Atkinson, VNG.co LLC	Raju, A. 2016. Renewable Natural Gas: Challenges and Opportunities. UC Riverside, Center for Renewable Natural Gas. Available at: http://www.cert.ucr.edu/research/rng/RNG_white_paper.pdf . Accessed: November 20, 2017.	Provides an overview of the potential for, benefits of, and barriers to production of renewable natural gas in significant quantities.	No	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0091	Robert Atkinson, VNG.co LLC	BCG Perspectives. 2014. A Realistic View of CNG Vehicles in the United States. Available at: https://www.bcgperspectives.com/content/articles/energy_environment_automotive_realistic_view_cng_vehicles_us/ . Accessed: November 20, 2017.	Examines the benefits and shortcomings of the emerging market for natural-gas vehicles in the U.S.	No	No
NHTSA-2017-0069-0091	Robert Atkinson, VNG.co LLC	Ford Motor Company. 2015. Fuel Efficiency, Alternative Fuels and Sustainability Earn Ford F-150 2016 Green Truck of the Year Award. Available at: https://media.ford.com/content/fordmedia/fna/us/en/news/2015/11/19/ford-f-150-earns-2016-green-truck-of-the-year-award.html . Accessed: November 20, 2017.	Provides a press release announcing Ford F-150 winning Green truck of the year award.	No	No
NHTSA-2017-0069-0091	Robert Atkinson, VNG.co LLC	Marks, J. F. 2012. CNG Vehicle Conversion Business is Booming for Oklahoma Company. <i>The Oklahoman</i> . Available at: http://newsok.com/article/3658028 . Accessed: November 20, 2017.	Reports on compressed natural gas conversion business success in Oklahoma.	No	No
NHTSA-2017-0069-0091	Robert Atkinson, VNG.co LLC	Truett, R. 2015. Ram Will Expand Lineup CNG-Powered Trucks. Available at: http://www.autonews.com/article/20150304/OEM05/150309913/ram-will-expand-lineup-of-cng-powered-trucks . Accessed: November 20, 2017.	Announces Fiat Chrysler's expansion of availability of compressed natural gas on its heavy-duty Dodge Ram pickups.	No	No
NHTSA-2017-0069-0091	Robert Atkinson, VNG.co LLC	Turkus, B. 2014. 2015 Chevy Silverado HD Gets CNG Option. Available at: http://www.autoblog.com/2014/02/06/2015-chevrolet-silverado-hd-cng-official/ . Accessed: November 20, 2017.	Announces Chevrolet Silverado new bi-fuel conversion kit for 2500 HD and 3500 HD pickups.	No	No

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NHTSA-2017-0069-0091	Robert Atkinson, VNG.co LLC	U.S. Environmental Protection Agency. 2012. Certification and Compliance for Vehicles and Engines. Available at: https://www3.epa.gov/otaq/consumer/fuels/altfuels/altfuels.htm . Accessed: November 20, 2017.	Provides compliance information to the vehicle and engine industry about certifying vehicles and engines through EPA, including paying fees and reporting to ensure compliance.	No	No
NHTSA-2017-0069-0091	Robert Atkinson, VNG.co LLC	Westport Innovations. 2015. Methane: The Performance Fuel. Available at: https://cleancities.energy.gov/files/u/news_events/document/document_url/128/Brad_Douville___Westport_NGVTf_.pdf . Accessed: November 20, 2017.	Discusses the innovation of natural-gas vehicles and natural gas' comparative benefits to other vehicles types and the policy conditions necessary for its market success.	No	No
NHTSA-2017-0069-0091	Robert Atkinson, VNG.co LLC	U.S. Environmental Protection Agency. 2014. Renewable Fuel Pathways II Final Rule to Identify Additional Fuel Pathways under Renewable Fuel Standard Program Documents. Available at: https://www.epa.gov/renewable-fuel-standard-program/renewable-fuel-pathways-ii-final-rule-identify-additional-fuel . Accessed: November 20, 2017.	Describes EPA's evaluation of biofuels derived from biogas fuel pathways under the Renewable Fuel Standard Program.	No	No

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NHTSA-2017-0069-0094	Constance Voget	Natural Resources Defense Council. 2017. Supplying Ingenuity II: U.S. Suppliers of Key Clean, Fuel-Efficient Vehicle Technologies. Available at: https://www.nrdc.org/sites/default/files/supplying-ingenuity-clean-vehicle-technologies-report.pdf . Accessed: November 20, 2017.	Discusses the U.S. automotive industry's success in creating jobs, profitability, pollution reduction, energy security, and costs saved to consumers. Gives policy recommendations for continuing this success.	No	No
NHTSA-2017-0069-0096	Brad Couch	National Renewable Energy Laboratory. 2016. Emissions Associated with Electric Vehicle Charging: Impact of Electricity Generation Mix, Charging Infrastructure Availability, and Vehicle Type. Available at: https://www.afdc.energy.gov/uploads/publication/ev_emissions_impact.pdf . Accessed: November 20, 2017.	Analyzes anticipated emissions resulting from both battery electric and plug-in hybrid electric vehicles for four charging scenarios and five electricity grid profiles.	No	No
NHTSA-2017-0069-0098	Philip Bender	National Aeronautics and Space Administration. 2017. Climate Change: How Do We Know? Available at: https://climate.nasa.gov/evidence/ . Accessed: November 20, 2017.	Provides various sources of evidence to prove existence of climate change.	No	No
NHTSA-2017-0069-0104	Shannon Baker-Branstetter, Consumers Union	Bowman, C., and A. Husain. 2004. Forecasting Commodity Prices: Futures Versus Judgment. IMF Working Paper. Available at: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.165.6075&rep=rep1&type=pdf . Accessed: November 20, 2017. (Link no longer active).	Assesses the performance of three types of commodity price forecasts—those based on judgment, those relying exclusively on historical price data, and those incorporating prices implied by commodity futures.	No	No

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NHTSA-2017-0069-0104	Shannon Baker-Branstetter, Consumers Union	Baum, A. 2017. What's Driving the U.S. Auto Industry's Financial Performance? Ceres. Available at: https://www.ceres.org/sites/default/files/reports/2017-08/Ceres%20Analysis%208_10.pdf . Accessed: November 20, 2017.	Examines the auto industry's financial performance, including the effect of the CAFE standards.	No	No
NHTSA-2017-0069-0104	Shannon Baker-Branstetter, Consumers Union	BlueGreen Alliance. 2017. Improving Vehicle Fuel Economy to Create 570,000 U.S. Jobs. Available at: https://www.bluegreenalliance.org/the-latest/improving-vehicle-fuel-economy-to-create-570000-u-s-jobs/ . Accessed: November 20, 2017.	Provides a projection of the number of jobs created by 2030 because of the vehicle fuel economy standards proposed under the Obama administration.	No	No
NHTSA-2017-0069-0104	Shannon Baker-Branstetter, Consumers Union	Board of Governors of the Federal Reserve System. 2016. Report on the Economic Well-Being of U.S. Households in 2015. Available at: https://www.federalreserve.gov/2015-report-economic-well-being-us-households-201605.pdf . Accessed: November 20, 2017.	Provides the results of a survey on the overall wellbeing of individual consumers, income and savings behaviors, economic preparedness, access to banking and credit, housing decisions, car purchases and auto lending, education and human capital, student loans, and retirement planning.	No	No

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NHTSA-2017-0069-0104	Shannon Baker-Branstetter, Consumers Union	Ceres. 2011. More Jobs Per Gallon: How Strong Fuel Economy/GHG Standards will Fuel American Jobs. Available at: https://www.ceres.org/resources/reports/more-jobs-gallon-how-strong-fuel-economyghg-standards-will-fuel-american-jobs . Accessed: November 20, 2017.	Discusses the economic impacts of strengthening fuel economy and greenhouse gas emission standards for passenger vehicles sold in the United States.	No	No
NHTSA-2017-0069-0104	Shannon Baker-Branstetter, Consumers Union	Ceres. 2016. Affordability of Vehicles Under the Current National Program in 2022–2025 for Detroit Three Automakers. Available at: https://www.ceres.org/resources/reports/affordability-vehicles-under-current-national-program-2022-2025-detroit-three . Accessed: November 20, 2017.	Addresses the affordability and effects of 2022–2025 fuel economy regulations.	No	No
NHTSA-2017-0069-0104	Shannon Baker-Branstetter, Consumers Union	Consumers Union. 2016. Investigation of Relationship between Fuel Economy and Owner Satisfaction. Available at: http://consumersunion.org/wp-content/uploads/2016/06/CU-MPG-Satisfaction-report-final.pdf . Accessed: November 20, 2017.	Examines the association between several vehicle attributes—fuel economy, acceleration, horsepower, reliability, and price—and owner satisfaction. Finds a strong positive correlation between owner satisfaction and fuel economy.	No	No
NHTSA-2017-0069-0104	Shannon Baker-Branstetter, Consumers Union	Consumers Union. 2017. More Mileage for Your Money: Fuel Economy Increases While Vehicle Prices Remain Stable. Available at: http://consumersunion.org/wp-content/uploads/2017/03/Synapse-CU-Affordability-Report-3-15-corrected-1.pdf . Accessed: November 20, 2017.	Discusses how car buyers are paying less for higher fuel economy in their vehicles.	No	No

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NHTSA-2017-0069-0104	Shannon Baker-Branstetter, Consumers Union	General Motors. 2017. SEC Filings. Available at: http://www.gm.com/investors/sec-filings.html . Accessed: November 20, 2017.	Provides all of filings submitted by General Motors to the U.S. Securities and Exchange Commission.	No	No
NHTSA-2017-0069-0104	Shannon Baker-Branstetter, Consumers Union	Greene, D., and J. Welch. 2016. The Impact of Increased Fuel Economy for Light-Duty Vehicles on the Distribution of Income in the United States. Prepared for Oak Ridge National Laboratory. Available at: http://bakercenter.utk.edu/wp-content/uploads/2016/09/Equity-Impacts-of-Fuel-Economy-Report_final.pdf . Accessed: November 20, 2017.	Analyzes the effects of increased fuel economy on households' expenditures on fuel and vehicles over the past four decades and quantifies the impacts by income quintile.	No	No
NHTSA-2017-0069-0104	Shannon Baker-Branstetter, Consumers Union	International Council on Clean Transportation. 2017. Consumer Benefits of Increased Efficiency in 2025–2030 Light-Duty Vehicles in the U.S. Available at: http://www.theicct.org/sites/default/files/publications/US-LDV-Efficiency-Consumer-Benefits_ICCT_Briefing_21062017_vF.pdf . Accessed: November 20, 2017.	Outlines the consumer benefits of increases in the efficiency of light-duty vehicles to meet the 2025 U.S. standards, as well as a hypothetical extension of the standards through 2030.	No	No
NHTSA-2017-0069-0104	Shannon Baker-Branstetter, Consumers Union	Parkin, R., R. Wilk, E. Hirsh, and A. Singh. 2017. 2017 Automotive Trends. <i>Strategy&</i> . Available at: https://www.strategyand.pwc.com/trend/2017-automotive-industry-trends . Accessed: November 20, 2017.	Reports that total shareholder return and return on invested capital are both declining in the global auto industry and gives policy and technology recommendations.	No	No

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NHTSA-2017-0069-0104	Shannon Baker-Branstetter, Consumers Union	Snyder, J. 2017. Crossovers and SUVs Fatten Profit Margins. Automotive News. Available at: http://www.autonews.com/article/20170724/RETAIL01/170729911/crossovers-suvs-fatten-profit-margins . Accessed: November 20, 2017.	Demonstrates that the average transaction price for SUVs and crossovers is higher than other vehicle types.	No	No
NHTSA-2017-0069-0104	Consumers Union, Shannon Baker-Branstetter	Strohm, M. 2017. September Car Loans Remain Surprisingly Cheap. Available at: http://www.interest.com/car-loans/news/car-loans/ . Accessed: November 20, 2017.	Provides overview of car loan rates from different lenders for the month of October.	No	No
NHTSA-2017-0069-0104	Shannon Baker-Branstetter, Consumers Union	U.S. Bureau of Labor Statistics. 2017. Consumer Expenditure Survey. Available at: https://www.bls.gov/cex/ . Accessed: November 20, 2017.	Provides data on expenditures, income, and demographic characteristics of consumers in the United States.	No	No
NHTSA-2017-0069-0104	Shannon Baker-Branstetter, Consumers Union	Union of Concerned Scientists. 2007. Creating Jobs, Saving Energy, and Protecting the Environment. Available at: http://www.ucsusa.org/sites/default/files/legacy/assets/documents/clean_vehicles/fueleconomyjobs.pdf . Accessed: November 20, 2017.	Analyzes the potential benefits of investing in efficient cars and trucks.	No	No
NHTSA-2017-0069-0104	Shannon Baker-Branstetter, Consumers Union	Stone, D., and M. Hamilton. 2017. Fuel Economy Improvements are Projected to Reduce Future Gasoline Use. Available at: https://www.eia.gov/todayinenergy/detail.php?id=31332 . Accessed: November 20, 2017.	Projects a decline in light-duty vehicle energy use between 2018 and 2040 as improvements in fuel economy more than offset increases in light-duty vehicle miles.	No	No

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NHTSA-2017-0069-0104	Shannon Baker-Branstetter, Consumers Union	U.S. Energy Information Administration. 2012. Annual Energy Outlook 2012. Available at: https://www.eia.gov/outlooks/aeo/pdf/0383(2012).pdf . Accessed: November 20, 2017.	Presents long-term projections of energy supply, demand, and prices through 2035, based on results from Energy Information Administration's National Energy Modeling System.	No	No
NHTSA-2017-0069-0104	Shannon Baker-Branstetter, Consumers Union	U.S. Energy Information Administration. 2017. Annual Energy Outlook 2017. Available at: https://www.eia.gov/outlooks/aeo/pdf/0383(2017).pdf . Accessed: November 20, 2017.	Provides modeled projections of domestic energy markets through 2050, and includes cases with different assumptions of macroeconomic growth, world oil prices, technological progress, and energy policies.	No	No
NHTSA-2017-0069-0104	Shannon Baker-Branstetter, Consumers Union	U.S. Energy Information Administration. 2017. Oil: Crude and Petroleum Products Explained. Available at: https://www.eia.gov/energyexplained/index.cfm?page=oil_home#tab3 . Accessed: November 20, 2017.	Provides preliminary data for the United States for 2016 on oil and petroleum product supply, consumption, pricing, and more.	No	No
NHTSA-2017-0069-0104	Shannon Baker-Branstetter, Consumers Union	U.S. Energy Information Administration. 2017. Petroleum & Other Liquids. Available at: https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=EMM_EPMR_PTE_NUS_DPG&f=M . Accessed: November 20, 2017.	Provides U.S. retail price of all formulations of gasoline from 1992 to 2016.	No	No

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NHTSA-2017-0069-0104	Shannon Baker-Branstetter, Consumers Union	U.S. Energy Information Administration. 2017. Short-Term Energy Outlook. Available at: https://www.eia.gov/outlooks/steo/report/us_oil.cfm . Accessed: November 20, 2017.	Provides graphs, tables, and bullet points related to petroleum prices, production, consumption, and reserves.	No	No
NHTSA-2017-0069-0104	Shannon Baker-Branstetter, Consumers Union	Edmunds. 2017. Used Vehicle Market Report. Available at: https://dealers.edmunds.com/static/assets/articles/2017_Feb_Used_Market_Report.pdf . Accessed: November 20, 2017.	Reports on sales in used vehicle market and their increase. Shows that the volume of certified pre-owned sales is high, and the price of used vehicles is at its highest in recorded history.	No	No
NHTSA-2017-0069-0104	Shannon Baker-Branstetter, Consumers Union	Ford Motor Company. 2017. New Ford F-150: Most Advanced F-150 Powertrain Lineup Ever Enables Best-In-Class Payload, Towing and Gas Mileage. Available at: https://media.ford.com/content/fordmedia/fna/ca/en/news/2017/08/09/new-ford-f150-most-advanced-powertrain-lineup-ever.pdf . Accessed: November 20, 2017.	Announces the various benefits and technical specifications of the newest Ford F-150 vehicle model.	No	No
NHTSA-2017-0069-0104	Shannon Baker-Branstetter, Consumers Union	Infiniti USA. 2016. Infiniti VC-Turbo Engine. Available at: https://www.infinitiusa.com/now/technology/vc-turbo-engine . Accessed: November 20, 2017.	Announces INFINITI's new Variable Compression Turbo (VC-Turbo) as the world's first production-ready variable compression ratio engine.	No	No

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NHTSA-2017-0069-0104	Shannon Baker-Branstetter, Consumers Union	International Council on Clean Transportation. 2016. Lightweighting Technology Development and Trends in U.S. Passenger Vehicles. Available at: http://www.theicct.org/sites/default/files/publications/ICCT_PVtech_lightweighting_wp2016-25.pdf . Accessed: November 20, 2017.	Analyzes lightweighting (mass reduction) developments and trends in passenger vehicle design and technology.	No	No
NHTSA-2017-0069-0104	Shannon Baker-Branstetter, Consumers Union	International Council on Clean Transportation. 2017. Efficiency Technology And Cost Assessment For U.S. 2025–2030 Light-Duty Vehicles. Available at: http://theicct.org/sites/default/files/publications/US-LDV-tech-potential_ICCT_white-paper_22032017.pdf . Accessed: November 20, 2017.	Analyzes emerging vehicle efficiency technologies, their ability to achieve lower emission levels, and their costs in the 2025–2030 period.	No	No
NHTSA-2017-0069-0104	Shannon Baker-Branstetter, Consumers Union	Mazda. 2017. Mazda Announces Long-Term Vision for Technology Development, Sustainable Zoom-Zoom 2030. Available at: https://insidemazda.mazdausa.com/press-release/mazda-announces-long-term-vision-technology-development-sustainable-zoom-zoom-2030/ . Accessed: November 20, 2017.	Announces Mazda's "Sustainable Zoom-Zoom 2030" long-term vision for technology development, which includes the release of their next-generation engine SKYACTIV-X, the world's first commercial gasoline engine to use compression ignition.	No	No
NHTSA-2017-0069-0104	Shannon Baker-Branstetter, Consumers Union	The National Academies. 2015. Cost, Effectiveness, and Deployment of Fuel Economy Technologies for Light-Duty Vehicles. Available at: https://www.nap.edu/read/21744/chapter/1 . Accessed: November 20, 2017.	Reports on the cost, effectiveness, and deployment by the end of the next decade of new light-duty vehicles.	No	No

Table B-1. Sources Identified in Scoping Comments

Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0104	Shannon Baker-Branstetter, Consumers Union	U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy. 2014. Lightweight Materials for Cars and Trucks. Available at: https://energy.gov/eere/vehicles/lightweight-materials-cars-and-trucks . Accessed: November 20, 2017.	Provides information on the U.S. Department of Energy Vehicle Technologies Office's work on lightweight materials for cars and trucks.	No	No
NHTSA-2017-0069-0104	Shannon Baker-Branstetter, Consumers Union	Nadel, S. 2012. The Rebound Effect: Large or Small? American Council for an Energy-Efficient Economy. Available at: http://aceee.org/sites/default/files/pdf/white-paper/rebound-large-and-small.pdf . Accessed: November 20, 2017.	Summarizes what is known and unknown about how large the rebound effect (i.e., people increase their use of products and facilities as a result of reduction in operating costs, thereby reducing energy savings achieved) is.	No	No
NHTSA-2017-0069-0104	Shannon Baker-Branstetter, Consumers Union	Pew Environment Group. 2011. History of Fuel Economy. Available at: http://www.pewtrusts.org/~media/assets/2011/04/history-of-fuel-economy-clean-energy-factsheet.pdf . Accessed: November 20, 2017.	Provides a historical review of fuel economy from the 1970s to 2010.	No	No
NHTSA-2017-0069-0104	Shannon Baker-Branstetter, Consumers Union	Union of Concerned Scientists. 2015. Tomorrow's Clean Vehicles, Today. Available at: http://www.ucsusa.org/sites/default/files/attach/2015/05/tomorrows-vehicles-today.pdf . Accessed: November 20, 2017.	Discusses how investments in fuel-efficiency technologies are allowing manufacturers to meet the regulatory targets for the 2012–2025 passenger vehicle fuel economy and global warming emissions standards.	No	No

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NHTSA-2017-0069-0104	Shannon Baker-Branstetter, Consumers Union	National Highway Traffic Safety Administration. 2016. Relationships between Fatality Risk, Mass, and Footprint in Model Years 2003–2010 Passenger Cars and LTVs. No. NHTSA-2016-0068. Available at: https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/2016-prelim-relationship-fatalityrisk-mass-footprint-2003-10.pdf . Accessed: November 20, 2017.	Details National Highway Traffic Safety Administration research supporting the development of potential safety impacts from the CAFE standards rulemaking.	No	No
NHTSA-2017-0069-0107	Alexander Bond, Edison Electric Institute	Electric Power Research Institute and Natural Resources Defense Council. 2015. Environmental Assessment of a Full Electric Transportation Portfolio. Available at: https://www.epri.com/#/pages/product/3002006881/ . Accessed: November 20, 2017.	Provides in-depth analysis of the environmental impact of electrifying a range of vehicles, including U.S. light-duty and medium-duty transportation and industrial equipment such as forklifts.	No	No
NHTSA-2017-0069-0109	Jill Leukhardt	Baltimore City Health Department. 2017. Asthma. Available at: https://health.baltimorecity.gov/health-resources-topic/asthma . Accessed: November 20, 2017.	Provides overview of incidence rate of asthma in Baltimore, as well as medical advice for individuals with asthma.	No	No
NHTSA-2017-0069-0109	Jill Leukhardt	BlueGreen Alliance. 2011. Gearing Up: Smart Standards Create Good Jobs Building Cleaner Cars. Available at: https://www.bluegreenalliance.org/resources/gearingup/ . Accessed: November 20, 2017.	Analyzes the macroeconomic impacts of the proposed standards with particular attention to the net gain in U.S. employment.	No	No

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NHTSA-2017-0069-0109	Jill Leukhardt	Union of Concerned Scientists. 2017. A Brief History of U.S. Fuel Efficiency Standards. Available at: http://www.ucsusa.org/clean-vehicles/fuel-efficiency/fuel-economy-basics.html#.WaBWS_iGNdg . Accessed: November 20, 2017.	Provides an overview of U.S. Fuel Economy Standards, their implementation, projected future, and anticipated benefits.	No	No
NHTSA-2017-0069-0111	Curt Wells, Aluminum Association	Ducker Worldwide. 2017. Aluminum Content in North American Light Vehicles 2016 to 2028. Available at: http://www.drivealuminum.org/wp-content/uploads/2017/10/Ducker-Public_FINAL.pdf . Accessed: November 20, 2017.	Details how over the next decade, automakers will continue to increase the adoption of high-strength, low-weight aluminum in new car and truck construction.	No	No
NHTSA-2017-0069-0111	Curt Wells, Aluminum Association	Ford Motor Company. 2016. Ford Recycles Enough Aluminum to Build 30,000 F-150 Bodies Every Month. Available at: https://media.ford.com/content/fordmedia/fna/us/en/news/2016/04/22/ford-recycles-enough-aluminum-to-build-30000-f150-bodies.html . Accessed: November 20, 2017.	Reports on the environmental benefits of Ford's aluminum-alloy scrap used to produce the vehicle bodies of the Ford F-150.	No	No
NHTSA-2017-0069-0111	Curt Wells, Aluminum Association	Isidore, C. 2017. Aluminum Advantages: Safety. <i>DriveAluminum</i> . Available at: http://www.drivealuminum.org/aluminum-advantages/safety/ . Accessed: November 20, 2017.	Discusses the safety advantages of aluminum-based motor vehicles, specifically impact absorption, and ability to support a larger, yet lightweight, frame.	No	No
NHTSA-2017-0069-0111	Curt Wells, Aluminum Association	John Dunham and Associates. 2017. The Potential Economic Benefits from Substituting Aluminum for Steel In Automotive Bodies.	Unable to locate article.	No	No

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NHTSA-2017-0069-0111	Curt Wells, Aluminum Association	Magna/Ford. 2015. MMLV Life Cycle Assessment. Available at: https://www.researchgate.net/publication/282939668_MMLV_Life_Cycle_Assessment . Accessed: November 20, 2017.	Communicates the results of a life cycle assessment study which compares the lightweight auto parts of the new multi-material lightweight Mach-I (1.0l I3) vehicle design to the conventional auto parts of the baseline 2013 Ford Fusion (1.6l I4).	No	No
NHTSA-2017-0069-0111	Curt Wells, Aluminum Association	Oak Ridge National Laboratory. 2014. Life Cycle Assessment – Energy and CO2 Impacts of Aluminum Intensive Vehicles. Available at: http://drivealuminum.wpengine.com/wp-content/uploads/2016/06/OakRidgeLCAFinal_2014.pdf . Accessed: November 20, 2017.	Finds that reducing vehicle weight with aluminum can result in the lowest total vehicle life cycle environmental impact—cradle-to-grave—as compared to both traditional and advanced steels.	No	No
NHTSA-2017-0069-0111	Curt Wells, Aluminum Association	Ricardo Incorporated. 2008. Impact of Vehicle Weight Reduction on Fuel Economy for Various Vehicle Architectures. Available at: https://www.h3xed.com/blogmedia/Ricardo_FE_MPG_Study.pdf . Accessed: November 20, 2017.	Presents research on how vehicle-weight-reduction measures affect fuel economy for different vehicle types.	No	No

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NHTSA-2017-0069-0111	Curt Wells, Aluminum Association	Ricardo Incorporated. 2009. Impact of Vehicle Weight Reduction on Fuel Economy for Various Vehicle Architectures. Available at: http://www.drivealuminum.org/research-resources/ricardo-electric-vehicle-component-sizing-vs-vehicle-structural-weight-report/ . Accessed: November 20, 2017.	Evaluates the impact of vehicle structural weight reduction on electric vehicle powertrain component size for various operating range targets.	No	No
NHTSA-2017-0069-0111	Aluminum Association, Curt Wells	The Aluminum Association. 2015. Aluminum Industry Equipped to Meet Auto Body Sheet Demand Increases, White Paper.	Unable to locate article.	No	No
NHTSA-2017-0069-0111	Aluminum Association, Curt Wells	The Aluminum Association. 2016. New Economic Impact Study Shows Continued Strength of Domestic Aluminum Industry. Available at: http://aluminum.org/news/new-economic-impact-study-shows-continued-strength-domestic-aluminum-industry . Accessed: November 20, 2017.	Summarizes a report showing the domestic aluminum industry employment and monetary contribution to the national economy.	No	No
NHTSA-2017-0069-0111	Curt Wells, Aluminum Association	Worcester Polytechnic Institute. 2016. Automotive Aluminum Recycling at End-of-Life: A Gate to Grave Analysis. Available at: http://www.drivealuminum.org/wp-content/uploads/2016/06/Final-Report-Automotive-Aluminum-Recycling-at-End-of-Life-A-Grave-to-Gate-Analysis.pdf . Accessed: November 20, 2017.	Provides a quantitative analysis of the fate of automotive aluminum at the end of its service life.	No	No
NHTSA-2017-0069-0112	Jeff Gerlach, Securing America's Future Energy	Greenblatt, J., and S. Saxena. 2015. Autonomous Taxis Could Greatly Reduce Greenhouse-Gas Emissions of US Light-Duty Vehicles. <i>Nature Climate Change</i> . Available at: https://www.nature.com/nclimate/journal/v5/n9/full/nclimate2685.html#access . Accessed: November 20, 2017.	Estimates 2014 and 2030 greenhouse gas emissions and costs of autonomous taxis.	Yes	No

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NHTSA-2017-0069-0112	Jeff Gerlach, Securing America's Future Energy	Liu, J., K. M. Kockelman, and A. Nichols. 2016. Anticipating the Emissions Impacts of Smoother Driving by Connected and Autonomous Vehicles, Using the MOVES Model. Available at: http://www.caee.utexas.edu/prof/kockelman/public_html/TRB17CAVEmissions.pdf . Accessed: November 20, 2017.	Uses EPA driving cycles and Austin-specific driving schedules to reflect national, trip-based and local, link-based driving behaviors.	No	No
NHTSA-2017-0069-0112	Jeff Gerlach, Securing America's Future Energy	Brown, A., J. Gonder, and B. Repac. 2014. An Analysis of Possible Energy Impacts of Automated Vehicle. <i>Road Vehicle Automation</i> . Available at: https://link.springer.com/chapter/10.1007/978-3-319-05990-7_13 . Accessed: November 20, 2017.	Estimates effects of vehicle automation on fuel efficiency.	Yes	No
NHTSA-2017-0069-0112	Jeff Gerlach, Securing America's Future Energy	Greene, D. L., R. S. Lee, and J. L. Hopson. 2013. OPEC and the Costs to the U.S. Economy of Oil Dependence: 1970–2010. White Paper 1-13. Available at: http://bakercenter.utk.edu/wp-content/uploads/2013/02/OilDependenceCosts2010-New-Cover021413.pdf . Accessed: November 20, 2017.	Analyzes past estimates that showed that oil dependence costs reached a peak of about \$350 billion in 1980 and 1981.	No	No
NHTSA-2017-0069-0112	Jeff Gerlach, Securing America's Future Energy	Securing America's Future Energy. 2016. A National Strategy for Energy Security. Available at: http://secureenergy.org/wp-content/uploads/2016/06/SAFE-National-Strategy-for-Energy-Security-2016.pdf . Accessed: November 20, 2017.	Offers policy recommendations that respond to the unfree nature of the global oil market and position our country's transportation sector for a timely and significant shift away from petroleum fuels, especially through the effective deployment of driverless cars.	No	No

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NHTSA-2017-0069-0112	Jeff Gerlach, Securing America's Future Energy	U.S. Energy Information Administration. 2017. World Oil Transit Chokepoints. Available at: https://www.eia.gov/beta/international/analysis_includes/special_topics/World_Oil_Transit_Chokepoints/world_oil_transit_chokepoints.pdf . Accessed: November 20, 2017.	Highlights seven chokepoints and argues that disruptions to these routes could affect oil prices and add thousands of miles of transit in alternative routes.	No	No
NHTSA-2017-0069-0112	Jeff Gerlach, Securing America's Future Energy	Mackenzie, D., Z. Wadud, and P. Leiby. 2016. Help or Hindrance? The Travel, Energy and Carbon Impact of Highly Automated Vehicles. <i>Transportation Research Part A: Policy and Practice</i> 86:1-18. Available at: https://ac.els-cdn.com/S0965856415002694/1-s2.0-S0965856415002694-main.pdf?_tid=6ab8e592-b570-11e7-abbb-00000aacb360&acdnat=1508488189_58b40436df17d949c6290e473ee43903 . Accessed: November 20, 2017.	Identifies specific mechanisms through which vehicle automation may affect travel and energy demand and resulting greenhouse gas emissions.	Yes	No
NHTSA-2017-0069-0112	Jeff Gerlach, Securing America's Future Energy	Samaras, C., and A. Mersky. 2016. Fuel economy testing of autonomous vehicles. <i>Transportation Research Part C: Emerging Technologies</i> 65:31-48 Available at: http://www.sciencedirect.com/science/article/pii/S0968090X16000024 . Accessed: November 20, 2017.	Develops a method to incorporate the impacts of autonomous vehicle technology within the bounds of current fuel economy tests, and simulates a range of automated following drive cycles to estimate changes in fuel economy.	Yes	No

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NHTSA-2017-0069-0113	Devin O'Connor, National Coalition for Advanced Transportation	Kim, H., C. S. Lee, S. D. Yu, J. S. Lee, J. Y. Chang, J. M. Jeon, H. R. Son, C. J. Park, D. C. Shin, and Y. W. Lim. 2015. Near-road exposure and impact of air pollution on allergic diseases in elementary school children: A cross-sectional study. <i>Yonsei Medical Journal</i> 57(3): 698–713. Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4800361/ . Accessed: November 20, 2017.	Classifies schools based on traffic pollutants and their complex sources in order to assess the environment, to determine the state of allergic diseases among students using the International Study of Asthma and Allergies in children questionnaire, and to assess their connection to air pollutants.	Yes	No
NHTSA-2017-0069-0113	Devin O'Connor, National Coalition for Advanced Transportation	U.S. Environmental Protection Agency. 2015. Best Practices for Reducing Near-Road Pollution Exposure at Schools. Available at: https://www.epa.gov/sites/production/files/2015-10/documents/ochp_2015_near_road_pollution_booklet_v16_508.pdf . Accessed: November 20, 2017.	Provides strategies for reducing traffic-related pollution exposure at schools located downwind from heavily traveled roadways (such as highways), along corridors with significant trucking traffic, or near other traffic or vehicular pollution sources.	No	No
NHTSA-2017-0069-0113	Devin O'Connor, National Coalition for Advanced Transportation	International Energy Agency. 2017. Global EV Outlook 2017. Available at: https://www.iea.org/publications/freepublications/publication/GlobalEVO Outlook2017.pdf . Accessed: November 20, 2017.	Covers the elements of electric vehicle deployment—market evolution, policy support, vehicle stock, and progress toward deployment targets.	No	No

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NHTSA-2017-0069-0113	Devin O'Connor, National Coalition for Advanced Transportation	Ewing, J. 2017. Volvo, Betting on Electric, Moves to Phase Out Conventional Engines. <i>The New York Times</i> . Available at: https://www.nytimes.com/2017/07/05/business/energy-environment/volvo-hybrid-electric-car.html . Accessed: November 20, 2017.	Reports on Volvo Cars' announcement that in 2018 all models it introduces will be either hybrids or powered solely by batteries and discusses implications for other carmakers and the surrounding policy environment.	No	No
NHTSA-2017-0069-0113	Devin O'Connor, National Coalition for Advanced Transportation	Lambert, F. 2017. VW Confirms Two New Upcoming Electric Cars for US Market: I.D. Lounge and I.D. AEROe. <i>Electrek</i> . Available at: https://electrek.co/2017/06/26/vw-electric-cars-i-d-lounge-and-i-d-aeroe/ . Accessed: November 20, 2017.	Reports on Volkswagen's release of two all-electric vehicles as part of its series of new I.D. concepts that will serve as the basis of its new electric car strategy.	No	No
NHTSA-2017-0069-0113	Devin O'Connor, National Coalition for Advanced Transportation	McKinsey & Company. 2016. An Integrated Perspective on the Future of Mobility. Available at: https://www.mckinsey.com/business-functions/sustainability-and-resource-productivity/our-insights/an-integrated-perspective-on-the-future-of-mobility . Accessed: November 20, 2017.	Outlines a number of social, economic, and technological trends that will work together to disrupt mobility, potentially creating three new urban models by 2030.	No	No
NHTSA-2017-0069-0113	Devin O'Connor, National Coalition for Advanced Transportation	Rapier, R. 2017. U.S. Electric Vehicle Sales Soared in 2016. <i>Forbes</i> . Available at: https://www.forbes.com/sites/rrapier/2017/02/05/u-s-electric-vehicle-sales-soared-in-2016/#191002c4217f . Accessed: November 20, 2017.	Discusses the jump in electric vehicles sales from 2015 and 2016 and the implications for future crude oil demand.	No	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0113	Devin O'Connor, National Coalition for Advanced Transportation	U.S. Department of Energy. 2016. At a Glance: Electric-Drive Vehicles. Available at: https://www.afdc.energy.gov/uploads/publication/electric-drive_vehicles.pdf . Accessed: November 20, 2017.	Provides information on the basics of owning and operating electric-drive vehicles and discusses the costs, benefits, and differences compared to gasoline-powered vehicles.	No	No
NHTSA-2017-0069-0113	Devin O'Connor, National Coalition for Advanced Transportation	U.S. Department of Energy. 2016. Revolution...Now, The Future Arrives for Five Clean Energy Technologies - 2016 Update. Available at: https://energy.gov/sites/prod/files/2016/09/f33/Revolutiona%CC%82%E2%82%ACNow%202016%20Report_2.pdf . Accessed: November 20, 2017.	Updates the 2015 report to highlight additional technologies—hydrogen fuel cells, smart energy management, grid connected batteries, and big area additive manufacturing.	No	No
NHTSA-2017-0069-0113	Devin O'Connor, National Coalition for Advanced Transportation	California Air Resources Board. 2017. Advanced Clean Cars Midterm Review. Available at: https://www.arb.ca.gov/msprog/acc/mtr/res17-3.pdf . Accessed: November 20, 2017.	Provides technical analysis for the midterm review of the adopted low-emission vehicle III greenhouse gas and particulate matter emission standards and zero-emission vehicle requirements.	No	No
NHTSA-2017-0069-0118	Paul Rothman	U.S. Environmental Protection Agency. 2017. Sources of Greenhouse Gas Emissions. Available at: https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions#transportation . Accessed: November 20, 2017.	Provides information on the transportation sector's contribution to U.S. greenhouse gases and strategies to reduce this amount.	No	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0119	Steven Lins, Sacramento Municipal Utility District	Bloomberg New Energy Finance. 2017. Electric Cars to Reach Price Parity by 2025. Available at: https://about.bnef.com/blog/electric-cars-reach-price-parity-2025/ . Accessed: November 20, 2017.	Presents information on the cost of electric vehicles in the future compared to comparable internal combustion engine vehicles.	No	No
NHTSA-2017-0069-0122	Vishnu Laalitha Surapaneni	Brook, R. 2007. Why physicians who treat hypertension should know more about air pollution. <i>Journal of Clinical Hypertension</i> 9(8):629–635. doi: 10.1111/j.1524-6175.2007.07187.x. Available at: http://onlinelibrary.wiley.com/doi/10.1111/j.1524-6175.2007.07187.x/full . Accessed: November 20, 2017.	Demonstrates how exposure to ambient levels of particulate matter air pollution increases the risk of a host of cardiovascular diseases and events.	Yes	No
NHTSA-2017-0069-0122	Vishnu Laalitha Surapaneni	Byrd, J. B., M. Morishita, R. L. Bard, R. Das, L. Wang, Z. Sun, C. Spino, J. Harkema, J. T. Dvonch, S. Rajagopalan, and R. D. Brook. 2015. Acute increase in blood pressure during inhalation of coarse particulate matter air pollution from an urban location. <i>Journal of the American Society of Hypertension</i> 10(2):133–139. doi: 10.1016/j.jash.2015.11.015 Available at: http://www.sciencedirect.com/science/article/pii/S1933171115007998 . Accessed: November 20, 2017.	Evaluates the impact of coarse particulate matter differing in size (2.5–10 micrometers), sources, and chemistry, as a risk factor for cardiovascular mortality.	Yes	No
NHTSA-2017-0069-0122	Vishnu Laalitha Surapaneni	Cakmak, S., R. Dales, J. Leech, and L. Liu. 2013. The influence of air pollution on cardiovascular and pulmonary function and exercise capacity. Canadian Health Measures Survey. <i>Environmental Research</i> 111(8):1309–1312. Available at: http://www.sciencedirect.com/science/article/pii/S0013935111002416 . Accessed: November 20, 2017.	Measures the association between air pollution, spirometry, blood pressure, and exercise capacity.	Yes	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0122	Vishnu Laalitha Surapaneni	Dockery, D. W., C. A. Pope, X. Xu, J. D. Spengler, J. H. Ware, M. E. Fav, B. G. Ferris, and F. E. Speizer. 1993. An association between air pollution and mortality in six U.S. cities. <i>The New England Journal of Medicine</i> 329(24):1753–1759. doi: 10.1056/NEJM199312093292401. Available at: http://www.scientificintegrityinstitute.org/Dockery1993.pdf . Accessed: November 20, 2017.	Estimates the effects of air pollution on mortality, while controlling for individual risk factors.	Yes	No
NHTSA-2017-0069-0122	Vishnu Laalitha Surapaneni	Folinsbee, L., W. F. McDonnell, and D. H. Horstman. 2012. Pulmonary function and symptoms responses after 6.6-hour exposure to 0.12 ppm ozone with moderate exercise. <i>JAPCA</i> 38(1):28–35. doi: 10.1080/08940630.1988.10466349. Available at: http://www.tandfonline.com/doi/pdf/10.1080/08940630.1988.10466349?needAccess=true . Accessed: November 20, 2017.	Investigates the hypothesis that prolonged exposure to 0.12 parts per million of O ₃ would result in progressively larger changes in respiratory function and symptoms over time.	Yes	No
NHTSA-2017-0069-0122	Vishnu Laalitha Surapaneni	Giorgini, P., M. Rubenfire, R. Das, T. Gracik, L. Wang, M. Norishita, R. L. Bard, E. A. Jackson, C. A. Fitzner, C. Ferri, and R. D. Brook. 2015. Higher fine particulate matter and temperature levels impair exercise capacity in cardiac patients. <i>Heart Journal</i> 101(16). doi: 10.1136/heartjnl-2014-306993. Available at: http://heart.bmj.com/content/101/16/1293.long . Accessed: November 20, 2017.	Assesses the effects of PM _{2.5} on directly measured aerobic functional capacity among high-risk patients for cardiovascular morbidity and mortality.	Yes	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0122	Vishnu Laalitha Surapaneni	Strickland, M. J., L. A. Darrow, M. Klein, W. D. Flanders, J. A. Sarnat, L. A. Waller, S. E. Sarnat, J. A. Mulholland, and P. E. Tolbert. 2010. Short-term associations between ambient air pollutants and pediatric asthma emergency department visits. <i>Am J Respir Crit Care Med</i> 182(3):307–316. doi: 10.1164/rccm.200908-1201OC. Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2921597/ . Accessed: November 20, 2017.	Investigates short-term associations between ambient air pollutant concentrations and emergency department visits for pediatric asthma.	Yes	No
NHTSA-2017-0069-0122	Vishnu Laalitha Surapaneni	Vaduganathan M., G. De Palma, A. Manerba, M. Goldoni, M. Triggiani, P. Apostoli, L. Dei Cas, and S. Nodari. 2016. Risk of cardiovascular hospitalizations from exposure to coarse particulate matter (PM10) below the European Union safety threshold. <i>The American Journal of Cardiology</i> 117(8):1231–1235. doi: 10.1016/j.amjcard.2016.01.041. Available at: http://www.sciencedirect.com/science/article/pii/S0002914916301631?via%3Dihub . Accessed: November 20, 2017.	Explores the cross-sectional association between particulate matter with aerodynamic diameter less than 10 micrometers (PM10) and daily cardiovascular hospitalizations in Brescia, Italy, using Poisson regression models adjusted for age, gender, and meteorological indices.	Yes	No
NHTSA-2017-0069-0124	Tracey King, Renewable Fuels Association	Ricardo Incorporated. 2017. Literature Review of Ethanol Use for High Octane Fuels. Prepared for Renewable Fuels Association. Available at: http://www.ethanolrfa.org/wp-content/uploads/2017/09/Literature-Review-of-Ethanol-Use-for-High-Octane-Fuels.pdf . Accessed: November 20, 2017.	Reviews the existing body of research regarding the use of ethanol to produce high-octane gasolines in the United States and the impact of high-octane fuels on modern spark-ignited engine efficiency.	No	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0136	Graham Noyes, Pearson Fuels	California Environmental Protection Agency. 2016. State Agency Greenhouse Gas Reduction Report Card. Available at: http://www.climatechange.ca.gov/climate_action_team/reports/2016_CalEPA_Report_Card.pdf . Accessed: November 20, 2017.	Provides information gathered in 2015 for actual greenhouse gas reductions occurring in 2014.	No	No
NHTSA-2017-0069-0136	Graham Noyes, Pearson Fuels	Aguila, J. August 25, 2017—Letter to Graham Noyes about total amount of E85 sold in California 2012–2016. Accessed: November 20, 2017.	Unable to locate article.	No	No
NHTSA-2017-0069-0136	Graham Noyes, Pearson Fuels	California Air Resources Board. 2017. Data Dashboard: Alternative Fuel Volumes and Credit Generation. Available at: https://www.arb.ca.gov/fuels/lcfs/dashboard/dashboard.d.htm . Accessed: November 20, 2017.	Provides information regarding California Air Resources Board's Low Carbon Fuel Standard Program	No	No
NHTSA-2017-0069-0136	Pearson Fuels, Graham Noyes	U.S. Energy Information Administration. 2015. Table C8. Transportation Sector Energy Consumption Estimates, 2015. Available at: https://www.eia.gov/state/seds/data.php?incfile=/state/seds/sep_sum/html/sum_btu_tra.html&sid=US . Accessed: November 20, 2017.	Provides energy consumption estimates of the transportation sector for different states and fuel types.	No	No
NHTSA-2017-0069-0136	Pearson Fuels, Graham Noyes	U.S. Energy Information Administration. 2016. Almost All U.S. Gasoline is Blended with 10% Ethanol. Available at: https://www.eia.gov/todayinenergy/detail.php?id=26092 . Accessed: November 20, 2017.	Discusses the consumption and demand of biofuels, ethanol, gasoline, liquid fuels, and renewables. Points to the preponderance of E10 fuel consumed in motor vehicles with gasoline engines.	No	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0136	Graham Noyes, Pearson Fuels	U.S. Energy Information Administration. 2017. U.S. Fuel Ethanol Production Continues to Grow in 2017. Available at: https://www.eia.gov/todayinenergy/detail.php?id=32152 . Accessed: November 20, 2017.	Discusses the production and supply of biofuels, ethanol, and liquid fuels under the renewable fuel standards, as well as other regulations.	No	No
NHTSA-2017-0069-0136	Graham Noyes, Pearson Fuels	Bunker, Byron. 2014. To Manufacturers. November 12. E85 Flexible Fuel Vehicle Weighting Factor for Model Year 2016-2018 Vehicles. Available at: https://iaspub.epa.gov/otaqpub/display_file.jsp?docid=33581&flag=1 . Accessed: November 20, 2017.	Provides the supporting analysis and rationale for the weighting factor being established by EPA under the light-duty vehicle greenhouse gas program to be used to weight E85 flexible fuel vehicle carbon dioxide emissions when tested with both gasoline and E85 (a mixture of 85% ethanol and gasoline).	No	No
NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	California Air Resources Board. 2010. Estimate of Premature Deaths Associated with Fine Particle Pollution (PM2.5) in California Using a U.S. Environmental Protection Agency Methodology. Available at: https://www.arb.ca.gov/research/health/pm-mort/pm-report_2010.pdf . Accessed: November 20, 2017.	Describes EPA's risk assessment methodology for calculating premature mortality in the 2010 Quantitative Health Risk Assessment for Particulate Matter, and its 2009 Integrated Science Assessment for particulate matter that provides the underlying scientific basis for the calculations.	No	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	Cision. 2017. Government of Canada to Develop a National Zero-Emissions Vehicle Strategy by 2018. Available at: http://www.newswire.ca/news-releases/government-of-canada-to-develop-a-national-zero-emissions-vehicle-strategy-by-2018-624609563.html . Accessed: November 20, 2017.	Reports on the Government of Canada's development of a national strategy to increase the number of zero-emission vehicles on Canadian roads by 2018.	No	No
NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	Quebec Government. 2017. Zero-Emission Vehicles (ZEV) Standard. Available at: http://www.mddelcc.gouv.qc.ca/changementsclimatiq/ues/vze/index-en.htm . Accessed: November 20, 2017.	Discusses Quebec's regulation increase of the number of zero-emission vehicles, with information on the objective, targeted businesses, proposed procedure, and types of vehicles eligible for credits.	No	No
NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	U.S. Environmental Protection Agency. 2010. Quantitative Health Risk Assessment for Particulate Matter. EPA-452/R-10-005. Available at: https://www3.epa.gov/ttn/naaqs/standards/pm/data/PM_RA_FINAL_June_2010.pdf . Accessed: November 20, 2017.	Provides national estimates of premature mortality associated with fine particulate matter pollution (PM2.5), supported by its finding that the scientific evidence shows a causal connection between mortality and exposure to PM2.5.	No	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	U.S. Environmental Protection Agency. 2012. Regulatory Impact Analysis for the Final Revisions to the National Ambient Air Quality Standards for Particulate Matter. EPA-452/R-12-005. Available at: https://www3.epa.gov/ttnecas1/regdata/RIAs/finalria.pdf . Accessed: November 20, 2017.	Examines the costs and benefits of regulating regional air districts for particulate matter emissions.	No	No
NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	U.S. Environmental Protection Agency. 2013. Fine Particle Concentrations Based on Monitored Air Quality from 2009 – 2011. Available at: https://www.epa.gov/sites/production/files/2016-04/documents/map_meeting_standard.pdf . Accessed: November 20, 2017.	Illustrates that most of the United States already meets the annual fine particle health standard of 12 nanograms per cubic meter.	No	No
NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	U.S. Environmental Protection Agency. 2015. Emissions Estimation Protocol for Petroleum Refineries. Available at: https://www3.epa.gov/ttn/chief/efpac/protocol/Protocol%20Report%202015.pdf . Accessed: November 20, 2017.	Provides guidance and instructions to petroleum refinery owners and operators and to federal, state, and local agencies for improving emission inventories for the petroleum refining industry.	No	No
NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	Blunden, J., and D. S. Arndt (eds). 2017. State of the climate in 2016. <i>Bulletin of American Meteorological Society</i> 98(8):Si–S277. doi:10.1175/2017BAMSStateoftheClimate.1. Available at: http://www.ametsoc.net/sotc2016/StateoftheClimate2016_lowres.pdf . Accessed: November 20, 2017.	Documents the status and trajectory of the many components of the climate system and the status and trajectory of human capacity and commitment to observe it.	Yes	No

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NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	Bradley, B. A., D. S. Wilcove, and M. Oppenheimer. 2010. Climate change increases risk of plant invasion in the eastern United States. <i>Biological Invasions</i> 12:1855–1872. doi:10.1007/s10530-009-9597-y. Available at: http://europemc.org/abstract/AGR/IND44367832/rel oad=0;jsessionid=geMUvZpMPs0zRUz8D6h.2 . Accessed: November 20, 2017.	Uses bioclimatic envelope modeling to assess current climatic habitat, or lands climatically suitable for invasion, for three of the most dominant and aggressive invasive plants in the southeast United States.	Yes	No
NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	California Air Resources Board. 2013. Available at: http://www.arb.ca.gov/desig/adm/2013/state_pm25.p df . (Link no longer active).	Unable to locate article.	No	No
NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	California Air Resources Board. 2017. California Greenhouse Gas Emission Inventory - 2017 Edition. Available at: https://www.arb.ca.gov/cc/inventory/data/data.htm . Accessed: November 20, 2017.	Provides breakdown of emissions by greenhouse gas and economic sector for 2015.	No	No
NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	California Air Resources Board. 2017. The 2017 Climate Change Scoping Plan Update of the Proposed Strategy for Achieving California's 2030 Greenhouse Gas Target. Available at: https://www.arb.ca.gov/cc/scopingplan/2030sp_pp_fi nal.pdf . Accessed: November 20, 2017.	Establishes a proposed framework of action for California to meet the most aggressive climate target in North America: a 40% reduction in greenhouse gases by 2030 compared to 1990 levels.	No	No

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NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	Fitzgerald, D. M., M. S. Fenster, B. A. Argow, and I. V. Buynevich. 2008. Coastal impacts due to sea-level rise. <i>Annual Review of Earth and Planetary Sciences</i> , Annual Reviews 36: 601–647. Available at: https://doi.org/10.1146/annurev.earth.35.031306.140139 . Accessed: November 20, 2017.	Discusses how rising sea level not only inundates low-lying coastal regions but also contributes to the redistribution of sediment along sandy coasts.	Yes	No
NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	Hansen, J., M. Sato, R. Ruedy, P. Kharecha, A. Lacis, R.L. Miller, L. Nazarenko, K. Lo, G. A. Schmidt, G. Russell, I. Aleinov, S. Bauer, E. Baum, B. Cairns, V. Canuto, M. Chandler, Y. Cheng, A. Cohen, A. Del Genio, G. Faluvegi, E. Fleming, A. Friend, T. Hall, C. Jackman, J. Jonas, M. Kelley, N.Y. Kiang, D. Koch, G. Labow, J. Lerner, S. Menon, T. Novakov, V. Oinas, J.P. Perlwitz, J. Perlwitz, D. Rind, A. Romanou, R. Schmunk, D. Shindell, P. Stone, S. Sun, D. Streets, N. Tausnev, D. Thresher, N. Unger, M. Yao, M. and S. Zhang. 2007. Dangerous human-made interference with climate: A GISS modelE study. <i>Atmospheric Chemistry and Physics</i> 7:2287–2312. doi:10.5194/acp-7-2287-2007. Available at: https://pubs.giss.nasa.gov/docs/2007/2007_Hansen_ha00210r.pdf . Accessed: November 20, 2017.	Investigates the issue of "dangerous human-made interference with climate" using simulations with GISS modelE driven by measured or estimated forcings for 1880–2003 and extended to 2100 for Intergovernmental Panel on Climate Change greenhouse gas scenarios as well as the "alternative" scenario of Hansen and Sato (2004).	Yes	No
NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	Interagency Working Group on Social Cost of Carbon. 2015. Technical Support Document: - Social Cost of Carbon for Regulatory Impact Analysis - Under Executive Order 12866. Available at: https://www.epa.gov/sites/production/files/2016-12/documents/sc_co2_tsd_august_2016.pdf . Accessed: November 20, 2017.	Provides a technical support document that responds to previous recommendations and updates the current estimates of the social cost of carbon.	No	No

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NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	National Park Service. 2014. Preserving Coastal Heritage Summary Report. U.S. Department of Interior. Available at: http://www.achp.gov/docs/pch-summary-report.pdf . Accessed: November 20, 2017.	Summarizes recommendations and feedback that emerged over a 2-day work session.	No	No
NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	National Research Council. 2011. Understanding Earth's Deep Past: Lessons for Our Climate Future. The National Academies Press. https://doi.org/10.17226/13111 . Available at: https://www.nap.edu/catalog/13111/understanding-earths-deep-past-lessons-for-our-climate-future . Accessed: November 20, 2017.	Describes past climate changes and discusses potential impacts of high levels of atmospheric greenhouse gases on regional climates, water resources, marine and terrestrial ecosystems, and the cycling of life-sustaining elements.	Yes	No
NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	Staudinger, M. D., S. L. Carter, M. S. Cross, N. S. Dubois, J. E. Duffy, C. Enquist, R. Griffis, J. J. Hellmann, J. J. Lawler, J. O'Leary, S. A. Morrison, L. Sneddon, B. A. Stein, L. M. Thompson, and W. Turner. 2013. Biodiversity in a changing climate: A synthesis of current and projected trends in the US. <i>Frontiers in Ecology and the Environment</i> 11:465–473, doi:10.1890/120272. Available at: http://onlinelibrary.wiley.com/doi/10.1890/120272/abstract . Accessed: November 20, 2017.	Provides a synthesis of the recent literature describing how global biodiversity is being affected by climate change and is projected to respond in the future.	Yes	No

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NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	Stralberg, D., D. Jongsomjit, C. A. Howell, M. A. Snyder, J. D. Alexander, J. A. Wiens, and T. L. Root. 2009. Re-shuffling of species with climate disruption: A no-analog future for California birds? <i>PLOS One</i> . 4: e6825. doi:10.1371/journal.pone.0006825. Available at: http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0006825 . Accessed: November 20, 2017.	Uses multivariate approach borrowed from paleoecology to quantify the potential change in California terrestrial breeding bird communities based on current and future species-distribution models for 60 focal species.	Yes	No
NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	U.S. Environmental Protection Agency. 2016. Climate Change Indicators in the United States. Available at: https://www.epa.gov/sites/production/files/2016-08/documents/climate_indicators_2016.pdf . Accessed: November 20, 2017.	Presents 37 indicators to help readers understand changes observed from long-term records related to the causes and effects of climate change, the significance of these changes, and their possible consequences for people, the environment, and society.	Yes	No
NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	U.S. Environmental Protection Agency. 2016. U.S. Greenhouse Gas Inventory Report: 1990–2014. Available at: https://19january2017snapshot.epa.gov/ghgemissions/us-greenhouse-gas-inventory-report-1990-2014_.html . Accessed: November 20, 2017.	Summarizes the latest information on U.S. anthropogenic greenhouse gas emission trends from 1990 through 2014.	No	No

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NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	U.S. Fish and Wildlife Service. 2010. An Overview Climate Change Strategic Plan. Available at: https://www.fws.gov/home/climatechange/pdf/ClimatePlanOverview.pdf . Accessed: November 20, 2017.	Discusses the U.S. Fish and Wildlife Service's Climate Change Strategic Plan, a framework for adaptation, mitigation, and engagement on climate change.	No	No
NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	U.S. Global Change Research Program. 2014. 2014 National Climate Assessment. Available at: http://nca2014.globalchange.gov/downloads . Accessed: November 20, 2017.	Provides an in-depth look at climate change impacts on the United States. It details the multitude of ways climate change is already affecting and will increasingly affect the lives of Americans.	Yes	No
NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	Wenger, S. J., D. J. Isaak, C. H. Luce, H. M. Neville, K. D. Fausch, J. B. Dunham, D. C. Dauwalter, M. K. Young, M. M. Elsner, B. E. Rieman, A. F. Hamlet, and J. E. Williams. 2011. Flow regime, temperature, and biotic interactions drive differential declines of trout species under climate change. <i>Proceedings of the National Academy of Sciences of the United States of America</i> 108(34): 14175–14180. doi: 10.1073/pnas.1103097108. Available at: http://www.pnas.org/content/108/34/14175 . Accessed: November 20, 2017.	Forecasts the effects of altered flows and increased temperatures on four interacting species of trout across the interior western United States.	Yes	No

Table B-1. Sources Identified in Scoping Comments

Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	Westerling, A. L., B. P. Bryant, H. K. Preisler, T. P. Holmes, H. G. Hidalgo, T. Das, and S. R. Shrestha. 2011. Climate change and growth scenarios for California wildfire. <i>Climate Change</i> 109(Suppl 1):445. Available at: https://doi.org/10.1007/s10584-011-0329-9 . Accessed: November 20, 2017.	Models a large wildfire occurrence and burned area using hydroclimate and land surface characteristics under a range of future climate and development scenarios.	Yes	No
NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	Chen, I.-C., J. K. Hill, R. Ohlemüller, D. B. Roy, and C. D. Thomas. 2011. Rapid range shifts of species associated with high levels of climate warming. <i>Science</i> 333(6045):1024–1026. doi: 10.1126/science.1206432. Available at: http://science.sciencemag.org/content/333/6045/1024 . Accessed: November 20, 2017.	Estimates that the distributions of species have recently shifted to higher elevations at a median rate of 11.0 meters per decade, and to higher latitudes at a median rate of 16.9 kilometers per decade.	Yes	Yes
NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	Cheung, W. W. L., V. W. Y. Lam, J. L. Sarmiento, K. Kearney, R. Watson, and D. Pauly. 2009. Projecting global marine biodiversity impacts under climate change scenarios. <i>Fish and Fisheries</i> 10(3):235–251. doi: 10.1111/j.1467-2979.2008.00315.x. Available at: http://onlinelibrary.wiley.com/doi/10.1111/j.1467-2979.2008.00315.x/abstract . Accessed: November 20, 2017.	Investigates the global patterns of such impacts by projecting the distributional ranges of a sample of 1066 exploited marine fish and invertebrates for 2050 using a newly developed dynamic bioclimate envelope model.	Yes	Yes

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	Field, C.B., V. Barros, T. F. Stocker, D. Qin, D. J. Dokken, K. L. Ebi, M. D. Mastrandrea, K. J. Mach, G.-K. Plattner, S. K. Allen, M. Tignor, and P. M. Midgley. 2012. Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation. A Special Report of Working Groups I and II of the Intergovernmental Panel on Climate Change. IPCC. Cambridge University Press. Page 582. Available at: https://www.ipcc.ch/pdf/special-reports/srex/SREX_Full_Report.pdf . Accessed: November 20, 2017.	Analyzes the relationship between climate change and extreme weather and climate events, the impacts of such events, and the strategies to manage the associated risks.	Yes	Yes
NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	Garfin, G., A. Jardine, R. Merideth, M. Black, and S. LeRoy. 2013. Assessment of Climate Change in the Southwest United States. Island Press, Chapter 6, Cayan, D., K. Kunkel, C. Castro, A. Gershunov, J. Barsugli, A. Ray, J. Overpeck, M. Anderson, J. Russell, R. B., R. I., and P. Duffy, pp. 153–196. Assessment of Climate Change in the Southwest United States. National Climate Assessment. Available at: http://www.swcarr.arizona.edu/sites/all/themes/files/SW-NCA-color-FINALweb.pdf . Accessed: November 20, 2017.	Summarizes the current understanding of climate variability, climate change, climate impacts, and possible solution choices for the climate challenge.	Yes	Yes
NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	Grinsted, A., J. C. Moore, and S. Jevrejeva. 2010. Reconstructing sea level from paleo and projected temperatures 200 to 2100 AD. <i>Climate Dynamics</i> 34:461–472. doi:10.1007/s00382-008-0507-2. Available at: http://link.springer.com/article/10.1007/s00382-008-0507-2/fulltext.html . Accessed: November 20, 2017.	Models future sea-level rises through different temperature scenarios.	Yes	Yes

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NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	Hidalgo, H. G., T. Das, D. R. Cayan, D. W. Pierce, T. P. Barnett, G. Bala, A. Mirin, A. W. Wood, C. Bonfils, B. D. Santer, and T. Nozawa. 2009. Detection and attribution of streamflow timing changes to climate change in the western United States. <i>Journal of Climate</i> 22: 3838–3855. Available at: http://journals.ametsoc.org/doi/abs/10.1175/2009JCLI2470.1 . Accessed: November 20, 2017.	Applies formal detection and attribution techniques to investigate the nature of observed shifts in the timing of streamflow in the western United States.	Yes	Yes
NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	Intergovernmental Panel on Climate Change. 2014. Fifth Assessment Report (AR5). Available at: https://www.ipcc.ch/report/ar5/ . Accessed: November 20, 2017.	Provides discussions on the physical science basis of climate change; impacts, adaptation and vulnerability; mitigation of climate change; and the Synthesis Report—which synthesizes and integrates material contained within the Working Group reports and Special Reports.	Yes	Yes
NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	Jevrejeva, S., J. C. Moore, and A. Grinsted, A. 2012. Sea level projections to AD2500 with a new generation of climate change scenarios. <i>Global and Planetary Change</i> :80–81,14–20. doi:10.1016/j.gloplacha.2011.09.006. Available at: https://www.giacyology.net/pdf/Jevrejeva-gloplacha11-sl2500-rcp.pdf . Accessed: November 20, 2017.	Uses models to project median sea-level rises of 0.57 for the lowest forcing and 1.10 meters for the highest forcing by 2100, which rise to 1.84 and 5.49 meters, respectively, by 2500.	Yes	Yes

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NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	Karl, T. R., J. T. Melillo, and T. C. Peterson. 2009. Global Climate Change Impacts in the United States. Cambridge University Press. Available at: https://downloads.globalchange.gov/usimpacts/pdfs/climate-impacts-report.pdf . Accessed: November 20, 2017.	Summarizes the science of climate change and the impacts of climate change on the United States, now and in the future, and discusses climate-related impacts for various societal and environmental sectors and regions across the nation.	Yes	Yes
NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	National Research Council. 2010. Ocean Acidification: A National Strategy to Meet the Challenges of a Changing Ocean. The National Academies Press. Available at: https://www.nap.edu/read/12904/chapter/1 . Accessed: November 20, 2017.	Demonstrates that ocean chemistry is changing at an unprecedented rate and magnitude due to anthropogenic carbon dioxide emissions; the rate of change exceeds any known to have occurred for at least the past hundreds of thousands of years.	Yes	Yes

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	National Research Council. 2011. Climate Stabilization Targets: Emissions, Concentrations, and Impacts over Decades to Millennia. The National Academies Press. doi.org/10.17226/12877. Available at: https://www.nap.edu/catalog/12877/climate-stabilization-targets-emissions-concentrations-and-impacts-over-decades-to . Accessed: November 20, 2017.	Quantifies the outcomes of different stabilization targets for greenhouse gas concentrations using analyses and information drawn from scientific literature. Although it does not recommend or justify any particular stabilization target, it does provide important scientific insights about the relationships among emissions, greenhouse gas concentrations, temperatures, and impacts.	Yes	Yes
NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	Pierce, D. W., T. P. Barnett, H. G. Hidalgo, T. Das, C. Bonfils, B. D. Santer, G. Bala, M. D. Dettinger, D. R. Cayan, A. Mirin, A. W. Wood, and T. Nozawa. 2008. Attribution of declining western U.S. snowpack to human effects. <i>Journal of Climate</i> 20:6425–44. Available at: https://doi.org/10.1175/2008JCLI2405.1 . Accessed: November 20, 2017.	Uses a formal model-based detection and attribution study of snowpack reductions.	Yes	Yes

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	Rahmstorf, S., G. Foster, and A. Cazenave. 2012. Comparing climate projections to observations up to 2011. <i>Environmental Research Letters</i> 7(4). doi:10.1088/1748-9326/7/4/044035. Available at: http://iopscience.iop.org/article/10.1088/1748-9326/7/4/044035/pdf;jsessionid=9231676D59AC548104EBC2225C9C348E.c1.iopscience.cld.iop.org . Accessed: November 20, 2017.	Analyzes global temperature and sea-level data for the past few decades and compares them to projections published in the third and fourth assessment reports of the Intergovernmental Panel on Climate Change.	Yes	Yes
NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	Schwalm, C. R., C. A. Williams, K. Schaefer, D. Baldocchi, T. Andrew Black, A. H. Goldstein, B. E. Law, W. C. Oechel, Kyaw Tha Paw U, and R. L. Scott. 2012. Reduction in carbon uptake during turn of the century drought in western North America. <i>Nature Geoscience</i> . doi: 10.1038/NGEO1529. Available at: https://www.nature.com/articles/ngeo1529 . Accessed: November 20, 2017.	Examines the effect of the turn-of-the-century drought in western North America on carbon uptake in the region, using reanalysis data, remote sensing observations, and data from global monitoring networks.	Yes	Yes
NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	Staudinger, M. D., N. B. Grimm, A. Staudt, S. L. Carter, F. S. Chapin III, P. Karevia, M. Ruckelshaus, and B. A. Stein. 2012. Impacts of Climate Change on Biodiversity, Ecosystems, and Ecosystem Services: Technical Input to the 2013 National Climate Assessment. Cooperative Report to the 2013 National Climate Assessment. 296 p. Available at: https://downloads.globalchange.gov/nca/technical_inputs/Biodiversity-Ecosystems-and-Ecosystem-Services-Technical-Input.pdf . Accessed: November 20, 2017.	Synthesizes the scientific understanding of the way climate change is affecting biodiversity, ecosystems, ecosystem services, and what strategies might be employed to decrease current and future risks.	Yes	Yes

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	U.S. Global Change Research Program. 2013. Climate Change Impacts in the United States: The Third National Climate Assessment. Available at: http://www.globalchange.gov/browse/reports/climate-change-impacts-united-states-third-national-climate-assessment-0 . Accessed: November 20, 2017.	Provides an in-depth look at climate change impacts on the United States. It details the multitude of ways climate change is already affecting and potentially will increasingly affect the lives of Americans.	Yes	Yes
NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	Vermeer, M., and S. Rahmstorf. 2009. Global Sea Level Linked to Global Temperature. <i>Proceedings of the National Academy of Sciences</i> 106:21527–21532. Available at: http://www.pnas.org/content/106/51/21527.full.pdf . Accessed: November 20, 2017.	Proposes a simple relationship linking global sea-level variations on time scales of decades to centuries to global mean temperature.	Yes	Yes
NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	California Air Resources Board. 2017. Advanced Strong Hybrid and Plug-In Hybrid Engineering Evaluation and Cost Analysis. Al Steier, Munro & Associates, and Alan Munday, Ricardo Strategic Consulting. Available at: https://www.arb.ca.gov/msprog/acc/mtr/hybrid_phev_report_full.pdf . Accessed: November 20, 2017.	Provides engineering evaluation and cost assessment of selected recent technologies available to support OEM hybridization strategies in the near and longer term.	No	No
NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	Revesz, R., M. Greenstone, M. Hanemann, M. Livermore, T. Sterner, D. Grab, P. Howard, and J. Schwartz. 2017. Best cost estimate of greenhouse gases. <i>Science</i> 357 (6352):655. Available at: http://science.sciencemag.org/content/357/6352/655 . Accessed: November 20, 2017.	Supports the work of the Interagency Working Group on the social cost of greenhouse gas.	Yes	No

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NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	National Research Council. 2013. Climate and Social Stress: Implications for Security Analysis. The National Academies Press. doi.org/10.17226/14682. Available at: https://www.nap.edu/download/14682 . Accessed: November 20, 2017.	Evaluates the evidence on possible connections between climate change and U.S. national security concerns and identifies ways to increase the ability of the intelligence community to consider climate change in assessing political and social stresses with implications for U.S. national security.	Yes	No
NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	Auto Alliance. 2017. ZEV Sales Dashboard. U.S. Light-Duty Zero Emission Vehicle (ZEV) Sales (2011–2017). Available at: https://autoalliance.org/energy-environment/zev-sales-dashboard/ . Accessed: November 20, 2017.	Presents the U.S. Light-Duty Zero Emission Vehicle Sales from 2011 to 2017.	No	No
NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	National Research Council. 2011. National Security Implications of Climate Change for U.S. Naval Forces. The National Academies Press. doi.org/10.17226/12914. Available at: https://www.nap.edu/catalog/12914/national-security-implications-of-climate-change-for-us-naval-forces . Accessed: November 20, 2017.	Finds that even the most moderate current trends in climate, if continued, will present new national security challenges for the U.S. Navy, Marine Corps, and Coast Guard.	Yes	No

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NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	Aliotta, J. 2017. Driving the Army's Energy-Efficient Future. U.S. Army. Available at: https://www.army.mil/article/181692/driving_the_armys_energy_efficient_future . Accessed: November 20, 2017.	Discusses the technological and operational innovations that the army has initiated that help make their machinery and equipment more energy-efficient.	No	No
NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	Bilal, A. 2017. All Cars In Norway Will Be 100% Electric By 2025. Available at: http://wccftech.com/norway-electric-cars/ . Accessed: November 20, 2017.	Reports on how starting in 2025, people in the Norway will no longer be able to buy a gasoline or diesel-powered car. Story also covers the needed price reductions to make the regulation economically feasible.	No	No
NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	California Air Resources Board. 2016. The Staff of the California Air Resources Board Present the Advanced Clean Cars Symposium: The Road Ahead. September 27–28, 2016. Available at: https://www.arb.ca.gov/msprog/acc/acc-symposium.htm . Accessed: November 20, 2017.	Provides the Advanced Clean Cars Symposium presented by the California Air Resources Board.	No	No
NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	Castle, S. 2017. Britain to Ban New Diesel and Gas Cars by 2040. <i>The New York Times</i> . Available at: https://www.nytimes.com/2017/07/26/world/europe/uk-diesel-petrol-emissions.html . Accessed: November 20, 2017.	Announces that Britain's sales of new diesel and gas cars would reach the end of the road by 2040.	No	No

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NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	Clean Energy Wire. 2017. Merkel Signals Support for Eventual Ban of Combustion Engine. Available at: https://www.cleanenergywire.org/news/merkel-open-combustion-engine-ban-onshore-wind-prices-drop/merkel-signals-support-eventual-ban-combustion-engine . Accessed: November 20, 2017.	Reports on German Chancellor Angela Merkel's voicing of support for banning internal combustion engine cars, similar to other European Union countries.	No	No
NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	Dukes, J. S., N. R. Chiariello, S. R. Loarie, and C. B. Field. 2011. Strong response of an invasive plant species (<i>Centaurea solstitialis</i> L.) to global environmental changes. <i>Ecological Applications</i> 21:1887–1894. doi:10.1890/11-0111.1. Available at: http://www.esajournals.org/doi/pdf/10.1890/11-0111.1 . Accessed: November 20, 2017.	Examines how a suite of five environmental factors, singly and in combination, can affect the success of a highly invasive plant.	Yes	No
NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	Eagle, A. J., M. E. Eiswerth, W. S. Johnson, S. E. Schoenig, and G. Cornelis van Kooten. 2007. Costs and losses imposed on California ranchers by yellow starthistle. <i>Rangeland Ecology & Management</i> 60(4):369–377. doi.org/10.2111/1551-5028(2007)60[369:CALIOC]2.0.CO;2.	Reports on results of a survey administered to California cattle ranchers to investigate yellow star thistle infestation rates, loss of forage quantity and value, and control or eradication efforts.	Yes	No
NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	Farand, C. 2017. France Will Ban All Petrol and Diesel Vehicles by 2040. <i>The Independent</i> . Available at: http://www.independent.co.uk/environment/france-petrol-diesel-ban-vehicles-cars-2040-a7826831.html . Accessed: November 20, 2017.	Reports that France will ban all petrol and diesel vehicles by 2040. The French Environment minister unveiled a 5-year-plan to fulfill the country's commitments under the Paris Agreement.	No	No

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NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	Fast Company. 2016. The Netherlands Will Ban New Gasoline-Powered Vehicles by 2025. Available at: https://www.fastcompany.com/3058649/the-netherlands-will-ban-new-gasoline-powered-vehicles-by-2025 . Accessed: November 20, 2017.	Reports on how starting in 2025, people in the Netherlands will no longer be able to buy a gasoline or diesel-powered car. By law, only zero-emissions vehicles will be on sale.	No	No
NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	Fujimoto, Y. 2016. Introduction of Variable Compression Turbo Engine. Nissan Motor Corporation. Available at: https://www.arb.ca.gov/msprog/consumer_info/advanced_clean_cars/vct_engine_technology_yutaka_fujimoto.pdf . Accessed: November 20, 2017.	Provides an introduction by Nissan of the Variable Compression Turbo Engine.	No	No
NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	Kane, M. 2017. China Considers ZEV Mandate Similar to California. Inside EVs. Available at: https://insideevs.com/china-considers-zev-mandate/ . Accessed: November 20, 2017.	Discusses China's introduction of the National VI emissions standard in major cities for 2017 and for the whole country in 2018. The country is also considering a zero-emission vehicle mandate.	No	No
NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	Okita, R. 2016. Mazda SKYACTIV-G Engine with New Boosting Technology. ACC Symposium held on September 28. Mazda. Available at: https://www.arb.ca.gov/msprog/consumer_info/advanced_clean_cars/new_engine_technology_reiji_okita.pdf . Accessed: November 20, 2017.	Presents Mazda's approach for environmental improvement and introduces the SKYACTIV-G Development Process and the SKYACTIV-G 2.5L TC development.	No	No

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NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	Peters, D. P. C., A. E. Lugo, F. S. Chapin III, S. T. A. Pickett, M. Duniway, A. V. Rocha, F. J. Swanson, C. Laney, and J. Jones. 2011. Cross-system comparisons elucidate disturbance complexities and generalities. <i>Ecosphere</i> 2(7):1–26. doi:10.1890/ES11-00115.1. Available at: http://onlinelibrary.wiley.com/doi/10.1890/ES11-00115.1/epdf . Accessed: November 20, 2017.	Presents a conceptual framework and an operational analog to integrate the current knowledge on the ecological effects of disturbance across ecosystems to promote quantitative comparisons of disturbance effects across different types of ecosystems and disturbances.	Yes	No
NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	Raffa, K. F., B. H. Aukema, B. J. Bentz, A. L. Carroll, J. A. Hicke, M. G. Turner, and W. H. Romme. 2008. Cross-scale drivers of natural disturbances prone to anthropogenic amplification: The dynamics of bark beetle eruptions. <i>BioScience</i> 58 (6):501–517. doi.org/10.1641/B580607.	Analyzes several anthropogenic influences on the recent bark beetle population eruption.	Yes	No
NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	Tomazic, D. 2016. GHG Reducing Advancements and Technologies. CARB ACC Symposium. FEV North America, Inc. Available at: https://www.arb.ca.gov/msprog/consumer_info/advanced_clean_cars/ghg_reducing_advancements_and_technologies_dean_tomazic.pdf . Accessed: November 20, 2017.	Presents recent advancements in clean-car technologies.	No	No

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NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	U.S. Fish and Wildlife Service. 2012. Consequences for Wildlife. Office of External Affairs. Available at: https://www.fws.gov/home/climatechange/impacts.html . Accessed: November 20, 2017.	Outlines the impacts of climate change on fish and wildlife, their populations, and their habitats in the United States.	No	No
NHTSA-2017-0069-0138	Richard Corey, California Air Resources Board	Younkins, M. 2016. Tula Technology's Dynamic Skip Fire. TULA. Available at: https://www.arb.ca.gov/msprog/consumer_info/advanced_clean_cars/potential_benefits_of_cylinder_deactivation_matthew_youngkins.pdf . Accessed: November 20, 2017.	Introduces the Dynamic Skip Fire technology.	No	No
NHTSA-2017-0069-0144	Jeffrey Clarke, NGVAmerica	U.S. Department of Agriculture. 2014. Biogas Opportunities Roadmap. Voluntary Actions to Reduce Methane Emissions and Increase Energy Independence. U.S. Department of Agriculture, U.S. Environmental Protection Agency, U.S. Department of Energy. Available at: https://www.usda.gov/oce/reports/energy/Biogas_Opportunities_Roadmap_8-1-14.pdf . Accessed: November 20, 2017.	Builds on progress made to date to identify voluntary actions that can be taken to reduce methane emissions with biogas systems and outlines strategies to overcome barriers to a robust biogas industry in the United States.	No	No
NHTSA-2017-0069-0144	Jeffrey Clarke, NGVAmerica	California Air Resources Board. 2014. Staff Report, California Air Resources Board, Proposed Re-Adoption of the California Low Carbon Fuel Standard. Available at: https://www.arb.ca.gov/regact/2015/lcfs2015/lcfs15isor.pdf . Accessed: November 20, 2017.	Proposes to re-adopt the Low Carbon Fuel Standard regulation and to include updates and revisions compared to the previous regulation.	No	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0144	Jeffrey Clarke, NGVAmerica	Gas Technology Institute. 2011. The Potential for Renewable Gas: Biogas Derived from Biomass Feedstocks and Upgraded to Pipeline Quality. American Gas Foundation. Available at: http://www.gasfoundation.org/researchstudies/agf-renewable-gas-assessment-report-110901.pdf . Accessed: November 20, 2017.	Evaluates the potential for renewable gas.	No	No
NHTSA-2017-0069-0144	Jeffrey Clarke, NGVAmerica	ICF. 2017. Economic Impacts of Deploying Low NOx Trucks Fueled by Renewable Natural Gas. Available at: https://static1.squarespace.com/static/53a09c47e4b050b5ad5bf4f5/t/590767ce59cc68a9a761ee54/1493657553202/ICF_RNG+Jobs+Study_FINAL+with+infographic.pdf . Accessed: November 20, 2017.	Analyzes the economic impacts of deploying low nitrogen oxide trucks using renewable natural gas.	No	No
NHTSA-2017-0069-0144	Jeffrey Clarke, NGVAmerica	National Petroleum Council Future Transportation Fuels Study. 2012. Renewable Natural Gas for Transportation: An Overview of the Feedstock Capacity, Economics, and GHG Emission Reduction Benefits of RNG as a Low-Carbon Fuel. Available at: http://www.npc.org/reports/FTF_Topic_papers/22-RNG.pdf . Accessed: November 20, 2017.	Provides an overview of the feedstock capacity, economics, and greenhouse gas emissions reduction benefits of renewable natural gas as a low-carbon fuel.	No	No
NHTSA-2017-0069-0144	Jeffrey Clarke, NGVAmerica	U.S. Department of Energy. 2017. Biofuels and Bioproducts from Wet and Gaseous Waste Streams: Challenges and Opportunities. Energy Efficiency & Renewable Energy. Bioenergy Technologies Office. Available at: https://energy.gov/eere/bioenergy/downloads/biofuels-and-bioproducts-wet-and-gaseous-waste-streams-challenges-and . Accessed: November 20, 2017.	Assesses the resource potential and technology opportunities provided by feedstocks, including wastewater treatment-derived sludge and biosolids, animal manure, food waste, inedible fats and greases, biogas, and carbon dioxide streams.	No	No

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NHTSA-2017-0069-0144	Jeffrey Clarke, NGVAmerica	RNG Coalition. 2016. RNG in California: More Than You Think. <i>Fleets & Fuels Magazine</i> . Available at: http://www.fleetsandfuels.com/fuels/cng/2016/04/rng-in-california-more-than-you-think/ . Accessed: November 20, 2017. (Link no longer active. See Couch, P.).	Explains that new figures from the California Air Resources Board indicate that, as of the end of 2015, approximately half of the natural gas being used as a vehicle fuel in the state is bio-based renewable natural gas.	No	No
NHTSA-2017-0069-0144	Jeffrey Clarke, NGVAmerica	National Petroleum Council. 2012. Advancing Technologies for America's Transportation Future. Available at: http://www.npc.org/reports/trans.html . Accessed: November 20, 2017.	Advises on accelerating development of advanced fuel-vehicle systems through 2050 for passenger and freight transport while examining ways to reduce the U.S. transportation sector's 2050 life-cycle greenhouse gas emissions.	No	No
NHTSA-2017-0069-0147	Arthur Wardle, Reason Foundation and Strata Policy	Gruenspecht, H. K. 1982. Differentiated regulation: The case of auto emissions standards. <i>American Economic Review</i> 72 (1982):328–331. Available at: https://www.jstor.org/stable/1802352?seq=1#page_sc_an_tab_contents . Accessed: November 20, 2017.	Analyzes automotive emissions regulation that explicitly considers the link between regulation and the composition of the vehicle stock.	Yes	No

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NHTSA-2017-0069-0147	Arthur Wardle, Reason Foundation and Strata Policy	Furth, S., and D. Kreutzer. 2016. Fuel Economy Standards are a Costly Mistake. The Heritage Foundation. No. 3096 Available at: http://www.heritage.org/government-regulation/report/fuel-economy-standards-are-costly-mistake . Accessed: November 20, 2017.	Argues that the fuel economy standards are a costly mistake.	No	No
NHTSA-2017-0069-0147	Arthur Wardle, Reason Foundation and Strata Policy	Ullman, D. F. 2016. A difficult road ahead: Fleet fuel economy, footprint-based CAFE compliance, and manufacturer incentives. <i>Energy Economics</i> 57:94–105. Available at: https://doi.org/10.1016/j.eneco.2016.04.013 . Accessed: November 20, 2017.	Analyzes the impact that identifiable vehicle characteristics and technological progress has on fleet fuel economy by vehicle type and class.	Yes	No
NHTSA-2017-0069-0147	Arthur Wardle, Reason Foundation and Strata Policy	Allcott, H., and N. Wozny. 2014. Gasoline Prices, Fuel Economy, and The Energy Paradox. NBER Working Paper Series 96(10):779–795. Available at: http://www.nber.org/papers/w18583 . Accessed: November 20, 2017.	Measures whether relative prices of vehicles with different fuel economy ratings fully adjust to time series variation in gasoline price forecasts.	No	No
NHTSA-2017-0069-0147	Arthur Wardle, Reason Foundation and Strata Policy	Allcott, H., and C. Knittel. 2017. Are Consumers Poorly Informed about Fuel Economy? Evidence from Two Experiments. NBER Working Paper 23076. Available at: http://www.nber.org/papers/w23076 . Accessed: November 20, 2017.	Presents evidence on the assertion that consumers are poorly informed about and inattentive to fuel economy, causing them to buy low-fuel economy vehicles, through two experiments providing fuel economy information to new vehicle shoppers.	No	No

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NHTSA-2017-0069-0147	Arthur Wardle, Reason Foundation and Strata Policy	Congressional Budget Office. 2003. The Economic Costs of Fuel Economy Standards Versus a Gasoline Tax. U.S. Congress. Available at: https://www.cbo.gov/sites/default/files/cbofiles/ftpdocs/49xx/doc4917/12-24-03_cafe.pdf . Accessed: November 20, 2017.	Compares the economic costs of two methods for reducing gasoline consumption: raising the CAFE standards for passenger vehicles and increasing the federal tax on gasoline.	No	No
NHTSA-2017-0069-0147	Arthur Wardle, Reason Foundation and Strata Policy	Dimitropoulos, A., W. Oueslati, and C. Sintek. 2016. The Rebound Effect in Road Transport: A Meta- Analysis of Empirical Studies. Environment Working Paper No. 113. Available at: http://dx.doi.org/10.1787/8516ab3a-en . Accessed: November 20, 2017.	Presents a meta-analysis of 76 primary studies and 1,138 estimates of the direct rebound effect in road transport to synthesize past work and inform ongoing discussions about the determinants and magnitude of the rebound effect.	Yes	No
NHTSA-2017-0069-0147	Arthur Wardle, Reason Foundation and Strata Policy	Fagnant, D. J., K. M. Kockelman, and P. Bansal. 2015. Operations of shared autonomous vehicle fleet for Austin, Texas, market. <i>Transportation Research Record</i> (2536):98–106, 2015. Available at: http://trrjournalonline.trb.org/doi/10.3141/2536-12 . Accessed: November 20, 2017.	Discusses the effects of autonomous vehicles in Austin, Texas.	Yes	No
NHTSA-2017-0069-0147	Arthur Wardle, Reason Foundation and Strata Policy	Hayek, F. A. 1945. The use of knowledge in society. <i>American Economic Review</i> XXXV(4):519–530. Available at: http://www.econlib.org/library/Essays/hykKnw1.html . Accessed: November 20, 2017.	Discusses the problems associated with a rational economic order.	Yes	No

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NHTSA-2017-0069-0147	Arthur Wardle, Reason Foundation and Strata Policy	Jacobsen, M. R., and A. A. van Benthem. 2015. Vehicle scrappage and gasoline policy. <i>American Economic Review</i> 105:1312–1338. Available at: https://www.aeaweb.org/articles?id=10.1257/aer.2013.0935 . Accessed: November 20, 2017.	Estimates the sensitivity of scrap decisions to changes in used car values and shows how this "scrap elasticity" produces emissions leakage under fuel efficiency standards, a process known as the Gruenspecht effect.	Yes	No
NHTSA-2017-0069-0147	Arthur Wardle, Reason Foundation and Strata Policy	Levinson, D. 2015. Climbing Mount Next: The effects of autonomous vehicles on society. <i>Minnesota Journal of Law, Science and Technology</i> 16(2):787–809. Available at: https://conservancy.umn.edu/handle/11299/172960 . Accessed: November 20, 2017.	Discusses the effects of autonomous vehicles in the contemporary United States.	Yes	No
NHTSA-2017-0069-0147	Arthur Wardle, Reason Foundation and Strata Policy	Luk, J. M., B. A. Saville, and H. L. MacLean. 2016. Vehicle attribute trade-offs to meet the 2025 CAFE fuel economy target. <i>Transportation Research Part D: Transport and Environment</i> 49:154–171. doi.org/10.1016/j.trd.2016.09.005 .	Analyzes changes in vehicle attributes that can improve fuel economy to meet CAFE standards.	Yes	No

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NHTSA-2017-0069-0147	Arthur Wardle, Reason Foundation and Strata Policy	Morris, J., and A. Wardle. 2017. CAFE and ZEV Standards: Environmental Effects and Alternatives. Reason Foundation. Available at: http://reason.org/news/show/cale-zev-standards-environmental . Accessed: November 20, 2017.	Considers the extent to which the CAFE standards are likely to achieve the objectives of reducing fuel consumption and greenhouse gas emissions and the relative importance of achieving such objectives compared with other possible environmental objectives, and more cost-effective alternative policies.	No	No
NHTSA-2017-0069-0147	Arthur Wardle, Reason Foundation and Strata Policy	Myrdal, G., and F. von Hayek. 1974. The Pretence of Knowledge. Nobel Prize Lecture. Available at: https://www.nobelprize.org/nobel_prizes/economic-sciences/laureates/1974/hayek-lecture.html . Accessed: November 20, 2017.	Provides a lecture to the memory of Alfred Nobel.	No	No
NHTSA-2017-0069-0147	Arthur Wardle, Reason Foundation and Strata Policy	Strata. 2017. Strata Policy Regarding Research Independence and Integrity. Available at: https://www.strata.org/stratas-policy-regarding-research-independence-and-integrity/ . Accessed: November 20, 2017.	Reports on research independence and integrity.	No	No

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NHTSA-2017-0069-0147	Arthur Wardle, Reason Foundation and Strata Policy	U.S. Environmental Protection Agency. 2010. How Consumers Value Fuel Economy: A Literature Review. U.S. Environmental Protection Agency. EPA-420-R-10-008. Available at: https://nepis.epa.gov/Exe/ZyNET.exe/P1006V00.txt?ZyActionD=ZyDocument&Client=EPA&Index=2006%20Thru%202010&Docs=&Query=&Time=&EndTime=&SearchMethod=1&TocRestrict=n&Toc=&TocEntry=&QField=&QFieldYear=&QFieldMonth=&QFieldDay=&UseQField=&IntQFieldOp=0&ExtQFieldOp=0&XmlQuery=&File=D%3A%5CZYFILES%5CINDEX%20DATA%5C06THRU10%5CTX%5C00000016%5CP1006V00.txt&User=ANONYMOUS&Password=anonymous&SortMethod=h%7C-&MaximumDocuments=1&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Display=hpfr&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page&MaximumPages=1&ZyEntry=2 . Accessed: November 20, 2017.	Examines empirical evidence from 28 econometric studies that directly or indirectly estimated the value consumers place on fuel economy.	No	No
NHTSA-2017-0069-0147	Arthur Wardle, Reason Foundation and Strata Policy	Whitefoot, K. S., and S. J. Skerlos. 2012. Design incentives to increase vehicle size created from the U.S. footprint-based fuel economy standards. <i>Energy Policy</i> 41:402–411. doi.org/10.1016/j.enpol.2011.10.062.	Considers whether the CAFE standards create an incentive for firms to increase vehicle size by presenting an oligopolistic-equilibrium model in which automotive firms can modify vehicle dimensions, implement fuel-saving technology features, and trade off acceleration performance and fuel economy.	Yes	No

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NHTSA-2017-0069-0148	William Corcoran	Prehoda, E. W., and J. M. Pearce. 2017. Saving lives and money: The potential of solar to replace coal. U.S. <i>Renewable and Sustainable Energy Reviews</i> . doi: http://dx.doi.org/10.1016.j.rser.2017.05.119 . Available at: https://www.academia.edu/33288631/Potential_Lives_Saved_by_Replacing_Coal_with_Solar_Photovoltaiic_Electricity_Production_in_the_U.S . Accessed: November 20, 2017.	Informs health policies by examining the health and monetary impacts of switching from coal to solar power.	No	No
NHTSA-2017-0069-0148	William Corcoran	Underwood, E. 2017. The polluted brain. <i>Science</i> (355)6323. Available at: http://science.sciencemag.org/content/355/6323/342 . Accessed: November 20, 2017.	Examines the possibility that inhaling fine and ultrafine pollutant particles can lead to dementia.	Yes	No
NHTSA-2017-0069-0149	Mark Cooper, Consumer Federation of America	Cooper, M. 2012. American Federalism At Its Best: Why the Environmental Protection Agency Should Grant A Clean Air Act Waiver to the Clean Cars Program, to the Environmental Protection Agency, Pubic Hearing, September 19, 2012. Consumer Federation of America. Available at: http://consumerfed.org/testimonial/american-federalism-at-its-best/ . Accessed: November 20, 2017.	Supports California's Advanced Clean Cars Program and urges EPA to grant California's waiver request as submitted.	No	No

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NHTSA-2017-0069-0149	Mark Cooper, Consumer Federation of America	Cooper, M. 2016. Testimony of Dr. Mark Cooper, on Midterm Review and an Update on the Corporate Average Fuel Economy Program and Greenhouse Gas Emissions Standards for Motor Vehicles, before the Committee on Energy and Commerce Subcommittee on Commerce, Manufacturing, and Trade Subcommittee on Energy and Power, U.S. House of Representatives, September 22, 2016. Available at: https://energycommerce.house.gov/hearings/midterm-review-and-update-corporate-average-fuel-economy-program-and/ . Accessed: November 20, 2017.	Provides the testimony of Dr. Mark Cooper on Midterm Review and an update on the CAFE program and greenhouse gas emissions standards for motor vehicles.	No	No
NHTSA-2017-0069-0149	Mark Cooper, Consumer Federation of America	Gillis, J., and R. Eckman. 2017. An Analysis of Consumer Savings and Automaker Progress on the Road to 2025 CAFE Standards. Consumer Federation of America. Available at: http://consumerfed.org/wp-content/uploads/2017/07/on-the-road-to-2025-cafe-standards.pdf . Accessed: November 20, 2017.	Evaluates the direct consumer savings, and automaker progress, associated with the 2025 CAFE standards.	No	No
NHTSA-2017-0069-0149	Mark Cooper, Consumer Federation of America	U.S. Bureau of Labor Statistics. 2017. Table 1101. Quintiles of Income before Taxes: Annual Expenditure Means, Shares, Standard Errors, and Coefficients of Variation, Consumer Expenditure Survey, 3rd Quarter 2015 through 2nd Quarter 2016. Available at: https://www.bls.gov/cex/22016/midyear/quintile.pdf . Accessed: November 20, 2017.	Provides a table demonstrating the quintiles of income before taxes.	No	No
NHTSA-2017-0069-0149	Mark Cooper, Consumer Federation of America	Consumer Federation of America. 2017. Consumer Federation of America Issues Energy Web page. Available at: http://consumerfed.org/issues/energy/ . Accessed: November 20, 2017.	Discusses energy issues in America.	No	No

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NHTSA-2017-0069-0149	Mark Cooper, Consumer Federation of America	Cooper, M. 2012. A Key Step to Ending America's Oil Addiction: Policymakers, Consumers and Automakers are Shifting, New Vehicles to Higher Fuel Economy. Consumer Federation of America. Available at: http://www.consumerfed.org/pdfs/Studies.CooperHigherFuelEconomy.7-7.pdf . Accessed: November 20, 2017.	Demonstrates that the primary force that has changed the direction of U.S. fuel economy policy and the glue that holds this consensus together is the favorable economics of increasing fuel economy.	No	No
NHTSA-2017-0069-0149	Mark Cooper, Consumer Federation of America	Cooper, M. 2012. Will They or Won't They? Consumer Adoption of High Fuel Economy Vehicles, 1999–2012, and the Role of the 2025 Standards in Speeding Diffusion of Advanced Technology. Consumer Federation of America. Available at: http://consumerfed.org/_archives/pdfs/PR.AdvancedTechnologyAdoptionAnalysisFuelEconomy12.13.12.pdf . Accessed: November 20, 2017.	Provides statement of Dr. Mark Cooper, Director of Research: Consumer Adoption of High Fuel Economy Vehicles, 1999–2012, and the Role of the 2025 Standards in Speeding Diffusion of Advanced Technology.	No	No
NHTSA-2017-0069-0149	Mark Cooper, Consumer Federation of America	Consumer Federation of America. 2014. For First Time Over 50 Percent of Current Year Models Get More Than 23 MPG; Over 11 Percent Get 30 MPG! Available at: http://consumerfed.org/press_release/for-first-time-over-50-percent-of-current-year-models-get-more-than-23-mpg-over-11-percent-get-30-mpg/ . Accessed: November 20, 2017.	States that more than 50% of the current year's vehicles get more than 23 miles per gallon according to the Consumer Federation of America.	No	No

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NHTSA-2017-0069-0149	Mark Cooper, Consumer Federation of America	Consumer Federation of America. 2015. 2015 Cars Gain MPG's. CAFE Goals in Reach If Gains Continue: However, New Data Shows Some Companies Are Backsliding. Available at: http://www.consumerfed.org/pdfs/150519_2015-Fuel-Economy_pressrelease.pdf . Accessed: November 20, 2017.	Reports on an analysis of 1,163 of 2015's new vehicles showing that fuel efficiency continues to increase on a model-by-model basis; however, individual car company fleets are backsliding on their overall fuel economy performance.	No	No
NHTSA-2017-0069-0149	Mark Cooper, Consumer Federation of America	Consumer Federation of America. 2015. Knowledge Affects Consumer Interest in EVs, New EVs Guide to Address Info Gap: New Survey Shows Nearly One-Third Are Willing to Consider Buying an EV for their Next Car. Available at: http://consumerfed.org/press_release/knowledge-affects-consumer-interest-in-evs-new-evs-guide-to-address-info-gap/ . Accessed: November 20, 2017.	Provides survey results showing that most Americans (54%) have a positive view of electric vehicles.	No	No
NHTSA-2017-0069-0149	Mark Cooper, Consumer Federation of America	Consumer Federation of America. 2016. New Data Shows Consumer Interest in Electric Vehicles Is Growing: Prices Are Down; Number of Models Is Up; Free New Guide to EVs Available as Year over Year Sales Increase. Available at: http://consumerfed.org/press_release/new-data-shows-consumer-interest-electric-vehicles-growing/ . Accessed: November 20, 2017.	Reports on new data showing that consumer interest in purchasing an electric vehicle has increased in the past year, and this interest is greatest among young adults.	No	No

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NHTSA-2017-0069-0149	Mark Cooper, Consumer Federation of America	Cooper, M. 2014. Paying the Freight: The Consumer Benefits of Increasing the Fuel Economy of Medium and Heavy Duty Trucks. Consumer Federation of America. Available at: http://www.consumerfed.org/pdfs/Paying-the-Freight.pdf . Accessed: November 20, 2017.	Examines the costs of energy used by medium- and heavy-duty trucks, the potential for energy savings in this transportation sector, and the positive impact increased fuel efficiency will have on America's households.	No	No
NHTSA-2017-0069-0149	Mark Cooper, Consumer Federation of America	Cooper, M. 2015. Staying on the Road to 54.5 MPG by 2025: Riding the Gasoline Roller Coaster. Consumer Federation of America. Available at: http://www.consumerfed.org/pdfs/150215_Gasoline-Rollercoaster-Fuel-Economy-report.pdf . Accessed: November 20, 2017.	Asserts that policy makers should keep a steady eye on road to the gradual increase to 54.5 miles per gallon by 2025.	No	No
NHTSA-2017-0069-0149	Mark Cooper, Consumer Federation of America	Gillis, J., and M. Cooper. 2013. On the Road to 54 MPG: A Progress Report on Achievability. Consumer Federation of America. Available at: http://consumerfed.org/reports/on-the-road-to-54-mpg-a-progress-report-on-achievability/ . Accessed: November 20, 2017.	Reports that consumer demand for more fuel-efficient vehicles is high and the nation is well on its way to adopting a more fuel-efficient vehicle fleet under the federal 54.5 mile-per-gallon standard.	No	No

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NHTSA-2017-0069-0149	Mark Cooper, Consumer Federation of America	U.S. Department of Transportation. 2001. Household, Individual, and Vehicle Characteristics. Bureau of Transportation Equipment. Available at: https://www.rita.dot.gov/bts/sites/rita.dot.gov.bts/files/publications/highlights_of_the_2001_national_household_travel_survey/html/section_01.html . Accessed: November 20, 2017. (Link no longer active).	Reports the U.S. Bureau of Transportation statistics on the prevalence of drivers and personal vehicle use in the nation.	No	No
NHTSA-2017-0069-0150	Chris Nevers, Alliance of Automobile Manufacturers and Association of Global Automakers	Association of Global Automakers. 2017. Association of Global Automakers Website. Available at: www.globalautomakers.org . Accessed: November 20, 2017.	Provides the main webpage of the Association of Global Automakers website.	No	No
NHTSA-2017-0069-0150	Chris Nevers, Alliance of Automobile Manufacturers and Association of Global Automakers	Auto Alliance. 2017. Auto Alliance Website. Available at: www.autoalliance.org . Accessed: November 20, 2017.	Provides the main page of the Auto Alliance (Alliance of Automobile Manufacturers) website.	No	No
NHTSA-2017-0069-0150	Chris Nevers, Alliance of Automobile Manufacturers and Association of Global Automakers	National Highway Traffic Safety Administration. 2017. Projected Fuel Economy Performance Report. Available at: https://one.nhtsa.gov/CAFE_PIC/MY%202016%20and%202017%20Projected%20Fuel%20Economy%20Performance%20Report%20Final.pdf . Accessed: November 20, 2017.	Estimates fuel economy values for manufacturers and fleets as a supplement to other reporting provided through the CAFE Public Information Center, which contains only EPA-verified final model year data.	No	No

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NHTSA-2017-0069-0150	Chris Nevers, Alliance of Automobile Manufacturers and Association of Global Automakers	Obama White House. 2010. Presidential Memorandum Regarding Fuel Efficiency Standards. Available at: https://obamawhitehouse.archives.gov/the-press-office/presidential-memorandum-regarding-fuel-efficiency-standards . Accessed: November 20, 2017.	Provides the text of the memorandum in which President Obama requested that additional coordinated steps be taken to produce a new generation of clean vehicles.	No	No
NHTSA-2017-0069-0150	Chris Nevers, Alliance of Automobile Manufacturers and Association of Global Automakers	Snively, B. 2017. EPA Eager to Work with Auto Industry to Evaluate Regulations. <i>USA Today</i> . Available at: https://www.usatoday.com/story/money/nation-now/2017/08/02/epa-eager-work-auto-industry-evaluate-regulations/531632001/ . Accessed: November 20, 2017.	Reports on EPA's desire to work with the automotive industry as they restructure greenhouse gas emission regulations.	No	No
NHTSA-2017-0069-0150	Chris Nevers, Alliance of Automobile Manufacturers and Association of Global Automakers	U.S. Environmental Protection Agency. 2011. Auto Manufacturer and California Air Resources Board Commitment Letters to Support 2017–2025 Regulations. Available at: https://www.epa.gov/regulations-emissions-vehicles-and-engines/2011-commitment-letters-2017-2025-light-duty-national . Accessed: November 20, 2017.	Provides letters of support from the State of California and major automakers for a continued national program of light-duty greenhouse gas and CAFE standards.	No	No
NHTSA-2017-0069-0150	Chris Nevers, Alliance of Automobile Manufacturers and Association of Global Automakers	WardsAuto InfoBank. 2017. WardsAuto Website. Available at: http://wardsauto.com/ . Accessed: November 20, 2017.	Provides the latest news, data, and analyses for today's auto industry.	No	No

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NHTSA-2017-0069-0151	Graham Noyes, Pearson Fuels	California Air Resources Board. 2012. State of California Air Resources Board, Resolution 12–11, January 26, 2012, at 20. Available at: https://arb.ca.gov/board/res/2012/res12-11.pdf . Accessed: November 20, 2017.	Discusses the Advanced Clean Cars Regulation Package.	No	No
NHTSA-2017-0069-0151	Graham Noyes, Pearson Fuels	Batres-Marquez, S. P. 2017. U.S. Ethanol: Production, Consumption, and the Relevance of Increasing Exports. Decision Innovation Solutions. Available at: https://www.agmrc.org/renewable-energy/renewable-energy-climate-change-report/renewable-energy-climate-change-report/april-2017-report/us-ethanol-production-consumption-and-the-relevance-of-increasing-exports/ . Accessed: November 20, 2017.	Analyzes the production, consumption, and relevance of increasing ethanol exports.	No	No
NHTSA-2017-0069-0151	Graham Noyes, Pearson Fuels	Bunker, B. J. 2014. E85 Flexible Fuel Weight Factor for Model Year 2016–2018 Vehicles. U.S. Environmental Protection Agency. Available at: https://iaspub.epa.gov/otaqpub/display_file.jsp?docid=33581&flag=1 . Accessed: November 20, 2017.	Provides a letter from EPA regarding the E85 flexible fuel vehicle-weighting factor for model year 2016–2018 vehicles.	No	No
NHTSA-2017-0069-0151	Graham Noyes, Pearson Fuels	Gas Buddy. 2017. About GasBuddy. Available at: https://www.gasbuddy.com/About . Accessed: November 20, 2017.	Discusses a smartphone app connecting drivers with gas station information.	No	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0151	Graham Noyes, Pearson Fuels	U.S. Department of Energy. 2017. Co- Optimization of Fuels and Engines. Office of Energy Efficiency and Renewable Energy. Available at: https://energy.gov/eere/bioenergy/co-optimization-fuels-engines . Accessed: November 20, 2017.	Discusses the research and development collaboration between the U.S. Department of Energy, nine national laboratories, and industry to combine biofuels and combustion research and development, building on decades of advances in both fuels and engines.	No	No
NHTSA-2017-0069-0151	Graham Noyes, Pearson Fuels	U.S. Energy Information Administration. 2017. How Much Oil is Consumed in the United States? U.S. Energy Information Administration. Available at: https://www.eia.gov/tools/faqs/faq.php?id=33&t=6 . Accessed: November 20, 2017.	Provides details on U.S. oil consumption in general and in 2016.	No	No
NHTSA-2017-0069-0151	Graham Noyes, Pearson Fuels	U.S. Energy Information Administration. 2017. U.S. Imports of Crude Oil and Petroleum Products. U.S. Energy Information Administration. Available at: https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=MTTIMUS1&f=M . Accessed: November 20, 2017.	Illustrates the import of crude oil and petroleum products from 1981 to 2017.	No	No
NHTSA-2017-0069-0151	Graham Noyes, Pearson Fuels	Council on Environmental Quality. 1981. Memorandum to Agencies: Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations. Executive Office of the President. Available at: https://energy.gov/sites/prod/files/G-CEQ-40Questions.pdf . Accessed: November 20, 2017.	Provides the 40 most-asked questions compiled in a memorandum to agencies for the information of relevant officials.	No	No

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NHTSA-2017-0069-0152	David Pettit, Acadia Center et al.	Liu, J. C., L. J. Mickley, M. P. Sulprizio, F. Dominici, X. Yue, K., Ebisu, G. B. Anderson, R. F. A. Khan, M. A. Bravo, and M. L. Bell. 2016. Particulate air pollution from wildfires in the Western US under climate change. <i>Climatic Change</i> 138(3–4):655–666. doi.org/10.1007/s10584-016-1762-6.	Estimates levels of fine particulate matter (PM2.5) directly attributable to wildfires in 561 western U.S. counties during fire seasons for the present-day (2004–2009) and future (2046–2051), using a fire prediction model and GEOS-Chem, a 3-D global chemical transport model.	Yes	No
NHTSA-2017-0069-0152	David Pettit, Acadia Center et al.	U.S. Environmental Protection Agency. 2017. Greenhouse Gas Emissions. Sources of Greenhouse Gas Emissions. Available at: https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions . Accessed: November 20, 2017.	Estimates the total national greenhouse gas emissions and removals associated with human activities across the United States.	No	No
NHTSA-2017-0069-0152	David Pettit, Acadia Center et al.	U.S. Environmental Protection Agency. 2017. Municipal Solid Waste Landfills: New Source Performance Standards, Emission Guidelines and Compliance Times: Reconsideration and Stay of Effective Date. U.S. Environmental Protection Agency. Available at: https://www.epa.gov/stationary-sources-air-pollution/municipal-solid-waste-landfills-new-source-performance-standards-0 . Accessed: November 20, 2017.	Provides guidelines on certain aspects of the 2016 New Source Performance Standards for municipal solid waste landfills.	No	No

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NHTSA-2017-0069-0152	David Pettit, Acadia Center et al.	Adelaine, S. A., M. Sato, Y. Jin, and H. Godwin. 2017. An assessment of climate change impacts on Los Angeles (California USA) hospitals, wildfires highest priority. <i>Prehospital and Disaster Medicine</i> 32(5):556–562. doi.org/10.1017/S1049023X17006586.	Determines how much climate change is likely to increase emergency department visits by mid-century for each hospital.	Yes	No
NHTSA-2017-0069-0152	David Pettit, Acadia Center et al.	Auffhammer, M., P. Baylis, and C. H. Hausman. 2017. Climate change is projected to have severe impacts on the frequency and intensity of peak electricity demand across the United States. <i>Proceedings of the National Academy of Sciences</i> 114(8):1886–1891. doi: 10.1073/pnas.1613193114. Available at: http://www.pnas.org/content/114/8/1886.full . Accessed: November 20, 2017.	Analyzes the estimated temperature response functions for total daily consumption in combination with the daily peak load with 18 downscaled global climate models to simulate climate change-driven impacts on both outcomes.	Yes	No
NHTSA-2017-0069-0152	David Pettit, Acadia Center et al.	Balbus, J. M., J. B. Greenblatt, R. Chari, D. Millstein, and K. L. Ebi. 2014. A wedge-based approach to estimating health co-benefits of climate change mitigation activities in the United States. <i>Climatic Change</i> 127(2):199–210. doi.org/10.1007/s10584-014-1262-5.	Presents a new framework for estimating the change in health outcomes resulting from implementation of specific carbon dioxide-reduction activities, allowing comparison of different sectors and options for climate-mitigation activities.	Yes	No

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NHTSA-2017-0069-0152	David Pettit, Acadia Center et al.	Bartos, M. D., and B. M. V. Chester. 2015. Impacts of climate change on electric power supply in the Western United States. <i>Nature Climate Change</i> 5:748–752. doi:10.1038/nclimate2648. Available at: https://www.nature.com/nclimate/journal/v5/n8/full/nclimate2648.html . Accessed: November 20, 2017.	Estimates reductions to generating capacity in the western United States based on long-term changes in streamflow, air temperature, water temperature, humidity, and air density.	Yes	No
NHTSA-2017-0069-0152	David Pettit, Acadia Center et al.	Blunden, J. 2017. International Report Confirms 2016 was Third Consecutive Year of Record Global Warmth. NOAA. Available at: https://www.climate.gov/news-features/understanding-climate/international-report-confirms-2016-was-third-consecutive-year . Accessed: November 20, 2017.	Confirms that 2016 surpassed 2015 as the warmest year in 137 years of recordkeeping.	No	No
NHTSA-2017-0069-0152	David Pettit, Acadia Center et al.	Diffenbaugh, N. S., D. L. Swain, and D. Touma. 2015. Anthropogenic warming has increased drought risk in California. <i>Proceedings of the National Academy of Sciences</i> 112(13):3931–3936. doi: 10.1073/pnas.1422385112. Available at: http://www.pnas.org/content/112/13/3931.abstract . Accessed: November 20, 2017.	Analyzes historical climate observations from California and finds that precipitation deficits in California were more than twice as likely to yield drought years if they occurred when conditions were warm.	Yes	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0152	David Pettit, Acadia Center et al.	Gergel, D. R., B. Nijssen, J. T. Abatzoglou, D. P. Lettenmaier, and M. R. Stumbaugh. 2017. Effects of climate change on snowpack and fire potential in the western USA. <i>Climatic Change</i> 141(2):287–299. doi.org/10.1007/s10584-017-1899-y.	Evaluates the implications of ten 21st century climate scenarios for snow, soil moisture, and fuel moisture across the conterminous western United States using the Variable Infiltration Capacity hydrology model.	Yes	No
NHTSA-2017-0069-0152	David Pettit, Acadia Center et al.	Hauer, M. E., J. M. Evans, and D. R. Mishra. 2016. Millions projected to be at risk from sea-level rise in the continental United States. <i>Nature Climate Change</i> 6:691–695. doi:10.1038/nclimate2961. Available at: https://www.nature.com/nclimate/journal/v6/n7/full/nclimate2961.html . Accessed: November 20, 2017.	Suggest that the absence of protective measures could lead to U.S. population movements of a magnitude similar to the 20th century Great Migration of southern African-Americans.	Yes	No
NHTSA-2017-0069-0152	David Pettit, Acadia Center et al.	Horne, J. R., and D. Dabdub. 2017. Impact of global climate change on ozone, particulate matter, and secondary organic aerosol concentrations in California: A model perturbation analysis. <i>Atmospheric Environment</i> 153:1–17. doi.org/10.1016/j.atmosenv.2016.12.049.	Determines the impact of changes in future climate and emissions on regional air quality in the South Coast Air Basin of California.	Yes	No

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NHTSA-2017-0069-0152	David Pettit, Acadia Center et al.	Le Quéré, C., R. M. Andrew, J. G. Canadell, S. Sitch, J. I. Korsbakken, G. P. Peters, A. C. Manning, T. A. Boden, P. P. Tans, R. A. Houghton, R. F. Keeling, S. Alin, O. D. Andrews, P. Anthoni, L. Barbero, L. Bopp, F. Chevallier, L. P. Chini, P. Ciais, K. Currie, C. Delire, S. C. Doney, P. Friedlingstein, T. Gkritzalis, I. Harris, J. Hauck, V. Haverd, M. Hoppema, K. Klein Goldewijk, A. K. Jain, E. Kato, A. Körtzinger, P. Landschützer, N. Lefèvre, A. Lenton, S. Lienert, D. Lombardozzi, J. R. Melton, N. Metz, F. Millero, P. M. S. Monteiro, D. R. Munro, J. E. M. S. Nabel, S.-I. Nakaoka, K. O'Brien, A. Olsen, A. M. Omar, T. Ono, D. Pierrot, B. Poulter, C. Rödenbeck, J. Salisbury, U. Schuster, J. Schwinger, R. Séférian, I. Skjelvan, B. D. Stocker, A. J. Sutton, T. Takahashi, H. Tian, B. Tilbrook, I. T. van der Laan-Luijkx, G. R. van der Werf, N. Viovy, A. P. Walker, A. J. Wiltshire, and S. Zaehle. 2016. Global Carbon Budget 2016. <i>Earth System Science Data</i> 8:605–649. https://doi.org/10.5194/essd-8-605-2016 , 2016. Available at: http://www.globalcarbonproject.org/carbonbudget/archive/2016/GCP_CarbonBudget_2016.pdf . Accessed: November 20, 2017.	Presents the global carbon budget data.	Yes	No
NHTSA-2017-0069-0152	David Pettit, Acadia Center et al.	National Research Council. 2013. Abrupt Impacts of Climate Change: Anticipating Surprises. The National Academies Press. Page 250. /doi.org/10.17226/18373 .	Discusses the uncertainty associated with climate change and abrupt changes in climate.	Yes	No
NHTSA-2017-0069-0152	David Pettit, Acadia Center et al.	National Research Council. 2014. The Arctic in the Anthropocene: Emerging Research Questions. The National Academies Press. Page 220. doi.org/10.17226/18726 .	Examines emerging research questions in the Arctic.	Yes	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0152	David Pettit, Acadia Center et al.	Peters, G. P, R. M. Andrew, S. Solomon, and P. Friedlingstein. 2015. Measuring a fair and ambitious climate agreement using cumulative emissions. <i>Environmental Research Letters</i> 10(10). Available at: http://iopscience.iop.org/article/10.1088/1748-9326/10/10/105004 . Accessed: November 20, 2017.	Develops a framework based on cumulative emissions of carbon dioxide to compare the consistency of countries' current emission pledges to the ambition of keeping global temperatures below 2°C, and, further, compares two alternative methods of sharing the remaining emissions allowance.	Yes	No
NHTSA-2017-0069-0152	David Pettit, Acadia Center et al.	Rogeli, J., M. Schaeffer, P. Friedlingstein, N. P. Gillett, D. P. Van Vuuren, K. Riahi, M. Allen, and R. Knutti. 2016. Differences between carbon budget estimates unraveled. <i>Nature Climate Change</i> 6:245–252. doi:10.1038/nclimate2868. Available at: http://www.nature.com/nclimate/journal/v6/n3/full/nclimate2868.html?WT.ec_id=NCLIMATE-201603&spMailingID=50767823&spUserID=ODkwMTM2NjQyMAS2&spJobID=862987827&spReportId=ODYyOTg3ODI3S0 . Accessed: November 20, 2017.	Analyzes methods to estimate the cumulative carbon emissions that would keep global warming to below a given temperature.	Yes	No

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NHTSA-2017-0069-0152	David Pettit, Acadia Center et al.	Schleussner, C., T. K. Lissner, E. M. Fischer, J. Wohland, M. Perrette, A. Golly, J. Rogelj, K. Childers, J. Schewe, K. Frieler, M. Mengel, W. Hare, and M. Schaeffer. 2016. Differential climate impacts for policy-relevant limits to global warming: the case of 1.5C and 2C. <i>Earth System Dynamics</i> 7:327–351. doi:10.5194/esd-7-327-2016. Available at: https://www.earth-syst-dynam.net/7/327/2016/esd-7-327-2016.pdf . Accessed: November 20, 2017.	Provides an assessment of key impacts of climate change at warming levels of 1.5°C and 2°C.	Yes	No
NHTSA-2017-0069-0152	David Pettit, Acadia Center et al.	Shindell, D. T., Y. Lee, and G. Faluvegi. 2016. Climate and health impacts of US emissions reductions consistent with 2 °C. <i>Nature Climate Change</i> 6:503–507. doi:10.1038/nclimate2935. Available at: http://www.nature.com/nclimate/journal/v6/n5/full/nclimate2935.html?foxtrotcallback=true . Accessed: November 20, 2017.	Examines the impacts of highly ambitious scenarios for clean energy and vehicles.	Yes	No
NHTSA-2017-0069-0152	David Pettit, Acadia Center et al.	Thompson, T. M, S. Rausch, R. K. Saari, and N. E. Selin. 2014. A systems approach to evaluating the air quality co-benefits of US carbon policies. <i>Nature Climate Change</i> 4:917–923. doi:10.1038/nclimate2342. Available at: https://www.nature.com/nclimate/journal/v4/n10/full/nclimate2342.html . Accessed: November 20, 2017.	Quantifies air quality co-benefits of U.S. policies to reduce greenhouse gas emissions. Health-related benefits from reduced ozone and particulate matter (PM2.5) are assessed by linking three advanced models, representing the full pathway from policy to pollutant damages.	Yes	No

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NHTSA-2017-0069-0152	David Pettit, Acadia Center et al.	U.S. Environmental Protection Agency. 2015. 2015 Inventory of U.S. Greenhouse Gas Emissions and Sinks. Available at: https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks . Accessed: November 20, 2017.	Provides a comprehensive accounting of total greenhouse gas emissions for all human-made sources in the United States.	No	No
NHTSA-2017-0069-0152	David Pettit, Acadia Center et al.	Wuebbles, D., D. Fahey, K. Hibbard, et al. 2017. U.S. global change research program climate science special report. Fifth-Order Draft. Final Clearance June 28, 2017. Available at: http://www.nytimes.com/packages/pdf/climate/2017/climate-report-final-draft-clean.pdf . Accessed: November 20, 2017.	Assesses the science of climate change, with a focus on the United States, to serve as the foundation for efforts to assess climate-related risks and inform decision-making about responses.	No	No
NHTSA-2017-0069-0152	David Pettit, Acadia Center et al.	Caldeira, K., and M. E. Wickett. 2005. Ocean model predictions of chemistry changes from carbon dioxide emissions to the atmosphere and ocean. <i>Journal of Geophysical Research</i> 110 (C09S04). doi:10.1029/2004JC002671. Available at: http://onlinelibrary.wiley.com/doi/10.1029/2004JC002671/full . Accessed: November 20, 2017.	Presents ocean chemistry calculations based on ocean general circulation model simulations of atmospheric carbon dioxide emission, stabilization of atmospheric carbon dioxide content, and stabilization of atmospheric carbon dioxide achieved in total or in part by injection of carbon dioxide to the deep ocean interior.	Yes	Yes

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NHTSA-2017-0069-0152	David Pettit, Acadia Center et al.	Doney, S.C., V. J. Fabry, R. A. Feely, and J. A. Kleypas. 2009. Ocean acidification: The other CO2 problem. <i>Annual Review of Marine Science</i> 1(1):169–192. Available at: http://www.annualreviews.org/doi/abs/10.1146/annurev.marine.010908.163834 . Accessed: November 20, 2017.	Reviews the ocean acidification process and discusses resulting issues such as increases in carbon fixation rates in some photosynthetic organisms (both calcifying and noncalcifying) and the potential for marine organisms to adapt to increasing carbon dioxide.	Yes	Yes
NHTSA-2017-0069-0152	David Pettit, Acadia Center et al.	Edenhofer, O., R. Pichs-Madruga, Y. Sokona, E. Farahani, S. Kadner, K. Seyboth, A. Adler, I. Baum, S. Brunner, P. Eickemeier, B. Kriemann, J. Savolainen, S. Schlömer, C. von Stechow, T. Zwickel, and J. C. Minx. 2014. Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. IPCC. Cambridge University Press. Page. 1435. Available at: http://www.ipcc.ch/report/ar5/wg3/ . Accessed: November 20, 2017.	Provides an assessment of relevant options for mitigating climate change through limiting or preventing greenhouse gas emissions, as well as activities that reduce their concentrations in the atmosphere.	Yes	Yes

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0152	David Pettit, Acadia Center et al.	Feely, R. A., C. L. Sabine, K. Lee, W. Berelson, W. Kleypas, V. J. Fabry, and F. J. Millero. 2004. Impact of anthropogenic CO ₂ on the CaCO ₃ system in the oceans. <i>Science</i> 305(5682): 362–366. doi: 10.1126/science.1097329. Available at: http://science.sciencemag.org/content/305/5682/362 . Accessed: November 20, 2017.	Estimates the <i>in-situ</i> calcium carbonate dissolution rates for the global oceans from total alkalinity and chlorofluorocarbon data, and discusses the future impacts of anthropogenic carbon dioxide on calcium carbonate shell-forming species.	Yes	Yes
NHTSA-2017-0069-0152	David Pettit, Acadia Center et al.	Field, C. B., V. R. Barros, D. J. Dokken, K. J. Mach, M. D. Mastrandrea, T. E. Bilir, M. Chatterjee, K. L. Ebi, Y. O. Estrada, R. C. Genova, B. Girma, E. S. Kissel, A. N. Levy, S. MacCracken, P. R. Mastrandrea, and L. L. White. 2014. Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. IPCC. Cambridge University Press. Page 1132. Available at: http://www.ipcc.ch/report/ar5/wg2/ . Accessed: November 20, 2017.	Addresses climate impacts that have already occurred and risks of future impacts, especially the way those risks change with the amount of climate change that occurs and with investments in adaptation to climate changes that cannot be avoided.	Yes	Yes

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0152	David Pettit, Acadia Center et al.	Hönisch, B., A. Ridgwell, D. N. Schmidt, E. Thomas, S. J. Gibbs, A. Sluijs, R. Zeebe, L. Kump, R. C. Martindale, S. E. Greene, W. Kiessling, J. Ries, J. C. Zachos, S. Barker, T. M. Marchitto Jr., R. Moyer, C. Pelejero, P. Ziveri, G. L. Foster, and B. Williams. 2012. The geological record of ocean acidification. <i>Science</i> 335(6072):1058–1063. doi: 10.1126/science.1208277. Available at: http://science.sciencemag.org/content/335/6072/1058 . Accessed: November 20, 2017.	Reviews events exhibiting evidence for elevated atmospheric carbon dioxide, global warming, and ocean acidification over the past 300 million years of Earth’s history, some with contemporaneous extinction or evolutionary turnover among marine calcifiers.	Yes	Yes
NHTSA-2017-0069-0152	David Pettit, Acadia Center et al.	Institute of Medicine. 2011. Climate Change, the Indoor Environment, and Health. The National Academies Press. P. 272. doi.org/10.17226/13115. Available at: https://www.nap.edu/catalog/13115/climate-change-the-indoor-environment-and-health . Accessed: November 20, 2017.	Discusses how climate change has the potential to affect the indoor environment because conditions inside buildings are influenced by conditions outside them.	Yes	Yes
NHTSA-2017-0069-0152	David Pettit, Acadia Center et al.	Kroeker, K. J., R. L. Kordas, R. Crim, I. E. Hendriks, L. Ramajo, G. S. Singh, C. M. Duarte, and J. P. Gattuso. 2013. Impacts of ocean acidification on marine organisms: quantifying sensitivities and interaction with warming. <i>Global Change Biology</i> 19(6):1884–1896. doi: 10.1111/gcb.12179. Available at: https://www.ncbi.nlm.nih.gov/pubmed/23505245 . Accessed: November 20, 2017.	Synthesizes the results of 228 studies examining biological responses to ocean acidification.	Yes	Yes

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NHTSA-2017-0069-0152	David Pettit, Acadia Center et al.	Luthi, D., M. Le Floch, B. Bereiter, T. Blunier, J. M. Barnola, U. Siegenthaler, D. Raynaud, J. Jouzel, H. Fischer, K. Kawamura, and T. F. Stocker. 2008. High-resolution carbon dioxide concentration record 650,000–800,000 years before present. <i>Nature</i> 453:379–382. doi:10.1038/nature06949. Available at: http://www.nature.com/nature/journal/v453/n7193/abs/nature06949.html . Accessed: November 20, 2017.	Reports the results of the lowest 200 meter of the Dome C ice core, extending the record of atmospheric carbon dioxide concentration by two complete glacial cycles to 800,000 years before present.	Yes	Yes
NHTSA-2017-0069-0152	David Pettit, Acadia Center et al.	McNeil, B., and R. J. Matear. 2006. Projected climate change impact on oceanic acidification. <i>Carbon Balance and Management</i> 1(2):1–6. doi.org/10.1186/1750-0680-1-2.	Demonstrates that the direct decrease in pH due to ocean warming is approximately equal to, but opposite in magnitude to, the indirect increase in pH associated with ocean warming.	Yes	Yes
NHTSA-2017-0069-0152	David Pettit, Acadia Center et al.	Melillo, J. M., T. C. Richmond, and G. W. Yohe. 2014. Climate Change Impacts in the United States: The Third National Climate Assessment. U.S. Global Change Research Program. P. 841. Available at: http://www.globalchange.gov/browse/reports/climate-change-impacts-united-states-third-national-climate-assessment-0 . Accessed: November 20, 2017.	Summarizes the impacts of climate change on the United States, now and in the future.	Yes	Yes

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NHTSA-2017-0069-0152	David Pettit, Acadia Center et al.	National Research Council. 2012. Sea-Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future. The National Academies Press. Page 201. doi.org/10.17226/13389.	Provides data on the global sea-level rise and the enormous risks it poses to the valuable infrastructure, development, and wetlands that line much of the 1,600-mile shoreline of California, Oregon, and Washington.	Yes	Yes
NHTSA-2017-0069-0152	David Pettit, Acadia Center et al.	Solomon, S., G. K. Plattner, R. Knutti, and P. Friedlingstein. 2009. Irreversible climate change due to carbon dioxide emissions. <i>Proceedings of the National Academy of Sciences</i> 106(6):1704–1709. doi: 10.1073/pnas.0812721106. Available at: http://www.pnas.org/content/106/6/1704.full . Accessed: November 20, 2017.	Demonstrates the relationship between climate change and increases in carbon dioxide.	Yes	Yes
NHTSA-2017-0069-0152	David Pettit, Acadia Center et al.	Stocker, T. F., D. Qin, G.-K. Plattner, M. Tignor, S. K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex, and P. M. Midgley. 2013. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. IPCC. Cambridge University Press. Page 1535. doi:10.1017/CBO9781107415324. Available at: http://www.ipcc.ch/report/ar5/wg1/ . Accessed: November 20, 2017.	Confirms that warming in the climate system is unequivocal, with many of the observed changes unprecedented over decades to millennia: warming of the atmosphere and the ocean, diminishing snow and ice, rising sea levels and increasing concentrations of greenhouse gases.	Yes	Yes

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NHTSA-2017-0069-0152	David Pettit, Acadia Center et al.	Lutsey, N., D. Meszler, A. Isenstadt, J. German, and J. Miller. 2017. Efficiency Technology and Cost Assessment for U.S. 2025–2030 Light-Duty Vehicles. The International Council on Clean Transportation. Available at: http://www.theicct.org/sites/default/files/publications/US-LDV-tech-potential_ICCT_white-paper_22032017.pdf . Accessed: November 20, 2017.	Analyzes emerging vehicle efficiency technologies, their ability to achieve lower emission levels, and their costs in the 2025–2030 period.	No	No
NHTSA-2017-0069-0152	David Pettit, Acadia Center et al.	Saari, R. K., T. M. Thompson, and N. E. Selin. 2017. Human health and economic impacts of ozone reductions by income group. <i>Environmental Science & Technology</i> 51(4):1953–1961. doi: 10.1021/acs.est.6b04708. Available at: http://pubs.acs.org/doi/pdf/10.1021/acs.est.6b04708 . Accessed: November 20, 2017.	Quantifies how three factors affect the relative benefits of ozone policies with household income: (1) unequal ozone reductions; (2) policy delay; and (3) economic valuation methods.	Yes	No
NHTSA-2017-0069-0152	David Pettit, Acadia Center et al.	Bloomberg New Energy Finance. 2017. Electric Vehicle Outlook. Available at: https://data.bloomberglp.com/bnef/sites/14/2017/07/BNEF_EVO_2017_ExecutiveSummary.pdf . Accessed: November 20, 2017.	Analyzes how economics, technology, policy, and consumer behavior will affect electric vehicle adoption between now and 2040.	No	No
NHTSA-2017-0069-0152	David Pettit, Acadia Center et al.	Cooper, A., and K. Schefter. 2017. Plug-In Electric Vehicle Sales Forecast through 2025 and the Charging Infrastructure Required. Edison Electric Institute, Institute for Electric Innovation. Available at: http://www.edisonfoundation.net/iei/publications/Documents/IEI_EEI%20PEV%20Sales%20and%20Infrastructure%20thru%202025_FINAL%20(2).pdf . Accessed: November 20, 2017.	Identifies both the scope and scale of charging infrastructure needed to support plug-in electric vehicles and the different approaches to infrastructure build-out.	No	No

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NHTSA-2017-0069-0152	David Pettit, Acadia Center et al.	U.S. Department of Energy. 2016. Revolution Now. U.S. Department of Energy. Available at: https://energy.gov/revolution-now . Accessed: November 20, 2017.	Reports on the accelerated deployment of five clean energy technologies thriving in the U.S. market—wind turbines, solar technologies for both utility-scale and distributed photovoltaic, electric vehicles, and light-emitting diodes.	No	No
NHTSA-2017-0069-0152	David Pettit, Acadia Center et al.	U.S. Environmental Protection Agency. 2017. EPA Proposes to Stay Oil and Gas Standards for Two Years. U.S. Environmental Protection Agency. Available at: https://www.epa.gov/controlling-air-pollution-oil-and-natural-gas-industry/epa-proposes-stay-oil-and-gas-standards-two-0 . Accessed: November 20, 2017.	Discusses how EPA is taking steps to ensure portions of the agency's 2016 New Source Performance Standards for the oil and natural gas industry remain stayed while the agency works through the reconsideration process.	No	No
NHTSA-2017-0069-0152	David Pettit, Acadia Center et al.	Nealer, R., D. Reichmuth, and D. Anair. 2015. Cleaner Cars from Cradle to Grave, How Electric Cars Beat Gasoline Cars on Lifetime Global Warming Emissions. Union of Concerned Scientists. Available at: http://www.ucsusa.org/sites/default/files/attach/2015/11/Cleaner-Cars-from-Cradle-to-Grave-full-report.pdf . Accessed: November 20, 2017.	Compares battery-electric vehicles with similar gasoline vehicles by examining their global warming emissions over their life cycles—from the raw materials to make the car through manufacturing, driving, and disposal or recycling.	No	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0152	David Pettit, Acadia Center et al.	California Air Resources Board. 2011. Advanced Clean Cars. Available at: https://www.arb.ca.gov/regact/2012/leviighg2012/levisor.pdf . Accessed: November 20, 2017.	Provides evidence that despite significant progress in reducing smog-forming and particulate matter criteria emissions from the passenger vehicle fleet, California needs further reductions in order to meet state and federal ambient air quality standards.	No	No
NHTSA-2017-0069-0152	David Pettit, Acadia Center et al.	Natural Resources Defense Council. 2017. Trump Wants to Kill the EPA's Environmental Justice Program. Natural Resources Defense Council. Available at: https://www.nrdc.org/trump-watch/trump-wants-kill-epas-environmental-justice-program . Accessed: November 20, 2017.	States that President Trump's proposed EPA budget reveals that the environmental justice program would be cut.	No	No
NHTSA-2017-0069-0152	David Pettit, Acadia Center et al.	U.N. Subsidiary Body for Scientific and Technological Advice. 2015. Report on the Structured Expert Dialogue on the 2013–2015 Review. FCCC/SB/2015/1NF.1. Available at: http://unfccc.int/resource/docs/2015/sb/eng/inf01.pdf . Accessed: November 20, 2017.	Summarizes the face-to-face dialogue between more than 70 experts and parties on the adequacy of the long-term global climate goal and the overall progress made toward achieving the long-term global goal.	No	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0152	David Pettit, Acadia Center et al.	U.S. Environmental Protection Agency. 2017. Environmental Justice and National Environmental Policy Act. Environmental Justice Considerations in the NEPA Process. U.S. Environmental Protection Agency. Available at: https://www.epa.gov/environmentaljustice/environmental-justice-and-national-environmental-policy-act . Accessed: November 20, 2017.	Provides guidance, methodologies, and tools to analyze environmental justice in National Environmental Policy Act documents.	No	No
NHTSA-2017-0069-0153	Patrick Michaels, Cato Institute	Bates, J. R. 2016. Estimating climate sensitivity using two-zone energy balance models. <i>Earth and Space Science</i> 3(5):207–225. Available at: http://onlinelibrary.wiley.com/doi/10.1002/2015EA000154/full . Accessed: November 20, 2017.	Provides estimates of carbon dioxide equilibrium climate sensitivity and effective climate sensitivity.	Yes	No
NHTSA-2017-0069-0153	Patrick Michaels, Cato Institute	Christy, J. R. 2017. Testimony to the House Science Committee, March 29, 2017. Available at: https://science.house.gov/sites/republicans.science.house.gov/files/documents/HHRG-115-SY-WState-JChristy-20170329.pdf . Accessed: November 20, 2017. (Link no longer active).	Provides a testimony focusing on the temperature of the bulk atmospheric layer from the surface to about 50,000 feet.	No	No
NHTSA-2017-0069-0153	Patrick Michaels, Cato Institute	Lewis, N., and J. A. Curry. 2014. The implications for climate sensitivity of AR5 forcing and heat uptake estimates. <i>Climate Dynamics</i> 45:1009. doi.org/10.1007/s00382-014-2342-y.	Presents energy budget estimates of equilibrium climate sensitivity and transient climate response.	Yes	No
NHTSA-2017-0069-0153	Patrick Michaels, Cato Institute	Loehle, C. 2014. A minimal model for estimating climate sensitivity. <i>Ecological Modelling</i> 276:80–84.	Estimates the periodic temperature oscillations often associated with the Pacific Decadal Oscillation and Atlantic Multidecadal Oscillation.	Yes	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0153	Patrick Michaels, Cato Institute	Masters, T. 2014. Observational estimate of climate sensitivity from changes in the rate of ocean heat uptake and comparison to CMIP5 models. <i>Climate Dynamics</i> 42:2173. doi.org/10.1007/s00382-013-1770-4.	Presents an analysis that incorporates climate sensitivity, ocean heat uptake, the CMIP model sensitivity, and climate feedback.	Yes	No
NHTSA-2017-0069-0153	Patrick Michaels, Cato Institute	Michaels, P. J. 2017. Reconciling competing climate science and policy paradigms. Extended Abstract # CC-38. Cato Institute. Available at: https://object.cato.org/sites/cato.org/files/wp-content/uploads/cc38-michaels.pdf . Accessed: November 20, 2017.	Discusses if the Paris Agreement objectives will be met.	No	No
NHTSA-2017-0069-0153	Patrick Michaels, Cato Institute	Michaels, P.J., and P. C. Knappenberger. 2016. Lukewarming. Cato Institute. Available at: https://store.cato.org/book/lukewarming . Accessed: November 20, 2017.	Examines if the impacts from climate change have been exaggerated.	No	No

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NHTSA-2017-0069-0153	Patrick Michaels, Cato Institute	Millar, R. J., J. S. Fuglestedt, P. Friedlingstein, J. Rogeli, M. J. Grubb, H. D. Matthews, R. B. Skeie, P. M. Forster, D. J. Frame, and M. R. Allen. 2017. Emission budgets and pathways consistent with limiting warming to 1.5 degrees Celsius. <i>Nature Geoscience</i> 10:741–748. doi:10.1038/NGEO3031. Available at: https://www.nature.com/articles/ngeo3031.epdf?referrer_access_token=mwngghdbL03wwT5ngwh6UadRgN0jAjWel9jnR3Zotv00hiLdhtid2wizB9lmkCPriDCWVzOyNzNp_Tol3CznXFOySvge_X48Y3hGnZ3sFnaDq28GuV1CtozcJIN2dJUbasl3jm5IKPn5UIntkCp5vbzHNQQ6CXHhGF2XyYDK3EPWuUQnCoa3ioodgNC0yDoMzuivauTmWjY_eXfd1LbkuNW2uiv2_0JILGgo0kQT-g0kDGkMCpCP9NGdqWL2VknHnFQbP_B6JgrA_OdmomL4M1A%3D%3D&tracking_referrer=www.nature.com . Accessed: November 20, 2017.	Shows that limiting warming to 1.5°C is not yet a geophysical impossibility, but is likely to require delivery on strengthened pledges for 2030, followed by challengingly deep and rapid mitigation.	Yes	No
NHTSA-2017-0069-0153	Patrick Michaels, Cato Institute	Skeie, R. B., T. Bernsten, M. Aldrin, M. Holden, and G. Myhre. 2014. A lower and more constrained estimate of climate sensitivity using updated observations and detailed radiative forcing time series. <i>Earth System Dynamics</i> 5:139–175. doi:10.5194/esd-5-139-2014. Available at: https://www.earth-syst-dynam.net/5/139/2014/esd-5-139-2014.pdf . Accessed: November 20, 2017.	Finds that using three ocean heat content datasets simultaneously and data for global mean temperature and ocean heat content up to 2010 substantially narrows the range in equilibrium climate sensitivity compared to using less updated data and only one ocean heat content data set.	Yes	No

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NHTSA-2017-0069-0153	Patrick Michaels, Cato Institute	Stevens, B. 2015. Rethinking the Lower Bound on Aerosol Radiative Forcing. <i>American Meteorological Society</i> . Available at: http://journals.ametsoc.org/doi/abs/10.1175/JCLI-D-14-00656.1 . Accessed: November 20, 2017.	Finds that aerosol radiative forcing is less negative and more certain than is commonly believed.	Yes	No
NHTSA-2017-0069-0153	Patrick Michaels, Cato Institute	Hateren, J. H. V. 2013. A fractal climate response function can simulate global average temperature trends of the modern era and the past millennium. <i>Climate Dynamics</i> 40(11-12):2651-2670. doi: 10.1007/s00382-012-1375-3.	Discusses how the temperature rise from 1820 to 1950 can be attributed for about 70% to increased solar irradiance, while the temperature changes after 1950 are almost completely produced by the interplay of anthropogenic greenhouse gases and aerosols.	Yes	No
NHTSA-2017-0069-0153	Patrick Michaels, Cato Institute	Voosen, P. 2016. Climate scientists open up their black boxes to scrutiny. <i>Science</i> 354(6311):401–402. doi: 10.1126/science.354.6311.401. Available at: http://science.sciencemag.org/content/354/6311/401 . Accessed: November 20, 2017.	Explains that some processes, like cloud formation, are too fine-grained, and lead modelers to use "parameterizations."	Yes	No
NHTSA-2017-0069-0153	Patrick Michaels, Cato Institute	Aldrin, M., M. Holden, P. Guttorp, R. B. Skeie, G. Myhre, and T. K. Berntsen. 2012. Bayesian estimation of climate sensitivity based on a simple climate model fitted to observations of hemispheric temperatures and global ocean heat content. <i>Environmetrics</i> 23(3):253–271. Accessed: November 20, 2017.	Presents a model framework for estimating climate sensitivity.	Yes	Yes

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NHTSA-2017-0069-0153	Patrick Michaels, Cato Institute	Annan, J. D., and J. C. Hargreaves. 2013. A new global reconstruction of temperature changes at the Last Glacial Maximum. <i>Climate of the Past</i> 9:367–376. Available at: https://www.clim-past.net/9/367/2013/cp-9-367-2013.pdf . Accessed: November 20, 2017.	Presents data and models to generate a spatially complete reconstruction of surface air (and sea surface) temperatures over time.	Yes	Yes
NHTSA-2017-0069-0153	Patrick Michaels, Cato Institute	Hargreaves, J. C., J. D. Annan, M. Yoshimori, and A. Abe-Ouchi. 2012. Can the last glacial maximum constrain climate sensitivity? <i>Geophysical Research Letters</i> 39(24). Available at: http://onlinelibrary.wiley.com/doi/10.1029/2012GL053872/full . Accessed: November 20, 2017.	Investigates the relationship between the Last Glacial Maximum and climate sensitivity across the PMIP2 multi-model ensemble of global climate change models and finds a correlation between tropical temperature and climate sensitivity.	Yes	Yes

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0153	Patrick Michaels, Cato Institute	Lindzen, R. S., and Y. S. Choi. 2011. On the observational determination of climate sensitivity and its implications. <i>Asia-Pacific Journal of the Atmospheric Sciences</i> 47(4):377–390. doi:10.1007/s13143-011-0023-x. Available at: http://www-eaps.mit.edu/faculty/lindzen/236-Lindzen-Choi-2011.pdf . Accessed: November 20, 2017.	Estimates climate sensitivity from observations using the deseasonalized fluctuations in sea surface temperatures and the concurrent fluctuations in the top-of-atmosphere outgoing radiation from the Earth Radiation Budget Experiment (ERBE) (1985–1999) and the Clouds and the Earth’s Radiant Energy System (CERES) (2000–2008) satellite instruments.	Yes	Yes
NHTSA-2017-0069-0153	Patrick Michaels, Cato Institute	Otto, A., F. E. L. Otto, O. Boucher, J. Church, G. Hegerl, P. M. Forster, N. P. Gillett, J. Gregory, G. C. Johnson, R. Knutti, N. Lewis, U. Lohmann, J. Marotzke, G. Myhre, D. Shindell, B. Stevens, and M. R. Allen. 2013. Energy budget constraints on climate response. <i>Nature Geoscience</i> 6:415–416 (2013). doi:10.1038/ngeo1836. Available at: https://www.nature.com/articles/ngeo1836 . Accessed: November 20, 2017.	Finds that the global energy budget implies a range of values for the equilibrium climate sensitivity that is in agreement with earlier estimates, within the limits of uncertainty.	Yes	Yes

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NHTSA-2017-0069-0153	Patrick Michaels, Cato Institute	Ring, M. J., D. Lindner, E. F. Cross, and M. E. Schlesinger. 2012. Causes of the global warming observed since the 19th century. <i>Atmospheric and Climate Sciences</i> 2:401–415. Available at: http://dx.doi.org/10.4236/acs.2012.24035 . Accessed: November 20, 2017.	Discusses° methods for temperature measurements (Singular Spectrum Analysis and Climate Model Simulation) and suggests that global warming is predominantly human-caused.	Yes	Yes
NHTSA-2017-0069-0153	Patrick Michaels, Cato Institute	Roe, G. H., and M. B. Baker. 2007. Why is climate sensitivity so unpredictable? <i>Science</i> 318(5850):629–632. Available at: http://science.sciencemag.org/content/318/5850/629 . Accessed: November 20, 2017.	Explains that both models and observations yield broad probability distributions for long-term increases in global mean temperature expected from the doubling of atmospheric carbon dioxide, with small but finite probabilities of very large increases.	Yes	Yes
NHTSA-2017-0069-0153	Patrick Michaels, Cato Institute	Schmittner, A., N. M. Urban, J. D. Shakun, N. M. Mahowald, NP. U. Clark, P. J. Bartlein, A. C. Mix, and A. Rosell-Mele. 2011. Climate sensitivity estimated from temperature reconstructions of the last glacial maximum. <i>Science</i> 334(6061):1385–1388. doi: 10.1126/science.1203513.	Finds a lower probability of imminent extreme climatic change than previously thought.	Yes	Yes

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NHTSA-2017-0069-0153	Patrick Michaels, Cato Institute	Spencer, R. W., and W. D. Braswell. 2010. On the diagnosis of radiative feedback in the presence of unknown radiative forcing. <i>Journal of Geophysical Research</i> 115(D16):109. doi:10.1029/2009JD013371. Available at: http://onlinelibrary.wiley.com/doi/10.1029/2009JD013371/full . Accessed: November 20, 2017.	Analyzes the need for more accurate methods of diagnosing feedback from satellite data and for quantitatively relating those feedbacks to long-term climate sensitivity.	Yes	Yes
NHTSA-2017-0069-0153	Patrick Michaels, Cato Institute	Christy, J. R. 2017. State of the Climate. <i>American Meteorological Society</i> . Available at: https://www.ametsoc.org/ams/index.cfm/publications/bulletin-of-the-american-meteorological-society-bams/state-of-the-climate/ . Accessed: November 20, 2017.	Unable to locate article.	No	No
NHTSA-2017-0069-0153	Patrick Michaels, Cato Institute	Christy, J. R. 2017. Figure S2-10. <i>American Meteorological Society</i> . Available at: https://www.ametsoc.org/ams/index.cfm/publications/bulletin-of-the-american-meteorological-society-bams/state-of-the-climate/ . Accessed: November 20, 2017. (Link no longer active).	Unable to locate article.	No	No
NHTSA-2017-0069-0154	Ann Wilson, Motor & Equipment Manufacturers Association	Alliance of Automobile Manufacturers. 2017. Cars Move America: State of the Auto Industry. Available at: https://autoalliance.org/resources/cars-move-america/ . Accessed: November 20, 2017.	Reports that automakers are driving innovation in the automobile industry.	No	No
NHTSA-2017-0069-0154	Ann Wilson, Motor & Equipment Manufacturers Association	Motor and Equipment Manufacturers Association and The Boston Consulting Group. 2016. Driving the Future: The Employment and Economic Impact of the Vehicle Supplier Industry in the U.S. Available at: https://www.mema.org/sites/default/files/MEMA_ImpactBook.pdf . Accessed: November 20, 2017.	Provides statistics regarding the automobile industry.	No	No

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NHTSA-2017-0069-0154	Ann Wilson, Motor & Equipment Manufacturers Association	National Highway Traffic Safety Administration. 2016. Projected Fuel Economy Performance Report. Available at: https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/my_2015_and_2016_projected_fuel_economy_performance_report_final.pdf . Accessed: November 20, 2017.	Provides projected fuel economy based on each manufacturer's pre-and mid-model year reports.	No	No
NHTSA-2017-0069-0155	Yueh-ru Chu, Attorneys General of New York, the District of Columbia, Iowa, Maine, Maryland, Massachusetts, Oregon, Pennsylvania, Vermont and Washington	U.S. Energy Information Administration. 2017. Today in Energy. U.S. energy-related CO2 emissions fell 1.7% in 2016. Available at: https://www.eia.gov/todayinenergy/detail.php?id=30712 . Accessed: November 20, 2017.	Illustrates energy related carbon dioxide emissions and energy-related carbon intensity.	No	No
NHTSA-2017-0069-0155	Yueh-ru Chu, Attorneys General of New York, the District of Columbia, Iowa, Maine, Maryland, Massachusetts, Oregon, Pennsylvania, Vermont and Washington	U.S. Environmental Protection Agency. 2017. Nitrogen Dioxide Pollution. Available at: https://www.epa.gov/no2-pollution/basic-information-about-no2#Effects . Accessed: November 20, 2017.	Explains the basics of nitrogen dioxide, where it comes from, and its harmful effects.	No	No

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NHTSA-2017-0069-0155	Yueh-ru Chu, Attorneys General of New York, the District of Columbia, Iowa, Maine, Maryland, Massachusetts, Oregon, Pennsylvania, Vermont and Washington	U.S. Environmental Protection Agency. 2017. Particulate Matter Pollution. Available at: https://www.epa.gov/pm-pollution/particulate-matter-pm-basics#PM . Accessed: November 20, 2017.	Explains the basics of particulate matter, where it comes from, and its harmful effects.	No	No
NHTSA-2017-0069-0155	Yueh-ru Chu, Attorneys General of New York, the District of Columbia, Iowa, Maine, Maryland, Massachusetts, Oregon, Pennsylvania, Vermont and Washington	Ford, W. C., and J. Hackett. 2017. The Science Behind Our Climate Change Strategy. Available at: https://corporate.ford.com/microsites/sustainability-report-2016-17/strategy-governance/strategy/science.html . Accessed: November 20, 2017.	Provides Ford's plans and targets that are rooted in climate change.	No	No

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NHTSA-2017-0069-0155	Yueh-ru Chu, Attorneys General of New York, the District of Columbia, Iowa, Maine, Maryland, Massachusetts, Oregon, Pennsylvania, Vermont and Washington	National Aeronautics and Space Administration. 2017. Global Climate Change; Vital Signs of the Planet; Facts; Effects. Available at: https://climate.nasa.gov/effects/ . Accessed: November 20, 2017.	Presents Intergovernmental Panel on Climate Change predictions on increased temperatures and the extent of climate change effects.	No	No
NHTSA-2017-0069-0155	Yueh-ru Chu, Attorneys General of New York, the District of Columbia, Iowa, Maine, Maryland, Massachusetts, Oregon, Pennsylvania, Vermont and Washington	Revesz, R., M. Greenstone, M. Hanemann, M. Livermore, T. Sterner, D. Grab, P. Howard, J. and Schwartz. 2017. Best cost estimate of greenhouse gases. <i>Science</i> 357:655. doi: 10.1126/science. Available at: http://science.sciencemag.org/content/357/6352/655 . Accessed: November 20, 2017.	Suggests that the social cost of greenhouse gases should be regularly updated, especially to reflect the latest evidence about damage functions.	Yes	No

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NHTSA-2017-0069-0155	Yueh-ru Chu, Attorneys General of New York, the District of Columbia, Iowa, Maine, Maryland, Massachusetts, Oregon, Pennsylvania, Vermont and Washington	U.S. Global Change Research Program. 2014. U.S. National Climate Assessment. Available at: http://nca2014.globalchange.gov/ . Accessed: November 20, 2017.	Provides an in-depth look at climate change impacts on the United States and details the multitude of ways climate change is already affecting and will increasingly affect the lives of Americans.	Yes	No
NHTSA-2017-0069-0156	Janice Nolen, American Lung Association	American Public Health Association. 2011. Climate Change: Mastering the Public Health Role. A Practical Guidebook. Available at: https://apha.org/~media/files/pdf/factsheets/climate_change_guidebook.ashx . Accessed: November 20, 2017.	Guides the public health community on the challenges of climate change.	No	No
NHTSA-2017-0069-0156	Janice Nolen, American Lung Association	Finkelstein, M. M., M. Jerrett, P. DeLuca, N. Finkelstein, D. K. Verma, K. Chapman, and M. R. Sears. 2003. Relation between income, air pollution and mortality: A cohort study. <i>Canadian Medical Association Journal</i> 169:397–402. Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC183288/ . Accessed: November 20, 2017.	Investigates mortality in relation to neighborhood levels of income and air pollution in an urban area.	Yes	No

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NHTSA-2017-0069-0156	Janice Nolen, American Lung Association	Health Effects Institute Panel on the Health Effects of Traffic Related Air Pollution. 2010. Traffic Related Air Pollution: A Critical Review of the Literature on Emissions, Exposure, and Health Effects. HEI Special Report 17. Health Effects Institute, Boston, MA. Available at: https://www.healtheffects.org/publication/traffic-related-air-pollution-critical-review-literature-emissions-exposure-and-health . Accessed: November 20, 2017.	Discusses the associations between exposure to air pollution from traffic and human health, and important remaining data gaps.	No	No
NHTSA-2017-0069-0156	Janice Nolen, American Lung Association	National Wildlife Federation and Asthma and Allergy Foundation of America. 2010. Extreme Allergies and Global Warming. National Wildlife Foundation. Available at: http://www.aafa.org/media/Extreme-Allergies-Global-Warming-Report-2010.pdf . Accessed: November 20, 2017.	Provides evidence that unchecked global warming will worsen respiratory allergies for approximately 25 million Americans.	No	No

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NHTSA-2017-0069-0156	Janice Nolen, American Lung Association	O'Neill, M. S., M. Jerrett, I. Kawachi, J. I. Levy, A. J. Cohen, N. Gouveia, P. Wilkinson, T. Fletcher, L. Cifuentes, J. Schwartz, et al. 2003. Health, wealth, and air pollution: Advancing theory and methods. <i>Environmental Health Perspectives</i> 111:1861–1870. Available at: https://pdfs.semanticscholar.org/a180/e2bb97e6671ee84994fccd91c86e3bc0a37.pdf . Accessed: November 20, 2017.	Introduces methodologic and conceptual approaches in the fields of air pollution and social epidemiology; proposes theories and hypotheses about how air pollution and socioeconomic factors may interact to influence health; discusses methodologic issues in the design and analysis of studies; and proposes specific steps to improve public health in collaboration with affected communities.	Yes	No
NHTSA-2017-0069-0156	Janice Nolen, American Lung Association	Ostro, B., R. Broadwin, S. Green, W. Feng, M. Lipsett. 2005. Fine particulate air pollution and mortality in nine California counties: Results from CALFINE. <i>Environmental Health Perspectives</i> 114:29–33. Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1332652/ . Accessed: November 20, 2017.	Analyzes the evidence linking PM2.5 with mortality.	Yes	No

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NHTSA-2017-0069-0156	Janice Nolen, American Lung Association	Pinkerton, K. E., W. N. Rom, M. Akpinar-Elci, J. R. Balmes, H. Bayram, O. Brandli, J. W. Hollingsworth, P. L. Kinney, H. G. Margolis, W. J. Martin, E. N. Sasser, K. R. Smith, and T. K. Takaro. 2012. An official American Thoracic Society Workshop Report: Climate change and human health. <i>Proceedings American Thoracic Society</i> 9(1):3–8. Available at: https://www.ncbi.nlm.nih.gov/pubmed/22421581 . DOI: 10.1513/pats.201201-015ST. Accessed: November 20, 2017.	This document presents the proceedings from the American Thoracic Society Climate Change and Respiratory Health Workshop that was held on May 15, 2010, in New Orleans, Louisiana. The purpose of the 1-day meeting was to address the threat to global respiratory health posed by climate change.	No	No
NHTSA-2017-0069-0156	Janice Nolen, American Lung Association	U.S. Environmental Protection Agency. 2017. Inventory of U.S. Greenhouse Gas Emissions and Sinks, 1990-2015. EPA 430-P-17-001. Available at: https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks-1990-2015 . Accessed: November 20, 2017.	Provides an emissions inventory that identifies and quantifies the primary anthropogenic sources and sinks of greenhouse gases.	No	No
NHTSA-2017-0069-0156	Janice Nolen, American Lung Association	U.S. Environmental Protection Agency. Nonattainment Areas for Criteria Pollutants (Green Book). 2017. Available at: https://www.epa.gov/green-book . Accessed: November 20, 2017.	Provides detailed information about area National Ambient Air Quality Standards designations, classifications, and nonattainment status.	No	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0156	Janice Nolen, American Lung Association	U.S. Global Change Research Program. 2016. The Impacts of Climate Change on Human Health in the United States: A Scientific Assessment. Crimmins A, Balbus J, Gamble JL, Beard CB, et al. Eds. U.S. Global Change Research Program, Washington DC. Available at: http://dx.doi.org/10.7930/J0R49NQX . Accessed: November 20, 2017.	Provides a comprehensive, evidence-based, and, where possible, quantitative estimation of observed and projected climate change-related health impacts in the United States.	Yes	No
NHTSA-2017-0069-0156	Janice Nolen, American Lung Association	Zeka, A., A. Zanobetti, J. Schwartz. 2006. Short-term effects of particulate matter on cause specific mortality: Effects of lags and modification by city characteristics. <i>Occupational and Environmental Medicine</i> 62:718–725. Available at: http://oem.bmj.com/content/62/10/718 . Accessed: November 20, 2017.	Examines the increased all-cause mortality and mortality from broad categories of causes associated with airborne particles in 20 U.S. cities, between 1989 and 2000.	Yes	No
NHTSA-2017-0069-0156	Janice Nolen, American Lung Association	Buonocore, J. J., K. F. Lambert, D. Burtaw, S. Sekar, and C. T. Driscoll. 2016. An analysis of costs and health co-benefits for a U.S. power plant carbon standard. <i>PLOS One</i> 11(6):e0156308. Available at: https://doi.org/10.1371/journal.pone.0156308 . Accessed: November 20, 2017.	Examines the costs and health co-benefits, in monetary terms, for a policy that resembles EPA's Clean Power Plan.	Yes	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0156	Janice Nolen, American Lung Association	U.S. Energy Information Administration. 2017. Monthly Energy Review. Available at: https://www.eia.gov/totalenergy/data/monthly/index.php#renewable . Accessed: November 20, 2017.	Provides statistics on total energy production, consumption, and trade; energy prices; overviews of petroleum, natural gas, coal, electricity, nuclear energy, renewable energy, and international petroleum; carbon dioxide emissions; and data unit conversion values.	No	No
NHTSA-2017-0069-0156	Janice Nolen, American Lung Association	California Air Resources Board. 2017. California's Advanced Clean Cars Midterm Review: Summary Report for the Technical Analysis of the Light Duty Vehicle Standards. Page ES-61. Available at: https://www.arb.ca.gov/msprog/acc/mtr/acc_mtr_final_report_full.pdf . Accessed: November 20, 2017.	Assesses specific California standards including the zero-emission vehicle regulation, the 1-milligram-per-mile particulate matter emission standard, and a general review of the format of the greenhouse gas standards.	No	No
NHTSA-2017-0069-0156	Janice Nolen, American Lung Association	Institute of Medicine. 1999. Toward Environmental Justice: Research, Education, and Health Policy Needs. Washington, DC: The National Academies Press. Available at: https://doi.org/10.17226/6034 . Accessed: November 20, 2017.	Discusses how poor and minority populations are burdened with more than their share of toxic waste, pesticide runoff, and other hazardous byproducts of modern economic life.	No	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0157	Aminah Zaghab, Multiple Organizations	International Council on Clean Transportation. 2017. New ICCT Study Shows Cost Estimates for Meeting MPG and Pollution Standards Are Overstated by As Much As 40 Percent. Available at: http://www.theicct.org/news/press-release-cost-estimates-for-meeting-mpg-and-pollution-standards-are-overstated . Accessed: November 20, 2017.	Reports on a new study that finds that the cost of meeting fuel economy standards in 2025 is likely being overstated by as much as 40% in the current debate and that even more stringent standards out to 2030 are feasible.	No	No
NHTSA-2017-0069-0157	Aminah Zaghab, Multiple Organizations	St. Clair., C. 2017. Carbon Pollution Standards for Cars and Light Trucks to Remain Unchanged Through 2025. EPA. Available at: https://archive.epa.gov/epa/newsreleases/carbon-pollution-standards-cars-and-light-trucks-remain-unchanged-through-2025.html . Accessed: November 20, 2017.	Determines that a wide variety of effective technologies are available to reduce greenhouse gas emissions from cars and light trucks, and that automakers are well positioned to meet the standards through model year 2025 at lower costs than predicted.	No	No
NHTSA-2017-0069-0157	Aminah Zaghab, Multiple Organizations	BlueGreen Alliance. Backgrounder Vehicle Standards and Jobs. Available at: http://www.bluegreenalliance.org/news/publications/document/Backgrounder-Vehicle-Standards-and-Jobs-FINAL.pdf . (Link no longer active).	Unable to locate article.	No	No
NHTSA-2017-0069-0158	Ann Mesnikoff, Environmental Law and Policy Center	Great Lakes Integrated Sciences Assessment. 2014. Climate Change in the Great Lakes Region. Available at: http://glisa.umich.edu/media/files/GLISA_climate_change_summary.pdf . Accessed: November 20, 2017.	Summarizes climate change impacts in the Great Lakes region.	No	No

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NHTSA-2017-0069-0158	Ann Mesnikoff, Environmental Law and Policy Center	U.S. Global Change Research Program. 2014. Midwest Report. Available at: http://nca2014.globalchange.gov/report/regions/midwest . Accessed: November 20, 2017.	Describes how climate change will amplify existing climate-related risks to people, ecosystems, and infrastructure in the Midwest.	Yes	No
NHTSA-2017-0069-0158	Ann Mesnikoff, Environmental Law and Policy Center	Brauer, K. 2017. 2018 Honda Accord: More from Less? Autotrader. Available at: https://www.autotrader.com/car-news/2018-honda-accord-more-from-less-266590 . Accessed: November 20, 2017.	Provides information on the 2018 Honda Accord.	No	No
NHTSA-2017-0069-0158	Ann Mesnikoff, Environmental Law and Policy Center	Lippert, J. 2017. Honda Invests \$267 Million, Adds 300 Ohio Jobs for New Accord. Bloomberg. Available at: https://www.bloomberg.com/news/articles/2017-09-18/honda-invests-267-million-adds-300-ohio-jobs-for-new-accord . Accessed: November 20, 2017.	Describes the strategy of Honda Motor Co., which involves investing \$267 million and adding 300 jobs at two Ohio factories as it begins mass production of the redesigned Accord flagship sedan for 2018.	No	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0158	Ann Mesnikoff, Environmental Law and Policy Center	BlueGreen Alliance. 2017. Supplying Ingenuity II: U.S. Suppliers of Key Clean, Fuel-Efficient Vehicle Technologies. Available at: https://www.bluegreenalliance.org/wp-content/uploads/2017/05/Supplying-Ingenuity-vFINAL-low-res.pdf . Accessed: November 20, 2017.	Summarizes how sound fuel economy and manufacturing policies remain critical to continued automotive recovery, to strong innovation and job growth, and to continuing to strengthen the manufacturing sector nationwide.	No	No
NHTSA-2017-0069-0159	Kim Coble, Chesapeake Bay Foundation	National Research Council. 2015. Cost, Effectiveness, and Deployment of Fuel Economy Technologies for Light-Duty Vehicles. Washington, DC: The National Academies Press. Available at: https://doi.org/10.17226/21744 . Accessed: November 20, 2017.	Estimates the cost, potential efficiency improvements, and barriers to commercial deployment of technologies that might be employed from 2020 to 2030.	Yes	No
NHTSA-2017-0069-0159	Kim Coble, Chesapeake Bay Foundation	U.S. Department of Energy. 2014. Lightweight Materials for Cars and Trucks. Office of Energy Efficiency & Renewable Energy. Available at: https://energy.gov/eere/vehicles/lightweight-materials-cars-and-trucks . Accessed: November 20, 2017.	Highlights the research and development on lightweight materials supported by the Vehicle Technologies Office at Oak Ridge National Laboratory.	No	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0159	Kim Coble, Chesapeake Bay Foundation	Isenstadt, A., J. German, P. Bubna, M. Wiseman, U. Venkatakrisnan, L. Abbasov, P. Guillen, N. Moroz, D. Richman, and G. Kolwich. 2016. Lightweighting Technology Development and Trends in U.S. Passenger Vehicles. International Council on Clean Transportation. Available at: http://www.theicct.org/sites/default/files/publications/ICCT_PVtech_lightweighting_wp2016-25.pdf . Accessed: November 20, 2017.	Provides an analysis of lightweighting (mass reduction) developments and trends in passenger vehicle design and technology.	No	No
NHTSA-2017-0069-0159	Kim Coble, Chesapeake Bay Foundation	Consumer Reports. Survey Finds Consumers Want Better Gas Mileage, Stricter MPG Standards. Available at: https://www.consumerreports.org/fuel-economy-efficiency/survey-finds-consumerswant-better-gas-mileage-stricter-mpg-standards/ . Accessed: November 20, 2017.	Claims that consumers want stricter miles-per-gallon standards and better gas mileage.	No	No
NHTSA-2017-0069-0159	Kim Coble, Chesapeake Bay Foundation	U.S. Environmental Protection Agency. 2010. Chesapeake Bay TMDL Document. U.S. Environmental Protection Agency. Available at: https://www.epa.gov/chesapeake-bay-tmdl/chesapeake-bay-tmdl-document . Accessed: November 20, 2017.	Identifies the necessary pollution reductions of nitrogen, phosphorus, and sediment across Delaware, Maryland, New York, Pennsylvania, Virginia, West Virginia, and the District of Columbia.	No	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	Ackerman, F., E. A. Stanton, and R. Bueno. 2012. Reason, Empathy, and Fair Play: The Climate Policy Gap. Economics & Social Affairs. DESA Working Paper No. 113. Available at: http://www.un.org/esa/desa/papers/2012/wp113_2012.pdf . Accessed: November 20, 2017.	Presents three changes to the basic assumptions of the DICE model.	No	No
NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	Ackerman, F., E. A. Stanton, and R. Bueno. 2013. CRED: A New Model of Climate and Development. <i>Ecological Economics</i> 85(166). Available at: http://www.un.org/esa/desa/papers/2010/wp96_2010.pdf . Accessed: November 20, 2017.	Describes a new model, Climate and Regional Economics of Development, which is designed to analyze the economics of climate and development choices.	Yes	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	Anthoff, D., and R. Tol. 2012. The Climate Framework for Uncertainty, Negotiation and Distribution (FUND), Technical Description, Version 3.6. Available at: http://www.fund-model.org/versions . Accessed: November 20, 2017.	Presents various versions of the FUND model, their applications, and their availability.	No	No
NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	Council of Environmental Quality. 2016. Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews. Available at: https://obamawhitehouse.archives.gov/sites/whitehouse.gov/files/documents/nepa_final_ghg_guidance.pdf . Accessed: November 20, 2017.	Guides federal departments and agencies on consideration of greenhouse gas emissions and the effects of climate change in NEPA reviews.	No	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	Dietz, S., and N. Stern. 2015. Endogenous growth, convexity of damage and climate risk: How Nordhaus' framework supports deep cuts in carbon emissions. <i>The Economic Journal</i> 125(574). Available at: http://onlinelibrary.wiley.com/doi/10.1111/ecoj.12188/full . Accessed: November 20, 2017.	Uses DICE to provide evidence that optimal policy comprises strong controls.	Yes	No
NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	Gayer, T., and W. Kip Viscusi. 2016. Determining the proper scope of climate change policy benefits in U.S. regulatory analyses: Domestic versus global approaches. <i>Review of Environmental Economics and Policy Advance Access</i> 10 (245). Available at: https://www.brookings.edu/wp-content/uploads/2016/08/rev-enviro-econ-policy-2016-gayer-reep-rew002.pdf . Accessed: November 20, 2017.	Describes how economic guidelines for policy assessment generally recommend that policies should be selected to maximize social welfare.	Yes	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	Havranek, T., Z. Irsova, K. Janda, and D. Zilberman. 2015. Selective reporting and the social cost of carbon. Available at: https://poseidon01.ssrn.com/delivery.php?ID=068096001126024098071084120116122117122011005035010028104088102024123025074005066091031007000042033007027069115098123009112071049007088022007111083099116126085109105024020000023076021116002070093089118093072000002004104097097089084122116088097118073091&EXT=pdf . Accessed: November 20, 2017.	Examines the potential selective reporting (publication bias) in the literature on the social cost of carbon by conducting a meta-analysis of 809 estimates of the social cost of carbon reported in 101 studies.	Yes	No
NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	Holladay, S. J., J. Horne, and J. A. Schwartz. 2009. Economists and Climate Change. Institute for Policy Institute, New York University School of Law. Policy Brief No. 5. Available at: http://policyintegrity.org/files/publications/EconomistsandClimateChange.pdf . Accessed: November 20, 2017.	Surveys top experts in the field to find out if there is widespread agreement among economists on some of the key questions raised by climate change policy.	No	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	Howard, P. 2014. Omitted Damages: What's Missing from the Social Cost of Carbon 5 (Cost of Carbon Project Report, 2014). Available at: http://costofcarbon.org/files/Omitted_Damages_Whats_Missing_From_the_Social_Cost_of_Carbon.pdf . Accessed: November 20, 2017.	Examines and documents omissions for the latest versions of the three integrated assessment models used by the Interagency Working Group, as well as earlier versions when they are used in calibrating the updated models.	No	No
NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	Howard, P., and D. Sylvan. 2015. The Economic Climate: Establishing Expert Consensus on the Economics of Climate Change. Institute for Policy Institute, New York University School of Law. Working Paper No. 2015/1. Available at: http://policyintegrity.org/files/publications/EconomicClimateConsensus.pdf . Accessed: November 20, 2017.	Clarifies the level of consensus among economists with respect to climate change risks, economic impacts, and policy responses. It also compares the views of economic experts to the views of the public.	No	No

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NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	Intertemporal Computable Equilibrium System. 2017. Centro Euro-Mediterraneo sui Cambiamenti Climatici. Available at: https://www.cmcc.it/models/ices-intertemporal-computable-equilibrium-system . Accessed: November 20, 2017.	Explains the Intertemporal Computable Equilibrium System, a recursive dynamic general equilibrium model developed with the main (but not exclusive) purpose to assess the final welfare implication of climate change impacts on world economies.	No	No
NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	Keeler, B. L., J. D. Gourevitch, S. Polasky, F. Isbell, C. W. Tessum, J. D. Hill, and J. D. Marshall. 2016. The social costs of nitrogen. <i>Science Advances</i> 2(10): e1600219. doi: 10.1126/sciadv.1600219.	Proposes a comprehensive approach for estimating the social cost of nitrogen, defined as the present value of the monetary damages caused by an incremental increase in nitrogen.	Yes	No

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NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	Mensbrugge, D. 2008. The Environmental Impact and Sustainability Applied General Equilibrium (ENVISAGE) Model. The World Bank. Available at: http://siteresources.worldbank.org/INTPROSPECTS/Resources/334934-1193838209522/Envisage7b.pdf . Accessed: November 20, 2017.	Provides a complete specification of the equations of the World Bank's Environmental Impact and Sustainability Applied General Equilibrium Model.	No	No
NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	Moore, F., U. Baldos, and T. Hertel. 2017. Economic impacts of climate change on agriculture: A comparison of process-based and statistical yield models. <i>Environmental Research Letters</i> 12 065008. Available at: http://iopscience.iop.org/article/10.1088/1748-9326/aa6eb2/pdf . Accessed: November 20, 2017.	Uses a database of yield impact studies compiled for the Intergovernmental Panel on Climate Change Fifth Assessment Report to compare results from process-based and empirical studies on climate change impacts, agricultural impacts, adaptation, and carbon dioxide fertilization.	Yes	No

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NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	Moore, F. C., and D. B. Diaz. 2015. Temperature impacts on economic growth warrant stringent mitigation policy. <i>Nature Climate Change</i> 5:127–131. doi:10.1038/nclimate2481.	Implements empirical estimates of temperature effects on gross domestic product growth rates in the DICE model through two pathways: total factor productivity growth and capital depreciation.	Yes	No
NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	National Academies of Sciences, Engineering, and Medicine. 2017. Valuing Climate Damages: Updating Estimation of the Social Cost of Carbon Dioxide. Washington, DC: The National Academies Press. Available at: https://doi.org/10.17226/24651 . Accessed: November 20, 2017.	Examines potential approaches to developing social cost of carbon, along with their relative merits and challenges, and recommends near- and longer-term research priorities to ensure that the social cost of carbon estimates reflect the best available science.	Yes	No

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NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	Newell, R., W. Pizer, and D. Raimi. 2014. Carbon market lessons and global policy outlook. <i>Science</i> 343(6177):1316–1317. doi: 10.1126/science.1246907. Available at: https://pdfs.semanticscholar.org/6840/11dd0fa2315a5a4e0786262554be9a690981.pdf . Accessed: November 20, 2017. (Link no longer active).	Discusses California's launch of its cap-and-trade program in 2013 and its 2014 link to Quebec's market.	Yes	No
NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	Nocera, S., S. Tonin, and F. Cavallaro. 2014. The economic impact of greenhouse gas abatement through a meta-analysis: Valuation, consequences and implications in terms of transport policy. <i>Transport Policy</i> 37:31–43. Available at: http://www.sciencedirect.com/science/article/pii/S0967070X14002030 . Accessed: November 20, 2017.	Presents a database of nearly 700 different observations coming from 60 studies on the economic valuation of greenhouse gas emissions.	Yes	No

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NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	Nordhaus, W. 2017. Revisiting the social cost of carbon. <i>Proceedings of the National Academy of Sciences</i> 114(7):1518–1523. doi: 10.1073/pnas.1609244114. Available at: http://www.pnas.org/content/114/7/1518.full . Accessed: November 20, 2017.	Presents updated social cost of carbon estimates based on a revised DICE model.	Yes	No
NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	Pindyck, R. S. 2016. The Social Cost of Carbon Revisited. National Bureau of Economic Research. No. w22807. Available at: http://web.mit.edu/rpindyck/www/Papers/SCCRevisitedNov2016.pdf . Accessed: November 20, 2017.	Presents an approach to estimating an average social cost of carbon.	No	No

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NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	Revesz, R., M. Greenstone, M. Hanemann, M. Livermore, T. Sterner, D. Grab, P. Howard, and J. Schwartz. 2017. Best cost estimate of greenhouse gases. <i>Science</i> 357(6352):655. doi: 10.1126/science.aao4322. Available at: http://science.sciencemag.org/content/357/6352/655 . Accessed: November 20, 2017.	States that the social cost of carbon should be regularly updated, especially to reflect the latest evidence about damage functions.	Yes	No
NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	Revesz, R., P. Howard, K. Arrow, L. Goulder, R. Kopp, M. Livermore, M. Oppenheimer, and T. Sterner. 2014. Global warming: Improve economic models of climate change. <i>Nature</i> 508:173–175. doi:10.1038/508173a. Available at: https://www.nature.com/news/global-warming-improve-economic-models-of-climate-change-1.14991 . Accessed: November 20, 2017.	Explains how the social cost of carbon is useful for policymaking, notwithstanding the significant uncertainties.	Yes	No

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NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	Tol, R. 2015. Economic Impacts of Climate Change. Univ. Sussex Working Paper No. 75-2015. Available at: https://www.sussex.ac.uk/webteam/gateway/file.php?name=wps-75-2015.pdf&site=24 . (Accessed: November 20, 2017).	Presents a technical discussion on the impacts of climate change, economic development, and the social cost of carbon.	No	No
NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	U.S. Environmental Protection Agency. 2015. Climate Change in the United States: Benefits of Global Action. United States Environmental Protection Agency, Office of Atmospheric Programs. EPA 430-R-15-001. Available at: https://www.epa.gov/cira . Accessed: November 20, 2017.	Estimates the physical and monetary benefits to the United States of reducing global greenhouse gas emissions.	Yes	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	Van Den Bergh, J. C. J. M., and W. J. W. Botzen. A lower bound to the social cost of CO2 emissions. <i>Nature Climate Change</i> 4:253–258. doi:10.1038/nclimate2135.	Evaluates critically the social cost of carbon estimates, focusing on omitted cost categories, discounting, uncertainties about damage costs, and risk aversion.	Yes	No
NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	Anthoff, D., and R. Tol. 2013. The uncertainty about the social cost of carbon: A decomposition analysis using FUND. <i>Climatic Change</i> 177(3):515–530. Available at: https://link.springer.com/article/10.1007/s10584-013-0706-7 . Accessed: November 20, 2017.	Reports the results of an uncertainty decomposition analysis of the social cost of carbon as estimated by FUND.	Yes	Yes

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	Hope, C. 2006. The marginal impact of CO2 from PAGE2002: An integrated assessment model incorporating the IPCC's five reasons for concern. <i>Integrated Assessment</i> 6(1). Available at: http://journals.sfu.ca/int_assess/index.php/iaj/article/viewArticle/227 . Accessed: November 20, 2017.	Introduces a new version of the PAGE model, PAGE2002, which includes all five of the Intergovernmental Panel on Climate Change's reasons for concern about climate change.	Yes	Yes
NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	Hope, C. 2011. The Social Cost of CO2 from the PAGE09 Model. University of Cambridge, Judge Business School. Available at: https://www.jbs.cam.ac.uk/fileadmin/user_upload/research/workingpapers/wp1105.pdf . Accessed: November 20, 2017.	Introduces a new version of the PAGE integrated assessment model (PAGE09) that values the impacts of climate change and the costs of policies to abate and adapt to it.	No	Yes

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	Hope, C. 2013. Critical issues for the calculation of the social cost of CO2: Why the estimates from PAGE09 are higher than those from PAGE2002. <i>Climatic Change</i> 117(3):531. Available at: https://doi.org/10.1007/s10584-012-0633-z . Accessed: November 20, 2017.	Describes how PAGE09 is an updated version of the PAGE2002 integrated assessment model with higher estimates.	Yes	Yes
NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	Tol, R. S. J. 2013. Targets for global climate policy: An overview. <i>Journal of Economic Dynamics and Control</i> 37(5):911. doi.org/10.1016/j.jedc.2013.01.001. Available at: http://www.sciencedirect.com/science/article/pii/S0165188913000092 . Accessed: November 20, 2017.	Provides an overview of the economic impacts of climate change.	Yes	Yes

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NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	Tol, R. S. J. 2011. The social cost of carbon. <i>Annual Review of Resource Economics</i> 3:419–443. doi.org/10.1146/annurev-resource-083110-120028.	Provides a review of social cost of carbon estimates.	Yes	Yes
NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	Council of Environmental Quality. 2014. Revised Draft Guidance on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews. Available at: https://obamawhitehouse.archives.gov/sites/default/files/docs/nepa_revised_draft_ghg_guidance_searchable.pdf . Accessed: November 20, 2017.	Provides guidance to federal agencies on when and how to consider the effects of greenhouse gas emissions and climate change in their evaluation of all proposed federal actions in accordance with NEPA and the CEQ Regulations Implementing the Procedural Provisions of NEPA.	No	No

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NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	Graham, D., and T. Johns. 2012. The Corporate Emergency Response Plan: A Smart Strategy. <i>Natural Resources and Environment</i> . Available at: https://www.americanbar.org/groups/environment_ergy_resources/publications/natural_resources_environment/2012_13/fall_2012/the_corporate_emergency_response_plan_smart_strategy.html . Accessed: November 20, 2017.	Presents research on corporate emergency response planning to provide strategies, tactics, and principles in order to minimize losses while effectively surmounting the challenges presented by a crisis.	No	No
NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	Howard, P. 2015. Expert Consensus on the Economics of Climate Change. Institute for Policy Integrity. Available at: http://policyintegrity.org/files/publications/ExpertConsensusReport.pdf . Accessed: November 20, 2017.	Compares the views of economic experts with the views of the public to help establish expert consensus on the likely economic impacts of climate change and the recommended policy responses.	No	No

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NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	Howard, P., and J. Schwartz. 2017. Think global: International reciprocity as justification for a global social cost of carbon. <i>Columbia Journal of Environmental Law</i> 42(203). Available at: http://www.columbiaenvironmentallaw.org/wp-content/uploads/sites/14/2017/03/howard-schwartz-think-global.pdf . Accessed: November 20, 2017.	Outlines both the economic arguments for why a global perspective on climate costs and benefits is in the interest of the United States and the legal arguments for why a global perspective may be required in any regulatory or deregulatory actions on climate change.	No	No
NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	Interagency Working Group on Social Cost of Carbon, Technical Support Document. 2010. Technical Support Document: - Social Cost of Carbon for Regulatory Impact Analysis - Under Executive Order 12866. Available at: https://obamawhitehouse.archives.gov/sites/default/files/omb/inforeg/for-agencies/Social-Cost-of-Carbon-for-RIA.pdf . Accessed: November 20, 2017.	Presents a summary of the interagency process that developed social cost of carbon estimates.	No	No

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NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	National Academies of Sciences, Engineering, and Medicine. 2016. Assessment of Approaches to Updating the Social Cost of Carbon: Phase 1 Report on a Near-Term Update. Committee on Assessing Approaches to Updating the Social Cost of Carbon, Board on Environmental Change and Society. Washington, DC: The National Academies Press. doi: 10.17226/21898.	Assesses the merits and challenges of a limited near-term update to the social cost of carbon and of a comprehensive update of the social cost of carbon to ensure that the estimates reflect the best available science.	Yes	No
NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	Nordhaus, W. 2014. Estimates of the social cost of carbon: concepts and results from the DICE-2013R model and alternative approaches. <i>Journal of the Association of Environmental and Resource Economists</i> 1(1/2):273–312. Available at: http://www.journals.uchicago.edu/doi/10.1086/676035 . Accessed: November 20, 2017.	Reviews the development of social cost of carbon, provides examples of its use in current U.S. regulatory policies, examines its analytical background, and estimates the social cost of carbon using an updated integrated assessment model (DICE-2013-R).	Yes	No

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NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	Dana, D. A. 2009. Valuing Foreign Lives and Civilizations in Cost-Benefit Analysis: The Case of the United States and Climate Change Policy. Northwestern Faculty Working Paper. Paper 196. Available at: http://scholarlycommons.law.northwestern.edu/cgi/viewcontent.cgi?article=1195&context=facultyworkingpapers . Accessed: November 20, 2017.	Explores the case for including losses of foreign (non-U.S.) lives and settlements in the estimated cost to the United States of unmitigated climate change in the future.	No	No
NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	Drupp, M., M. Freeman, B. Groom, and F. Nesje. 2015. Discounting Disentangled: An Expert Survey on the Determinants of the Long-Term Social Discount Rate. The Centre for Climate Change and Economics and Policy. The Centre for Climate Change Economics and the Environment. Working Paper 172. Available at: http://piketty.pse.ens.fr/files/DruppFreeman2015.pdf . Accessed: November 20, 2017.	Elicits expert recommendations on the social discount rate and disentangles central components of discounting: the risk-free interest rate, rate of pure time preference, elasticity of marginal utility, and a prediction of long-term per capita consumption growth.	No	No

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NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	Revesz, R., J. A. Schwartz, P. H. Howard, K. Arrow, A. Livermore, M. Oppenheimer, and T. Sterner. 2017. The social cost of carbon: A global imperative. <i>Review of Environmental Economics and Policy</i> 11(1):172–173. doi: 10.1093/reep/rew022. Available at: http://policyintegrity.org/files/publications/REEP_SCC_2017.pdf . Accessed: November 20, 2017.	Expresses support for the continued use of a global social cost of carbon.	No	No
NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	Arrow, K. J., M. L. Cropper, C. Gollier, B. Groom, G. M. Heal, R. G. Newell, W. D. Nordhaus, R. S. Pindyck, W. A. Pizer, P. R. Portney, T. Sterner, R. S. J. Tol, and M. L. Weitzman. 2012. How Should Benefits and Costs Be Discounted in an Intergenerational Context? Resources for the Future. Available at: http://www.rff.org/files/sharepoint/WorkImages/Download/RFF-DP-12-53.pdf . Accessed: November 20, 2017.	Summarizes the use of the Ramsey formula as an organizing principle for determining discount rates over long horizons, whether the discount rate should decline over time, and how intra- and intergenerational discounting practices can be made compatible.	No	No

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NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	Arrow, K. J., M. L. Cropper, G. C. Eads, R. W. Hahn, B. L. Lester, R. G. Noll, P. R. Portney, M. Russell, R. Schmalensee, V. K. Smith, and R. N. Stavins. 1996. Is there a role for benefit-cost analysis in Environmental, Health, and Safety Regulation? <i>Science</i> 272(5259):221–222. doi: 10.1126/science.272.5259.221. Available at: http://science.sciencemag.org/content/272/5259/221 . Accessed: November 20, 2017.	Describes how a formal benefit-cost analysis should not be viewed as either necessary or sufficient for designing sensible public policy, but that it can provide an exceptionally useful framework for consistently organizing disparate information, and can greatly improve the process and the outcome of policy analysis.	Yes	No
NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	Callen, T. 2012. Gross Domestic Product: An Economy's All. International Monetary Fund. Available at: http://www.imf.org/external/pubs/ft/fandd/basics/gdp.htm . Accessed: November 20, 2017.	Defines gross domestic product (GDP) and real GDP, how to measure GDP, and how to compare the GDPs of two countries.	No	No

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NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	Council of Economic Advisers. 2017. Discounting for Public Policy: Theory and Recent Evidence on the Merits of Updating the Discount Rate. Available at: https://obamawhitehouse.archives.gov/sites/default/files/page/files/201701_cea_discounting_issue_brief.pdf . Accessed: November 20, 2017.	Reassesses the current choice of discount rates for public policy and methodologies for selecting the 3% and 7% rates.	No	No
NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	The World Bank. 2017. GNI, Atlas method (current US\$). Available at: https://data.worldbank.org/indicator/NY.GNP.ATLS.CD . Accessed: November 20, 2017.	Presents the World Bank national accounts data and OECD National Accounts data files.	No	No

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NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	U.S. Office of Management and Budget & Secretariat General of the European Commission. 2008. Review of Application of EU and U.S. Regulatory Impact Assessment Guidelines on the Analysis of Impacts on International Trade and Development. Available at: https://georgewbush-whitehouse.archives.gov/omb/inforeg/reports/sg-omb_final.pdf . Accessed: November 20, 2017.	Reviews the application of the Office of Management and Budget's Circular A-4, regulatory analysis guidance, and the European Commission's Impact Assessment Guidelines, with the goal of ensuring that assessment of future regulations takes due account of their impacts on international trade and investment.	No	No
NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	Furman, J., and B. Deese. 2016. The Economic Benefits of a 50 Percent Target for Clean Energy Generation by 2025. The White House. Available at: https://obamawhitehouse.archives.gov/blog/2016/06/29/economic-benefits-50-percent-target-clean-energy-generation-2025 . Accessed: November 20, 2017.	Describes how a new target for 50% clean energy generation across North America will help the environment, foster growing industries, and support hundreds of thousands of jobs.	No	No

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NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	Howard, P., and J. Schwartz. 2015. Foreign Action, Domestic Windfall: The U.S. Economy Stands to Gain Trillions from Foreign Climate Action. Institute for Policy Integrity. Available at: http://policyintegrity.org/files/publications/ForeignActionDomesticWindfall.pdf . Accessed: November 20, 2017.	Discusses the economic benefits of the United States participating in and helping to lead international cooperation to avoid climate deterioration.	No	No
NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	U.S. Department of the Interior, Bureau of Land Management. 2014. Environmental Assessment DOI-BLM-MT-C020-2014-0091-EA, 76. Available at: https://www.blm.gov/sites/blm.gov/files/MT-DAKs%20MCFO%20Final%20EA%20October%202014%20Protest.pdf . Accessed: November 20, 2017.	Provides an environmental assessment on an oil and gas lease parcel.	No	No

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NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	U.S. Department of Defense. 2015. National Security Implications of Climate-Related Risks and a Changing Climate. Available at: http://archive.defense.gov/pubs/150724-congressional-report-on-national-implications-of-climate-change.pdf?source=govdelivery . Accessed: November 20, 2017.	Reports on the most serious and likely climate-related security risks for each Combatant Command, the ways in which the Combatant Commands are integrating mitigation of these risks into their planning processes, and a description of the resources required for an effective response.	No	No
NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	Association of Americans Residents Overseas. 2016. Available at: https://www.aaro.org .	Unable to locate article.	No	No

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NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	Axelrod, R. 1984. The Evolution of Cooperation. Basic Books: New York. Pages 10–11.	Explores the emergence of cooperation in society.	No	No
NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	Canadian Environmental Protection Act. 2013. Heavy-duty Vehicle and Engine Greenhouse Gas Emission Regulations. P.C. 2013-160. Available at: http://canadagazette.gc.ca/rp-pr/p2/2013/2013-03-13/html/sor-dors24-eng.html . Accessed: November 20, 2017.	Presents Canada's Environmental Protection Act, including regulations on heavy-duty vehicle and engine greenhouse gas emissions.	No	No

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NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	Giles, Cynthia. Assistant Administrator. U.S. Environmental Protection Agency. April 22, 2013— Letter to Jose W. Fernandez and Dr. Kerri Anne Jones, U.S. Department of State.	Provides a letter from EPA to the U.S. Department of State, stating the Keystone Environmental Impact Report was insufficient.	No	No
NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	Hardin, G. 1968. The tragedy of the commons. <i>Science</i> 162(3859):1243–1248. doi: 10.1126/science.162.3859.1243. Available at: http://science.sciencemag.org/content/162/3859/1243.full . Accessed: November 20, 2017.	Presents the concept of the tragedy of the commons.	Yes	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	Office of Information and Regulatory Affairs. 2011. Regulatory Impact Analysis: A Primer 2.	Unable to locate article.	No	No
NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	Sunstein, C. 2001. Probability Neglect: Emotions, Worst Cases, and Law. University of Chicago Law & Economics, Olin Working Paper No. 138. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=292149 . Accessed: November 20, 2017.	Discusses probability neglect and its implications for policy. It discusses probability, behavioral economics, cost-benefit analysis, and environmental regulation.	No	No

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NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	The Fallacy Files. 2017. The Base Rate Fallacy. Available at: http://www.fallacyfiles.org/baserate.html . Accessed: November 20, 2017.	Discusses the base rate fallacy through a thought experiment.	No	No
NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	U.S. Department of Agriculture Forest Service. 2016. Rulemaking for Colorado Roadless Areas Supplemental Final Environmental Impact Statement. Available at: https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fs_eprd525072.pdf . Accessed: November 20, 2017.	Provides the Supplemental Final Environmental Impact Statement, supplementing the 2012 Final Environmental Impact Statement for the Colorado Roadless Rule with additional analyses.	No	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0160	Jason Schwartz, Institute for Policy Integrity at New York University School of Law, Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists	Western Regional Climate Center. 2015. Four Corners Power Plant and Navajo Mine Energy Project Final Environmental Impact Statement. Section 4.2, Climate Change. Available at: http://www.wrcc.osmre.gov/initiatives/fourCorners/documents/FinalEIS/Section%204.2%20-%20Climate%20Change.pdf . Accessed: November 20, 2017.	Provides Section 4.2, Climate Change, of the Four Corners Power Plant and Navajo Mine Energy Project Final EIS.	No	No
NHTSA-2017-0069-0162	Hilary Sinnamon, Environmental Defense Fund, Center for Energy Efficiency and Renewable Technologies, and Clean Power Campaign	U.S. Global Change Research Program. 2014. Highlights of Climate Change Impacts in the United States: The Third National Climate Assessment. Pp. 34–37, 46–47. Available at: http://www.globalchange.gov/browse/reports/highlights-climate-change-impacts-united-states-third-national-climate-assessment . Accessed: November 20, 2017.	Reports on the major findings from Climate Change Impacts in the United States: The Third National Climate Assessment.	Yes	No

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NHTSA-2017-0069-0162	Hilary Sinnamon, Environmental Defense Fund, Center for Energy Efficiency and Renewable Technologies, and Clean Power Campaign	Intergovernmental Panel on Climate Change. 2014. Summary for Policymakers. Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Edenhofer, O., R. Pichs-Madruga, Y. Sokona, E. Farahani, S. Kadner, K. Seyboth, A. Adler, I. Baum, S. Brunner, P. Eickemeier, B. Kriemann, J. Savolainen, S. Schlömer, C. von Stechow, T. Zwickel and J.C. Minx (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.	Summarizes the literature on the scientific, technological, environmental, economic, and social aspects of mitigation of climate change.	Yes	Yes
NHTSA-2017-0069-0162	Hilary Sinnamon, Environmental Defense Fund, Center for Energy Efficiency and Renewable Technologies, and Clean Power Campaign	U.S. Environmental Protection Agency. 2016. Light-Duty Automotive Technology, Carbon Dioxide Emissions, and Fuel Economy Trends Report, 1975–2016. EPA-420-S-16-001. Available at: https://www.epa.gov/sites/production/files/201611/documents/420s16001.pdf . Accessed: November 20, 2017. (Link no longer active).	Reports on carbon dioxide emissions, fuel economy, and powertrain technology trends for new personal vehicles in the United States.	No	No
NHTSA-2017-0069-0162	Hilary Sinnamon, Environmental Defense Fund, Center for Energy Efficiency and Renewable Technologies, and Clean Power Campaign	U.S. Environmental Protection Agency. 2017. 44 EPA's Optimization Model for reducing Emissions of Greenhouse Gases from Automobiles (OMEGA), Version 1.4.56 and Pre-Processors. Available at: https://www.epa.gov/regulations-emissions-vehicles-and-engines/optimization-model-reducing-emissions-greenhouse-gases . Accessed: November 20, 2017.	Provides for the download of OMEGA, a free desktop computer application that estimates the technology cost for automobile manufacturers to achieve variable fleet-wide levels of vehicle greenhouse gas emissions.	No	No

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NHTSA-2017-0069-0162	Hilary Sinnamon, Environmental Defense Fund, Center for Energy Efficiency and Renewable Technologies, and Clean Power Campaign	Myhre, Gunnar et al. 2013. Anthropogenic and Natural Radiative Forcing. Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Available at: http://www.climatechange2013.org/images/report/WG1AR5_ALL_FINAL.pdf . Accessed: November 20, 2017.	Confirms that warming in the climate system is unequivocal, with many of the observed changes unprecedented over decades to millennia: warming of the atmosphere and the ocean, diminishing snow and ice, rising sea levels and increasing concentrations of greenhouse gases.	Yes	Yes
NHTSA-2017-0069-0162	Hilary Sinnamon, Environmental Defense Fund, Center for Energy Efficiency and Renewable Technologies, and Clean Power Campaign	Garcia, A. 2017. Car Sales Set Another U.S. Record. <i>CNN Money</i> . Available at: http://money.cnn.com/2017/01/04/news/companies/car-sales-2016/index.html . Accessed: November 20, 2017.	Provides a video discussing car sales being at a record high for the 7th year in a row.	No	No
NHTSA-2017-0069-0163	Hilary Sinnamon, Environmental Defense Fund, Center for Energy Efficiency and Renewable Technologies, and Clean Power Campaign	National Oceanic and Atmospheric Administration National Centers for Environmental Information. 2017. U.S. Billion-Dollar Weather and Climate Disasters. Available at: https://www.ncdc.noaa.gov/billions/time-series . Accessed: November 20, 2017.	Presents a graphic that visualizes how the different types of identified U.S. billion-dollar disaster events have changed over time.	No	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0163	Hilary Sinnamon, Environmental Defense Fund, Center for Energy Efficiency and Renewable Technologies, and Clean Power Campaign	Myhre, G., D. Shindell, F.-M. Bron, W. Collins, J. Fuglestvedt, J. Huang, D. Koch, J.-F. Lamarque, D. Lee, B. Mendoza, T. Nakajima, A. Robock, G. Stephens, T. Takemura, and H. Zhang. 2013. Anthropogenic and Natural Radiative Forcing. Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Available at: http://www.ipcc.ch/report/ar5/wg1/ . Accessed: November 20, 2017.	Discusses anthropogenic increases in greenhouse gases that have substantially enhanced the greenhouse effect.	Yes	Yes
NHTSA-2017-0069-0163	Hilary Sinnamon, Environmental Defense Fund, Center for Energy Efficiency and Renewable Technologies, and Clean Power Campaign	Cackette, T., and R. Rykowski. 2017. Technical Assessment of CO2 Emission Reductions for Passenger Vehicles in the Post-2025 Timeframe. Environmental Defense Fund. Available at: https://www.edf.org/sites/default/files/content/final_public_white_paper_post_2026_co2_reductions2.27_clean.pdf . Accessed: November 20, 2017.	Analyzes the feasibility and cost-effectiveness of reducing carbon dioxide emissions from passenger vehicles to below the current model year 2025 standards.	No	No
NHTSA-2017-0069-0163	Hilary Sinnamon, Environmental Defense Fund, Center for Energy Efficiency and Renewable Technologies, and Clean Power Campaign	German, J., N. Isenstadt, N. Lutsey, D. Meszler, and J. Miller. 2017. Efficiency Technology and Cost Assessment for U.S. 2025–2030 Light-Duty Vehicles. ICCT. Available at: http://www.theicct.org/US-2030-technology-cost-assessment . Accessed: November 20, 2017.	Explores the technology implications of the shift to increased efficiency and lower carbon dioxide emissions in 2025–2030.	No	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0163	Hilary Sinnamon, Environmental Defense Fund, Center for Energy Efficiency and Renewable Technologies, and Clean Power Campaign	U.S. Environmental Protection Agency. 2007. A Wedge Analysis of the U.S. Transportation Sector. EPA420-F-07-049. Available at: https://nepis.epa.gov/Exe/ZyNET.exe/P1001YWG.TXT?ZyActionD=ZyDocument&Client=EPA&Index=2006+Thru+2010&Docs=&Query=&Time=&EndTime=&SearchMethod=1&TocRestrict=n&Toc=&TocEntry=&QField=&QFieldYear=&QFieldMonth=&QFieldDay=&IntQFieldOp=0&ExtQFieldOp=0&XmlQuery=&File=D%3A%5Czyfiles%5CIndex%20Data%5C06thru10%5CTxt%5C00000005%5CP1001YWG.txt&User=ANONYMOUS&Password=anonymous&SortMethod=h%7C-&MaximumDocuments=1&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Display=hpfr&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page&MaximumPages=1&ZyEntry=1&SeekPage=x&ZyPURL# . Accessed: November 20, 2017.	Presents graphics depicting greenhouse gas emissions from the transportation sector, as well as the stabilization wedge approach.	No	No
NHTSA-2017-0069-0164	Erin Murphy, Environmental Defense Fund	Environmental Defense Fund. 2016. Public Comments on Proposed Determination on the Appropriateness of the Model Year 2022–2025 Light-Duty Vehicle Greenhouse Gas Emissions Standards Under the Midterm Evaluation. Available at: https://www.regulations.gov/document?D=NHTSA-2017-0069-0164 . Accessed: November 20, 2017.	Provides Environmental Defense Fund's public comments to EPA.	No	No

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NHTSA-2017-0069-0164	Erin Murphy, Environmental Defense Fund	Environmental Defense Fund. 2016. Attachments to Public Comments on Proposed Determination on the Appropriateness of the Model Year 2022–2025 Light-Duty Vehicle Greenhouse Gas Emissions Standards Under the Midterm Evaluation. Available at: https://www.regulations.gov/document?D=NHTSA-2017-0069-0164 . Accessed: November 20, 2017.	Provides Environmental Defense Fund's tables and data attachments to public comments to EPA.	No	No
NHTSA-2017-0069-0164	Erin Murphy, Environmental Defense Fund	The Aluminum Association. 2017. Aluminum Industry Requests Regulatory Certainty from EPA Regulators during Public Hearing. Available at: http://www.aluminum.org/news/aluminum-industry-requests-regulatory-certainty-epa-regulators-during-public-hearing . Accessed: November 20, 2017.	Summarizes Ganesh Panneer, chairman of the Aluminum Association Aluminum Transportation Group and vice president and general manager of automotive at Novelis, testimony to the EPA in Washington D.C. about the need for regulatory certainty for the automotive industry and its key suppliers.	No	No
NHTSA-2017-0069-0164	Erin Murphy, Environmental Defense Fund	Auto Alliance. 2017. Auto Alliance Letter to Administrator Pruitt on Final Determination on the Appropriateness of the Model Year 2022–2025 Light-Duty Vehicle Greenhouse Gas Emissions Standards under the Midterm Evaluation. Available at: https://autoalliance.org/wp-content/uploads/2017/02/Letter-to-EPA-Admin.-Pruitt-Feb.-21-2016-Signed.pdf . Accessed: November 20, 2017.	Provides the letter from Auto Alliance to Administrator Pruitt on MY 2022–2025 midterm evaluation.	No	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0164	Erin Murphy, Environmental Defense Fund	Ross, J. 2014. Honda is First Japanese Carmaker to Be a Net-Exporter from US. <i>Autoblog</i> . Available at: https://www.autoblog.com/2014/01/29/honda-first-japanese-carmaker-net-exporter-from-us/ . Accessed: November 20, 2017.	Discusses Honda export totals to the United States.	No	No
NHTSA-2017-0069-0164	Erin Murphy, Environmental Defense Fund	BlueGreen Alliance. 2016. Backgrounder: Sound Vehicle Standards & Policies Drive Strong Job Growth. Available at: https://www.bluegreenalliance.org/wp-content/uploads/2016/08/Backgrounder-Vehicle-Standards-and-Jobs-FINAL.pdf . Accessed: November 20, 2017.	Summarizes research and analysis of the impact of CAFE standards on job growth in the United States.	No	No
NHTSA-2017-0069-0164	Erin Murphy, Environmental Defense Fund	BlueGreen Alliance. 2016. Combating climate change 426,000 pickup trucks at a time. BlueGreen Alliance Issue Brief. Available at: https://www.bluegreenalliance.org/resources/combating-climate-change-426000-pickup-trucks-at-a-time/ . Accessed: November 20, 2017.	Discusses Ford F-150 pickup trucks in relation to fuel standards.	No	No
NHTSA-2017-0069-0164	Erin Murphy, Environmental Defense Fund	Beene, R. 2017. Auto CEOs Ask Trump to Revisit Obama-era Fuel Efficiency Rules. <i>Bloomberg Auto</i> . Available at: https://www.bloomberg.com/news/articles/2017-02-11/auto-ceos-ask-trump-to-revisit-obama-era-fuel-efficiency-rules . Accessed: November 20, 2017.	Reports on automakers requesting review of fuel standards.	No	No
NHTSA-2017-0069-0164	Erin Murphy, Environmental Defense Fund	Comings, T., A. Allison, and F. Ackerman, PhD. 2016. Fueling Savings: Higher Fuel Economy Standards Result in Big Savings for Consumers. Consumers Union. Available at: http://consumersunion.org/wp-content/uploads/2016/09/Fueling-Savings-Consumer-Savings-from-CAFE-2025-Final-1.pdf . Accessed: November 20, 2017.	Provides updated estimates of net savings under the latest CAFE standards for a typical car or light truck owner.	No	No

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NHTSA-2017-0069-0164	Erin Murphy, Environmental Defense Fund	Smith, A. 2017. Automakers, Parts Suppliers at Odds Over EPA Emissions Standards. <i>Bloomberg News</i> . Available at: https://www.bna.com/automakers-parts-suppliers-n73014464219/ . Accessed: November 20, 2017.	Discusses differing opinions between automakers and parts suppliers on fuel standards.	No	No
NHTSA-2017-0069-0164	Erin Murphy, Environmental Defense Fund	Busse, M. R., C. R. Knittel, J. Silva-Risso, and F. Zettelmeyer. 2016. Who is exposed to gas prices? How gasoline prices affect automobile manufacturers and dealerships. <i>Quantitative Marketing and Economics</i> 14(1):41–95. Available at: http://hdl.handle.net/1721.1/103416 . Accessed: November 20, 2017.	Investigates the effects of gasoline prices on the automobile industry.	Yes	No
NHTSA-2017-0069-0164	Erin Murphy, Environmental Defense Fund	Young, S., and D. Clegern. 2017. CARB Finds Vehicle Standards Are Achievable and Cost Effective. California Air Resources Board. #17-19. Available at: https://arb.ca.gov/newsrel/newsrelease.php?id=908 . Accessed: November 20, 2017.	Discusses the California Air Resources Board vote to continue with the vehicle greenhouse gas emission standards and zero-emission vehicle program for cars and light trucks sold in California through 2025.	No	No
NHTSA-2017-0069-0164	Erin Murphy, Environmental Defense Fund	Congressional Budget Office. 2012. Estimated Impact of the American Recovery and Reinvestment Act on Employment and Economic Output from October 2011 Through December 2011. Available at: https://www.cbo.gov/publication/43013 . Accessed: November 20, 2017.	Reports on employment and economic output.	No	No

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NHTSA-2017-0069-0164	Erin Murphy, Environmental Defense Fund	Cleantech Group. 2016. Clean Energy Patent Growth Index. Available at: http://cepgi.typepad.com/files/h0731144-1.pdf . Accessed: November 20, 2017.	Reports on patents in the clean energy sector.	No	No
NHTSA-2017-0069-0164	Erin Murphy, Environmental Defense Fund	Baum, A., and D. Luria. 2016. Economic Implications of the Current National Program v. a Weakened National Program in 2022–2025 for Detroit Three Automakers and Tier One Suppliers. Ceres. Available at: https://www.ceres.org/resources/reports/economic-implications-current-national-program-v-weakened-national-program-2022 . Accessed: November 20, 2017.	Evaluates the economic implications of retaining or weakening the CAFE and greenhouse gas emissions regulations for automakers and their suppliers under five fuel price scenarios.	No	No
NHTSA-2017-0069-0164	Erin Murphy, Environmental Defense Fund	Wattles, J. 2017. India to Sell Only Electric Cars by 2030. <i>CNN Tech</i> . Available at: http://money.cnn.com/2017/06/03/technology/future/india-electric-cars/index.html?iid=EL . Accessed: November 20, 2017.	Reports on India's decision to sell only electric cars by 2030.	No	No
NHTSA-2017-0069-0164	Erin Murphy, Environmental Defense Fund	Petroff, A. 2017. These Countries Want to Ditch Gas and Diesel Cars. <i>CNN Money</i> . Available at: http://money.cnn.com/2017/07/26/autos/countries-that-are-banning-gas-cars-for-electric/index.html . Accessed: November 20, 2017.	Reports on various countries moving toward electric automobiles.	No	No
NHTSA-2017-0069-0164	Erin Murphy, Environmental Defense Fund	Northeast States for Coordinated Air Use Management. 2016. Letter from Northeast States for Coordinated Air Use Management to Administrator McCarthy on Proposed Determination on the Appropriateness of the Model Year 2022–2025 Light-Duty Vehicle Greenhouse Gas Emissions Standards under the Midterm Evaluation. Available at: http://www.nescaum.org/topics/automobile-emissions . Accessed: November 20, 2017.	Provides the comment letter to Administrator McCarthy on proposed EPA rule.	No	No

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NHTSA-2017-0069-0165	Erin Murphy, Environmental Defense Fund	New York State Department of Environmental Conservation. 2016. Letter from New York State Department of Environmental Conservation to Administrator McCarthy on Proposed Determination on the Appropriateness of the Model Year 2022–2025 Light-Duty Vehicle Greenhouse Gas Emissions Standards under the Midterm Evaluation. Available at: https://www.regulations.gov/document?D=NHTSA-2017-0069-0165 . Accessed: November 20, 2017.	Provides the comment letter from New York Department of Environmental Conservation to Administrator McCarthy on proposed EPA rule.	No	No
NHTSA-2017-0069-0165	Erin Murphy, Environmental Defense Fund	Environmental Defense Fund. 2017. Supplemental Public Comments on Proposed Determination on the Appropriateness of the Model Year 2022–2025 Light-Duty Vehicle Greenhouse Gas Emissions Standards under the Midterm Evaluation. Available at: https://www.epa.gov/regulations-emissions-vehicles-and-engines/midterm-evaluation-light-duty-vehicle-greenhouse-gas . Accessed: November 20, 2017.	Provides the supplemental comment letter to Administrator McCarthy on proposed EPA rule.	No	No
NHTSA-2017-0069-0165	Erin Murphy, Environmental Defense Fund	U.S. Environmental Protection Agency. 2017. Final Determination on the Appropriateness of the Model Year 2022–2025 Light-Duty Vehicle Greenhouse Gas Emissions Standards under the Midterm Evaluation. EPA-420-R-17-001. Available at: https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100QQ91.pdf . Accessed: November 20, 2017.	Provides EPA's Final Rule.	No	No

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NHTSA-2017-0069-0165	Erin Murphy, Environmental Defense Fund	U.S. Environmental Protection Agency. 2016. Proposed Determination on the Appropriateness of the Model Year 2022–2025 Light-Duty Vehicle Greenhouse Gas Emissions Standards under the Midterm Evaluation. EPA-420-R-16-020. Available at: https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100Q3DO.pdf . Accessed: November 20, 2017.	Provides EPA's Proposed Rule.	No	No
NHTSA-2017-0069-0165	Erin Murphy, Environmental Defense Fund	U.S. Environmental Protection Agency. 2017. Midterm Evaluation of Light-Duty Vehicle Greenhouse Gas Emissions Standards for Model Years 2022–2025. Web page. Available at: https://www.epa.gov/regulations-emissions-vehicles-and-engines/midterm-evaluation-light-duty-vehicle-greenhouse-gas . Accessed: November 20, 2017.	Provides EPA's midterm evaluation webpage.	No	No
NHTSA-2017-0069-0165	Erin Murphy, Environmental Defense Fund	Fox Business. 2017. China sets new deadline for electric-car production. <i>Fox Business</i> . Available at: https://www.foxbusiness.com/markets/china-sets-new-deadline-for-electric-car-production . Accessed: March 29, 2018.	Reports on China electric car rulemaking.	No	No
NHTSA-2017-0069-0165	Erin Murphy, Environmental Defense Fund	United States Government Accountability Office. 2010. NHTSA and EPA's Partnership for Setting Fuel Economy and Greenhouse Gas Emissions Standards Improved Analysis and Should Be Maintained. Available at: http://www.gao.gov/products/GAO-10-336 . Accessed: November 20, 2017.	Provides a report to the Chairman, Subcommittee on Energy and Environment, Committee on Energy and Commerce, House of Representatives on fuel economy.	No	No

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NHTSA-2017-0069-0165	Erin Murphy, Environmental Defense Fund	Gillingham, K., D. Rapson, and G. Wagner. 2014. The Rebound Effect and Energy Efficiency Policy. RFF DP 14-39. Available at: http://www.rff.org/files/sharepoint/WorkImages/Download/RFF-DP-14-39.pdf . Accessed: November 20, 2017.	Clarifies what the rebound effect is and provides a guide for economists and policymakers interested in its magnitude.	No	No
NHTSA-2017-0069-0165	Erin Murphy, Environmental Defense Fund	Gillis, J., S. Brobeck, and M. Cooper. 2016. Automakers Are on the Road to Meeting Fuel Efficiency Standards. An Analysis of Automaker Progress in Meeting 2025 Fuel Efficiency Requirements and A Look At Consumer Attitudes Towards Fuel Efficiency. Consumer Federation of America. Available at: http://consumerfed.org/wp-content/uploads/2016/04/2016-Fuel-Economy-Report-April-25-2016.pdf . Accessed: November 20, 2017.	Analyzes automaker progress in meeting 2025 fuel efficiency requirements and a look at consumer attitudes toward fuel efficiency.	No	No
NHTSA-2017-0069-0165	Erin Murphy, Environmental Defense Fund	Association of Global Automakers. 2017. Letter from Association of Global Automakers to Administrator Pruitt to Petition for Reconsideration and Request to Withdraw Final Determination on the Appropriateness of the Model Year 2022–2025 Light-duty Vehicle Greenhouse Gas Emissions Standards under the Midterm Evaluation. Available at: https://www.globalautomakers.org/system/files/document/attachments/2017-10-05_global_automakers_ghg-cafe_mte_comments.pdf . Accessed: November 20, 2017. (Link no longer active).	Provides a letter from Global Automaker association requesting withdrawal of EPA determination for MYs 2022–2025.	No	No

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NHTSA-2017-0069-0165	Erin Murphy, Environmental Defense Fund	Greene, D., A. Hossain, J. Hofmann, G. Helfand, and R. Beach. No Date. Consumer Willingness to Pay for Vehicle Characteristics: What Do We Know? Available at: http://te3conference.com/2017/07/31/consumer-willingness-pay-vehicle-attributes-know/ . Accessed: November 20, 2017.	Presents automobile consumer characteristics.	No	No
NHTSA-2017-0069-0165	Erin Murphy, Environmental Defense Fund	House of Representatives. 1965. House Report No. 89-899.	Provides a House of Representatives report to amend the Clean Air Act to require standards for controlling the emission of pollutants from gasoline-powered or diesel-powered vehicles, to establish a Federal Air Pollution Control Laboratory, and for other purposes.	No	No
NHTSA-2017-0069-0168	Erin Murphy, Environmental Defense Fund	Bolon, K. EPA's Technology Assessment for the 2025 GHG Standards, presented at the CTI Symposium USA. Available at: https://www.epa.gov/sites/production/files/2017-06/documents/cti-novi-2017-epa-2017-05-17.pdf . Accessed: November 20, 2017.	Presents how EPA greenhouse gas standards work, industry progress and contribution of powertrain improvements, EPA's consideration of technologies for 2025 timeframe, and future expectations.	No	No

Table B-1. Sources Identified in Scoping Comments

Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0168	Erin Murphy, Environmental Defense Fund	U.S. Environmental Protection Agency, National Highway Traffic Safety Administration, and California Air Resources Board. 2016. Draft Technical Assessment Report: Midterm Evaluation of Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards for Model Years 2022–2025. EPA-420-D-16-900. Available at: https://nepis.epa.gov/Exe/ZyPDF.cgi/P100OXEO.PDF?Dockey=P100OXEO.PDF . Accessed: November 20, 2017.	Examines a wide range of technical issues relevant to greenhouse gas emissions and augural CAFE standards for MYs 2022–2025, and share with the public the initial technical analyses of those issues.	No	No
NHTSA-2017-0069-0168	Erin Murphy, Environmental Defense Fund	U.S. Environmental Protection Agency. 2016. Proposed Determination on the Appropriateness of the Model Year 2022–2025 Light-Duty Vehicle Greenhouse Gas Emissions Standards under the Midterm Evaluation: Technical Support Document. EPA-420-R-16-021. Available at: https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100Q3L4.pdf . Accessed: November 20, 2017.	Describes in more detail assessment of public comment on the Draft Technical Assessment Report, and updates to technology costs, technology effectiveness, consumer impacts, and other elements of our analysis.	No	No
NHTSA-2017-0069-0170	Emily Rosenblum, Environmental Defense Fund	Samaha, R. R., Prasad, P., Marzougui, D., Cui, C., Digges, K., Summers, S., Patel S., Zhao, L., & Barsan-Anelli, A. 2014. Methodology for evaluating fleet protection of new vehicle designs: Application to lightweight vehicle designs. Report No. DOT HS 812 051A. Washington, DC: National Highway Traffic Safety Administration. Available at: https://one.nhtsa.gov/Research/Crashworthiness/ci.Vehicle-Aggressivity-and-Fleet-Compatibility-Research.print . Accessed: November 20, 2017.	Discusses the approach of elevating fleet protection in vehicle design and safety performance.	No	No

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NHTSA-2017-0069-0170	Emily Rosenblum, Environmental Defense Fund	Samaha, R. R., P. Prasad, D. Marzougui, C. Cui, K. Digges, S. Summers, S. Patel, L. Zhao, and A. Barsan-Anelli. 2014. Methodology for Evaluating Fleet Protection of New Vehicle Designs: Application to Lightweight Vehicle Designs, Appendices. Report No. DOT HS 812 051B. Washington, DC: National Highway Traffic Safety Administration. Available at: https://one.nhtsa.gov/Research/Crashworthiness/ci.Vehicle-Aggressivity-and-Fleet-Compatibility-Research.print . Accessed: November 20, 2017.	Provides appendices to the Methodology for Evaluating Fleet Protection of New Vehicle Designs: Application to Lightweight Vehicle Designs.	No	No
NHTSA-2017-0069-0170	Emily Rosenblum, Environmental Defense Fund	National Highway Traffic Safety Administration. 2014. Methodology for Evaluating Fleet Protection of New Vehicle Designs: Application To Lightweight Vehicle Designs. DOT HS 812 051C. Available at: https://one.nhtsa.gov/Research/Crashworthiness/ci.Vehicle-Aggressivity-and-Fleet-Compatibility-Research.print . Accessed: November 20, 2017.	Provides the methods for evaluating the fleet protection of new vehicle designs.	Yes	No
NHTSA-2017-0069-0170	Emily Rosenblum, Environmental Defense Fund	National Research Council. 2011. Assessment of Fuel Economy Technologies for Light-Duty Vehicles. The National Academies Press. Available at: https://doi.org/10.17226/12924 . Accessed: November 20, 2017.	Assesses fuel economy improvements and various technologies that could be implemented.	No	No
NHTSA-2017-0069-0170	Emily Rosenblum, Environmental Defense Fund	Malliaris, A., H. Hsia, and H. Gould. 1976. Concise Description of Auto Fuel Economy and Performance in Recent Model Years. SAE Technical Paper 760045. Available at: https://doi.org/10.4271/760045 . Accessed: November 20, 2017.	Provides fuel economy data from the early to mid-1970s.	Yes	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0170	Emily Rosenblum, Environmental Defense Fund	Transportation Research Board and National Research Council. 2002. Effectiveness and Impact of Corporate Average Fuel Economy (CAFE) Standards. The National Academies Press. Available at: https://doi.org/10.17226/10172 . Accessed: November 20, 2017.	Evaluates the implications changes in motor vehicle technology, globalization of the industry, the mix and characteristics of vehicle sales, and production capacity since CAFE standards were established, as well as anticipated changes in the next few years.	Yes	No
NHTSA-2017-0069-0170	Emily Rosenblum, Environmental Defense Fund	Pickrell, D., and P. Schimek. 1999. Growth in motor vehicle ownership and use: Evidence from the Nationwide Personal Transportation Survey. <i>Journal of Transportation and Statistics</i> 1(2): 1–17. Available at: https://rosap.ntl.bts.gov/view/dot/4712 . Accessed: March 30, 2017.	Uses information from the Nationwide Personal Transportation Survey to address three related subjects: 1) growth in personal motor vehicle travel and its sources; 2) changes in the number, types, and age distribution of household motor vehicles; and 3) the determinants of households' vehicle utilization patterns and demands for private motor vehicle travel.	Yes	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0170	Emily Rosenblum, Environmental Defense Fund	Young, A.R. 1999. Regression Analysis for Acceleration Performance of Light Duty Vehicles. Final Report Peer Review. DOT HS 807 763. National Highway Safety Administration.	Provides the peer review of a study that provides an algorithmic method for calculating 0 to 60 miles-per-hour acceleration time for recent passenger cars and light trucks based on their horsepower-to-weight ratios.	Yes	No
NHTSA-2017-0069-0170	Emily Rosenblum, Environmental Defense Fund	National Highway Traffic Safety Administration. 1991. Regression Analysis for Acceleration Performance of Light Duty Vehicles. Final Report. DOT HS 807 763. Available at: https://ntrl.ntis.gov/NTRL/dashboard/searchResults/titleDetail/PB92113778.xhtml . Accessed: November 20, 2017.	Provides an updated analysis of the relationship of acceleration to design parameters of light-duty vehicles.	Yes	No
NHTSA-2017-0069-0170	Emily Rosenblum, Environmental Defense Fund	Manhattan Strategy Group. 2013. The Impact of Transportation on Affordability: LAI Auto Cost Research Synthesized. U.S. DOT and U.S. HUD Office of Sustainable Housing and Communities. Available at: http://www.locationaffordability.info/downloads/AutoCostResearch.pdf . Accessed: November 20, 2017. (Link no longer active).	Analyzes the Location Affordability Index, which includes household transportation costs, comprising auto ownership, auto use, and transit use, based on a home's location.	No	No
NHTSA-2017-0069-0170	Emily Rosenblum, Environmental Defense Fund	National Highway Traffic Safety Administration. 2003. Vehicle Weight, Fatality Risk and Crash Compatibility of Model Year 1991-99 Passenger Cars and Light Trucks. NHTSA Technical Report. DOT HS 809 662. Available at: https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/809662 . Accessed: November 20, 2017.	Examines fatality risk and crash compatibility of MY 1991–1999 passenger cars and light trucks.	No	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0171	Emily Rosenblum, Environmental Defense Fund	Kargul, J., A. Moskalik, D. Barba, K. Newman, and P. Dekraker. 2016. Estimating GHG Reduction from Combinations of Current Best-Available and Future Powertrain and Vehicle Technologies for a Midsized Car Using EPA's ALPHA Model. SAE Technical Paper. 2016-01-0910. doi: 10.4271/2016-01-0910. Available at: https://www.epa.gov/regulations-emissions-vehicles-and-engines/estimating-ghg-reduction-combinations-current-best . Accessed: November 20, 2017.	Presents the ALPHA model inputs, results, and the lessons learned during this modeling and assessment activity.	Yes	No
NHTSA-2017-0069-0171	Emily Rosenblum, Environmental Defense Fund	Winebrake, J.J., E. H. Green, B. Comer, J. J. Corbett, and S. Froman. 2012. Estimating the direct rebound effect for on-road freight transportation. <i>Energy Policy</i> 48:252–259. doi: 10.1016/j.enpol.2012.05.018.	Provides a critical review of the literature related to the heavy-duty vehicles rebound effect.	Yes	No
NHTSA-2017-0069-0171	Emily Rosenblum, Environmental Defense Fund	Dekraker, P., J. Kargul, A. Moskalik, K. Newman, M. Doorlag, and D. Barba. 2017. Fleet-level modeling of real world factors influencing greenhouse gas emission simulation in ALPHA. <i>SAE International Journal of Fuels and Lubricants</i> 10(1). doi: 10.4271/2017-01-0899. Available at: https://www.epa.gov/regulations-emissions-vehicles-and-engines/fleet-level-modeling-real-world-factors-influencing . Accessed: November 20, 2017.	Presents an overview of the laboratory benchmarking that was done to support validation of the ALPHA model. The paper also discusses a variety of real world factors that influence the simulation of fuel economy and greenhouse gas emissions.	Yes	No

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NHTSA-2017-0069-0171	Emily Rosenblum, Environmental Defense Fund	Stuhldreher, M. 2016. Fuel Efficiency Mapping of a 2014 6-Cylinder GM EcoTec 4.3L Engine with Cylinder Deactivation. SAE Technical Paper 2016-01-0662. doi: 10.4271/2016-01-0662. Available at: https://www.epa.gov/regulations-emissions-vehicles-and-engines/fuel-efficiency-mapping-2014-6-cylinder-gm-ecotec-43l . Accessed: November 20, 2017.	Describes the test method and results for the engine dyno portion of the benchmarking.	Yes	No
NHTSA-2017-0069-0171	Emily Rosenblum, Environmental Defense Fund	Lee, S., J. Cherry, B. Lee, J. McDonald, and M. Safoutin. 2014. HIL Development and Validation of Lithium-Ion Battery Packs. SAE Technical Paper 2014-01-1863. doi: 10.4271/2014-01-1863. Available at: https://www.epa.gov/regulations-emissions-vehicles-and-engines/hil-development-and-validation-lithium-ion-battery-packs . Accessed: November 20, 2017.	Presents lithium-ion battery pack HIL development and validation integrated into the EPA Battery Test Facility.	Yes	No
NHTSA-2017-0069-0171	Emily Rosenblum, Environmental Defense Fund	U.S. Environmental Protection Agency. 2010. Peer Review for the Report, How Consumers Value Fuel Economy: A Literature Review. EPA-420-S-10-001.	Provides the peer review for the final RTI report summarizing the peer review of David Greene's literature survey, including the detailed comments of each peer reviewer and an overview of the most significant comments compiled by RTI.	Yes	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0171	Emily Rosenblum, Environmental Defense Fund	Gillingham, K. 2013. Identifying the elasticity of driving: Evidence from a gasoline price shock in California. <i>Regional Science & Urban Economics</i> 47(C):13–24. doi: 10.1016/j.regsciurbeco.2013.08.004. Available at: https://www.researchgate.net/publication/259099360_Identifying_the_elasticity_of_driving_Evidence_from_a_gasoline_price_shock_in_California . Accessed: November 20, 2017.	Focuses on the intensive margin of consumer response to the recent gasoline price shock by providing new evidence on the utilization elasticity for vehicles; i.e., the elasticity of vehicle-miles-traveled with respect to the cost of driving.	Yes	No
NHTSA-2017-0069-0171	Emily Rosenblum, Environmental Defense Fund	Marten, A. L., E. A. Kopits, C. W. Griffiths, S. C. Newbold, and A. Wolverton. 2015. Incremental CH ₄ and N ₂ O mitigation benefits consistent with the US Government's SC-CO ₂ estimates. <i>Climate Policy</i> 15(2):272–298. doi: http://dx.doi.org/10.1080/14693062.2014.912981 . Available at: http://www.tandfonline.com/doi/full/10.1080/14693062.2014.912981 . Accessed: November 20, 2017.	Analyzes the social costs of non-carbon dioxide greenhouse gases particularly methane and nitrous oxide through integrated assessment models.	Yes	No
NHTSA-2017-0069-0171	Emily Rosenblum, Environmental Defense Fund	U.S. Environmental Protection Agency. 2016. Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2014. EPA 430-R-16-002. Available at: https://www.epa.gov/sites/production/files/2016-04/documents/us-ghg-inventory-2016-main-text.pdf . Accessed: November 20, 2017.	Summarizes the latest information on U.S. anthropogenic greenhouse gas emission trends from 1990 through 2014 and provides graphs and tables detailing U.S. emissions and sinks.	No	No

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NHTSA-2017-0069-0171	Emily Rosenblum, Environmental Defense Fund	Moskalik, A., A. Hula, D. Barba, and J. Kargul. Investigating the effect of advanced automatic transmissions on fuel consumption using vehicle testing and modeling. <i>SAE International Journal of Engines</i> 9(3):1916–1928. doi: 10.4271/2016-01-1142. Available at: https://www.epa.gov/regulations-emissions-vehicles-and-engines/investigating-effect-advanced-automatic-transmissions . Accessed: November 20, 2017.	Uses the validated ALPHA model to predict the effectiveness improvement of real-world transmissions over a baseline circa 2008 four-speed transmission, and to predict further improvements possible from future eight-speed transmissions.	Yes	No
NHTSA-2017-0069-0171	Emily Rosenblum, Environmental Defense Fund	ICF International. 2011. Peer Review of FEV Inc. Report, Light Duty Technology Cost Analysis, Power-Split and P2 Hybrid Electric Vehicle Case Studies. EPA-420-R-11-016. Available at: https://nepis.epa.gov/Exe/ZyNET.exe/P100CVJS.txt?ZyActionD=ZyDocument&Client=EPA&Index=2011%20Thru%202015&Docs=&Query=&Time=&EndTime=&SearchMethod=1&TocRestrict=n&Toc=&TocEntry=&QField=&QFieldYear=&QFieldMonth=&QFieldDay=&UseQField=&IntQFieldOp=0&ExtQFieldOp=0&XmlQuery=&File=D%3A%5CZYFILES%5CINDEX%20DATA%5C11THRU15%5CTX%5C00000003%5CP100CVJS.txt&User=ANONYMOUS&Password=anonymous&SortMethod=h%7C-&MaximumDocuments=1&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Display=hpfr&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page&MaximumPages=1&ZyEntry=1 . Accessed: November 20, 2017.	Presents the findings of the reviews conducted by four subcontracted subject matter experts.	Yes	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0171	Emily Rosenblum, Environmental Defense Fund	FEV, Inc. 2011. Light Duty Technology Cost Analysis, Power-Split and P2 HEV Case Studies. EPA. EPA-420-R-11-015. Available at: https://nepis.epa.gov/Exe/ZyNET.exe/P100EG1R.txt?ZyActionD=ZyDocument&Client=EPA&Index=2011%20Thru%202015&Docs=&Query=&Time=&EndTime=&SearchMethod=1&TocRestrict=n&Toc=&TocEntry=&QField=&QFieldYear=&QFieldMonth=&QFieldDay=&UseQField=&IntQFieldOp=0&ExtQFieldOp=0&XmlQuery=&File=D%3A%5CZYFILES%5CINDEX%20DATA%5C11THRU15%5CTX%5C00000004%5CP100EG1R.txt&User=ANONYMOUS&Password=anonymous&SortMethod=h%7C-&MaximumDocuments=1&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Display=hpfr&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page&MaximumPages=1&ZyEntry=1 . Accessed: November 20, 2017.	Provides incremental direct manufacturing costs for a set of advanced light-duty vehicle technologies.	No	No
NHTSA-2017-0069-0171	Emily Rosenblum, Environmental Defense Fund	U.S. Environmental Protection Agency. 2014. Light-Duty Automotive Technology, Carbon Dioxide Emissions, and Fuel Economy Trends: 1975 through 2014. EPA-420-R-14-023a. Available at: https://www.epa.gov/fueleconomy/light-duty-automotive-technology-carbon-dioxide-emissions-and-fuel-economy-trends-1975 . Accessed: November 20, 2017. (Link no longer active).	Reports on new light-duty (or personal) vehicle carbon dioxide emissions, fuel economy, and powertrain technology trends in the United States.	No	No

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NHTSA-2017-0069-0171	Emily Rosenblum, Environmental Defense Fund	U.S. Environmental Protection Agency. 2016. Light-Duty Automotive Technology, Carbon Dioxide Emissions, and Fuel Economy Trends: 1975 through 2016, Executive Summary. EPA-420-R-16-010. Available at: https://www.epa.gov/fueleconomy/light-duty-automotive-technology-carbon-dioxide-emissions-and-fuel-economy-trends-1975-1 . Accessed: November 20, 2017. (Link no longer active).	Provides the executive summary for the report on the new light-duty (or personal) vehicle carbon dioxide emissions, fuel economy, and powertrain technology trends in the United States.	No	No
NHTSA-2017-0069-0171	Emily Rosenblum, Environmental Defense Fund	Dagci, O., N. Pereira, and J. Cherry. 2013. Maneuver-based battery-in-the-loop testing - bringing reality to lab. <i>SAE International Journal of Alternative Powertrains</i> 2(1):7–17. doi: 10.4271/2013-01-0157. Available at: http://papers.sae.org/2013-01-0157/ . Accessed: November 20, 2017.	Describes testing mechanisms to drive down development costs and optimize the efficiency of these vehicles.	Yes	No
NHTSA-2017-0069-0171	Emily Rosenblum, Environmental Defense Fund	Lee, S., J. Cherry, M. Safoutin, and J. McDonald. 2017. Modeling and Validation of 12V Lead-Acid Battery for Stop-Start Technology. SAE Technical Paper 2017-01-1211. doi-01-1211. Available at: https://www.epa.gov/regulations-emissions-vehicles-and-engines/modeling-and-validation-12v-lead-acid-battery-stop-start . Accessed: November 20, 2017.	Presents the development and validation of the lead-acid battery model.	Yes	No
NHTSA-2017-0069-0171	Emily Rosenblum, Environmental Defense Fund	Lee, S., B. Lee, J. McDonald, and E. Nam. 2013. Modeling and Validation of Lithium-Ion Automotive Battery Packs. SAE Technical Paper 2013-01-1539. doi: 10.4271/2013-01-1539. Available at: https://www.researchgate.net/publication/291025131_Modeling_and_Validation_of_Lithium-Ion_Automotive_Battery_Packs . Accessed: March 30, 2018.	Describes the battery pack model for ALPHA. This paper also presents lithium-polymer battery pack model development and validation integrated into the ALPHA tool.	Yes	No

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NHTSA-2017-0069-0171	Emily Rosenblum, Environmental Defense Fund	Lee, S., B. Lee, J. McDonald, L. Sanchez, and E. Nam. 2013. Modeling and Validation of Power-Split and P2 Parallel Hybrid Electric Vehicles. SAE Technical Paper 2013-01-1470. doi: 10.4271/2013-01-1470. Available at: https://www.sae.org/publications/technical-papers/content/2013-01-1470/ . Accessed: March 30, 2018.	Presents the power-split and P2 parallel hybrid electric vehicle models, which will eventually be integrated into ALPHA, and discusses controls development and validation.	Yes	No
NHTSA-2017-0069-0171	Emily Rosenblum, Environmental Defense Fund	Newman, K., M. Doorlag, and D. Barba. 2016. Modeling of a Conventional Mid-Size Car with CVT Using ALPHA and Comparable Powertrain Technologies. SAE Technical Paper 2016-01-1141. doi:10.4271/2016-01-1141. Available at: https://www.epa.gov/regulations-emissions-vehicles-and-engines/modeling-conventional-mid-size-car-cvt-using-alpha-and . Accessed: November 20, 2017.	Presents the results of testing a Nissan Altima with CVT and the initial development of a CVT shift algorithm (ALPHA shift-CVT) for use with EPA's ALPHA model.	Yes	No

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NHTSA-2017-0069-0172	Emily Rosenblum, Environmental Defense Fund	ICF International. 2012. Peer Review of the Draft Report, Modeling the Cost and Performance of Lithium-Ion Batteries for Electric-Drive Vehicles. Revised Final Report. EPA. EPA-420-R-12-021. Available at: https://nepis.epa.gov/Exe/ZyNET.exe/P100F17H.txt?ZyActionD=ZyDocument&Client=EPA&Index=2011%20Thru%202015&Docs=&Query=&Time=&EndTime=&SearchMethod=1&TocRestrict=n&Toc=&TocEntry=&QField=&QFieldYear=&QFieldMonth=&QFieldDay=&UseQField=&IntQFieldOp=0&ExtQFieldOp=0&XmlQuery=&File=D%3A%5CZYFILES%5CINDEX%20DATA%5C11THRU15%5CTX%5C00000005%5CP100F17H.txt&User=ANONYMOUS&Password=anonymous&SortMethod=h%7C-&MaximumDocuments=1&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Display=hpfr&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page&MaximumPages=1&ZyEntry=1 . Accessed: November 20, 2017.	Summarizes the peer reviewer comments to the Draft Report "Modeling the Cost and Performance of Lithium-Ion Batteries for Electric-Drive Vehicles Revised Final Report" according to technical, manufacturing, and tool categories.	Yes	No

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NHTSA-2017-0069-0172	Emily Rosenblum, Environmental Defense Fund	Argonne National Laboratory. 2011. Modeling the Cost and Performance of Lithium-Ion Batteries for Electric-Drive Vehicles. Final Report. EPA. EPA-420-R-12-023. Available at: https://nepis.epa.gov/Exe/ZyNET.exe/P100F84A.TXT?ZyActionD=ZyDocument&Client=EPA&Index=2011+Thru+2015&Docs=&Query=&Time=&EndTime=&SearchMethod=1&TocRestrict=n&Toc=&TocEntry=&QField=&QFieldYear=&QFieldMonth=&QFieldDay=&IntQFieldOp=0&ExtQFieldOp=0&XmlQuery=&File=D%3A%5Czyfiles%5CIndex%20Data%5C11thru15%5Ctxt%5C00000005%5CP100F84A.txt&User=ANONYMOUS&Password=anonymous&SortMethod=h%7C-&MaximumDocuments=1&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Display=hpfr&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page&MaximumPages=1&ZyEntry=1&SeekPage=x&ZyPURL . Accessed: November 20, 2017.	Discusses the Battery Performance and Cost model developed at Argonne National Laboratory for lithium-ion battery packs used in automotive transportation.	Yes	No
NHTSA-2017-0069-0172	Emily Rosenblum, Environmental Defense Fund	Newman, K. A., and P. Dekraker. 2016. Modeling the Effects of Transmission Gear Count, Ratio Progression, and Final Drive Ratio on Fuel Economy and Performance Using ALPHA. SAE Technical Paper 2016-01-1143. doi: 10.4271/2016-01-1143. Available at: https://www.epa.gov/regulations-emissions-vehicles-and-engines/modeling-effects-transmission-gear-count-ratio . Accessed: November 20, 2017.	Presents an analysis of the effects of varying the absolute and relative gear ratios of a given transmission on carbon emissions and performance.	Yes	No

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NHTSA-2017-0069-0172	Emily Rosenblum, Environmental Defense Fund	U.S. Environmental Protection Agency. 2016. Population and Activity of On-road Vehicles in MOVES2014. EPA-420-R-16-003. Available at: https://nepis.epa.gov/Exe/ZyNET.exe/P10007VJ.TXT?ZyActionD=ZyDocument&Client=EPA&Index=2011+Thru+2015&Docs=&Query=&Time=&EndTime=&SearchMethod=1&TocRestrict=n&Toc=&TocEntry=&QField=&QFieldYear=&QFieldMonth=&QFieldDay=&IntQFieldOp=0&ExtQFieldOp=0&XmlQuery=&File=D%3A%5Czyfiles%5CIndex%20Data%5C11thru15%5CTxt%5C00000019%5CP10007VJ.txt&User=ANONYMOUS&Password=anonymous&SortMethod=h%7C-&MaximumDocuments=1&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Display=hpfr&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page&MaximumPages=1&ZyEntry=1&SeekPage=x&ZyPURL . Accessed: November 20, 2017.	Describes the sources and derivation for on road vehicle population and activity information and associated adjustments as stored in the MOVES2014 and MOVES2014a default databases.	Yes	No
NHTSA-2017-0069-0172	Emily Rosenblum, Environmental Defense Fund	Schenk, C., and P. Dekraker. 2017. Potential Fuel Economy Improvements from the Implementation of cEGR and CDA on an Atkinson Cycle Engine. SAE Technical Paper 2017-01-1016. doi: 10.4271/2017-01-1016.	Presents the results from implementation of external exhaust gas recirculation and cylinder deactivation on an engine capable of Atkinson cycle operation.	Yes	No
NHTSA-2017-0069-0172	Emily Rosenblum, Environmental Defense Fund	Greene, D. L. 2012. Rebound 2007: Analysis of U.S. light-duty vehicle travel statistics. <i>Energy Policy</i> 43(35):14–28. /doi.org/10.1016/j.enpol.2010.03.083. Available at: https://inis.iaea.org/search/search.aspx?orig_q=RN:43077006 . Accessed: November 20, 2017.	Examines the impact price of gas has on light-duty vehicle travel and fuel efficiency.	Yes	No

Table B-1. Sources Identified in Scoping Comments

Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0172	Emily Rosenblum, Environmental Defense Fund	Helfand, G., M. McWilliams, K. Bolon, L. Reichle, M. Sha, A. Smith, and R. Beach. 2016. Searching for hidden costs: A technology-based approach to the energy efficiency gap in light-duty vehicles. <i>Energy Policy</i> 98:590–606. doi.org/10.1016/j.enpol.2016.09.014. Available at: http://www.sciencedirect.com/science/article/pii/S0301421516304803?via%3Dihub . Accessed: November 20, 2017.	Examines the existence of hidden costs in energy-saving technologies through a content analysis of auto reviews of model-year 2014 vehicles.	Yes	No
NHTSA-2017-0069-0172	Emily Rosenblum, Environmental Defense Fund	Rugh, J.P., V. Hovland, and S. O. Andersen. 2004. Significant Fuel Savings and Emission Reductions by Improving Vehicle Air Conditioning. National Renewable Energy Laboratory. Available at: https://www.nrel.gov/docs/legosti/old/62232.pdf . Accessed: November 20, 2017.	Details vehicle air conditioning's impact on fuel use and tailpipe emissions and reviewed ways to improve vehicle air conditioning systems.	No	No

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NHTSA-2017-0069-0172	Emily Rosenblum, Environmental Defense Fund	Helfand, G., C. Lui, M. Donahue, J. Doremus, A. Kahan, and M. Shelby. 2015. Testing a Model of Consumer Vehicle Purchases Draft. EPA. EPA-420-D-15-011. Available at: https://nepis.epa.gov/Exe/ZyNET.exe/P100NNOZ.TXT?ZyActionD=ZyDocument&Client=EPA&Index=2011+Thru+2015&Docs=&Query=&Time=&EndTime=&SearchMethod=1&TocRestrict=n&Toc=&TocEntry=&QField=&QFieldYear=&QFieldMonth=&QFieldDay=&IntQFieldOp=0&ExtQFieldOp=0&XmlQuery=&File=D%3A%5Czyfiles%5CIndex%20Data%5C11thru15%5CTxt%5C00000018%5CP100NNOZ.txt&User=ANONYMOUS&Password=anonymous&SortMethod=h%7C-&MaximumDocuments=1&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Display=hpfr&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page&MaximumPages=1&ZyEntry=1&SeekPage=x&ZyPURL . Accessed: November 20, 2017.	Presents a validation exercise for a model developed for EPA, intended to estimate the impacts of changes in vehicle prices and fuel economy due to changes in vehicle greenhouse gas emissions standards.	No	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0172	Emily Rosenblum, Environmental Defense Fund	U.S. Environmental Protection Agency. 2015. Testing a Model of Consumer Vehicle Purchases. EPA-420-D-15-011. Available at: https://nepis.epa.gov/Exe/ZyNET.exe/P100NNOZ.TXT?ZyActionD=ZyDocument&Client=EPA&Index=2011+Thru+2015&Docs=&Query=&Time=&EndTime=&SearchMethod=1&TocRestrict=n&Toc=&TocEntry=&QField=&QFieldYear=&QFieldMonth=&QFieldDay=&IntQFieldOp=0&ExtQFieldOp=0&XmlQuery=&File=D%3A%5Czyfiles%5CIndex%20Data%5C11thru15%5Ctxt%5C00000018%5CP100NNOZ.txt&User=ANONYMOUS&Password=anonymous&SortMethod=h%7C-&MaximumDocuments=1&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Display=hpfr&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page&MaximumPages=1&ZyEntry=1&SeekPage=x&ZyPURL . Accessed: November 20, 2017.	Provides the details of Testing a Model of Consumer Vehicle Purchases.	No	No
NHTSA-2017-0069-0172	Emily Rosenblum, Environmental Defense Fund	Ferris, A. E., R. J. Shadbegian, and A. Wolverton. 2014. The effect of environmental regulation on power sector employment: Phase I of the Title IV SO2 Trading Program. <i>Journal of the Association of Environmental and Resource Economists</i> 1(4):521–553. Available at: http://www.journals.uchicago.edu/doi/abs/10.1086/679301 . Accessed: November 20, 2017.	Examines the impact of Phase I of the Title IV sulfur dioxide trading program on electric utility employment.	Yes	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0172	Emily Rosenblum, Environmental Defense Fund	Helfand, G., and R. Dorsey-Palmateer. 2015. The energy efficiency gap in EPA's benefit-cost analysis of vehicle greenhouse gas regulations: A case study. <i>Journal of Benefit-Cost Analysis</i> 6(2):432–454. Available at: https://www.cambridge.org/core/journals/journal-of-benefit-cost-analysis/article/div-classtitlethe-energy-efficiency-gap-in-epas-benefit-cost-analysis-of-vehicle-greenhouse-gas-regulations-a-case-studydiv/21A55026616C7C17496A56783F64FA3D . Accessed: November 20, 2017.	Presents EPA's cost benefit analysis to lower greenhouse gas emissions and have better fuel economy by reviewing available technologies and their costs.	Yes	No
NHTSA-2017-0069-0172	Emily Rosenblum, Environmental Defense Fund	Jaffe, A. B., and R. N. Stavins. 1994. The energy paradox and the diffusion of conservation technology. <i>Resource and Energy Economics</i> 16(2):91–122. Available at: http://www.sciencedirect.com/science/article/pii/0928765594900019 . Accessed: November 20, 2017.	Discusses diffusion of energy conservation technologies and potential market failures that may impede the growth of technology.	Yes	No
NHTSA-2017-0069-0172	Emily Rosenblum, Environmental Defense Fund	Hymel, K. M. and Small, K.A. 2015. The rebound effect for automobile travel: Asymmetric response to price changes and novel features of the 2000s. <i>Energy Economics</i> 49: 93–103. doi: 10.1016/j.eneco.2014.12.016.	Explains gasoline price changes during the 2000s and discussed the impact of the rebound effect.	Yes	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0172	Emily Rosenblum, Environmental Defense Fund	ICF International. 2015. Peer Review for the Report, The Rebound Effect from Fuel Efficiency Standards: Measurement and Projection to 2035. EPA. EPA-420-R-15-013. Available at: https://nepis.epa.gov/Exe/ZyNET.exe/P100N141.txt?ZyActionD=ZyDocument&Client=EPA&Index=2011%20Thru%202015&Docs=&Query=&Time=&EndTime=&SearchMethod=1&TocRestrict=n&Toc=&TocEntry=&QField=&QFieldYear=&QFieldMonth=&QFieldDay=&UseQField=&IntQFieldOp=0&ExtQFieldOp=0&XmlQuery=&File=D%3A%5CZYFILES%5CINDEX%20DATA%5C11THRU15%5CTX%5C00000016%5CP100N141.txt&User=ANONYMOUS&Password=anonymous&SortMethod=h%7C-&MaximumDocuments=1&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Display=hpfr&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page&MaximumPages=1&ZyEntry=1 . Accessed: November 20, 2017.	Provides a peer review <i>The Rebound Effect from Fuel Efficiency Standards: Measurement and Projection to 2035</i> .	Yes	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0172	Emily Rosenblum, Environmental Defense Fund	ICF International. 2015. The Rebound Effect from Fuel Efficiency Standards: Measurement and Projection to 2035. EPA. EPA-420-R-15-012. Available at: https://nepis.epa.gov/Exe/ZyNET.exe/P100N11T.txt?ZyActionD=ZyDocument&Client=EPA&Index=2011%20Thru%202015&Docs=&Query=&Time=&EndTime=&SearchMethod=1&TocRestrict=n&Toc=&TocEntry=&QField=&QFieldYear=&QFieldMonth=&QFieldDay=&UseQField=&IntQFieldOp=0&ExtQFieldOp=0&XmlQuery=&File=D%3A%5CZYFILES%5CINDEX%20DATA%5C11THRU15%5CTX%5C00000016%5CP100N11T.txt&User=ANONYMOUS&Password=anonymous&SortMethod=h%7C-&MaximumDocuments=1&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Display=hpfr&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page&MaximumPages=1&ZyEntry=1 . Accessed: November 20, 2017.	Discusses empirical values of the “rebound effect” for travel in passenger vehicles in the United States.	Yes	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0172	Emily Rosenblum, Environmental Defense Fund	Baldauf, R. W., R. B. Devlin, P. Gehr, R. Giannelli, B. Hassett-Sipple, H. Jung, G. Martini, J. McDonald, J. D. Sacks, and K. Walker. 2016. Ultrafine particle metrics and research considerations: Review of the 2015 UFP workshop. <i>International Journal of Environmental Research and Public Health</i> 13(11):1054. doi: 10.3390/ijerph13111054. Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5129264/ . Accessed: November 20, 2017.	Summarizes the presentations and discussions during a 2015 EPA sponsored workshop on emissions, air quality impacts, and health effects associated with exposures to ultrafine particles, highlighting the observations offered by individual speakers, summaries of the panel discussions, and potential opportunities to continue dialogue and enhance coordination and collaboration across multiple scientific disciplines.	Yes	No
NHTSA-2017-0069-0172	Emily Rosenblum, Environmental Defense Fund	Rogozhin, A., M. Gallaher, G. Helfand, and W. McManus. 2010. Using indirect cost multipliers to estimate the total cost of adding new technology in the automobile industry. <i>International Journal of Production Economics</i> 124(2):360–368. doi: 10.1016/j.ijpe.2009.11.031. Available at: https://www.researchgate.net/publication/46487085_Using_indirect_cost_multipliers_to_estimate_the_total_cost_of_adding_new_technology_in_the_automobile_industry . Accessed: November 20, 2017.	Develops modified multipliers, referred to as indirect cost multipliers that specifically include evaluation of the contributors to indirect costs that are likely to be affected by vehicle modifications.	Yes	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0172	Emily Rosenblum, Environmental Defense Fund	Moskalik, A., P. Dekraker, J. Kargul, and D. Barba. 2015. Vehicle component benchmarking using a chassis dynamometer. <i>SAE International Journal of Materials and Manufacturing</i> 8(3). doi:10.4271/2015-01-0589. Available at: https://www.epa.gov/regulations-emissions-vehicles-and-engines/vehicle-component-benchmarking-using-chassis-dynamometer . Accessed: November 20, 2017.	Uses data from chassis dynamometer testing to determine the efficiency and operation of vehicle driveline components.	Yes	No
NHTSA-2017-0069-0173	Emily Rosenblum, Environmental Defense Fund	Lee, S., C. Schenk, and J. McDonald. 2016. Air Flow Optimization and Calibration in High-Compression Ratio Naturally Aspirated SI Engines with Cooled-EGR. SAE Technical Paper 2016-01-0565. doi:10.4271/2016-01-0565. Available at: https://www.epa.gov/regulations-emissions-vehicles-and-engines/air-flow-optimization-and-calibration-high-compression . Accessed: November 20, 2017.	Presents initial results of a parametric study to determine appropriate rates of cooled, external exhaust gas recirculation; internal (residual) exhaust gas recirculation; and control development for a future engine technology demonstration project based upon the 2.0L, 14:1 CR version of the Mazda SkyActiv-G engine.	Yes	No
NHTSA-2017-0069-0173	Emily Rosenblum, Environmental Defense Fund	Hula, A., J. Alson, A. Bunker, and K. Bolon. 2014. Analysis of Technology Adoption Rates in New Vehicles. SAE Technical Paper 2014-01-0781. doi:10.4271/2014-01-0781. Available at: https://www.epa.gov/regulations-emissions-vehicles-and-engines/analysis-technology-adoption-rates-new-vehicles-sae . Accessed: November 20, 2017.	Examines the pace at which manufacturers have added certain powertrain technology into new vehicles from MYs 1975 to the present.	Yes	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0173	Emily Rosenblum, Environmental Defense Fund	RTI International and Transportation Research Institute University of Michigan. 2009. Automobile Industry Retail Price Equivalent and Indirect Cost Multipliers. EPA. EPA-420-R-09-003. Available at: https://cfpub.epa.gov/si/si_public_record_report.cfm?dirEntryID=205147 . Accessed: November 20, 2017.	Uses a modified multiplier to evaluate the components of indirect costs affected by vehicle modifications associated with environmental regulation.	Yes	No
NHTSA-2017-0069-0173	Emily Rosenblum, Environmental Defense Fund	Ellies, B., C. Schenk, and P. Dekraker. 2016. Benchmarking and Hardware-in-the-Loop Operation of a 2014 MAZDA SkyActiv 2.0L 13:1 Compression Ratio Engine. SAE Technical Paper 2016-01-1007. doi: 10.4271/2016-01-1007. Available at: https://www.epa.gov/regulations-emissions-vehicles-and-engines/benchmarking-and-hardware-loop-operation-2014-mazda . Accessed: November 20, 2017.	Presents the results of EPA's benchmarking of a Mazda 2.0L 13:1 CR SkyActiv engine.	Yes	No
NHTSA-2017-0069-0173	Emily Rosenblum, Environmental Defense Fund	Newman, K., J. Kargul, and B. Barba. 2015. Benchmarking and Modeling of a Conventional Mid-Size Car Using ALPHA. SAE Technical Paper 2015-01-1140. doi:10.4271/2015-01-1140. Available at: https://www.epa.gov/regulations-emissions-vehicles-and-engines/benchmarking-and-modeling-conventional-mid-size-car-using . Accessed: November 20, 2017.	Uses the ALPHA software tool to analyze current and future advanced vehicle technologies.	Yes	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0173	Emily Rosenblum, Environmental Defense Fund	Simon, K., J. Alson, L. Snapp, and A. Hula. 2015. Can transportation emission reductions be achieved autonomously? <i>Environmental Science and Technology</i> 49(24):13910-13911. doi: 10.1021/acs.est.5b05396. Available at: http://pubs.acs.org/doi/abs/10.1021/acs.est.5b05396 . Accessed: November 20, 2017.	Discusses the benefits of connected and automated vehicles, particularly on fuel economy, connectivity and infrastructure, ride-sharing, urban environment and low carbon fuels and electrification.	Yes	No
NHTSA-2017-0069-0173	Emily Rosenblum, Environmental Defense Fund	Dekraker, P., M. Stuhldreher, and Y. Kim. 2017. Characterizing factors influencing SI engine transient fuel consumption for vehicle simulation in ALPHA. <i>SAE Journal of Engines</i> 10(2):529–540. doi:10.4271/2017-01-0533. Available at: https://www.epa.gov/sites/production/files/2017-06/documents/sae-2017-01-0533-characterizing-factors-influencing-si-engine-transient-fuel-consumption-alpha.pdf . Accessed: November 20, 2017.	Examines a) typical transient engine operation encountered over the EPA city and highway drive cycles; b) EPA's vehicle and engine testing to characterize that transient fuel usage; and c) changes made to ALPHA to better model transient engine operation.	Yes	No
NHTSA-2017-0069-0173	Emily Rosenblum, Environmental Defense Fund	Fann, N., K. R. Baker, and C. M. Fulcher. 2012. Characterizing the PM2.5-related health benefits of emission reductions for 17 industrial, area and mobile emission sectors across the U.S. <i>Environmental International</i> 49:141–151. doi: 10.1016/j.envint.2012.08.017. Available at: http://www.sciencedirect.com/science/article/pii/S0160412012001985 . Accessed: November 20, 2017.	Analyzes the health benefits of reducing PM2.5.	Yes	No

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NHTSA-2017-0069-0173	Emily Rosenblum, Environmental Defense Fund	Ricardo, Inc. and Systems Research and Applications Corporation. 2011. Response to Peer Review of Ricardo Computer Simulation of Light-Duty Vehicle Technologies for Greenhouse Gas Emission Reduction in the 2020-2025 Timeframe. EPA. EPA-420-R-11-021. Available at: https://nepis.epa.gov/Exe/ZyNET.exe/P100D5BX.txt?ZyActionD=ZyDocument&Client=EPA&Index=2011%20Thru%202015&Docs=&Query=&Time=&EndTime=&SearchMethod=1&TocRestrict=n&Toc=&TocEntry=&QField=&QFieldYear=&QFieldMonth=&QFieldDay=&UseQField=&IntQFieldOp=0&ExtQFieldOp=0&XmlQuery=&File=D%3A%5CZYFILES%5CINDEX%20DATA%5C11THRU15%5CTX%5C00000003%5CP100D5BX.txt&User=ANONYMOUS&Password=anonymous&SortMethod=h%7C-&MaximumDocuments=1&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Display=hpfr&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page&MaximumPages=1&ZyEntry=1&slide . Accessed: November 20, 2017.	Details the peer-reviewed response to Ricardo, Inc.'s simulation models and analysis of its report "Computer Simulation of Light-Duty Vehicle Technologies for Greenhouse Gas Emission Reduction in the 2020–2025 Timeframe."	Yes	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0173	Emily Rosenblum, Environmental Defense Fund	Ricardo, Inc. and Systems Research and Applications Corporation. 2011. Computer Simulation of Light-Duty Vehicle Technologies for Greenhouse Gas Emission Reduction in the 2020–2025 Timeframe. EPA. EPA-420-R-11-020. Available at: https://cfpub.epa.gov/si/si_public_record_report.cfm?dirEntryID=236014 . Accessed: November 20, 2017.	Assesses the effectiveness of a broad range of technologies including powertrain architecture (conventional and hybrid), engine, transmission, and other vehicle attributes such as engine displacement, final drive ratio, vehicle weight, and rolling resistance on seven light-duty vehicle classes.	Yes	No
NHTSA-2017-0069-0173	Emily Rosenblum, Environmental Defense Fund	Systems Research and Applications International, Inc. 2012. Peer Review for the Consumer Vehicle Choice Model and Documentation. EPA. EPA-420-R-12-013. Available at: https://nepis.epa.gov/Exe/ZyPDF.cgi/P100EZEB.PDF?Doctype=P100EZEB.PDF . Accessed: November 20, 2017.	Contains the analysis and comments from the peer reviewers who examined the EPA's Consumer Vehicle Choice Model and associated documentation.	Yes	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0173	Emily Rosenblum, Environmental Defense Fund	Oak Ridge National Laboratory. 2012. Consumer Vehicle Choice Model Documentation. EPA. EPA-420-B-12-052. Available at: https://nepis.epa.gov/Exe/ZyNET.exe/P100EZ37.TXT?ZyActionD=ZyDocument&Client=EPA&Index=2011+Thru+2015&Docs=&Query=&Time=&EndTime=&SearchMethod=1&TocRestrict=n&Toc=&TocEntry=&QField=&QFieldYear=&QFieldMonth=&QFieldDay=&IntQFieldOp=0&ExtQFieldOp=0&XmlQuery=&File=D%3A%5Czyfiles%5CIndex%20Data%5C11thru15%5CTxt%5C00000005%5CP100EZ37.txt&User=ANONYMOUS&Password=anonymous&SortMethod=h%7C-&MaximumDocuments=1&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Display=hpfr&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page&MaximumPages=1&ZyEntry=1&SeekPage=x&ZyPURL . Accessed: November 20, 2017.	Details Consumer Vehicle Choice Model design principles, model equations, parameter calibration, implementation and user guide.	Yes	No
NHTSA-2017-0069-0173	Emily Rosenblum, Environmental Defense Fund	Caffrey, C., K. Bolon, H. Harris, G. Kolwich, R. Johnston, and T. Shaw. 2013. Cost-Effectiveness of a Lightweight Design for 2017–2020: An Assessment of a Midsize Crossover Utility Vehicle. SAE Technical Paper 2013-01-0656. doi: 10.4271/2013-01-0656. Available at: http://papers.sae.org/2013-01-0656/ . Accessed: November 20, 2017.	Describes a holistic approach in which the most cost-effective mass-reduction ideas were selected using a structured optimization procedure and the crash safety of the resultant design was evaluated using a full-vehicle engineering analysis.	Yes	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0173	Emily Rosenblum, Environmental Defense Fund	Caffrey, C., K. Bolon, G. Kolwich, R. Johnston, and T. Shaw. 2015. Cost-Effectiveness of a Lightweight Design for 2020–2025: An Assessment of a Light-Duty Pickup Truck. SAE Technical Paper 2015-01-0559. doi:10.4271/2015-01-0559. Available at: https://www.epa.gov/sites/production/files/2016-10/documents/2015-01-0559_0.pdf . Accessed: November 20, 2017.	Presents an overview of the study “Vehicle Mass Reduction and Cost Analysis-Light-duty Pickup Truck Model Years 2020–2025” by FEV North America, Inc.	Yes	No
NHTSA-2017-0069-0173	Emily Rosenblum, Environmental Defense Fund	Hottle, T., C. Caffrey, J. McDonald, and R. Dodder. 2017. Critical factors affecting life cycle assessments of material choice for vehicle mass reduction. <i>Transportation Research Part D: Transport and Environment</i> . 56:241–257. doi.org/10.1016/j.trd.2017.08.010. Available at: http://www.sciencedirect.com/science/article/pii/S1361920916309142?via%3Dihub . Accessed: November 20, 2017.	Details various factors such as materials used, which would decrease the overall mass of vehicles and reduce the life cycle impacts.	Yes	No
NHTSA-2017-0069-0173	Emily Rosenblum, Environmental Defense Fund	Sciance, F., B. Nelson, M. Yassine, A. Patti, and L. Rao. 2013. Developing the AC17 Efficiency Test for Mobile Air Conditioners. SAE Technical Paper 2013-01-0569. doi.org/10.4271/2013-01-0569. Available at: http://papers.sae.org/2013-01-0569/ . Accessed: November 20, 2017.	Reviews efficiencies in mobile air conditioners.	Yes	No

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NHTSA-2017-0069-0173	Emily Rosenblum, Environmental Defense Fund	Newman, K., J. Kargul, and D. Barba. 2015. Development and testing of an automatic transmission shift schedule algorithm for vehicle simulation. <i>SAE International. Journal of Engines</i> 8(3):1417–1427. doi:10.4271/2015-01-1142. Available at: http://papers.sae.org/2015-01-1142/ . Accessed: November 20, 2017.	Presents ALPHA's shift logic algorithm and compares its predicted shift points to actual shift points from a mid-size light-duty vehicle and to the shift points predicted using a static table-based shift logic as calibrated to the same vehicle during benchmark testing.	Yes	No
NHTSA-2017-0069-0173	Emily Rosenblum, Environmental Defense Fund	Lee, B., S. Lee, J. Cherry, JA. Neam, J. Sanchez, and E. Nam 2013. Development of Advanced Light-Duty Powertrain and Hybrid Analysis Tool. SAE Technical Paper 2013-01-0808. doi.org/10.4271/2013-01-0808. Available at: http://papers.sae.org/2013-01-0808/ . Accessed: November 20, 2017.	Discusses the development and capability of the advanced light-duty powertrain and hybrid analysis tool and the role this model played in determining the effects of off-cycle technologies on greenhouse gas emissions.	Yes	No
NHTSA-2017-0069-0173	Emily Rosenblum, Environmental Defense Fund	Stuhldreher, M., C. Schenk, J. Brakora, D. Hawkins, A. Moskalik, and P. Dekraker. 2015. Downsized Boosted Engine Benchmarking and Results. SAE Technical Paper 2015-01-1266. doi: 10.4271/2015-01-1266. Available at: https://www.epa.gov/sites/production/files/2016-10/documents/2015-01-1266_0.pdf . Accessed: November 20, 2017.	Analyzes the technology of "downsized" boosted engines by measuring a benchmarked engine.	Yes	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0173	Emily Rosenblum, Environmental Defense Fund	Safoutin, M., J. Cherry, J. McDonald, and S. Lee. 2015. Effect of Current and SOC on Round-Trip Energy Efficiency of a Lithium-Iron Phosphate (LiFePO4) Battery Pack. SAE Technical Paper 2015-01-1186. doi.org/10.4271/2015-01-1186. Available at: http://papers.sae.org/2015-01-1186/ . Accessed: November 20, 2017.	Measures the roundtrip energy efficiency of a 22.8-kilowatt-hour A123 Li-ion (Lithium Iron Phosphate, LiFePO4) battery pack.	Yes	No
NHTSA-2017-0069-0174	Hilary Sinnamon, Environmental Defense Fund, Center for Energy Efficiency and Renewable Technologies, and Clean Power Campaign	EDF, CEERT, and the Clean Power Campaign. 2017. Re: Request for Comment on Reconsideration of the Final Determination of the Mid-Term Evaluation of Greenhouse Gas Emissions Standards for Model Year 2022–2025 Light-Duty Vehicles; Request for Comment on Model Year 2021 Greenhouse Gas Emissions Standards (August 21, 2017; EPA–HQ–OAR–2015–0827.	Provides joint comments submitted by the Environmental Defense Fund, the Center for Energy Efficiency, and Renewable Technologies, and the Clean Power Campaign regarding the Mid-Term Evaluation of Greenhouse Gas Emissions Standards for Model Year 2022–2025 Light-Duty Vehicles and the Model Year 2021 Greenhouse Gas Emissions Standards.	No	No
NHTSA-2017-0069-0175	Emily Rosenblum, Environmental Defense Fund	U.S. Environmental Protection Agency. 2015. Light-Duty Automotive Technology Carbon Dioxide Emissions and Fuel Economy Trends 1975 through 2015. EPA-420-R-15-016. Available at: https://nepis.epa.gov/Exe/ZyPdf.cgi?Dockey=P100O5P6.pdf . Accessed: November 20, 2017.	Addresses carbon dioxide emissions, fuel economy, and powertrain technology trends for new vehicles in the United States.	No	No

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NHTSA-2017-0069-0175	Emily Rosenblum, Environmental Defense Fund	FEV, Inc. 2012. Light-Duty Vehicle Mass Reduction and Cost Analysis - Midsize Crossover Utility Vehicle. EPA. EPA-420-R-12-026. Available at: https://nepis.epa.gov/Exe/ZyPDF.cgi/P100EWVL.PDF?Dockey=P100EWVL.PDF . Accessed: November 20, 2017.	Analyzes mass-reduction technologies and implementation of midsize crossover utility vehicles.	Yes	No
NHTSA-2017-0069-0175	Emily Rosenblum, Environmental Defense Fund	FEV, Inc. 2012. Peer Review of Light-Duty Vehicle Mass Reduction and Cost Analysis - Midsize Crossover Utility Vehicle (FEV Report). EPA. EPA-420-R-12-019. Available at: https://nepis.epa.gov/Exe/ZyPDF.cgi/P100EW1M.PDF?Dockey=P100EW1M.PDF . Accessed: November 20, 2017.	Provides the peer-reviewed comments of the report titled "Light-Duty Vehicle Mass Reduction and Cost Analysis - Midsize Crossover Utility Vehicle."	Yes	No
NHTSA-2017-0069-0175	Emily Rosenblum, Environmental Defense Fund	FEV North America, Inc. 2015. Mass Reduction and Cost Analysis, Light-Duty Pickup Truck Model Years 2020–2025. EPA. EPA-420-R-15-006. Available at: https://nepis.epa.gov/Exe/ZyPDF.cgi/P100MS0E.PDF?Dockey=P100MS0E.PDF . Accessed: November 20, 2017.	Details the potential of implementing mass-reducing technologies in light-duty pickup trucks and their associated costs.	Yes	No
NHTSA-2017-0069-0175	Emily Rosenblum, Environmental Defense Fund	Singh, H. 2012. Mass Reduction for Light-Duty Vehicles for Model Years 2017–2015. NHTSA. Available at: ftp://ftp.nhtsa.dot.gov/CAFE/2017-25_Final/811666.pdf . Accessed: November 20, 2017.	Analyzes the maximum feasible weight reduction while maintaining the same vehicle functionalities, such as performance, safety, crash rating, and relative price as the baseline vehicle.	Yes	No
NHTSA-2017-0069-0166	Erin Murphy, Environmental Defense Fund	International Council on Clean Transportation. 2015. Factsheet Canada, Light-Duty Vehicle Efficiency Standards. Available at: www.theicct.org/info-tools/global-passenger-vehicle-standards . Accessed: November 20, 2017.	Provides a fact sheet on Canadian fuel standards.	No	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0166	Erin Murphy, Environmental Defense Fund	J.D. Power. 2017. Despite Cheap Gas, Fuel Efficiency Still a Primary Concern. Press Release. Available at: http://www.jdpower.com/press-releases/2015-us-avoider-study . Accessed: November 20, 2017.	Provides press release on a study on consumer purchasing habits for automobiles.	No	No
NHTSA-2017-0069-0166	Erin Murphy, Environmental Defense Fund	Knittel, C. 2012. Automobiles on steroids: Product attribute trade-offs and technological progress in the automobile sector. <i>American Economic Review</i> 101: 3368–3399. Available at: http://www.aeaweb.org/articles.php?doi=10.1257/aer.101.7.3368 . Accessed: November 20, 2017.	Estimates the technological progress that has occurred since 1980 in the automobile industry and the trade-offs faced when choosing between fuel economy, weight, and engine power characteristics.	Yes	No
NHTSA-2017-0069-0166	Erin Murphy, Environmental Defense Fund	Leard, B., J. Linn, and Y. C. Zhou. 2017. How Much Do Consumers Value Fuel Economy and Performance? Evidence from Technology Adoption. June. Resources for the Future. Available at: http://www.rff.org/files/document/file/RFF-Rpt-WTP_FuelEconomy%26Performance.pdf . Accessed: November 20, 2017.	Reports on consumer purchasing habits for automobiles.	No	No
NHTSA-2017-0069-0166	Erin Murphy, Environmental Defense Fund	Holmes, L. 2017. Oral Statement of the Motor & Equipment Manufacturers Association before the U.S. Environmental Protection Agency. Available at: https://www.mema.org/sites/default/files/resource/EMA%20Testimony%20EPA%20MTE%20Sept%206%202017.pdf . Accessed: November 20, 2017.	Provides the motor vehicle advocacy organization statement to EPA on reconsideration of 2022–2025 standards.	No	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0166	Erin Murphy, Environmental Defense Fund	Castle, S. 2017. Britain to Ban New Diesel and Gas Cars by 2040. <i>The New York Times</i> . Available at: https://www.nytimes.com/2017/07/26/world/europe/uk-diesel-petrol-emissions.html . Accessed: November 20, 2017.	Reports on Britain's automobile regulations.	No	No
NHTSA-2017-0069-0166	Erin Murphy, Environmental Defense Fund	Khan, S. 2017. Scotland to 'phase out' new petrol and diesel cars by 2032. <i>The Independent</i> . Available at: http://www.independent.co.uk/news/uk/politics/scotland-petrol-diesel-cars-phase-out-ban-2032-nicola-sturgeon-snp-environment-air-pollution-a7930781.html . Accessed: November 20, 2017.	Reports on Scotland's automobile regulations.	No	No
NHTSA-2017-0069-0166	Erin Murphy, Environmental Defense Fund	Transportpolicy.net. 2017. China: Light-Duty: Fuel Consumption. Available at: http://www.transportpolicy.net/standard/china-light-duty-fuel-consumption/ . Accessed: November 20, 2017.	Reports on Chinese light-duty fuel consumption.	No	No
NHTSA-2017-0069-0166	Erin Murphy, Environmental Defense Fund	Transportpolicy.net. 2017. EU: Light-Duty: GHG Emissions. Available at: http://www.transportpolicy.net/standard/eu-light-duty-ghg-emissions/ . Accessed: November 20, 2017.	Reports on European Union's light-duty greenhouse gas emissions.	No	No
NHTSA-2017-0069-0166	Erin Murphy, Environmental Defense Fund	Transportpolicy.net. 2017. India: Light-Duty: Fuel Consumption. Available at: http://www.transportpolicy.net/standard/india-light-duty-fuel-consumption/ . Accessed: November 20, 2017.	Reports on India's light-duty fuel consumption.	No	No
NHTSA-2017-0069-0166	Erin Murphy, Environmental Defense Fund	Transportpolicy.net. 2017. South Korea: Light-Duty: Fuel Economy and GHG. Available at: http://www.transportpolicy.net/standard/south-korea-light-duty-fuel-economy-and-ghg/ . Accessed: November 20, 2017.	Reports on India's light-duty fuel economy and greenhouse gas emissions.	No	No

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NHTSA-2017-0069-0166	Erin Murphy, Environmental Defense Fund	White House. 2011. The Resurgence of the American Automotive Industry. Available at: https://obamawhitehouse.archives.gov/blog/2011/06/01/resurgence-american-automotive-industry . Accessed: November 20, 2017.	Reports on American automakers' comeback from the recession.	No	No
NHTSA-2017-0069-0166	Erin Murphy, Environmental Defense Fund	Rogers, C. 2015. U.S. Car Exports Top 2 Million. <i>Wall Street Journal</i> . Available at: https://www.wsj.com/articles/u-s-car-exports-top-2-million-1423174695 . Accessed: November 20, 2017.	Reports on U.S. car exports.	No	No
NHTSA-2017-0069-0176	Alliance of Automobile Manufacturers	Short, D., D. Vu, T. D. Durbin, G. Karavalakis, and A. Asa-Awuku. 2015. Components of particle emissions from light-duty spark-ignition vehicles with varying aromatic content and octane rating in gasoline. <i>Environmental Science & Technology</i> 49 (17): 10682-10691. Available at: https://pubs.acs.org/doi/abs/10.1021/acs.est.5b03138 . Accessed: February 28, 2018.	Reports on the effects of aromatic hydrocarbons and octane ratings of gasoline and their impacts on particulate matter.	Yes	No
NHTSA-2017-0069-0176	Alliance of Automobile Manufacturers	Young, S. 2017. Air quality environmental epidemiology studies are unreliable. <i>Regulatory Toxicology and Pharmacology</i> 86: 177-180. Available at: https://www.sciencedirect.com/science/article/pii/S0273230017300673?via%3Dihub . Accessed: February 28, 2018.	Examines the assertion of the unreliability of meta-analysis regarding air quality environmental epidemiology studies.	Yes	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0176	Alliance of Automobile Manufacturers	Cox Jr., L. A. 2016. Do causal concentration-response functions exist? A critical review of associational and causal relations between fine particulate matter and mortality. <i>Critical Reviews in Toxicology</i> 47 (7): 609-637. Available at: https://www.tandfonline.com/doi/full/10.1080/10408444.2017.1311838 . Accessed: February 28, 2018.	Critically reviews the concentration-response functions for fine particulate matter and mortality risks.	Yes	No
NHTSA-2017-0069-0176	Alliance of Automobile Manufacturers	Cox Jr., L. A., and D. Popken. 2015. Has reducing fine particulate matter and ozone caused reduced mortality rates in the United States? <i>Annals of Epidemiology</i> 25 (3): 162-173. Available at: https://www.sciencedirect.com/science/article/pii/S1047279714005079 . Accessed: February 28, 2018.	Compares county-level changes in average annual ambient pollutant levels to corresponding changes in all-cause and cardiovascular disease mortality rates from 2000 to 2010.	Yes	No
NHTSA-2017-0069-0176	Alliance of Automobile Manufacturers	Cox Jr., L. A. 2016. Rethinking the meaning of concentration-response functions and the estimated burden of adverse health effects attributed to exposure concentrations. <i>Risk Analysis</i> 36 (9): 1770-1779. Available at: http://onlinelibrary.wiley.com/doi/10.1111/risa.12670/full . Accessed: February 28, 2018.	Questions the use of concentration-response relations to predict or estimate how changing exposure concentrations would change responses in a population.	Yes	No
NHTSA-2017-0069-0176	Alliance of Automobile Manufacturers	Young, S., R. Smith, and K. Lopiano. 2017. Air quality and acute deaths in California, 2000-2012. <i>Regulatory Toxicology and Pharmacology</i> 88:173-184. Available at: https://www.sciencedirect.com/science/article/pii/S0273230017301538 . Accessed: February 28, 2018.	Questions causal associations between air quality and acute deaths.	Yes	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0176	Alliance of Automobile Manufacturers	Enstrom, J. 2017. Fine particulate matter and total mortality in cancer prevention study cohort reanalysis. <i>Dose-Response</i> 15(1). Available at: http://journals.sagepub.com/doi/full/10.1177/1559325817693345 . Accessed: February 28, 2018.	Tests the validity of the relationship between fine particulate matter and total mortality in the 1982 American Cancer Society Cancer Prevention Study cohort.	Yes	No
NHTSA-2017-0069-0176	Alliance of Automobile Manufacturers	Voose, P. 2016. Climate scientists open up their black boxes to scrutiny. <i>Science</i> 354(6311):401-402. DOI: 10.1126/science.3546311.401. Available at: http://science.sciencemag.org/content/354/6311/401 . Accessed: March 4, 2018.	Reports on problems with predictive “parameterizations” used by climate scientists and the recent development of climate scientists becoming more transparent with their methods.	Yes	No
NHTSA-2017-0069-0176	Alliance of Automobile Manufacturers	Hourdin, F. and T. Mauritsen, et al. 2017. The art and science of climate model tuning. <i>American Meteorological Society</i> March 2017:589-602. Available at: https://journals.ametsoc.org/doi/full/10.1175/BAMS-D-15-00135.1 . Accessed: March 4, 2018.	Reports on the issues surrounding climate model tuning as well as the challenges and opportunities in applying so-called objective methods in climate model tuning.	Yes	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0176	Alliance of Automobile Manufacturers	McCabe, G. J., M. Palecki, and J. Betancourt. 2004. Pacific and Atlantic Ocean influence on multidecadal drought frequency in the United States. <i>Proceedings of the National Academy of Sciences of the United States of America</i> 101(12):4136-4141. doi.org/10.1073/pnas.0306738101. Available at: http://www.u.arizona.edu/~conniew1/geog532/McCabeetal2004.pdf . Accessed: March 4, 2018. (Link no longer active).	Discusses the effects of Pacific Decadal Oscillation, Atlantic Multidecadal Oscillation, El Niño Southern Oscillation, and sea surface temperatures on droughts in the conterminous United States.	Yes	Yes
NHTSA-2017-0069-0176	Alliance of Automobile Manufacturers	Klotzback, P. K. 2017. "2017 Atlantic TC Activity Thru October 15." Available at: https://pbs.twimg.com/media/DMN3m6MVwAAFjK5.jpg . Accessed: March 4, 2018.	Lists various statistics related to 2017 Atlantic storm activity.	No	No
NHTSA-2017-0069-0176	Alliance of Automobile Manufacturers	Browman, H. 2016. Applying organized skepticism to ocean acidification research. <i>ICES Journal of Marine Science</i> 73(3):529-536. doi.org/10.1093/icesjms/fsw010. Available at: https://academic.oup.com/icesjms/article/73/3/529/2459146 . Accessed: March 4, 2018. (Link no longer active).	Presents a brief overview of the history of research on ocean acidification.	Yes	No
NHTSA-2017-0069-0176	Alliance of Automobile Manufacturers	Cook, A. R., and L. M. Leslie, et al. 2017. The impact of El Niño-Southern Oscillation (ENSO) on winter and early spring U.S. tornado outbreaks. <i>Journal of Applied Meteorology and Climatology</i> 36:2455-2478. DOI: 10.1175/JAMC-D-16-0248.1 Available at: http://www.spc.noaa.gov/publications/cook/ensojamc.pdf . Accessed: March 4, 2018.	Reports on linkages between El Niño-Southern Oscillation and tornado outbreaks in the United States during winter and early spring.	Yes	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0176	Alliance of Automobile Manufacturers	Doerr, S. and C. Santin. 2016. Global trends in wildfire and its impacts: perceptions versus realities in a changing world. <i>Philosophical Transactions of the Royal Society B</i> 371(1696). DOI: 10.1098/rstb.2015.0345 Available at: http://rstb.royalsocietypublishing.org/content/371/1696/20150345 . Accessed: March 4, 2018.	Critiques the perception that wildfire is an accelerating problem.	Yes	No
NHTSA-2017-0069-0176	Alliance of Automobile Manufacturers	U.S. Department of the Interior. 2017. Secretary Zinke Directs Interior Bureaus to Take Aggressive Action to Prevent Wildfires. U.S. Department of the Interior. Last revised: September 12, 2017. Available at: https://www.doi.gov/pressreleases/secretary-zinke-directs-interior-bureaus-take-aggressive-action-prevent-wildfires . Accessed: March 4, 2018.	Discusses memo issued by Secretary of the Interior Ryan Zinke directing all Department of Interior bureaus, superintendents, and land managers to adopt more aggressive practices aimed at preventing and combatting the spread of catastrophic wildfires through reduction and pre-suppression techniques.	No	No
NHTSA-2017-0069-0176	Alliance of Automobile Manufacturers	McClintock, T. 2017. Hearing on Wildfire Prevention. Testimony to the U.S. House Subcommittee on Federal Lands. Last revised: May 17, 2017. Available at: https://mcclintock.house.gov/newsroom/speeches/hearing-on-wildfire-prevention . Accessed: March 4, 2018.	Provides testimony by U.S. Representative Tom McClintock from the 4th District of California regarding the management of forests by the government.	No	No

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NHTSA-2017-0069-0176	Alliance of Automobile Manufacturers	Leard, B, J. Linn, and Y. C. Zhou. 2017. How Much Do Consumers Value Fuel Economy and Performance?: Evidence from Technology Adoption. Resources for the Future. Available at: http://www.rff.org/files/document/file/RFF-Rpt-WTP_FuelEconomy%26Performance.pdf . Accessed: March 4, 2018.	Evaluates the welfare consequences of automakers forgoing performance increases to raise fuel economy since 2012.	No	No
NHTSA-2017-0069-0176	Alliance of Automobile Manufacturers	Allcott, H. and C. R. Knittel. 2017. Are Consumers Poorly-Informed about Fuel Economy? Evidence from Two Experiments. Working Paper. MIT Center for Energy and Environmental Policy Research. Available at: http://ceep.mit.edu/files/papers/2017-008.pdf . Accessed: March 4, 2018.	Analyzes the effect of information related to fuel economy on people's vehicle-purchasing decisions.	No	No
NHTSA-2017-0069-0176	Alliance of Automobile Manufacturers	Davis, L., and C. Knittel. 2016. Are Fuel Economy Standards Regressive? Working Paper. MIT Center for Energy and Environmental Policy Research. Available at: http://ceep.mit.edu/files/papers/2016-016.pdf . Accessed: March 5, 2018.	Analyzes the distributional impact of U.S fuel economy standards as compared to carbon tax.	No	No
NHTSA-2017-0069-0176	Alliance of Automobile Manufacturers	Nevers, C. and J. M. Rege. 2017. Comments on Notice of Intent to Prepare an Environmental Impact Statement for Model Year 2022-2025 Corporate Average Fuel Economy Standards. Alliance of Automobile Manufacturers, Association of Global Automakers. Available at: https://www.regulations.gov/document?D=NHTSA-2017-0069-0150 . Accessed March 5, 2018.	Provides comments from the Alliance of Automobile Manufacturers and the Association of Global Automakers regarding NHTSA CAFE standards.	No	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0176	Alliance of Automobile Manufacturers	Nevers, C. 2017. Comments on Reconsideration of the Final Determination on the MTE. Alliance of Automobile Manufacturers. Available at: https://www.regulations.gov/document?D=EPA-HQ-OAR-2015-0827-9194 . Accessed March 5, 2018.	Provides comments from the Alliance of Automobile Manufacturers regarding EPA and NHTSA request for comment on reconsideration of the final determination of the mid-term evaluation of greenhouse gas emissions standards for MY 2022–2025 light-duty vehicles and request for comment on MY 2021 greenhouse gas emissions standards.	No	No
NHTSA-2017-0069-0176	Alliance of Automobile Manufacturers	Rege, J. 2017. Comments from the Association of Global Automakers, Inc. Association of Global Automakers. Available at: https://www.regulations.gov/document?D=NHTSA-2016-0068-0236 . Accessed: March 5, 2018.	Provides comments from the Association of Global Automakers, Inc. on the request for comment on reconsideration of the final determination of the mid-term evaluation of greenhouse gas emissions standards for MY 2022–2025 light-duty vehicles and request for comment on MY 2021 greenhouse gas emissions standards.	No	No

Table B-1. Sources Identified in Scoping Comments

Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0176	Alliance of Automobile Manufacturers	Viera, J. 2016. Comments on Proposed Determination of the Appropriateness of the Model Year 2022-2025 Light Duty Vehicle Greenhouse Gas Emissions Standards Under the Mid-Term Evaluation. Ford Motor Company. Available at: https://www.regulations.gov/document?D=EPA-HQ-OAR-2015-0827-6153 . Accessed: March 5, 2018.	Provides comments on the proposed determination on the appropriateness of the MY 2022–2025 light-duty vehicle greenhouse gas emissions standards under the mid-term evaluation.	No	No
NHTSA-2017-0069-0176	Alliance of Automobile Manufacturers	FitzGerald, B. 2016. Comments of Mercedes-Benz Research and Development North America, Inc. and Daimler AG. Mercedes-Benz. Available at: https://www.regulations.gov/document?D=EPA-HQ-OAR-2015-0827-4015 . Accessed: March 5, 2018.	Provides comments in response to the technical assessment report for MY 2022–2025 light-duty vehicle greenhouse gas emissions and CAFE standards published by EPA and NHTSA as part of the midterm evaluation process.	No	No
NHTSA-2017-0069-0176	Alliance of Automobile Manufacturers	Fiat Chrysler Automobiles. 2016. Comments on Draft Technical Assessment Report. Available at: https://www.regulations.gov/document?D=EPA-HQ-OAR-2015-0827-4176 . Accessed: March 5, 2018.	Provides comments in response to draft technical assessment report: midterm evaluation of light-duty vehicle greenhouse gas emission standards and corporate average fuel economy standards for MYs 2022–2025.	No	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0176	Alliance of Automobile Manufacturers	Kiss, B. 2016. General Motors Comments and Request to Withdraw the Proposed Determination. General Motors Company. Available at: https://www.regulations.gov/document?D=EPA-HQ-OAR-2015-0827-6157 . Accessed: March 5, 2018.	Provides comments formally requesting the withdrawal of the proposed determination and asking that the EPA return to the public timetable for proper completion of the midterm review.	No	No
NHTSA-2017-0069-0176	Alliance of Automobile Manufacturers	Johnson, S. 2016. Comments on Midterm Evaluation Draft Technical Assessment Report for Model Year 2022-2025 Light-Duty Vehicle GHG Emissions and CAFE Standards. Volkswagen Group of America, Inc. Available at: https://www.regulations.gov/document?D=NHTSA-2016-0068-0093 . Accessed: March 5, 2018.	Provides comments regarding the joint Midterm Evaluation Draft Technical Assessment Report for Model Year 2022–2025 Light-Duty GHG Emission and CAFE Standards published in the <i>Federal Register</i> on July 27, 2016.	No	No
NHTSA-2017-0069-0176	Alliance of Automobile Manufacturers	Novation Analytics. 2017. Evaluation of the Environmental Protection Agency's Lumped Parameter Model Informed Projections from the Proposed Determination. Prepared for: Alliance of Automobile Manufacturers and Association of Global Automakers. Available at: https://www.regulations.gov/document?D=EPA-HQ-OAR-2015-0827-9194 . Accessed: March 5, 2018.	Analyzes the technology effectiveness estimates generated by the EPA's Lumped Parameter Model and evaluating the efficacy of previous changes that EPA made to this model.	No	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0176	Alliance of Automobile Manufacturers	Novation Analytics. 2017. MY 2016 Baseline Study - Final Volumes. Prepared for: Alliance of Automobile Manufacturers and Association of Global Automakers. Available at: https://www.regulations.gov/document?D=EPA-HQ-OAR-2015-0827-9194 . Accessed: March 5, 2018.	Provides trend information to support the midterm review process and comments by the Associations and their members on the EPA Request for Comment on Reconsideration of the Final Determination and Request for Comment on Model Year 2021 GHG Standards.	No	No
NHTSA-2017-0069-0176	Alliance of Automobile Manufacturers	U.S. Energy Information Administration. 2018. Annual Energy Outlook 2018 With Projections to 2050. Available at: https://www.eia.gov/outlooks/aeo/ . Accessed March 5, 2018.	Provides modeled projections of domestic energy markets through 2050, including cases with different assumptions regarding macroeconomic growth, world oil prices, technological progress, and energy policies.	No	No
NHTSA-2017-0069-0176	Alliance of Automobile Manufacturers	Strategic Vision. 2018. New Vehicle Experience Study. Available at: https://www.strategicvision.com/nves Accessed: March 5, 2018.	Provides information on car buyers with data dating back to the 1990s.	No	No

Table B-1. Sources Identified in Scoping Comments

Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0176	Alliance of Automobile Manufacturers	Exponent Failure Analysis Associates. 2017. Assessment of Greenhouse Gas (GHG) and Corporate Average Fuel Economy (CAFE) Technology Cost Assumptions Technical Memorandum. Prepared for: Alliance of Automobile Manufacturers and Association of Global Automakers. Available at: https://www.regulations.gov/document?D=EPA-HQ-OAR-2015-0827-9194 . Accessed: March 5, 2018.	Assesses the technical and modeling assumptions that EPA and NHTSA used in analyses for the development of the light-duty greenhouse gas emissions and corporate average fuel economy standards for MY 2017–2025 vehicles.	No	No
NHTSA-2017-0069-0176	Alliance of Automobile Manufacturers	Center for Automotive Research. 2017. Automotive Product Development Cycles and the Need for Balance with the Regulatory Environment. Available at: http://www.cargroup.org/automotive-product-development-cycles-and-the-need-for-balance-with-the-regulatory-environment/ . Accessed: March 5, 2018.	Discusses the challenges facing the automotive industry related to profitability and product development.	No	No
NHTSA-2017-0069-0176	Alliance of Automobile Manufacturers	Carlson, T., J. Lyons, C. Green, D. Harrison, and E. Shakun. 2017. Critical Assessment of Certain Technical and Economic Assumptions Made in EPA's final Determination on the Appropriateness of the Model Year 2022-2025 Light-Duty Vehicle Greenhouse Gas Emission Standards under the Midterm Evaluation. Prepared by: Trinity Consultants, NERA Economic Consulting. Prepared for: Alliance of Automobile Manufacturers. Available at: https://www.regulations.gov/document?D=EPA-HQ-OAR-2015-0827-9194 . Accessed: March 5, 2018.	Argues that EPA estimates of real-world greenhouse gas emission and fuel economy benefits are overestimated.	No	No

Table B-1. Sources Identified in Scoping Comments

Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0176	Alliance of Automobile Manufacturers	Pannone, G., B. Betz, M. Reale, and J. Thomas. 2017. Decomposing Fuel Economy and Greenhouse Gas Regulatory Standards in the Energy Conversion Efficiency and Tractive Energy Domain. <i>SAE International Journal of Fuels and Lubricants</i> 10(1):202-216. doi.org/10.4271/2017-01-0897 . Available at: https://www.sae.org/publications/technical-papers/content/2017-01-0897/ . Accessed: March 5, 2018.	Evaluates the regulations established in the U.S. for fuel consumption and carbon dioxide emissions based on use of principles of tractive energy and efficiency to compute sustainable vehicle and propulsion system scenarios.	Yes	No
NHTSA-2017-0069-0176	Alliance of Automobile Manufacturers	Kazman, S., and M. Lewis. 2017. Comment on the Environmental Protection Agency's Reconsideration of Its Final Mid-Term Evaluation of Greenhouse Gas Emission Standards for Model Year 2022-2025 Light-Duty Vehicles. Competitive Enterprise Institute. Available at: https://www.regulations.gov/document?D=EPA-HQ-OAR-2015-0827-9731 . Accessed: March 5, 2018.	Presents comments critical of EPA's final Mid-Term Evaluation and recommending reconsideration.	No	No
NHTSA-2017-0069-0176	Alliance of Automobile Manufacturers	Walton, T. 2017. Opportunity Cost, Willingness to Pay, and Affordability of the MY 2016-2025 Fuel Economy Standards. Defour Group. Available at: https://www.regulations.gov/document?D=EPA-HQ-OAR-2015-0827-9097 . Accessed: March 5, 2018.	Analyzes what the author sees as a deficiency in the EPA and NHTSA's estimates of benefits, costs, and affordability of their proposed fuel economy standards for MYs 2017 to 2025.	No	No

Table B-1. Sources Identified in Scoping Comments

Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0176	Alliance of Automobile Manufacturers	Gibson, T. 2017. The American Iron and Steel Institute's Comments on EPA and NHTSA's Reconsideration of the Mid-Term Evaluation of Greenhouse Gas Emissions Standards for MY 2022-2025 Light-Duty Vehicles. American Iron and Steel Institute. Available at: https://www.regulations.gov/document?D=EPA-HQ-OAR-2015-0827-9005 . Accessed: March 5, 2018.	Supports return to previously established Mid-Term Evaluation schedule and coordination with NHTSA and other agencies.	No	No
NHTSA-2017-0069-0176	Alliance of Automobile Manufacturers	U.S. Environmental Protection Agency. 2016. Draft Technical Assessment Report: Midterm Evaluation of Light-Duty Vehicle Greenhouse Gas Emissions Standards for Model Years 2022-2025.	Examines a wide range of technical issues relevant to greenhouse gas emissions and augural CAFE standards for MY 2022–2025.	No	No
NHTSA-2017-0069-0176	Alliance of Automobile Manufacturers	Chen, L., M. Braisher, A. Crossley, and R. Stone. 2010. The influence of ethanol blends on particulate matter emissions from gasoline direct injection engines. SAE Technical Paper. Available at: https://www.sae.org/publications/technical-papers/content/2010-01-0793/ . Accessed March 5, 2018.	Analyzes the effect of fuel composition on particulate matter emissions.	Yes	No
NHTSA-2017-0069-0176	Alliance of Automobile Manufacturers	Karavalakis, G., D. Short, D. Vu, R. Russell. 2015. A complete assessment of the emissions performance of ethanol blends and iso-butanol blends from a fleet of nine PFI and GDI vehicles. <i>SAE International Journal of Fuels and Lubricants</i> 8(2):374-395. doi.org/10.4271/2015-01-0957. Available at: https://www.sae.org/publications/technical-papers/content/2015-01-0957/ . Accessed: March 5, 2018.	Evaluates the potential emissions impacts of different alcohol blends on a fleet of modern gasoline vehicles.	Yes	No

Table B-1. Sources Identified in Scoping Comments

Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0176	Alliance of Automobile Manufacturers	Sobotowski, R., A. Butler, and Z. Guerra. 2015. A pilot study of fuel impacts on PM emissions from light-duty gasoline vehicles. <i>SAE International Journal of Fuels and Lubricants</i> 8(1):214-233. doi.org/10.4271/2015-01-9071. Available at: https://www.sae.org/publications/technical-papers/content/2015-01-9071/ . Accessed: March 5, 2018.	Explores the effects of PM Index, low and high molecular weight aromatics, and ethanol content on particulate matter emissions from light-duty Tier-2 gasoline vehicles.	Yes	No
NHTSA-2017-0069-0176	Alliance of Automobile Manufacturers	Saliba, G., R. Saleh, Y. Zhao, A. A. Presto, A. T. Lambe, B. Frodin, S. Sardar, H. Maldonado, C. Maddox, A. A. May, G. T. Drozd, A. H. Goldstein, L. M. Russell, F. Hagen, and A. L. Robinson. 2017. Comparison of gasoline direct-injection (GDI) and port fuel injection (PFI) vehicle emissions: emission certification standards, cold-start, secondary organic aerosol formation potential, and potential climate impacts. <i>Environmental Science & Technology</i> 51(11):6542-6552. DOI: 10.1021/acs.est.6b06509. Available at: https://pubs.acs.org/doi/abs/10.1021/acs.est.6b06509 . Accessed: March 5, 2018.	Quantifies the effects of changes in engine technologies on emissions.	Yes	No
NHTSA-2017-0069-0176	Alliance of Automobile Manufacturers	Short, D., D. Vu, T. D. Durbin, G. Karavalakis, and A. Asa-Awuku. 2015. Components of particle emissions from light-duty spark-ignition vehicles with varying aromatic content and octane rating in gasoline. <i>Environmental Science & Technology</i> 49(17):10682-10691. DOI: 10.1021/acs.est.5b03138. Available at: https://pubs.acs.org/doi/abs/10.1021/acs.est.5b03138 . Accessed: March 5, 2018.	Attempts to define the impacts of varying concentrations of aromatic hydrocarbons and octane ratings in gasolines on particulate matter such as black carbon and water-soluble and insoluble particle compositions.	Yes	No

Table B-1. Sources Identified in Scoping Comments

Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if available)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0176	Alliance of Automobile Manufacturers	Toyota. 2017. Toyota Comments on Reconsideration of the Final Determination on the MTE. October 5, 2017. Available at: https://www.regulations.gov/document?D=NHTSA-2017-0068-0215 (Link no longer active).	Unable to access link.	No	No
NHTSA-2017-0069-0176	Alliance of Automobile Manufacturers	Nissan. 2017. Nissan Comments on Reconsideration of the Final Determination on the MTE. October 5, 2017. Available at: https://www.regulations.gov/document?D=NHTSA-2016-0068-9063 (Link no longer active).	Unable to access link.	No	No

Notes:

EIS = environmental impact statement; IPCC = Intergovernmental Panel on Climate Change; NHTSA = National Highway Traffic Safety Administration; EPA = U.S. Environmental Protection Agency; CAFE = Corporate Average Fuel Economy; SUV = sport-utility vehicle; PM2.5 = particulate matter less than 2.5 microns in diameter; PM10 = particulate matter less than 10 microns in diameter; E10 = fuel with 1% concentration of ethanol. E85 = fuel with 85% concentration of ethanol; OEM = original equipment manufacturer; 3-D = 3-dimensional; CMIP = Coupled Model Intercomparison Project; DICE = Dynamic Integrated Climate-Economy; FUND = Climate Framework for Uncertainty, Negotiation and Distribution; PAGE = Policy Analysis of the Greenhouse Effect; NEPA = National Environmental Policy Act; CEQ = Council on Environmental Quality; GDP = gross domestic product; OECD = Organisation for Economic Co-Operation and Development; OMEGA = Optimization Model for Reducing Emissions of Greenhouse Gases from Automobiles; ALPHA = Advanced Light-Duty Powertrain and Hybrid Analysis; RTI = Research Triangle Institute; CVT = continuously variable transmission; MOVES = Motor Vehicle Emission Simulator

B.2 Sources Identified in Comments on the Draft EIS

Table B-2 provides a list of references identified in comments on the Draft EIS. NHTSA has reviewed all comments received by the agency during the public comment period and considered all appropriate sources cited in developing the Final EIS.

Table B-2. Sources Identified in Comments on the Draft EIS

Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if provided by commenter)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	Abatzoglou, J. T., and A. P. Williams. 2016. Impact of anthropogenic climate change on wildfire across western US forests. <i>Proceedings of the National Academy of Sciences</i> 113(42): 1770–1775.	Climate change	Yes	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Abatzoglou, John. 2018. Drought Returns to the Pacific Northwest. OCCRI Climate Circulator. Available at: https://climatecirculator.org.wordpress.com/2018/08/02/drought-returns-to-the-pacific-northwest/ .	Climate change	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Acadia Center. 2017. New York: Pathway to 2030. Available at: https://2030.acadiacenter.org/wp-content/uploads/2018/02/Acadia-Center_EnergyVision-2030_NY-State-Target-Summary_20180131.pdf .	Energy	No	No
NHTSA-2017-0069-0606	Lou Finazzo, Sierra Club	ACEEE. 2016. Addendum to ACEEE Comments to the Environmental Protection Agency and the National Highway Traffic Safety Administration on the Technical Assessment Report. Docket ID No. EPA-HQ-OAR- 2015-0827 and/or Docket No. NHTSA-2016-0068. November 17, 2016.	Other	No	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	Ackerman, F., et al. 2018. Assessment of Macroeconomic Impacts from Federal SAFE Proposal. <i>Synapse Energy Economics</i> : 4–5.	Other	No	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	Ackerman, F., et al. 2012. Reason, Empathy, and Fair Play: The Climate Policy Gap. DESA Working Paper No. 113. Available at: http://www.un.org/esa/desa/papers/2012/wp113_2012.pdf .	Climate change	No	No

Table B-2. Sources Identified in Comments on the Draft EIS

Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if provided by commenter)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Adaptation Subcommittee to the Governor's Steering Committee on Climate Change. 2010. The Impacts of Climate Change on Connecticut Agriculture, Infrastructure, Natural Resources and Public Health. CT. Available at: http://www.ct.gov/deep/lib/deep/climatechange/impactssofclimatetechange.pdf .	Climate change, other	No	No
NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	AghaKouchak, A., et al. 2018. Projected Changes in California's Precipitation Intensity-Duration-Frequency Curves. A Report for: California's Fourth Climate Change Assessment. Available at: http://www.climateassessment.ca.gov/techreports/docs/20180827-Projections_CCCA4-CEC-2018-005.pdf .	Climate change	Yes	No
NHTSA-2017-0069-0574	Erin Murphy, Environmental Defense Fund	Ajanovic, A., and R. Haas. 2012. The Role of Efficiency Improvements vs. Price Effects for Modeling Passenger Car Transport Demand and Energy Demand—Lessons from European Countries. <i>Energy Policy</i> 41:36–46.	Energy, other	Yes	No
NHTSA-2017-0069-0559	Jason Schwartz, Institute for Policy Integrity	Alan, B., et al. 2016. Adapting to climate change: The remarkable decline in the U.S. temperature- mortality relationship over the 20th century. NBER WORK. PAP. 124: 46.	Climate change	Yes	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Albright, R., et al. 2010. Ocean acidification compromises recruitment success of the threatened Caribbean coral <i>Acropora palmata</i> . <i>Proceedings of the National Academy of Sciences of the United States of America</i> . 107(47): 20400-20404. Available at: https://www.pnas.org/content/107/47/20400 . Accessed: June 4, 2019.	Climate change	Yes	No
NHTSA-2017-0069-0556	Lou Finazzo, Sierra Club	Albright, R., et al. 2016. Reversal of ocean acidification enhances net coral reef calcification. <i>Nature</i> . 351: doi:10.1038/nature17155. Available at: https://www.nature.com/articles/nature17155 .	Other	Yes	No

Table B-2. Sources Identified in Comments on the Draft EIS

Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if provided by commenter)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0606	Lou Finazzo, Sierra Club	Alexandros, D., et al. 2018. The rebound effect in road transport: A meta-analysis of empirical studies. <i>Energy Economics</i> 75: 163–179.	Other	Yes	No
NHTSA-2017-0069-0556	Lou Finazzo, Sierra Club	Allen, E., et al. 2009. Impacts of atmospheric nitrogen deposition on vegetation and soils in Joshua Tree National Park. In: Webb, R.H., Fenstermaker, L.F., Heaton, J.S., Hughson, D.L., McDonald, E.V., Miller, D.M. eds. 2009. <i>The Mojave Desert: Ecosystem Processes and Sustainability</i> . University of Nevada Press, Las Vegas: pp. 78-100.	Air quality	No	No
NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	Allen, M., et al. 2018. Chapter 1: Framing and Context. In: <i>Global Warming of 1.5 °C</i> . Intergovernmental Panel on Climate Change. Available at: https://www.ipcc.ch/sr15/ .	Climate change	Yes	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Alliance of Automobile Manufacturers. 2018. <i>Advanced Technology Vehicle Sales Dashboard</i> . Compiled by the Alliance of Automobile Manufacturers using information provided by HIS Markit. Last revised: Aug. 23, 2018. Available at: https://autoalliance.org/energy-environment/advanced-technology-vehicle-sales-dashboard/ .	Other	No	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	Allison, A., et al. 2018. <i>Cleaner Cars and Job Creation Macroeconomic Impacts of Federal and State Vehicle Standards</i> . March 27, 2018. Available at: http://www.synapse-energy.com/sites/default/files/Cleaner-Cars-and%20Job-Creation-17-072.pdf . Accessed: December 18, 2018.	Other	No	No
NHTSA-2017-0069-0532	Wayne Nastri, South Coast Air Quality Management District	Amadeo, K. 2018. <i>Oil Price Forecast 2019 - 2050</i> . The Balance. Available at: https://www.thebalance.com/oil-price-forecast-3306219 . Accessed: December 18, 2018.	Other	No	No

Table B-2. Sources Identified in Comments on the Draft EIS

Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if provided by commenter)	Issue Addressed by Source	Peer- Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0547	Academy of Integrative Health & Medicine et al.	American Academy of Pediatrics Committee on Environmental Health. 2004. Ambient Air Pollution: health hazards to children. Pediatrics. 114: 1699-1707. Available at: http://pediatrics.aappublications.org/content/pediatrics/114/6/1699.full.pdf . Accessed: December 21, 2018.	Other	Yes	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	American Automobile Association. 2018. Fact Sheet: Consumer Attitudes Electric Vehicles. Available at: https://publicaffairsresources.aaa.biz/download/10790/ . Accessed: October 24, 2018.	Other	No	No
NHTSA-2017-0069-0584	Erin Murphy, Environmental Defense Fund	American Automobile Association. 2018. October Is Finally Falling Into Cheaper Gas Prices. Available at: https://gasprices.aaa.com/october-is-finally-falling-into-cheaper-gas-prices/ . Accessed: December 24, 2018.	Other	No	No
NHTSA-2017-0069-0580	Troy Knecht, South Dakota Corn Growers Association	American Coalition for Ethanol. 2018. The Case for Properly Valuing the Low Carbon Benefits of Corn Ethanol. Available at: https://bluetoad.com/publication/?i=519490&p=&pn=#%22issue_id%22:519490,%22page%22:0 Accessed: December 24, 2018.	Energy	No	No
NHTSA-2017-0069-0554	Environmental Law Project, University of Pennsylvania Law School	American Lung Association. 2018. Healthy Air: Particle Pollution. Available at: https://www.lung.org/our-initiatives/healthy-air/outdoor/air-pollution/particle-pollution.html . Accessed: December 21, 2018.	Air quality, other	No	No
NHTSA-2017-0069-0591	Erin Murphy, Environmental Defense Fund	American Lung Association. 2018. Letter re: Comment period extension request for proposed rulemaking– Docket No. NHTSA-2018-0067; EPA-HQ-OAR-2018-0283 dated September 9, 2018. Available at: https://www.regulations.gov/document?D=NHTSA-2017-0069-0591 .	Other	No	No

Table B-2. Sources Identified in Comments on the Draft EIS

Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if provided by commenter)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	American Lung Association. 2018. State of the Air 2018. Last revised: 2018. Available at: https://www.lung.org/assets/documents/healthy-air/state-of-the-air/sota-2018-full.pdf . Accessed: October 24, 2018.	Air quality	No	No
NHTSA-2017-0069-0541	Lou Finazzo, Sierra Club	American Lung Association. 2018. State of the Air 2018: California Metropolitan Areas among Top Ten most impacted by air pollution in the US.	Air quality	No	No
NHTSA-2017-0069-0554	Environmental Law Project, University of Pennsylvania Law School	American Lung Association. 2018. State of the Air: Most Polluted Cities. Available at: https://www.lung.org/our-initiatives/healthy-air/sota/city-rankings/most-polluted-cities.html . Accessed: December 21, 2018.	Air quality	No	No
NHTSA-2017-0069-0547	Academy of Integrative Health & Medicine et al.	American Lung Association. 2018. Voters Support Strong EPA Fuel Efficiency Standards. March 2018. Washington, D.C.	Air quality	No	No
EPA-HQ-OAR-2018-0283-5765	Fresh Energy	American Lung Association. 2019. Disparities in the Impact of Air Pollution. Available at: http://www.lung.org/our-initiatives/healthy-air/outdoor/air-pollution/disparities.html .	Air quality	No	No
NHTSA-2017-0069-0631	Environmental Defense Fund	American Meteorological Society (AMS). 2018. Explaining Extreme Events from a Climate Perspective. Special supplement to the <i>Bulletin of the American Meteorological Society</i> 99(12). Available at: https://www.ametsoc.org/ams/index.cfm/publications/bulletin-of-the-american-meteorological-society-bams/explaining-extreme-events-from-a-climate-perspective/ .	Climate change	Yes	No
NHTSA-2017-0069-0672	Environmental Defense Fund	American Meteorological Society (AMS). 2018. State of the Climate in 2017. Available at: https://www.ametsoc.org/index.cfm/ams/publications/bulletin-of-the-american-meteorological-society-bams/state-of-the-climate/ .	Climate change	Yes	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if provided by commenter)	Issue Addressed by Source	Peer- Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0605	Alejandra Nunez, Sierra Club, Sierra Club	Amstrup, S. C., et al. 2007. Forecasting the Range-wide Status of Polar Bears at Selected Times in the 21st Century. U.S. Department of the Interior and U.S. Geological Survey. USGS Science Strategy to Support U.S. Fish and Wildlife Service Polar Bear Listing Decision. Reston, VA.	Other	No	No
NHTSA-2017-0069-0605	Alejandra Nunez, Sierra Club, Sierra Club	Amstrup, S. C., et al. 2010. Greenhouse Gas Mitigation Can Reduce Sea Ice Loss and Increase Polar Bear Persistence. <i>Nature</i> 4: 955.	Climate change	Yes	No
NHTSA-2017-0069-0568	Lou Finazzo, Sierra Club	Anderson, K., and A. Bows. 2011. Beyond 'dangerous' climate change: emission scenarios for a new world. <i>Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> : vol. 369, issue 1934, 20-44. Available at: https://royalsocietypublishing.org/doi/pdf/10.1098/rsta.2010.0290 . Accessed: December 19, 2018.	Climate change	Yes	No
NHTSA-2017-0069-0555	Simon Mui, National Resources Defense Council	Anderson, M. L., and M. Auffhammer. 2014. Pounds that Kill: The External Costs of Vehicle Weight. <i>The Review of Economic Studies</i> 81 (2):535–571.	Other	Yes	No
NHTSA-2017-0069-0694	Center for Biological Diversity et al.	Anderson, S.T., et al. 2011. Automobile fuel economy standards: impacts, efficiency, and alternatives. <i>Review of Environmental Economics & Policy</i> . 5(1):89-108. Available at: https://doi.org/10.1093/reep/req021 .	Other	Yes	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	Argonne National Laboratory. 2018. Impact of Electrification of Light-Duty Vehicles in the United States, 2010-2017. January 2018. Available at: https://publications.anl.gov/anlpubs/2018/01/141595.pdf . Accessed: December 18, 2018.	Energy	No	No

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NHTSA-2017-0069-0541	Lou Finazzo, Sierra Club	Arndt, D. 2015. Climate Change Rule of Thumb: cold "things" warming faster than warm things. NOAA Climate.gov. Available at: https://www.climate.gov/news-features/blogs/beyond-data/climate-change-rule-thumb-cold-things-warming-faster-warm-things/ Accessed: December 20, 2018.	Climate change	No	No
NHTSA-2017-0069-0615	Lou Finazzo, Sierra Club	Arnold, G., et al. 2018. Content Analysis of Unique Auto Ads in the United States: 2005, 2012, 2015, and 2017.	Other	No	No
NHTSA-2017-0069-0606	Lou Finazzo, Sierra Club	Arrow, K., et al. 2013. Determining Benefits and Costs for Future Generations. <i>Environmental Economics</i> 341: 349.	Other	Yes	No
NHTSA-2017-0069-0620	Lou Finazzo, Sierra Club	Ash, M., et al. 2009. Justice in the Air, Tracking Toxic Pollution from America's Industries and Companies to our States, Cities, and Neighborhoods. Available at: https://dornsife.usc.edu/assets/sites/242/docs/justice_in_the_air_web.pdf .	Air quality	No	No
NHTSA-2017-0069-0556	Lou Finazzo, Sierra Club	Atwood, T. C., et al. 2016. Forecasting the relative influence of environmental and anthropogenic stressors on polar bears. <i>Ecosphere</i> 7(6):e01370. 10.1002/ecs2.1370.	Other	Yes	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Atwood, T., et al. 2016. Rapid environmental change drives increased land use by an Arctic marine predator. <i>PLoS ONE</i> . 11(6): e0155932. Available at: https://doi.org/10.1371/journal.pone.0155932 . Accessed: June 4, 2019.	Other	Yes	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	Auffhammer. 2017. Valuing climate damages: Updating estimation of the social cost of carbon dioxide. <i>National Academies of Sciences, Engineering, and Medicine</i> . National Academies Press.	Climate change, other	Yes	No
NHTSA-2017-0069-0584	Erin Murphy, Environmental Defense Fund	Auto Alliance. 2017. Facts About Auto Sales. Available at: https://autoalliance.org/economy/facts-about-auto-sales/ . Accessed: December 24, 2018.	Other	No	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if provided by commenter)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0591	Erin Murphy, Environmental Defense Fund	Auto Alliance. 2018. Letter re: Request for Extension of Comment Periods in The Safer Affordable Fuel Efficient Vehicles Proposed Rule for Model Years 2021-2026 (Dockets EPA-HQ-OAR-2018-0283, NHTSA-2018- 0067/NHTSA-2017-0069) and Draft Environmental Impact Statement for SAFE Vehicles Rule (Docket NHTSA-2018-0067-1425) dated September 6, 2018. Available at: https://www.regulations.gov/document?D=NHTSA-2017-0069-0591 .	Other	No	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	Avol, E. L., et al. 2001. Respiratory effects of relocating to areas of differing air pollution levels. <i>American Journal of Respiratory and Critical Care Medicine</i> 164: 2067–2072.	Other	Yes	No
NHTSA-2017-0069-0531	Lou Finazzo, Sierra Club	Balaguru, K., et al. 2016. Future Hurricane Storm Surge Risk For The U.S. Gulf And Florida Coasts Based On Projections Of Thermodynamic Potential Intensity. <i>Climatic Change</i> (2016) 138:99–110. DOI 10.1007/s10584-016-1728-8.	Climate change	Yes	No
NHTSA-2017-0069-0574	Erin Murphy, Environmental Defense Fund	Barla, P., et al. 2009. Traveled Distance, Stock, and Fuel Efficiency of Private Vehicles in Canada: Price Elasticities and Rebound Effect. <i>Transportation</i> 36(4): 389–402.	Other	Yes	No

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NHTSA-2017-0069-0703	Erin Murphy; Center for Biological Diversity, Conservation Law Foundation, Environmental Defense Fund, Natural Resources Defense Council, Public Citizen, Inc., Sierra Club, Union of Concerned Scientists	Barnard, P., et al. 2019. Dynamic flood modeling essential to assess the coastal impacts of climate change. <i>Scientific Reports</i> . Available at: https://www.nature.com/articles/s41598-019-40742-z .	Climate change	Yes	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Barth, J. A., et al. 2018. The Oregon Coordinating Council on Ocean Acidification and Hypoxia First Biennial Report. Available at: https://www.oregonocean.info/index.php/ocean-documents/oah-hypox/oah-council-1st-biennial-report/1766-oah-council-1st-biennial-report-sept-15th-2018-1/file .	Climate change	No	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Barton, A., et al. 2012. The Pacific oyster, <i>Crassostrea gigas</i> , shows negative correlation to naturally elevated carbon dioxide levels: Implications for near-term ocean acidification effects. <i>Limnology and Oceanography</i> 57(3): 698–710. doi.org/10.4319/lo.2012.57.3.0698.	Climate change	Yes	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Basu, R., and B. D. Ostro. 2008. A multicounty analysis identifying the populations vulnerable to mortality associated with high ambient temperature in California. <i>American Journal of Epidemiology</i> 168(6): 632–637. Available at: https://doi.org/10.1093/aje/kwn170 .	Climate change, other	Yes	No

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NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Basu, R., and B. Malig. 2011. High ambient temperature and mortality in California: exploring the roles of age, disease, and mortality displacement. <i>Environmental Research</i> . 111(8): 1286-1292.	Climate change, other	Yes	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Basu, R., et al. 2010. High ambient temperature and the risk of preterm delivery. <i>American Journal of Epidemiology</i> . 172(10): 1108-1117. Available at: https://academic.oup.com/aje/article/172/10/1108/90774 .	Climate change, other	Yes	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Basu, R., et al. 2012. The effect of high ambient temperatures on emergency room visits. <i>Epidemiology</i> . 23(6): 813-820. Available at: https://journals.lww.com/epidem/Fulltext/2012/11000/The_Effect_of_High_Ambient_Temperature_on.9.aspx .	Other	Yes	No
NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	Basu, R., et al. 2018. Examining the Association Between Temperature and ER Visits from Mental Health-Related Outcomes in California. <i>Am J Epidemiology</i> 187(4):726–735.	Climate change	Yes	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Basu, R., et al. 2016. Association between high ambient temperature and risk of stillbirth in California. <i>American Journal of Epidemiology</i> . 183(10): 894-901. doi.org/10.1093/aje/kwv295.	Climate change, other	Yes	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Basu, R., et al. 2008. Characterizing temperature and mortality in nine California counties. <i>Epidemiology</i> . 19(1): 138-145. 10.1097/EDE.0b013e31815c1da7.	Climate change, other	Yes	No
EPA-HQ-OAR-2018-0283-5471	Community Action to Promote Healthy Environments	Batterman, S., et al. 2014. Dispersion Modeling of Traffic-Related Air Pollutant Exposures and Health Effects Among Children with Asthma in in Detroit, Michigan. <i>Transportation Research Record</i> . 2452, (2452) 105.	Air quality	Yes	No

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NHTSA-2017-0069-0561	Erin Murphy, Environmental Defense Fund	Baum, A., and D. Luria. 2016. Analyst Brief: Economic Implications of the Current National Program v. a Weakened National Program in 2022-2025 for Detroit Three Automakers and Tier One Suppliers. Ceres. June 27, 2016.	Other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Baylis, K., et al. 2015. Preparing for Climate Change in Illinois: An Overview of Anticipated Impacts. University of Illinois Institute of Government and Public Affairs. Available at: https://igpa.uillinois.edu/sites/igpa.uillinois.edu/files/reports/Preparing-for-Climate-Change-in-Illinois.pdf .	Climate change	No	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Bednarsek, N., et al. 2014. Limacina helicina shell dissolution as an indicator of declining habitat suitability owing to ocean acidification in the California Current Ecosystem. <i>Proceedings of the Royal Society B</i> . 281 (1785). Available at: https://royalsocietypublishing.org/doi/full/10.1098/rspb.2014.0123 . Accessed: June 4, 2019.	Climate change	Yes	No
NHTSA-2017-0069-0571	Lou Finazzo, Sierra Club	Bedsworth, L., et al. 2018. Statewide Summary Report. California's Fourth Climate Change Assessment. Publication number: SUMCCCA4-2018-013. Available at: http://www.climateassessment.ca.gov/state/docs/20180827-StatewideSummary.pdf .	Climate change	No	No
NHTSA-2017-0069-0571	Lou Finazzo, Sierra Club	Behrentz, E., and A. M. Winer. 2005 Estimates of Nitrous Oxide Emissions from Motor Vehicles and the Effects of Catalyst Composition and Aging. <i>California Air Resources Board</i> . Available at: https://www.google.com/url?q=https://www.arb.ca.gov/research/apr/past/02-313.pdf&sa=U&ved=0ahUKEwiN-b7gvLHfAhXk5oMKHbOnB4UQFggFMAA&client=internal-uds-cse&cx=009910126870644753977:9bvj8tzpbo&usg=AOvVaw2vW2QMf_-BNsrcVFXCy-M5 .	Climate change	No	No

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EPA-HQ-OAR-2018-0283-5765	Fresh Energy	Bell, M. L. and K. Ebisu. 2012. Environmental Inequality in Exposures to Airborne Particulate Matter Components in the United States. <i>Environmental Health Perspectives</i> . Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3546368/ .	Air quality, environmental justice	Yes	No
NHTSA-2017-0069-0601	Wesley Dyer, California Air Resources Board	Benjamin, K. S., and M. A. Brown. 2009. Working Paper #45 Competing Dimensions of Energy Security: An International Perspective.	Energy	No	No
NHTSA-2017-0069-0615	Lou Finazzo, Sierra Club	Benjamin, L., and V. McConnell. Resources for the Future (RFF). 2017. New Markets for Credit Trading under US Automobile Greenhouse Gas and Fuel Economy Standards.	Other	No	No
NHTSA-2017-0069-0694	Center for Biological Diversity et al.	Bento, A. M., et al. 2018. Vehicle Lifetime Trends and Scrapage Behavior: Trends in the U.S. Used Car Market. <i>The Energy Journal</i> . Available at: https://www.iaee.org/energyjournal/article/3032 .	Other	Yes	No
NHTSA-2017-0069-0584	Erin Murphy, Environmental Defense Fund	Bento, A., et al. 2016. Vehicle Lifetime Trends and Scrapage Behavior in the U.S. Used Car Market. Available at: https://faculty.sites.uci.edu/kevinroth/files/2011/03/Scrappage_18Jan2016.pdf . Accessed: December 24, 2018.	Life cycle assessment	No	No
NHTSA-2017-0069-0574	Erin Murphy, Environmental Defense Fund	Bento, A., et al. 2009. Distributional and Efficiency Impacts of Increased U.S. Gasoline Taxes. <i>American Economic Review</i> : 99(3): 667–699.	Other	Yes	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	Berhane, K., et al. 2016. Association of changes in air quality with bronchitic symptoms in children in California, 1993-2012. <i>Journal of the American Medical Association</i> 315(14):1491–1501.	Other	Yes	No
NHTSA-2017-0069-0613	Erin Murphy, Environmental Defense Fund	Bingham, A., and E. Porter. 2015. Ozone effects on two ecosystem services at Great Smoky Mountains National Park. National Parks Service. Available at: https://www.nps.gov/articles/parkscience_32_1_71-79_bingham_porter_3825.htm .	Climate change	No	No

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NHTSA-2017-0069-0531	Lou Finazzo, Sierra Club	Bingham, A., and E. Porter. 2015. Ozone effects on two ecosystem services at Great Smoky Mountains National Park, USA. <i>Park Science</i> 32(1):71–79.	Air quality	No	No
NHTSA-2017-0069-0541	Lou Finazzo, Sierra Club	Bland, Alastair. 2017. As Oceans Warm, the World's Kelp Forests Begin to Disappear. <i>Yale Environment 360</i> . Available at: https://e360.yale.edu/features/as-oceans-warm-the-worlds-giant-kelp-forests-begin-to-disappear . Accessed: December 20, 2018.	Climate change	No	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	Bloomberg New Energy Finance (BNEF). 2017. Electric Vehicles to Accelerate to 54% of New Car Sales by 2040. July 6, 2017. Available at: https://about.bnef.com/blog/electric-vehicles-accelerate-54-new-car-sales-2040/ . Accessed: December 18, 2018.	Other	No	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	Bloomberg New Energy Finance (BNEF). 2018. Electric Vehicle Outlook 2018. 2018. Available at: https://bnef.turtl.co/story/evo2018?teaser=true . Accessed: December 18, 2018.	Energy	No	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	Bloomberg New Energy Finance (BNEF). 2018. New Energy Outlook 2018. 2018. Available at: https://bnef.turtl.co/story/neo2018?teaser=true . Accessed: December 18, 2018.	Energy	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Bloomberg New Energy Finance (BNEF). 2018. Cumulative Global EV Sales Hit 4 Million. Bloomberg New Energy Finance Blog. Available at: https://about.bnef.com/blog/cumulative-global-ev-sales-hit-4-million/?utm_source=newsletter&utm_medium=email&utm_campaign=newsletter_axiosgenerat .	Other	No	No

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NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	Bloomberg News. 2017. China Fossil Fuel Deadline Shifts Focus to Electric Car Race. September 10, 2017. Available at: https://www.bloomberg.com/news/articles/2017-09-10/china-s-fossil-fuel-deadline-shifts-focus-to-electric-car-race-j7ftx9z . Accessed: December 18, 2018.	Energy	No	No
NHTSA-2017-0069-0561	Erin Murphy, Environmental Defense Fund	BlueGreen Alliance. 2016. Combating climate change 426,000 pickup trucks at a time: The Ford F-150 shows how fuel economy standards work and are working.	Other	No	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	BlueGreen Alliance. 2017. Supplying Ingenuity II: U.S. Suppliers of Key Clean Fuel-Efficient Technologies. May 23, 2017. Available at: https://www.bluegreenalliance.org/resources/supplying-ingenuity-ii-u-s-suppliers-of-key-clean-fuel-efficient-vehicle-technologies/ . Accessed: December 18, 2018.	Energy	No	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	BlueGreen Alliance. 2018. Electric Vehicles at a Crossroads: Challenges and Opportunities for the Future of U.S. Manufacturing and Jobs. September 12, 2018. Available at: https://www.bluegreenalliance.org/resources/electric-vehicles-at-a-crossroads/ . Accessed: December 18, 2018.	Other	No	No
NHTSA-2017-0069-0225	Alejandra Nunez, Sierra Club, Sierra Club	BlueGreen Alliance. 2018. Flawed Proposal to Roll Back Fuel Economy and Emissions Standards Will Cost Thousands of Jobs. August 2, 2018. Available at: https://www.bluegreenalliance.org/the-latest/flawed-proposal-to-roll-back-fuel-economy-and-emissions-standards-will-cost-thousands-of-jobs/ . Accessed: December 17, 2018.	Other	No	No
NHTSA-2017-0069-0561	Erin Murphy, Environmental Defense Fund	BlueGreen Alliance. No Date. Backgrounder: Sound Vehicle Standards & Policies Drive Strong Job Growth. Available at: https://www.bluegreenalliance.org/wp-content/uploads/2016/08/Backgrounder-Vehicle-Standards-and-Jobs-FINAL.pdf . Accessed: February 4, 2019.	Other	No	No

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NHTSA-2017-0069-0620	Lou Finazzo, Sierra Club	Boehmer et al. 2013. Residential Proximity to Major Highways — United States, 2010. Centers of Disease Control and Prevention. MMWR. Vol.62 No.3.	Other	Yes	No
NHTSA-2017-0069-0606	Lou Finazzo, Sierra Club	Bowatte, G., et al. 2017. Traffic-related air pollution exposure is associated with allergic sensitization, asthma, and poor lung function in middle age. <i>J Allergy Clin Immunol</i> 139(1): 122.	Other	Yes	No
NHTSA-2017-0069-0561	Erin Murphy, Environmental Defense Fund	Bozella, J., President, CEO. Sacramento, CA. Association of Global Automakers. August 2, 2018. Letter.	Other	No	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	Bradley, M., and J. Levine. 2018. Re: Request for Public Input on Potential Alternatives to a Potential Clarification of the “Deemed to Comply” Provision for the LEV III Greenhouse Gas Emission Regulations for Model Years Affected by Pending Federal Rulemakings. page 3.	Climate change	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Bretz, L. 2017. Climate Change and Homes: Who Would Lose the Most to a Rising Tide? Zillow Research. Available at: https://www.zillow.com/research/climate-change-underwater-homes-2-16928/ .	Climate change	No	No
NHTSA-2017-0069-0605	Alejandra Nunez, Sierra Club	Bromaghin, J. F., et al. 2015. Polar Bear Population Dynamics in the Southern Beaufort Sea during a Period of Sea Ice Decline. <i>Ecological Applications</i> 25: 634.	Other	Yes	No
EPA-HQ-OAR-2018-0283-5486	Michael Oppenheimer, Philip B. Duffy, Emmett Environmental Law & Policy Clinic at Harvard Law School	Brown, M. E., et al. 2015. Climate Change, Global Food Security, and the U.S. Food System. U.S. Department of Agriculture. Available at: https://www.usda.gov/oce/climate_change/FoodSecurity2015Assessment/FullAssessment.pdf .	Climate change	No	No

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NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Brown Jr., E. G. 2017. Governor Edmund G. Brown Jr.'s Letter to US EPA.	Other	No	No
EPA-HQ-OAR-2018-0283-5486	Michael Oppenheimer, Philip B. Duffy, Emmett Environmental Law & Policy Clinic at Harvard Law School	Brzoska, M., et al. 2015. Climate Change, Migration, and Violent Conflict: Vulnerabilities, Pathways, and Adaption Strategies. <i>Migration & Dev.</i> 5:190.	Climate change, other	Yes	No
NHTSA-2017-0069-0490	Francis W. Jackson, citizen	Buck's County Courier Times. 2018. Lower Bucks has a smog problem; this spring was the worst in a decade. Available at: http://www.buckscountycouriertimes.com/news/20180713/lower-bucks-has-smog-problem-this-spring-was-worst-in-decade . Accessed: December 17, 2018.	Air quality	No	No
EPA-HQ-OAR-2018-0283-5486	Michael Oppenheimer, Philip B. Duffy, Emmett Environmental Law & Policy Clinic at Harvard Law School	Buhaus, H., et al. 2015. Climate Variability, Food Production Shocks, and Violent Conflict in Sub-Saharan Africa. <i>Envtl Res Letters</i> 10(1).	Other	Yes	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	Bunch, D. 2018. An Evaluation of NHTSA's Economics-based Modeling and Implications for Benefit-Cost Analysis in the NHTSA/EPA August 24, 2018 Notice of Proposed Rulemaking (NPRM) ["The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks"] (Bunch Report) October 24, 2018.	Other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Burch, J. (June 29, 2018) - Email from Julia Burch to Chandana Achanta EPA Comments on GHG/CAFE NPRM Preamble.	Other	No	No

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NHTSA-2017-0069-0567	R.M. Van Auken, Dynamic Research, Inc.	Bureau of Economic Analysis. 2018. National Accounts (NIPA), Table 1.1.9. Implicit Price Deflators for Gross Domestic Product. Available at: https://apps.bea.gov/histdata/Releases/GDP_and_PI/2016/Q4/Third_March-30-2017/Section1all_xls.xls .	Other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Bureau of Environmental Health and Massachusetts Department of Public Health. 2014. Capacity to Address the Health Impacts of Climate Change in Massachusetts: Findings from a Statewide Survey of Local Health Departments. Final. MA. Available at: https://www.mass.gov/files/documents/2016/07/nh/climate-change-report-2014.pdf .	Climate change	No	No
NHTSA-2017-0069-0532	Wayne Nastri, South Coast Air Quality Management District	Bureau of Transportation Statistics. 2018. Number of U.S. Aircraft, Vehicles, Vessels, and Other Conveyances. Available at: https://www.bts.gov/content/number-us-aircraft-vehicles-vessels-and-other-conveyances . Accessed: December 18, 2018.	Other	No	No
NHTSA-2017-0069-0579	Erin Murphy, Environmental Defense Fund	Bureau of Transportation Statistics. 2018. Passenger Car Vehicle Miles Traveled. Available at: https://www.bts.gov/content/us-vehicle-miles . Accessed: December 24, 2018.	Other	No	No
NHTSA-2017-0069-0606	Lou Finazzo, Sierra Club	Burke, M., et al. 2018. Higher temperatures increase suicide rates in the United States and Mexico. <i>Nature Climate Change</i> 8: 723-729.	Other	Yes	No
NHTSA-2017-0069-0559	Jason Schwartz, Institute for Policy Integrity	Burke, M., et al. 2015. Global non-linear effect of temperature on economic production. <i>NATURE</i> 527: 235–239.	Other	Yes	No
NHTSA-2017-0069-0559	Jason Schwartz, Institute for Policy Integrity	Burke, M., and K. Emerick. 2016. Adaptation to Climate Change: Evidence from US Agriculture. <i>AM. ECON. J. ECON. POLICY</i> . 8: 106–140.	Climate change	Yes	No

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NHTSA-2017-0069-0532	Wayne Nastri, South Coast Air Quality Management District	BusinessWire. 2018. New Analysis of California ZEV Market Finds State Will Meet or Exceed 1.5 Million by 2025 Goal. January 30, 2018. Available at: https://www.businesswire.com/news/home/20180130005410/en/New-Analysis-California-ZEV-Market-%20Finds-State . Accessed: December 18, 2018.	Other	No	No
NHTSA-2017-0069-0561	Erin Murphy, Environmental Defense Fund	Busse, M. et al. 2014. Who is exposed to gas prices? How gasoline prices affect automobile manufacturers and dealerships. <i>Quantitative Marketing and Economics</i> 14(1): 41-95. Available at: https://doi.org/10.1007/s11129-016-9166-5 .	Other	Yes	No
NHTSA-2017-0069-0591	Erin Murphy, Environmental Defense Fund	Cackette, T., and R. Rykowski. 2017. Technical Assessment of CO ₂ Emission Reductions for Passenger Vehicles in the Post-2025 Timeframe. Report prepared for Environmental Defense Fund. Available at: https://www.edf.org/sites/default/files/content/final_public_white_paper_post_2026_co2_reductions2.27_clean.pdf .	Air quality	No	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Cahill, A., et al. 2013. How does climate change cause extinction? <i>Proceedings of the Royal Society B</i> . 280(1750). Available at: https://royalsocietypublishing.org/doi/full/10.1098/rspb.2012.1890 . Accessed: June 4, 2019.	Climate change	Yes	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	Cahill, E. 2018. Distribution Strategy and Retail Performance in the U.S. Market for Plug-in Electric Vehicles: Implications for Product Innovation and Policy. Institute of Transportation Studies, University of California, Davis, Research Report UCD-ITS-RR-15-29. Available at: Available at: https://its.ucdavis.edu/research/publications/ p. 276. Accessed: October 24, 2018.	Other	No	No

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NHTSA-2017-0069-0521, NHTSA-2017-0069-0521	Kay Rhoads, Sac and Fox Nation	Caiazzo, F., et al. 2013. Air Pollution and Early Deaths in the United States. Part I: Quantifying the Impact of Major Sectors in 2005. <i>Atmospheric Environment</i> 79: 198-208. Available at: https://doi.org/10.1016/j.atmosenv.2013.05.081 . Accessed: December 18, 2018.	Air quality, other	Yes	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	CalETC. 2016. Evaluating Methods to Encourage Plug-in Electric Vehicle Adoption. October 2016. Available at: http://www.caletc.com/wp-content/uploads/2016/10/PIA-Incentive-Survey-Paper-CS5-final-cosmetic.pdf . Accessed: December 18, 2018.	Energy	No	No
NHTSA-2017-0069-0541	Lou Finazzo, Sierra Club	CalFire. 2018. Incident Information for the Ranch Fire (Mendocino Complex).	Other	No	No
NHTSA-2017-0069-0558	Wesley Dyer, California Air Resources Board	California Air Resources Board (CARB). 2014. Proposed 2014 Amendments to the Zero Emission Vehicle Regulation. CA.	Air quality	No	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	California Air Resources Board. 1996. Staff Report: Initial Statement of Reasons Advanced Clean Cars 2012 Proposed Amendments to the California Zero Emission Vehicle Program Regulations. California Environmental Protection Agency. CA.	Climate change	No	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	California Air Resources Board. 1996. Staff Report: Low-Emission Vehicle and Zero-Emission Vehicle Program Review, 5-8 (1996). Preliminary Draft Staff Report. California Environmental Protection Agency. CA.	Climate change	No	No
NHTSA-2017-0069-0541	Lou Finazzo, Sierra Club	California Air Resources Board. 2004. Basis for California's Request for Clean Air Act Section 209(b) within-the-scope and new waiver determinations for the 1999-2003 Amendments to the California Zero Emission Vehicle Regulation.	Other	No	No

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NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	California Air Resources Board. 2011. Appendix S: LEV III Economic Analysis Technical Support Document. Initial Statement of Reasons for LEV III Rulemaking. Initial Statement of Reasons (ISOR) for LEV III rulemaking. Available at: https://www.arb.ca.gov/regact/2012/leviiiighg2012/levapps.pdf .	Other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	California Air Resources Board. 2011. Appendix T: LEV III Mobile Source Emissions Inventory Technical Support Document. Initial Statement of Reasons for LEV III Rulemaking. Initial Statement of Reasons (ISOR) for LEV III rulemaking. Available at: https://www.arb.ca.gov/regact/2012/leviiiighg2012/levappt.pdf .	Other	No	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	California Air Resources Board. 2011. CARB Staff Report: Initial Statement of Reasons for Proposed Rulemaking, Public Hearing to Consider the "LEV III" Amendments. (Final). Prepared by CA.	Climate change	No	No
NHTSA-2017-0069-0542	Lou Finazzo, Sierra Club	California Air Resources Board. 2012. Staff Report: Initial Statement of Reasons Advanced Clean Cars Proposed Amendments To The California Zero Emission Vehicle Program Regulations.	Other	No	No
NHTSA-2017-0069-0541	Lou Finazzo, Sierra Club	California Air Resources Board. 2014. California's Cap-and-Trade Program: Fuel Facts.	Other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	California Air Resources Board. 2015. California Refinery. Last revised: Jul. 8, 2015. Available at https://www.arb.ca.gov/fuels/carefinery/carefinery.htm . Accessed: October 24, 2018.	Energy	No	No
NHTSA-2017-0069-0571	Lou Finazzo, Sierra Club	California Air Resources Board. 2016. 2016 Mobile Source Strategy. Last updated May 16, 2016. Available at: https://www.arb.ca.gov/planning/sip/2016sip/2016mobsr.htm .	Other	No	No

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NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	California Air Resources Board. 2017. California's 2017 Climate Change Scoping Plan ES-5. Available at: https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017_es.pdf . Accessed: October 24, 2018.	Climate change	No	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	California Air Resources Board. 2017. California's Advanced Clean Cars Midterm Review. California Environmental Protection Agency. Available at: https://www.arb.ca.gov/msprog/acc/acc-mtr.htm .	Climate change	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	California Air Resources Board. 2017. California's 2017 Climate Change Scoping Plan Update: The Strategy for Achieving California's 2030 Greenhouse Gas Target. CA. Available at: https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf .	Climate change	No	No
NHTSA-2017-0069-0541	Lou Finazzo, Sierra Club	California Air Resources Board. 2017. California's 2017 Climate Change Scoping Plan. Available at: https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf . Accessed: December 20, 2018.	Climate change	No	No
NHTSA-2017-0069-0541	Lou Finazzo, Sierra Club	California Air Resources Board. 2017. California's Advanced Clean Cars Midterm Review. Appendix L: Emissions Impact Assessment for the 1 mg/mi standard.	Air quality	No	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	California Air Resources Board. 2017. Revised Proposed 2016 State Strategy for the State Implementation Plan 11, 12, 24. California Environmental Protection Agency. CA.	Climate change	No	No
NHTSA-2017-0069-0541	Lou Finazzo, Sierra Club	California Air Resources Board. 2017. Revised Proposed 2016 State Strategy for the State Implementation Plan. March 7, 2017. Available at: https://www.arb.ca.gov/planning/sip/2016sip/rev2016statesip.pdf . Accessed: December 19, 2018.	Air quality	No	No

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NHTSA-2017-0069-0571	Lou Finazzo, Sierra Club	California Air Resources Board. 2017. California's Advanced Clean Cars Midterm Review, Appendix D: Zero Emission Vehicle Infrastructure Status in California and Section 177 ZEV states. Available at: https://www.arb.ca.gov/msprog/acc/mtr/appendix_d.pdf .	Other	No	No
NHTSA-2017-0069-0571	Lou Finazzo, Sierra Club	California Air Resources Board. 2018. 2000-2016 Emissions Trends Report. Available at: https://www.arb.ca.gov/cc/inventory/data/data.htm .	Climate change	No	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	California Air Resources Board. 2018. 2018 Annual Evaluation of Fuel Cell Electric Vehicle Deployment and Hydrogen Fuel Station Network Development (June 2018). California Environmental Protection Agency. CA.	Climate change, other	No	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	California Air Resources Board. 2018. Greenhouse Gas Inventory. Last revised: July 11, 2018. Available at: https://www.arb.ca.gov/cc/inventory/inventory.htm . Accessed: October 24, 2018.	Climate change	No	No
NHTSA-2017-0069-0553	Erin Murphy, Environmental Defense Fund	California Air Resources Board. 2018. Overview: Diesel Exhaust & Health. Sacramento, CA.	Other	No	No
NHTSA-2017-0069-0547	Academy of Integrative Health & Medicine et al.	California Air Resources Board. 2018. Proposed Amendments to the Low-Emission Vehicle III Greenhouse Gas Emission Regulation: Standardized Regulatory Impact Assessment (SRIA) Equivalent Document. Available at: http://www.dof.ca.gov/Forecasting/Economics/Major_Regulations/Major_Regulations_Table/documents/LEV%20III%20GHG%20Regulation%20Amendments.pdf . Accessed: December 21, 2018.	Air quality	No	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	California Air Resources Board. EMFAC 2014 Web Database v1.0.7. Available at: https://www.arb.ca.gov/emfac/2014/ . Accessed: February 5, 2019.	Climate change	No	No

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NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	California Coastal Commission. 2018. Recommended Science Updates to the CCC SLR Policy Guidance. Available at: https://documents.coastal.ca.gov/reports/2018/9/w6g/w6g-9-2018-exhibits.pdf .	Climate change	No	No
NHTSA-2017-0069-0611	Lou Finazzo, Sierra Club	California Council on Science and Technology. 2015. An Independent Scientific Assessment of Well Stimulation in California Volume II Potential Environmental Impacts of Hydraulic Fracturing and Acid Stimulations. July 2015. Available at: https://ccst.us/wp-content/uploads/160708-sb4-vol-II.pdf . Accessed: December 19, 2018.	Energy	No	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	California Department of Finance. 2018. E-5 Population Estimates for Cities, Counties, and the State, 2011-2018 with 2010 Census Benchmark. Available at: http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-4/2010-18/documents/E-4_2018InternetVersion.xls .	Other	No	No
NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	California Department of Finance. 2018. Report E-4: Population Estimates for Cities, Counties, and State, 2011-2018, with 2010 Census Benchmark. Available at: http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-4/2010-18/ .	Other	No	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	California Department of Food and Agriculture. 2017. California Agricultural Production Statistics. Available at: https://www.cdfa.ca.gov/statistics/ . Accessed: October 24, 2018.	Other	No	No
NHTSA-2017-0069-0554	Environmental Law Project, University of Pennsylvania Law School	California Energy Commission. 2017. Greenhouse Gas Emissions Reductions-Tracking Progress. Available at: https://www.energy.ca.gov/renewables/tracking_progress/documents/Greenhouse_Gas_Emissions_Reductions.pdf . Accessed: December 21, 2018.	Air quality	No	No

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NHTSA-2017-0069-0541	Lou Finazzo, Sierra Club	California Energy Commission. 2018. California's Oil Refineries. Available at: https://www.energy.ca.gov/almanac/petroleum_data/refineries.html . Accessed December 20, 2018.	Energy	No	No
NHTSA-2017-0069-0571	Lou Finazzo, Sierra Club	California Governor's Office of Business and Economic Development. 2018. ZEV Action Plan Priorities Update. Available at: http://business.ca.gov/Portals/0/ZEV/2018-ZEV-Action-Plan-Priorities-Update.pdf . Accessed: February 5, 2019.	Other	No	No
NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	California Governor's Office of Planning and Research. 2018. San Francisco Bay Area Region Report. California's Fourth Climate Change Assessment. Available at: http://climateassessment.ca.gov/regions/docs/20180827-SanFranciscoBayArea.pdf .	Climate change	Yes	No
NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	California Governor's Office of Planning and Research. 2018. Statewide Summary Report. Available at: http://www.climateassessment.ca.gov/state/docs/20180827-StatewideSummary.pdf .	Climate change	No	No
NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	California Governor's Office of Planning and Research. 2018. Summary Report from Tribal and Indigenous Communities within California. California's Fourth Climate Change Assessment. Available at: http://climateassessment.ca.gov/state/docs/20180827-TribalCommunitySummary.pdf .	Climate change	Yes	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	California New Car Dealers Association. 2018. California Green Vehicle Report. Available at: https://www.cncda.org/wp-content/uploads/Cal-Alt-Powertrain-Report-3Q-18-Release.pdf . Accessed: October 24, 2018.	Other	No	No

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NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	California Office of Environmental Health Hazard Assessment. 2018. Indicators of Climate Change in California. Available at: https://oehha.ca.gov/climate-change/report/2018-report-indicators-climate-change-california .	Climate change, other	No	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	California Public Utilities Commission. 2018. Transportation Electrification Activities Pursuant to Senate Bill 350. September 2018. Available at: http://www.cpuc.ca.gov/sb350te/ . Accessed: December 18, 2018.	Energy	No	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	California Public Utilities Commission. 2018. Zero-Emission Vehicles. 2018. Available at: http://www.cpuc.ca.gov/zev/ . Accessed: December 18, 2018.	Energy	No	No
NHTSA-2017-0069-0542	Lou Finazzo, Sierra Club	California Public Utilities Commission. 2018. Decision On The Transportation Electrification Standard Review Projects. A.17-01-020 et al. ALJ/SL5/MLC/lil PROPOSED DECISION (Rev. 2).	Energy	No	No
NHTSA-2017-0069-0531	Lou Finazzo, Sierra Club	Camilo, M., et al. 2017. Twenty-seven ways a heat wave can kill you: Deadly heat in the era of climate change. <i>Circulation Cardiovascular Quality and Outcomes</i> . DOI: 10.1161/CIRCOUTCOMES.117.004233.	Climate change	Yes	No
NHTSA-2017-0069-0600	Lou Finazzo, Sierra Club	Camilo, M., et al. 2017. Global risk of deadly heat. <i>Nature Climate Change</i> . Volume 7 DOI: 10.1038/NCLIMATE3322.	Other	Yes	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Camp, E., et al. 2016. Acclimatization to high-variance habitats does not enhance physiological tolerance of two key Caribbean corals to future temperature and pH. <i>Proceedings of the Royal Society B</i> . 283(1831). Available at: https://royalsocietypublishing.org/doi/full/10.1098/rspb.2016.0442 . Accessed: June 4, 2019.	Climate change	Yes	No
NHTSA-2017-0069-0669	EDF	Car Sales Base. 2018. US Car Sales Data. Carsalesbase.com.	Life cycle assessment	No	No

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NHTSA-2017-0069-0559	Jason Schwartz, Institute for Policy Integrity	Carleton, T., et al. 2018. Valuing the Global Mortality Consequences of Climate Change Accounting for Adaptation Costs and Benefits (Becker Friedmand Inst. Working Paper No. 2018-51).	Other	Yes	No
NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	Carlson, A. E. 2018. The Clean Air Act's Blind Spot: Microclimates and Hotspot Pollution. <i>UCLA L. Rev.</i> , 65, p.1036.	Climate change, air quality	Yes	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	Carper, Tom. Senator. 2018. Letter to Secretary Chao and Acting Administrator Wheeler. October 16, 2018. Available at: https://www.epw.senate.gov/public/_cache/files/e/6/e66d6d50-e3c5-42c1-9663-c1ea1d2215dc/3752E5E73547A5D722D1BEADA0E69405.10.16.2018-cafe.pdf . Accessed: December 18, 2018.	Other	No	No
NHTSA-2017-0069-0611	Lou Finazzo, Sierra Club	CarSalesBase.com. 2018. US Car Sales Data, 2018. Available at: http://carsalesbase.com/us-car-sales-data/ . Accessed: September 20, 2018.	Other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Carter, L. M., et al. 2014. Ch. 17: Southeast and the Caribbean. Climate Change Impacts in the United States: The Third National Climate Assessment, J. M. Melillo, Terese (T.C.) Richmond, and G. W. Yohe, Eds., U.S. Global Change Research Program, 396-417. doi:10.7930/JONP22CB.	Climate change	Yes	No
NHTSA-2017-0069-0556	Lou Finazzo, Sierra Club	Center for Biological Diversity. 2013. Deadly Waters - how rising seas threaten 233 endangered species. Available at: https://www.biologicaldiversity.org/campaigns/sea-level-rise/pdfs/SeaLevelRiseReport_2013_print.pdf . Accessed: February 5, 2019.	Climate change	No	No

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NHTSA-2017-0069-0591	Erin Murphy, Environmental Defense Fund	Center for Biological Diversity. 2018. Letter re: Request for Extension of Comment Period on NHTSA and EPA's Proposal to Amend CAFE and Greenhouse Gas Standards for MY 2021-2016 Passenger Cars and Light Trucks, published on August 24, 2018 (83. Fed. Reg. 42,986), and NHTSA's Draft Environmental Impact Statement for the Proposed CAFE Standards, published on August 10, 2018 (83 Fed. Reg. 39,750) dated August 30, 2018. Available at: https://www.regulations.gov/document?D=NHTSA-2017-0069-0591 .	Other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Center for Disease Control and Prevention. 2014. 2014 Adult Asthma Data: Prevalence Tables and Maps, Table C1. Available at: https://www.cdc.gov/asthma/brfss/2014/tableC1.htm .	Other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Center for Sea Level Rise, Old Dominion University. 2017. Center for Sea Level Rise. Hampton Roads Intergovernmental Pilot Project. Available at: https://digitalcommons.odu.edu/hripp_website/1/?utm_source=digitalcommons.odu.edu%2Fhripp_website%2F1&utm_medium=PDF&utm_campaign=PDFCoverPages .	Climate change	No	No
NHTSA-2017-0069-0613	Erin Murphy, Environmental Defense Fund	Centers for Disease Control and Prevention. 2017. Vibrio Species Causing Vibriosis. Available at: www.cdc.gov/vibrio/index.html . Accessed November 28, 2017.	Other	Yes	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Chaloupka, M., et al. 2008. Is climate change affecting the population dynamics of the endangered Pacific loggerhead sea turtle? <i>Journal of Experimental Marine Biology and Ecology</i> . 356(1): 136-143. Available at: https://www.sciencedirect.com/science/article/pii/S0022098107005813?via%3Dihub . Accessed: June 4, 2019.	Climate change	Yes	No

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NHTSA-2017-0069-0580	Troy Knecht, South Dakota Corn Growers Association	Chambers, A., et al. 2016. Soil carbon sequestration potential of US croplands and grasslands: Implementing the 4 per Thousand Initiative. <i>Journal of Soil and Water Conservation</i> . doi:10.2489/jswc.71.3.68A.	Energy	Yes	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Chan, F., et al. 2016. The West Coast Ocean Acidification and Hypoxia Science Panel: Major Findings, Recommendations, and Actions. Final. California Ocean Science Trust. Oakland, CA. Available at: http://westcoastoah.org/wp-content/uploads/2016/04/OAH-Panel-Key-Findings-Recommendations-and-Actions-4.4.16-FINAL.pdf .	Climate change	No	No
NHTSA-2017-0069-0551	Lou Finazzo, Sierra Club	Charmley, B. 2018. National Academies of Science Committee on the Assessment of Technologies for Improving Fuel Economy of Light-Duty Vehicles – Phase 3 Presentation. July 16, 2018.	Air quality, other	No	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	Charmley, William. Email message to Chandana Achanta, June 18, 2018. Regulations. Accessed: October 24, 2018. Available at: https://www.regulations.gov/document?D=EPA-HQ-OAR-2018-0283-0453 , Attachment 5, p. 22.	Other	No	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Cheng, L., et al. 2019. How fast are the oceans warming? <i>Science</i> 363(6423): 128-129. Available at: https://science.sciencemag.org/content/363/6423/128.summary . Accessed: June 4, 2019.	Climate change	Yes	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Cherry, S., et al. 2009. Fasting physiology of polar bears in relation to environmental change and breeding behavior in the Beaufort Sea. <i>Polar Biology</i> 32(3): 383-391. Available at: https://www.researchgate.net/publication/225329757_Fasting_physiology_of_polar_bears_in_relation_to_environmental_change_and_breeding_behavior_in_the_Beaufort_Sea . Accessed: June 4, 2019.	Climate change	Yes	No

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NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Cherry, S., et al. 2013. Migration phenology and seasonal fidelity of an Arctic marine predator in relation to sea ice dynamics. <i>Journal of Animal Ecology</i> 82(4): 912-921. Available at: https://www.ncbi.nlm.nih.gov/pubmed/23510081 . Accessed: June 4, 2019.	Other	Yes	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Chesapeake Bay Foundation. 2019. Sea Level Rise: Finding Nature-Based Solutions to Sea Level Rise. Available at: https://www.cbf.org/issues/climate-change/sea-level-rise.html .	Climate change	No	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	Chevrolet. 2018. Bolt EV. 2018. Available at: https://www.chevrolet.com/electric/bolt-ev-electric-car . Accessed: December 28, 2018.	Other	No	No
NHTSA-2017-0069-0574	Erin Murphy, Environmental Defense Fund	Chitinis, et al. 2014. Who rebounds most? Estimating direct and indirect rebound effects for different UK socioeconomic groups. <i>Ecological Economics</i> : 106, 12–32.	Other	Yes	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Chou, C., et al. 2013. Increase in the range between wet and dry season precipitation. <i>Nature Geoscience</i> . 6:263-267. Available at: https://www.nature.com/articles/ngeo1744 .	Climate change	Yes	No
EPA-HQ-OAR-2018-0283-4030	Fond du Lac Band of Lake Superior Chippewa	Christianson, L. D. E., and R. C. Venette. 2018. Modest effects of host on the cold hardiness of Emerald Ash Borer. <i>MDPI. Ans 9</i> (61):346. Available at: https://www.fs.fed.us/nrs/pubs/jrnl/2018/nrs_2018_christianson_001.pdf .	Climate change	Yes	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	Cirillo, Cinzio. Professor, University of Maryland. Comment number NHTSA-2018-0067-7819 (Oct. 19, 2018).	Other	No	No

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NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	City of Boston. 2016. Climate Ready Boston Final Report. Final. Boston, MA. Available at: https://www.boston.gov/sites/default/files/20161207_climate_ready_boston_digital2.pdf .	Climate change	No	No
NHTSA-2017-0069-0591	Erin Murphy, Environmental Defense Fund	City of Los Angeles. 2018. Letter titled Request for Extension of Comment Period and Additional Public Hearings Regarding Joint Proposed Rule to Withdraw California's Clean Air Act Waiver and Roll Back Vehicle Greenhouse Gas Emissions and Corporate Average Fuel Economy Standards for Model Years 2021-2026 Light-Duty Vehicles 83 [Fed. Reg. 42,986 (Aug. 24, 2018)] dated September 7, 2018. Available at: https://www.regulations.gov/document?D=NHTSA-2017-0069-0591 .	Other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	City of Virginia Beach. 2017. Comprehensive Sea Level Rise. Available at: https://www.vbgov.com/government/departments/public-works/comp-sea-level-rise/Pages/default.aspx .	Climate change	No	No
NHTSA-2017-0069-0606	Lou Finazzo, Sierra Club	Clean Air Task Force. 2017. Fumes Across the Fence-Line The Health Impacts of Air Pollution from Oil & Gas Facilities on African American Communities. Available at: www.naacp.org/climate-justice-resources/fumes-across-the-fence-line .	Air quality, environmental justice, other	No	No
NHTSA-2017-0069-0613	Erin Murphy, Environmental Defense Fund	Climate and Security Advisory Group. 2018. A Responsibility to Prepare: Strengthening National and Homeland Security in the Face of a Changing Climate. Available at: https://climateandsecurity.files.wordpress.com/2018/02/climate-and-security-advisory-group_a-responsibility-to-prepare_2018_02.pdf .	Other	No	No

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NHTSA-2017-0069-0613	Erin Murphy, Environmental Defense Fund	Climate Central. 2018. The 10 Hottest U.S. Years on Record. Available at: http://www.climatecentral.org/gallery/graphics/10-hottest-us-years-on-record .	Climate change	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Climate Sensitivity Research Spotlight. The Climate Change in the Los Angeles Region Project. Available at: http://research.atmos.ucla.edu/csrl/LA_project_summary.html .	Climate change	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Cogil, C. 2017. Extreme Drought Expands in Southern Iowa. National Weather Service. Available at: https://www.weather.gov/media/dmx/Climate/Drought.pdf .	Other	No	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	Coignard, J., et al. 2018. Clean vehicles as an enabler for a clean electricity grid. Environ. Res. Lett. 13. May 16, 2018. Available at: http://iopscience.iop.org/article/10.1088/1748-9326/aabe97/pdf . Accessed: December 18, 2018.	Energy	Yes	No
NHTSA-2017-0069-0543	Lou Finazzo, Sierra Club	Committee on America's Climate Choices; Board on Atmospheric Sciences and Climate; Division on Earth and Life Studies; National Research Council. 2011. America's Climate Choices. National Academies Press. Washington, D.C.	Climate change	Yes	No
NHTSA-2017-0069-0615	Lou Finazzo, Sierra Club	Committee on Energy and Commerce House of Representatives. 2007. Review of the Administration's Energy Proposals for the Transportation Sector.	Energy	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Commonwealth of Massachusetts Executive Office of Energy and Environmental Affairs. 2015. Massachusetts Zero Emission Vehicle Action Plan: A Roadmap to Reach 300,000 Zero Emission Vehicles on Massachusetts Roads by 2025. Draft. Available at: https://www.mass.gov/files/documents/2016/08/nk/massachusetts-zero-emission-vehicle-action-plan2015.pdf .	Other	No	No

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EPA-HQ-OAR-2018-0283-5471	Community Action to Promote Healthy Environments	Community Action to Promote Healthy Environments. 2017. Public Health Action Plan: Improving Air Quality & Health in Detroit. Available at: http://caphedetroit.sph.umich.edu/wp-content/uploads/2017/05/FINAL-CAPHE-ExecutiveSummary-5-10-17.pdf .	Air quality	No	No
NHTSA-2017-0069-0615	Lou Finazzo, Sierra Club	Concerned Health Professionals. 2018. Compendium of Scientific, Medical, and Media Findings Demonstrating Risks and Harms of Fracking (Unconventional Gas and Oil Extraction).	Other	No	No
NHTSA-2017-0069-0561	Erin Murphy, Environmental Defense Fund	Congressional Budget Office. 2012. Estimated Impact of the American Recovery and Reinvestment Act on Employment and Economic Output from October 2011 Through December 2011.	Other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Connecticut Department. Of Energy And Environmental Protection. CHEAPR Eligible Vehicle List. Available at: https://www.ct.gov/deep/cwp/view.asp?a=2684&q=561424&deepNav_GID=2183 . Accessed: October 24, 2018.	Other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Constible, J. 2018. Climate Change and Health in Virginia. The Natural Resource Defense Council. Available at: https://assets.nrdc.org/sites/default/files/climate-change-health-impacts-virginia-ib.pdf .	Climate change	Yes	No
NHTSA-2017-0069-0561	Erin Murphy, Environmental Defense Fund	Consumer Federation of America. 2016. Automakers Are on the Road to Meeting Fuel Efficiency Standards.	Other	No	No
NHTSA-2017-0069-0561	Erin Murphy, Environmental Defense Fund	Consumer Federation of America. 2018. At-Risk MPG Standards Could Cost Future Labor Day Travelers.	Other	No	No
NHTSA-2017-0069-0561	Erin Murphy, Environmental Defense Fund	Consumer Federation of America. 2018. SUVs, Crossovers and Pickups with High MPG Percent Increases Sell Better.	Other	No	No

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NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	Consumer Reports. 2018. 2018 Automotive Fuel Economy Survey Report. July 2018. Available at: https://advocacy.consumerreports.org/wp-content/uploads/2018/07/2018-Fuel-Economy-Survey-Fact-Sheet-1.pdf . Accessed: December 18, 2018.	Energy	No	No
NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	Consumer Reports. 2018. Auto Fuel Economy and Safety: Improving Together. Available at: https://advocacy.consumerreports.org/wp-content/uploads/2018/08/auto-economy-fact-sheet-2018-copy-1.pdf .	Other	No	No
NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	Cooper, A., and K. Schefter. 2017. Plug-in Electric Vehicle Sales Forecast through 2025 and the Changing Infrastructure required. The Edison Foundation and Edison Electric Institute. Washington, D.C.	Life cycle assessment	No	No
NHTSA-2017-0069-0615	Lou Finazzo, Sierra Club	Cooper, Mark. Consumer Federation of America (CFA). 2016. In the Matter of Proposed Determination on the Appropriateness of the Model Year 2022-2025 Light-Duty Vehicle Greenhouse Gas Emissions Standards under the Midterm Evaluation.	Other	No	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	Copeland, A., et al. 2018a. Interest Rates and the Market for New Light Vehicles. Working Paper and Appendices. Available at: http://people.brandeis.edu/~ghall/papers/CHM_paper_JMCB_RR_final.pdf . Accessed: October 24, 2018.	Other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Cosgrove, J. 2018. Hurricane Florence: Rainfall up to a 1,000-year Return Period. Risk Management Solutions Blog. Available at: https://www.rms.com/blog/2018/09/14/hurricane-florence-rainfall-up-to-a-1000-year-return-period/ .	Climate change	No	No

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NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Couch, C., et al. 2017. Mass coral bleaching due to unprecedented marine heatwave in Papahānaumokuākea Marine National Monument. 12(9): e0185121. Available at: https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0185121 . Accessed: June 4, 2019.	Other	Yes	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Council on Environmental Quality. 1997. Environmental Justice Guidance Under the National Environmental Policy Act. Available at: https://www.epa.gov/sites/production/files/2015-02/documents/ej_guidance_nepa_ceq1297.pdf .	Other	No	No
NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	Cullen, A. 2018. Preparations for Chartered SAB Discussions of EPA Planned Agency Actions and their Supporting Science in the Fall 2017 Regulatory Agenda. Memo from SAB Working Group to the Members of the Chartered SAB and SAB Liaisons. Available at: https://yosemite.epa.gov/sab/sabproduct.nsf/A4070377D540D61B8525827F0075E673/\$File/SABWkGrpSpring2017Att+ABC.pdf .	Other	No	No
NHTSA-2017-0069-0615	Lou Finazzo, Sierra Club	Czolowski, E. D., et al. 2017. Toward Consistent Methodology to Quantify Populations in Proximity to Oil and Gas Development: A National Spatial Analysis and Review. Environmental Health Perspectives. doi.org/10.1289/EHP1535.	Other	Yes	No
NHTSA-2017-0069-0606	Lou Finazzo, Sierra Club	Dahl, K. A., et al. 2017. Sea level rise drives increased tidal flooding frequency at tide gauges along the U. S. East and Gulf Coasts: Projections for 2030 and 2045. PLoS ONE 12(2): e0170949. doi:10.1371/journal.pone.0170949.	Other	Yes	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Dalton, M. M., et al. 2017. The Third Oregon Climate Assessment Report. Final. Corvallis, OR. Oregon Climate Change Research Institute. Available at: http://www.occri.net/media/1042/ocar3_final_125_web.pdf .	Climate change	No	No

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NHTSA-2017-0069-0574	Erin Murphy, Environmental Defense Fund	De Borger, B., et al. 2016. Measuring the Rebound Effect with Micro Data: A First-Difference Approach. <i>Journal of Environmental Economics & Management</i> : 79: 1-17.	Other	Yes	No
NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	De Coninck, H., et al. 2018. Chapter 4: Strengthening and implementing the global response. In: <i>Global Warming of 1.5 °C</i> . Intergovernmental Panel on Climate Change. Available at: https://www.ipcc.ch/sr15/ .	Climate change	Yes	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Delaware Sea-Level Rise Technical Committee. 2017. Recommendation of Sea-Level Rise Planning Scenarios for Delaware: Technical Report. Final. DE. Prepared for DNREC Delaware Coastal Programs DE. http://www.dgs.udel.edu/sites/default/files/projects-docs/de%20slr%202017%20technical%20report%20final.pdf .	Climate change, other	No	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	Delfino, R. J., et al. 2003. Respiratory symptoms and peak expiratory flow in children with asthma in relation to volatile organic compounds in exhaled breath and ambient air. <i>Journal of Exposure Analysis and Environmental Epidemiology</i> 13: 348–363.	Other	Yes	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	Delfino, R., et al. 2003. Asthma Symptoms in Hispanic Children and Daily Ambient Exposures to Toxic and Criteria Air Pollutants. <i>Environmental Health Perspectives</i> 111(4): 647-656.	Other	Yes	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Dennison, P. E., et al. 2014. Large wildfire trends in the western United States, 1984–2011. <i>Geophysical Research Letters</i> . 41(8): 2928-2933. doi.org/10.1002/2014GL059576.	Climate change	Yes	No
NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	Department of Community Affairs. 2018. Electric Vehicle Charging Stations – What you need to know. Available at: https://www.rosenet.org/DocumentCenter/View/85/Homeowner-s-Guide-to-Electric-Vehicle-Charging-Stations .	Life cycle assessment	No	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if provided by commenter)	Issue Addressed by Source	Peer- Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0604	Lou Finazzo, Sierra Club	Department of Defense. 2018. Climate-Related Risk to DoD Infrastructure Initial Vulnerability Assessment Survey (SLVAS) Report.	Climate change, other	No	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	Department of Energy. 2018. Electric Vehicle Projection Tool (EVI-Pro) Lite. Alternative Fuels Data Center. Available at: https://www.afdc.energy.gov/evi-pro-lite (Scenario run September 6, 2018, using Electric Vehicle Projection Tool (EVI-Pro) Lite). Accessed: October 24, 2018.	Energy	No	No
NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	Department of Environmental Management, Rhode Island. 2018. Draft Beneficiary Mitigation Plan VW Environmental Mitigation. Office of Air Resources. Available at: http://www.dem.ri.gov/programs/air/documents/pn/vwmitplan.pdf . Accessed: February 5, 2019.	Climate change, life cycle assessment, other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Department of Natural Resources and Environmental Control. Preparing for Tomorrow's High Tide: Sea-Level Rise Vulnerability Assessment for the State of Delaware. Final. DE. Prepared for Delaware Sea Level Rise Advisory Committee. DE. Available at: http://www.dnrec.delaware.gov/coastal/Documents/SeaLevelRise/AssesmentForWeb.pdf .	Climate change, other	No	No
NHTSA-2017-0069-0619	Erin Murphy, Environmental Defense Fund	Department of Transportation (DOT). 2018. Letter to Natural Resources Defense Council (April 2018)	Other	No	No
NHTSA-2017-0069-0559	Jason Schwartz, Institute for Policy Integrity	Deschêne, O., and M. Greenstone. 2012. The Economic Impacts of Climate Change: Evidence from Agricultural Output and Random Fluctuations in Weather: Reply. <i>American Economic Review</i> . 102: 3761–3773. doi: 10.1257/aer.102.7.3761. Available at: https://www.aeaweb.org/articles?id=10.1257/aer.102.7.3761 .	Other	Yes	No

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NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Dettinger, M., et al. 2018. Sierra Nevada Summary Report. California's Fourth Climate Change Assessment. Publication number: SUM-CCCA4-2018-004. Available at: http://www.climateassessment.ca.gov/regions/docs/20180827-SierraNevada.pdf .	Climate change	No	No
NHTSA-2017-0069-0606	Lou Finazzo, Sierra Club	Deutsch, C. A., et al. 2018. Increase in crop losses to insect pests in a warming climate. <i>Science</i> 361: 916-919.	Climate change	Yes	No
NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	Dias, D., et al. 2018. Statistical Prediction of Minimum and Maximum Air Temperature in CA and Western North America. A Report for: California's Fourth Climate Change Assessment. Available at: http://www.climateassessment.ca.gov/techreports/docs/20180827-Projections_CCCA4-CEC-2018-011.pdf .	Climate change	Yes	No
NHTSA-2017-0069-0559	Jason Schwartz, Institute for Policy Integrity	Diaz, D., and F. Moore. 2017. Quantifying the economic risks of climate change. <i>Nature Climate Change</i> 7: 774–782.	Other	Yes	No
NHTSA-2017-0069-0714	Lou Finazzo, Center for Biological Diversity et al.	Diaz, S. et al. 2019. Summary for Policymakers of the Global Assessment Report on Biodiversity and Ecosystem Services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. Available at: https://www.biologicaldiversity.org/programs/biodiversity/pdfs/Summary-for-Policymakers-IPBES-Global-Assessment.pdf .	Climate change	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	DiMarisco, Andrew J. October 23, 2018. Letter from Andrew J. DiMarisco (NHTSA) to Ellen Peter (CA ARB) NHTSA FOIA Response.	Other	No	No

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NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	District of Columbia Department of Energy & Environment. 2015. Climate Projections & Scenario Development. Available at: https://doee.dc.gov/sites/default/files/dc/sites/ddoe/publication/attachments/150828_AREA_Research_Report_Small.pdf .	Climate change	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Dittmer, Kyle. 2013. Changing streamflow on Columbia basin tribal lands—climate change and salmon. <i>Climatic Change</i> . 120(3): 627–641. Available at: https://link.springer.com/article/10.1007/s10584-013-0745-0 .	Climate change	Yes	No
NHTSA-2017-0069-0559	Jason Schwartz, Institute for Policy Integrity	Donadelli, M., et al. 2017. Temperature shocks and welfare costs, SAFE Working Paper, No. 177. SAFE - Sustainable Architecture for Finance in Europe. Available at: http://nbn-resolving.de/urn:nbn:de:hebis:30:3-437499 .	Other	Yes	No
NHTSA-2017-0069-0556	Lou Finazzo, Sierra Club	Donner, S. D. 2009. Coping with Commitment: Projected Thermal Stress on Coral Reefs under Different Future Scenarios. <i>PLoS ONE</i> 4(6): e5712. doi:10.1371/journal.pone.0005712.	Other	Yes	No
NHTSA-2017-0069-0561	Erin Murphy, Environmental Defense Fund	Douglas, S., and C. Nevers. Senior Director and Vice President. Energy & Environment, Auto Alliance. September 24, 2018. Alliance Remarks for NHTSA / EPA Hearings on fuel economy standards.	Other	No	No
NHTSA-2017-0069-0584	Erin Murphy, Environmental Defense Fund	Drive Aluminum. 2017. Aluminum Content In North American Light Vehicles 2016 To 2028: Summary Report. Ducker Worldwide. Troy, Michigan. Available at: http://www.drivealuminum.org/wp-content/uploads/2017/10/Ducker-Public_FINAL.pdf . Accessed: December 24, 2018.	Life cycle assessment	No	No

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NHTSA-2017-0069-0621	Natural Resources Defense Council	Drupp, M. A., et al. 2015. Discounting disentangled, No 172, GRI Working Papers, Grantham Research Institute on Climate Change and the Environment. Available at: http://www.lse.ac.uk/GranthamInstitute/wp-content/uploads/2015/06/Working-Paper-172-Drupp-et-al.pdf .	Climate change	Yes	No
NHTSA-2017-0069-0604	Erin Murphy, Environmental Defense Fund Lou Finazzo, Sierra Club	du Pont, Y. R., et al. 2016. Equitable mitigation to achieve the Paris Agreement goals. <i>Nature Climate Change</i> 7:38-43. Available at: http://dx.doi.org/10.1038/nclimate3186 .	Climate change, other	Yes	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	Duleep, G. 2018. Review of the Technology Costs and Effectiveness Utilized in the Proposed SAFE Rule. Final. Prepared for by H-D Systems.	Other	No	No
NHTSA-2017-0069-0571	Lou Finazzo, Sierra Club	Durbin, T. D., et al. 2011. CARB Assessment of the Emissions from the Use of Biodiesel as a Motor Vehicle Fuel in California "Biodiesel Characterization and NOx Mitigation Study" California Air Resources Board Final Report. Sacramento, CA. Available at: https://www.arb.ca.gov/fuels/diesel/altdiesel/20111013_CARB%20Final%20Biodiesel%20Report.pdf .	Other	No	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Durner, G., et al. 2011. Consequences of long-distance swimming and travel over deep-water pack ice for a female polar bear during a year of extreme sea ice retreat. <i>Polar Biology</i> 34(7): 975-984. Available at: https://link.springer.com/article/10.1007%2Fs00300-010-0953-2 . Accessed: June 4, 2019.	Other	Yes	No
NHTSA-2017-0069-0556	Lou Finazzo, Sierra Club	Eakin C. M., et al. 2010. Caribbean Corals in Crisis: Record Thermal Stress, Bleaching, and Mortality in 2005. <i>PLoS ONE</i> 5(11): e13969. doi:10.1371/journal.pone.0013969.	Other	Yes	No

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NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Eakin, M., et al. 2018. Unprecedented three years of global coral bleaching 2014-17 [in "State of the Climate in 2017"]. <i>Bulletin of the American Meteorological Society</i> . 99(8): S74-S75. Available at: https://www.ametsoc.net/sotc2017/StateoftheClimate2017_lowres.pdf . Accessed: June 4, 2019.	Climate change	Yes	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Economic Development Partnership of North Carolina. 2017. North Carolina Tourism Generates Record Employment and Visitor Spending in 2016. Available at: https://edpnc.com/north-carolina-tourism-generates-record-employment-visitor-spending-2016/ .	Other	No	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	Edelstein, Stephen. 2017. Mercedes-Benz Investing \$1 Billion in Alabama Plant Upgrades to Build Electric SUVs. September 22, 2017. Available at: http://www.thedrive.com/tech/14554/mercedes-benz-investing-1-billion-in-alabama-plant-%20upgrades-to-build-electric-suvs?iid=sr-link8 . Accessed: December 18, 2018.	Other	No	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	Edelstein, Stephen. 2017. This Is How Parked Electric Cars Are Earning Money in Denmark. August 15, 2017. Available at: http://www.thedrive.com/tech/13498/this-is-how-parked-electric-cars-are-earning-money-in-denmark . Accessed: December 18, 2018.	Other	No	No
NHTSA-2017-0069-0568	Lou Finazzo, Sierra Club	Eisen, R. J., et al. 2017. Tick-Borne zoonoses in the United States: Persistent and Emerging Threats to Human Health. <i>ILAR journal</i> 58(3): 319-335.	Other	Yes	No

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NHTSA-2017-0069-0604	Lou Finazzo, Sierra Club Erin Murphy, Environmental Defense Fund Erin Murphy, Environmental Defense Fund	Eisen, R., et al. 2016. County-Scale Distribution of Ixodes scapularis and Ixodes pacificus (Acari: Ixodidae) in the Continental United States. <i>Journal of Medical Entomology</i> 53(2): 349-386. doi:10.1093/jme/tjv237.	Other	Yes	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Ekstrom, J. A., et al. 2015. Vulnerability and adaptation of US shellfisheries to ocean acidification. <i>Nature Climate Change</i> . 5: 207-214. Available at: https://www.nature.com/articles/nclimate2508 .	Climate change	Yes	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	Electric Power Research Institute. 2018. Review and Assessment of Electric Vehicle Rate Options in the United States. January 8, 2018. Available at: https://www.epri.com/#/pages/product/000000003002012263/?lang=en-US . Accessed: December 18, 2018.	Other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Electric Vehicle Infrastructure Council. 2017. Annual Report 2017. Presented to Governor Lawrence J. Hogan, Jr. and the Maryland General Assembly. Available at: http://www.mdot.maryland.gov/newMDOT/Planning/Electric_Vehicle/Documents/EVIC_2017_Annual_Report_Final_12-31-2017.pdf .	Other	No	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	Electrified Powertrains. National Academic Press. Available at: https://www.nap.edu/read/21744/chapter/6 . Accessed: October 24, 2018.	Other	Yes	No
NHTSA-2017-0069-0613	Erin Murphy, Environmental Defense Fund	Emanuel, K. 2017. Assessing the Present and Future Probability of Hurricane Harvey's Rainfall. <i>PNAS</i> 114(48) 12681-12684. Available at: www.pnas.org/cgi/doi/10.1073/pnas.1716222114 .	Climate change	Yes	No

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NHTSA-2017-0069-0604	Lou Finazzo, Sierra Club	Emanuel, Kerry. 2017. Assessing the present and future probability of Hurricane Harvey's rainfall. <i>PNAS</i> 114(28): 12681-12684.	Other	Yes	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Enochs, I., et al. 2014. Effects of light and elevated pCO ₂ on the growth and photochemical efficiency of <i>Acropora cervicornis</i> . <i>Coral Reefs</i> . 33(2): 477-485. Available at: https://link.springer.com/article/10.1007%2Fs00338-014-1132-7 . Accessed: June 4, 2019.	Climate change	Yes	No
NHTSA-2017-0069-0580	Troy Knecht, South Dakota Corn Growers Association	Environmental and Energy Study Institute. 2018. Ethanol and Air Quality – Separating Fact from Fiction. October 12, 2018. Available at: https://www.eesi.org/articles/view/ethanol-and-air-quality-separating-fact-from-fiction . Accessed: December 24, 2018.	Energy	No	No
NHTSA-2017-0069-0619	Erin Murphy, Environmental Defense Fund	Environmental Defense Fund (EDF). 2018. Email titled Mid-Term Evaluation of Greenhouse Gas Emissions Standards for Model Year 2022–2025 LightDuty Vehicles; Docket ID No. NHTSA–2016–0068 Renewed and Expanded Request for Supporting Information Regarding the Volpe Model (May 2018).	Other	No	No
NHTSA-2017-0069-0619	Erin Murphy, Environmental Defense Fund	Environmental Defense Fund (EDF). 2018. Email titled Reconsideration of the Final Determination of the Mid-Term Evaluation of Greenhouse Gas Emissions Standards for Model Year 2022–2025 Light-Duty Vehicles; Model Year 2021 Greenhouse Gas Emissions Standards; Docket ID No. Environmental Protection Agency (EPA)–HQ–OAR–2015–0827 Request for Supporting Information regarding the OMEGA Mode (March 2018).	Other	No	No
NHTSA-2017-0069-0619	Erin Murphy, Environmental Defense Fund	Environmental Defense Fund (EDF). 2018. Email titled Request for Supporting Information Regarding the OMEGA Model (September 2018).	Other	No	No

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NHTSA-2017-0069-0584	Erin Murphy, Environmental Defense Fund	Environmental Defense Fund. 2017. Letter Request for Comment on Reconsideration of the Final Determination of the Mid-Term Evaluation of Greenhouse Gas Emissions Standards for Model Year 2022–2025 Light-Duty Vehicles; Request for Comment on Model Year 2021 Greenhouse Gas Emissions Standards (August 21, 2017); EPA–HQ–OAR–2015–0827. Available at: https://www.regulations.gov/document?D=NHTSA-2017-0069-0584 .	Other	No	No
NHTSA-2017-0069-0584	Erin Murphy, Environmental Defense Fund	Environmental Defense Fund. 2018. Impacts of Weakening the Existing EPA Phase 2 GHG Standards. NHTSA-2017-0069-0584, Attachment 1. Available at: https://www.regulations.gov/document?D=NHTSA-2017-0069-0584 .	Energy, air quality, climate change	No	No
NHTSA-2017-0069-0225	Alejandra Nunez, Sierra Club	Environmental Defense Fund. 2018. Impacts of Weakening the Existing EPA Phase 2 GHG Standards. April 2018. Available at: http://blogs.edf.org/climate411/files/2018/04/MTE-Relaxation-Impacts-Final.pdf . Accessed: December 12, 2018.	Air quality	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Environmental Protection Agency. 2016. Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2014. Available at: https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks-1990-2014 .	Climate change	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Environmental Protection Agency. 2016. Proposed Determination on the Appropriateness of the Model Year 2022-2025 Light-Duty Vehicle Greenhouse Gas Emissions Standards under the Midterm Evaluation. Available at: https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100Q3DO.pdf .	Other	No	No

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NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Environmental Protection Agency. 2016. What Climate Change Means for California. Available at: https://www.epa.gov/sites/production/files/2016-09/documents/climate-change-ca.pdf .	Climate change	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Environmental Protection Agency. 2016. What Climate Change Means for Iowa. Available at: https://19january2017snapshot.epa.gov/sites/production/files/2016-09/documents/climate-change-ia.pdf .	Climate change	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Environmental Protection Agency. 2016. What Climate Change Means for Massachusetts. Available at: https://ia801602.us.archive.org/9/items/climate-change-ma/climate-change-ma.pdf .	Climate change	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Environmental Protection Agency. 2016. What Climate Change Means for Minnesota. Available at: https://19january2017snapshot.epa.gov/sites/production/files/2016-09/documents/climate-change-mn.pdf .	Climate change	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Environmental Protection Agency. 2016. What Climate Change Means for New Jersey. Available at: https://www.epa.gov/sites/production/files/2016-09/documents/climate-change-nj.pdf .	Climate change	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Environmental Protection Agency. 2016. What Climate Change Means for North Carolina. Available at: https://19january2017snapshot.epa.gov/sites/production/files/2016-09/documents/climate-change-nc.pdf .	Climate change	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Environmental Protection Agency. 2016. What Climate Change Means for Vermont. Available at: https://19january2017snapshot.epa.gov/sites/production/files/2016-09/documents/climate-change-vt.pdf .	Climate change	No	No

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NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Environmental Protection Agency. 2017. Final Determination on the Appropriateness of the Model Year 2022-2025 Light-Duty Vehicle Greenhouse Gas Emissions Standards under the Midterm Evaluation Response to Comments. Available at: https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100QQ9Y.pdf .	Other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Environmental Protection Agency. 2017. Final Determination on the Appropriateness of the Model Year 2022-2025 Light-Duty Vehicle Greenhouse Gas Emissions Standards under the Midterm Evaluation. Available at: https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100QQ9Y.pdf .	Other	No	No
NHTSA-2017-0069-0703	Erin Murphy; Center for Biological Diversity, Conservation Law Foundation, Environmental Defense Fund, Natural Resources Defense Council, Public Citizen, Inc., Sierra Club, Union of Concerned Scientists	Environmental Protection Agency. 2019. The 2018 EPA Automotive Trends Report: Greenhouse Gas Emissions, Fuel Economy, and Technology Since 1975.	Other	No	No
EPA-HQ-OAR-2018-0283-5765	Fresh Energy	Environmental Protection Agency. 2019. About Smog, Soot, and Other Air Pollution from Transportation. Available at: https://www.epa.gov/transportation-air-pollution-and-climate-change/smog-soot-and-local-air-pollution .	Air quality	No	No

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EPA-HQ-OAR-2018-0283-5765	Fresh Energy	Environmental Protection Agency. EJ 2020: National EJ Challenges. Available at: https://www.epa.gov/environmentaljustice/ej-2020-national-ej-challenges#existing .	Environmental Justice	No	No
NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	Environmental Protection Bureau of NY State AG. 2014. Current Future Trends in Extreme Rainfall Across New York State. Available at: https://ag.ny.gov/pdfs/Extreme_Precipitation_Report%209%20%2014.pdf .	Climate change	Yes	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Environmental Protection Bureau of the New York State Attorney General. 2014. Current & Future Trends in Extreme Rainfall Across New York State. Final. New York City, NY. Available at: https://ag.ny.gov/pdfs/Extreme_Precipitation_Report%209%20%2014.pdf .	Climate change	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Environmental Quality Board. 2015. Minnesota and Climate Change: Our Tomorrow Starts Today. Available at: https://www.eqb.state.mn.us/sites/default/files/documents/EQB%20Climate%20Change%20Communications.pdf .	Climate change	No	No
NHTSA-2017-0069-0606	Lou Finazzo, Sierra Club	Estrada, F., W. J. Wouter Botzen, and R. S. J. Tol. 2015. Economic losses from US hurricanes consistent with an influence from climate change. <i>Nature Geoscience</i> 8: 880.	Climate change, other	Yes	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Executive Office of the President of the United States. 2014. The Cost of Delaying Action to Stem Climate Change. Available at: https://obamawhitehouse.archives.gov/sites/default/files/docs/the_cost_of_delaying_action_to_stem_climate_change.pdf . Accessed: June 5, 2019.	Climate change	Yes	No

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NHTSA-2017-0069-0621	NRDC	Auffhammer, M., et al. 2018. Expert Report by attached to CARB's Comments (The Use of the Social Cost of Carbon in the Federal Proposal "Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks") (October 19, 2018).	Climate change	No	No
NHTSA-2017-0069-0621	NRDC	Gillingham, Kenneth. 2018. Expert Report attached to CARB's Comments ("The Rebound Effect of Fuel Economy Standards: Comment on the Safer Affordable Fuel-Efficient (SAFE) Vehicles Proposed Rule for Model Years 2021-2026 Passenger Cars and Light Trucks") (October 2018) ("Gillingham Rebound Report").	Other	No	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Fabry, V., et al. 2008. Impacts of ocean acidification on marine fauna and ecosystem processes. <i>ICES Journal of Marine Science</i> 65(3): 414-432. Available at: https://academic.oup.com/icesjms/article/65/3/414/789605 . Accessed: June 4, 2019.	Climate change	Yes	No
NHTSA-2017-0069-0568	Lou Finazzo, Sierra Club Erin Murphy, Environmental Defense Fund	Fann, N., et al. 2018. The health impacts and economic value of wildland fire episodes in the U.S.: 2008-2012. <i>The Science of the Total Environment</i> : 610-611: 802-809. doi: 10.1016/j.scitotenv.2017.08.024.	Other	Yes	No
NHTSA-2017-0069-0614	Erin Murphy, Environmental Defense Fund	Federal Highway Administration (FHWA). 2017. Historical Vehicle Miles Traveled Report (ANA7).	Other	No	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	Federal Highway Administration. 2017 National Household Travel Survey (NHTS). Tabulation created on the NHTS website. Households with less than \$50,000 in annual income owned older vehicles (11 years and older) on a percentage basis than middle (\$50-100k) or higher (\$100k+) income groups. Available at: http://nhts.ornl.gov .	Other	No	No

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NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Federal Highway Administration. 2017. Alternative Fuel Corridors. Available at: https://hepgis.fhwa.dot.gov/fhwagis/ViewMap.aspx?map=Highway+Information Electric+Vehicle+(EV-Round+1+and+2)# . Accessed: October 24, 2018.	Energy	No	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Feely, R., et al. 2008. Evidence for upwelling of corrosive 'acidified' water onto the continental shelf. <i>Science</i> . 320(5882). Available at: https://www.pmel.noaa.gov/pubs/outstand/feel3087/feel3087.shtml . Accessed: June 4, 2019.	Climate change	Yes	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Feely, R., et al. 2009. Ocean acidification: Present conditions and future changes in a high CO2 world. <i>Oceanography</i> 22(4): 36-47. Available at: https://tos.org/oceanography/article/ocean-acidification-present-conditions-and-future-changes-in-a-high-co2-wor . Accessed: June 4, 2019.	Climate change	Yes	No
NHTSA-2017-0069-0556	Lou Finazzo, Sierra Club Alejandra Nunez, Sierra Club	Fenn, M. E., et al. 2003. Ecological effects of nitrogen deposition in western US. <i>BioScience</i> 53(4): 404- 420.	Air quality, other	Yes	No
NHTSA-2017-0069-0574	Erin Murphy, Environmental Defense Fund	Ficano, C., and P. Thompson. 2014. Estimating Rebound Effects in Personal Automotive Transport: Gas Price and the Presence of Hybrids. <i>American Economist</i> 59(2): 167-175.	Other	Yes	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	Fingas, Jon. 2018. Fiat Chrysler will launch over 30 EVs and hybrids by 2022. June 2, 2018. Available at: https://www.engadget.com/2018/06/02/fiat-chrysler-launching-over-30-electric-and-hybrid-cars-by-2022/ . Accessed: December 18, 2018.	Other	No	No

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NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Fire and Resource Assessment Program, California Department of Forestry and Fire Protection. 2010. California's Forests and Rangelands: 2010 Assessment. Sacramento, CA. Chapter 1-3. Available at: http://climate.calcommons.org/bib/californias-forests-and-rangelands-2010-assessment .	Climate change	No	No
NHTSA-2017-0069-0606	Lou Finazzo, Sierra Club	Fischbeck, P. S., et al. 2006. Using GIS to Explore Environmental Justice Issues: The Case of U.S. Petroleum Refineries. Center for the Study & Improvement of Regulation.	Environmental justice	No	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	Fischer, C. 2010. Imperfect Competition, Consumer Behavior, and the Provision of Fuel Efficiency in Light-Duty Vehicles. Resources for the Future, Discussion Paper DP 10-60, December 2010.	Other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Fletcher, C. 2010. Hawaii's Changing Climate: Briefing Sheet. Department of Geology and Geophysics, School of Ocean and Earth Science and Technology, University of Hawai'i at Mānoa. HI. Available at: http://www.soest.hawaii.edu/coasts/publications/ClimateBrief_low.pdf .	Climate change	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Fletcher, C. H. 2009. Sea level by the end of the 21st century: A review. <i>Shore and Beach</i> 77(4): 4-12. Available at: http://www.soest.hawaii.edu/coasts/publications/fletcher2009_sealevelreview.pdf .	Climate change	Yes	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Fletcher, C. H., and K. Rotzoll. 2013. Assessment of groundwater inundation as a consequence of sea-level rise. <i>Nature Climate Change</i> 3: 477-481. Available at: https://www.nature.com/articles/nclimate1725 .	Climate change	Yes	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Fletcher, C. H., et al. 2012. National Assessment of Shoreline Change: Historical Shoreline Change in the Hawaiian Islands. Final. HI. U.S. Geological Survey Open-File Report. Available at: https://pubs.usgs.gov/of/2011/1051 .	Climate change	No	No

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NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Forbes. 2018. The World's Largest Public Companies. Available at: https://www.forbes.com/global2000/list/#tab:overall . Accessed: October 15, 2018.	Other	No	No
NHTSA-2017-0069-0619	Erin Murphy, Environmental Defense Fund	Ford Motor Company. 2018. Our Climate Commitment: Sustainability Report 2017/18.	Other	No	No
NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	Ford Motor Company. 2018. Sustainability Report 2017/2018: Customers and Products. Available at: https://corporate.ford.com/microsites/sustainability-report-2017-18/index.html .	Life cycle assessment	No	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	Foundation for Advancing Alcohol Responsibility. 2016. 2016 State of Drunk Driving Fatalities in America. Accessed: October 24, 2018. Available at: https://www.responsibility.org/wp-content/uploads/2018/02/2016-State-of-Drunk-Driving-Fatalities.pdf . Accessed: February 4, 2019.	Other	No	No
NHTSA-2017-0069-0556	Lou Finazzo, Sierra Club	Fowler, D., et al. 2013. The global nitrogen cycle in the twenty-first century. <i>Phil Trans R Soc B</i> 368: 20130164. Available at: http://dx.doi.org/10.1098/rstb.2013.0164 .	Other	Yes	No
NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	Franco, G. F., et al. 2018. Cumulative Global CO2 Emissions and Their Climate Impact from Local Through Regional Scales. A Report for: California's Fourth Climate Change Assessment. Available at: http://www.climateassessment.ca.gov/techreports/docs/20180827-Projections_CCCA4-EXT-2018-007.pdf .	Climate change	Yes	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Frankson, R., et al. 2017. Illinois State Climate Summary. NOAA Technical Report NESDIS 149-IL. Available at: https://statesummaries.ncics.org/il .	Climate change	No	No

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NHTSA-2017-0069-0571	Lou Finazzo, Sierra Club	Frankson, R., et al. 2017: California State Climate Summary. NOAA Technical Report NESDIS 149-CA, 17 pp. Available at: https://statesummaries.ncics.org/chapter/ca/ .	Climate change	Yes	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Frey, K., et al. 2015. Divergent patterns of recent sea ice cover across the Bering, Chukchi and Beaufort seas of the Pacific Arctic Region. <i>Progress in Oceanography</i> 136: 32-49. Available at: https://www.sciencedirect.com/science/article/pii/S0079661115001068?via%3Dihub . Accessed: June 4, 2019.	Climate change	Yes	
NHTSA-2017-0069-0556	Alejandra Nunez, Sierra Club Lou Finazzo, Sierra Club	Frieler, K., M. Meinshausen, A. Golly, M. Mengel, K. Lebek, S. D. Donner, and O. Hoegh-Guldberg. 2012. Limiting global warming to 2°C is unlikely to save most coral reefs. <i>Nature Climate Change</i> . 3: 165–170. doi:10.1038/nclimate1674.	Climate change, other	Yes	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Frolicher, T., et al. 2018. Marine heatwaves under global warming. <i>Nature</i> . 560(7718): 360-364. Available at: https://www.ncbi.nlm.nih.gov/pubmed/30111788 . Accessed: June 4, 2019.	Climate change	Yes	No
NHTSA-2017-0069-0574	Erin Murphy, Environmental Defense Fund	Fron-del, M., and C. Vance. 2013. Re-identifying the rebound: What about asymmetry? <i>Energy Journal</i> : 34 (4):43-54.	Other	Yes	No
NHTSA-2017-0069-0574	Erin Murphy, Environmental Defense Fund	Fron-del, M., et al. 2012. Heterogeneity in the Rebound Effect: Further Evidence for Germany. <i>Energy Economics</i> : 34(2): 461-467.	Energy	Yes	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	Frontier Group. 2016. Drive Clean & Save Electric Vehicles are a Good Deal for California Consumers and the Environment. July 6, 2016. Available at: https://environmentcalifornia.org/reports/cae/drive-clean-save . Accessed: December 18, 2018.	Other	No	No

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NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Fuentes, M., et al. 2009. Potential impacts of projected sea-level rise on sea turtle rookeries. <i>Aquatic Conservation: Marine and Freshwater Ecosystems</i> . 20(2): 132-139. Available at: https://onlinelibrary.wiley.com/doi/abs/10.1002/aqc.1088 . Accessed: June 4, 2019.	Climate change	Yes	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Fuentes, M., et al. 2010. Vulnerability of sea turtle nesting grounds to climate change. <i>Global Change Biology</i> 17(1): 140-153. Available at: https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1365-2486.2010.02192.x . Accessed: June 4, 2019.	Climate change	Yes	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Funk, J., et al. 2016. Confronting Climate Change in New Mexico. Final. Union of Concerned Scientists. Available at: https://www.demos.org/sites/default/files/publications/UpdatedNMFULLReport.pdf .	Climate change	No	No
NHTSA-2017-0069-0568	Lou Finazzo, Sierra Club	Garfin, G. 2017. Climate Change Impacts and Adaptation on Southwestern DoD Facilities. <i>Strategic Environmental Research and Development Program (SERDP). Project RC-2232. Environmental Security Technology Certification Program (ESTCP)</i> . Available at: https://apps.dtic.mil/dtic/tr/fulltext/u2/1037504.pdf . Accessed: February 7, 2019.	Climate change	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Garfin, G., et al. 2014. Ch. 20: Southwest. Climate Change Impacts in the United States: The Third National Climate Assessment, J. M. Melillo, Terese (T.C.) Richmond, and G. W. Yohe, Eds., U.S. Global Change Research Program, 462-486. doi:10.7930/J08G8HMN.	Climate change	Yes	No

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NHTSA-2017-0069-0606	Lou Finazzo, Sierra Club	Gasparrini, A., et al. 2017. Projections of temperature-related excess mortality under climate change scenarios. <i>Lancet Planetary Health</i> 1(9): e360-367. Available at: https://doi.org/10.1016/S2542-5196(17)30156-0 . Accessed: February 4, 2019.	Other	Yes	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	Gauderman, W. J., et al. 2004. The effect of air pollution on lung development from 10 to 18 years of age. <i>New England Journal of Medicine</i> 351(11): 1057-1067.	Other	Yes	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	Gauderman, W. J., et al. 2015. Association of improved air quality with lung development in children. <i>New England Journal of Medicine</i> 372(10): 905-913.	Other	Yes	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	Gauderman, W., et al. 2005. Childhood asthma and exposure to traffic and nitrogen dioxide. <i>Epidemiology</i> 16(6): 737-743.	Other	Yes	No
NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	Gaylord, B., et al. 2018. California Mussels as Bio-Indicators of Ocean Acidification. A Report for: California's Fourth Climate Change Assessment. Available at: http://climateassessment.ca.gov/techreports/docs/20180827-Ocean_CCCA4-CNRA-2018-003.pdf .	Climate change	Yes	No
EPA-HQ-OAR-2018-0283-5486	Michael Oppenheimer, Philip B. Duffy, Emmett Environmental Law & Policy Clinic at Harvard Law School	George Washington University, Milken Institute School of Public Health. 2018. Ascertainment of the Estimated Excess Mortality from Hurricane María In Puerto Rico. Executive Summary. p. iii. Available at: https://publichealth.gwu.edu/sites/default/files/downloads/projects/PRstudy/Acertainment%20of%20the%20Estimated%20Excess%20Mortality%20from%20Hurricane%20Maria%20in%20Puerto%20Rico.pdf .	Other	No	No

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NHTSA-2017-0069-0603	Wesley Dyer, California Air Resources Board	German, John. 2015. Hybrid Vehicles Technology Development and Cost Reduction. ICCT.	Other	No	No
NHTSA-2017-0069-0703	Erin Murphy; Center for Biological Diversity, Conservation Law Foundation, Environmental Defense Fund, Natural Resources Defense Council, Public Citizen, Inc., Sierra Club, Union of Concerned Scientists	Gertler, C., et al. 2019. Changing Available Energy for Extratropical Cyclones and Associated Convection in Northern Hemisphere Summer. Available at: https://www.pnas.org/content/116/10/4105 .	Energy	Yes	No
NHTSA-2017-0069-0531	Lou Finazzo, Sierra Club	Gignac, R., and H. Damon Matthews. 2015. Allocating a 2°C cumulative carbon budget to countries. <i>Environmental Research Letters</i> . 10 (2015) 075004. doi:10.1088/1748-9326/10/7/075004. Available at: https://iopscience.iop.org/article/10.1088/1748-9326/10/7/075004/pdf .	Climate change	Yes	No
NHTSA-2017-0069-0574	Erin Murphy, Environmental Defense Fund	Gillingham, K. 2011. The Consumer Response to Gasoline Prices: Empirical Evidence and Policy Implications. Dissertation presented at Stanford University. Available at: https://stacks.stanford.edu/file/druid:wz808zn3318/Gillingham_Dissertation-augmented.pdf .	Other	No	No
NHTSA-2017-0069-0574	Erin Murphy, Environmental Defense Fund	Gillingham, K. 2014. Identifying the Elasticity of Driving: Evidence from a Gasoline Price Shock in California. <i>Regional Science and Urban Economics</i> 47: 13-24.	Other	Yes	No

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NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	Gillingham, K. 2018. How Fuel Economy Standards Affect Fleet Turnover and Used Vehicle Scrappage: Comment on the Safer Affordable Fuel-Efficient (SAFE) Vehicles Proposed Rule for Model Years 2021-2026 Passenger Cars and Light Trucks. Final. Yale University.	Other	No	No
NHTSA-2017-0069-0574	Erin Murphy, Environmental Defense Fund Richard Corey, California Air Resources Board	Gillingham, K., et al. 2015. Heterogeneity in the response to gasoline prices: Evidence from Pennsylvania and implications for the rebound effect. <i>Energy Economics</i> 52(S1): S41- S52, at S41.	Other	Yes	No
NHTSA-2017-0069-0574	Erin Murphy, Environmental Defense Fund	Gillingham, Kenneth. 2014. Identifying the elasticity of driving: Evidence from a gasoline price shock in California. <i>Regional Science and Urban Economics</i> 47: 13–24.	Other	Yes	No
NHTSA-2017-0069-0715	California Air Resources Board	Gleason, K. E., et al. 2019. Four-fold increase in solar forcing on snow in western U.S. burned forests since 1999. <i>Nature Communications</i> . Available at: https://www.nature.com/articles/s41467-019-09935-y .	Climate change	Yes	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Gledhill, D. K., et al. 2015. Ocean and coastal acidification off New England and Nova Scotia. <i>Oceanography</i> 28(2): 182-197. doi.org/10.5670/oceanog.2015.41.	Climate change	Yes	No
NHTSA-2017-0069-0542	Lou Finazzo, Sierra Club	Golden, Christopher. 2016. Fall in Fish Catch Threatens Human Health. <i>Nature: International Journal of Science</i> 534: 317-320.	Other	Yes	No

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NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Goldfuss, Christina. 2016. Memorandum from Christina Goldfuss, Council on Environmental Quality, on Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews to the Heads of Federal Departments and Agencies. Available at: https://ceq.doe.gov/docs/ceq-regulations-and-guidance/nepa_final_ghg_guidance.pdf .	Climate change	No	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	Goldman-Sachs. 2018. An Inflection Point in the Global Expansion of Electric Vehicles. May 14, 2018. Available at: https://www.goldmansachs.com/insights/pages/inflection-point-electric-vehicles-chris-buddin.html . Accessed: December 18, 2018.	Energy	No	No
NHTSA-2017-0069-0585	Lou Finazzo, Sierra Club	Goldstein, D. B., and R. Cavanaugh. 2011. Energy Efficiency and the Rebound Effect. NRDC Blog dated February 17, 2011. Available at: https://www.nrdc.org/experts/david-b-goldstein/energy-efficiency-and-rebound-effect .	Other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Goldstein, T., et al. 2009. The role of domoic acid in abortion and premature parturition of California sea lions (<i>Zalophus californianus</i>) on San Miguel Island, California. <i>Journal of Wildlife Diseases</i> 45(1): 91-108. doi.org/10.7589/0090-3558-45.1.91.	Climate change	Yes	No
NHTSA-2017-0069-0541	Lou Finazzo, Sierra Club	Goldstene, James. Executive Officer. Sacramento, California. California Air Resources Board. September 17, 2009. Letter to U.S. EPA Administrator Liza Jackson Re: Request for Waiver Action Pursuant to Clean Air Act Section 209(b) amendments to California's zero emission vehicle regulations.	Other	No	No
NHTSA-2017-0069-0722	Environmental Defense Fund et al.	Gomez, J. A., U.S. Government Accountability Office. 2019. Climate Change Opportunities to Reduce Federal Fiscal Exposure. Available at: https://www.gao.gov/products/GAO-19-625T .	Climate change	No	No

Table B-2. Sources Identified in Comments on the Draft EIS

Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if provided by commenter)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Gonzalez, P., et al. 2018. Disproportionate magnitude of climate change in the United States national parks. <i>Environmental Research Letters</i> . 13(2018): 104001. doi.org/10.1088/1748-9326/aade09.	Climate change	Yes	No
NHTSA-2017-0069-0580	Troy Knecht, South Dakota Corn Growers Association	Gordon, D., et al. 2015. Know your oil: Creating a global oil-climate index. Washington, DC: Carnegie Endowment for International Peace. Available at: https://carnegieendowment.org/2015/03/11/know-your-oil-creating-global-oil-climate-index-pub-59285 . Accessed: December 24, 2018.	Energy	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Gordon, K., et al. 2015. Heat in the Heartland: Climate Change and Economic Risk in the Midwest. Final. Risky Business. Available at: http://riskybusiness.org/site/assets/uploads/2015/09/RBP-Midwest-Report-WEB-1-26-15.pdf .	Climate change, other	Yes	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Governor's Office of Planning and Research State of California; State of California Energy Commission; & California Natural Resource Agency. 2018. A Summary of Key Findings from California's Fourth Climate Change Assessment. CA. Available at: http://www.climateassessment.ca.gov/state/docs/20180827-SummaryBrochure.pdf .	Climate change	No	No
NHTSA-2017-0069-0559	Jason Schwartz, Institute for Policy Integrity	Graff Zivin, J., and M. M. J. Neidell. 2010. Temperature and the allocation of time: Implications for climate change. <i>Journal of Labor Economics</i> 32: 1–26.	Climate change	Yes	No
NHTSA-2017-0069-0559	Jason Schwartz, Institute for Policy Integrity	Graff Zivin, J., et al. 2018. Temperature and human capital in the short- and long-run. <i>Journal of the Association of Environmental and Resource Economists</i> 5(1): 77-105.	Other	Yes	No
NHTSA-2017-0069-0548	Wesley Dyer, California Air Resources Board	Green Car Congress. 2018. Volkswagen Millerized 1.5 TSI ACT BlueMotion gasoline engine offers diesel-like fuel economy; derivatives may be applied in hybrid systems.	Life cycle assessment	No	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if provided by commenter)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	Green Energy Consumers Alliance. 2018. Drive Green: Your next car should be electric.	Life cycle assessment	No	No
NHTSA-2017-0069-0574	Erin Murphy, Environmental Defense Fund	Green, David. 2009. Rebound 2007: Analysis of U.S. light-duty vehicle travel statistics. <i>Energy Policy</i> 41 (2012) 14–28.	Other	Yes	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Green, R., et al. 2008. The effect of temperature on hospital admissions in nine California counties. <i>Epidemiology</i> 19(6): S267-S268. Available at: https://journals.lww.com/epidem/Fulltext/2008/11001/The_Effect_of_Temperature_on_Hospital_Admissions.745.aspx .	Climate change, other	Yes	No
NHTSA-2017-0069-0617	Erin Murphy, Environmental Defense Fund	Greene, et al. 2017. Consumer Willingness to Pay for Vehicle Characteristics: What Do We Know?	Other	No	No
NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	Greene, Christina. 2018. Broadening understandings of drought: the climate vulnerability of farmworkers and rural communities in California (USA). <i>Environmental Science & Policy</i> 89: 283-291. doi.org/10.1016/j.envsci.2018.08.002.	Climate change	Yes	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Greene, Christina. 2018. Drought Impacts and Drought Vulnerability in Rural Communities of California's San Joaquin Valley. California's Fourth Climate Change Assessment. Available at: http://www.climateassessment.ca.gov/techreports/docs/20180928-PublicHealth_External_Greene.pdf .	Climate change	No	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	Greene, D. L. 2010. How consumers value fuel economy: A literature review. EPA-420-R-10-008.	Other	Yes	No

Appendix B Sources Identified in Public Comments

Table B-2. Sources Identified in Comments on the Draft EIS

Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if provided by commenter)	Issue Addressed by Source	Peer- Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0617	Erin Murphy, Environmental Defense Fund	Greene, D. L. 2017. A Trillion Gallons of Gasoline. Howard L. Baker Jr. Center for Public Policy.	Other	No	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	Greene, D. L., and J. G. Welch. 2018. Impacts of fuel economy improvements on the distribution of income in the US. <i>Energy Policy</i> 122: 528-541.	Other	Yes	No
NHTSA-2017-0069-0694	Center for Biological Diversity et al.	Greene, D., et al. 2018. Consumer willingness to pay for vehicle attributes: What do we know? <i>Transportation Research</i> 118: 258-279. doi.org/10.1016/j.tra.2018.09.013.	Other	Yes	No
NHTSA-2017-0069-0579	Erin Murphy, Environmental Defense Fund	Greenspan, A., and D. Cohen. 1996. Motor Vehicle Stocks, Scrappage, and Sales. Available at: https://www.federalreserve.gov/pubs/feds/1996/199640/199640pap.pdf . Accessed: December 24, 2018.	Other	No	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Griffen, B., et al. 2018. Modeling the metabolic costs of swimming in polar bears (<i>Ursus maritimus</i>). <i>Polar Biology</i> 41(3): 491-503. Available at: https://link.springer.com/article/10.1007/s00300-017-2209-x . Accessed: June 4, 2019.	Other	Yes	No
NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	Griggs, G. A., et al. 2017. Rising Seas in California: An Update on Sea-Level Rise Science. California Ocean Science Trust. Available at: http://www.opc.ca.gov/webmaster/ftp/pdf/docs/rising-seas-in-california-an-update-on-sea-level-rise-science.pdf .	Climate change	No	No
NHTSA-2017-0069-0584	Erin Murphy, Environmental Defense Fund	Gruenspecht, H. K. 1982. Differentiated Regulation: A Theory With Applications To Automobile Emissions Control. Dissertation, Graduate School of Yale University.	Air quality	No	No
NHTSA-2017-0069-0694	Center for Biological Diversity et al.	Gruenspecht, Howard. 1982. Differentiated Regulation: The Case of Auto Emissions Standards. <i>American Economic Review</i> 72(2): 328-31. Available at: https://econpapers.repec.org/article/aeaecrev/v_3a72_3ay_3a1982_3ai_3a2_3ap_3a328-31.htm .	Other	Yes	No

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NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Guidry, M. W., and F. T. Mackenzie. 2006. Climate Change, Water Resources, and Sustainability in the Pacific Basin: Emphasis on Oahu, Hawaii and Majuro Atoll, Republic of the Marshall Islands. University of Hawaii Sea Grant Publication.	Climate change	No	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	Gunier R. B., et al. 2003. Traffic density in California: socioeconomic and ethnic differences among potentially exposed children. <i>Journal of Exposure Analysis and Environmental Epidemiology</i> 13(3): 240-46.	Other	Yes	No
NHTSA-2017-0069-0559	Jason Schwartz, Institute for Policy Integrity	Guo, C., and C. Costello. 2013. The value of adaption: Climate change and timberland management. <i>Journal of Environmental Economics and Management</i> 65: 452–468	Climate change	Yes	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	Haagen-Smit, A. J. 1962. Smog Control – Is it just around the corner? <i>Engineering and Science</i> 26(2).	Air quality	Yes	No
NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	Hall, A., et al. 2018. Los Angeles Summary Report. California's Fourth Climate Change Assessment. Publication number: SUM-CCCA4-2018-007.	Climate change	Yes	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	Handy, S. 2018. Potential Federal Actions to Reduce Vehicle Travel. Available at: https://ww2.arb.ca.gov/sites/default/files/2018-10/10-16-2018_Handy_UC_Davis-Reducing_VMT.pdf .	Climate change, other	No	No
NHTSA-2017-0069-0568	Lou Finazzo, Sierra Club	Hansen, J., et al. 2008. Target Atmospheric CO2: Where should Humanity Aim? <i>The Open Atmospheric Science Journal</i> : 2(1). DOI: 10.2174/1874282300802010217. Available at: https://arxiv.org/ftp/arxiv/papers/0804/0804.1126.pdf . Accessed: December 19, 2018.	Climate change	Yes	No

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NHTSA-2017-0069-0611	Lou Finazzo, Sierra Club	Hansen, J., et al. 2016. Ice melt, sea level rise and superstorms: evidence from paleoclimate data, climate modeling, and modern observation that 2C global warming could be dangerous. <i>Atmospheric Chemistry and Physics</i> 16. Available at: https://www.atmos-chem-phys.net/16/3761/2016/ . Accessed: December 19, 2018.	Climate change	Yes	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	Hardman, S., and G. Tal. 2018. Who are the early adopters of fuel cell vehicles? <i>International Journal of Hydrogen Energy</i> 43(37): 17857-17866. doi.org/10.1016/j.ijhydene.2018.08.006.	Other	Yes	No
NHTSA-2017-0069-0606	Lou Finazzo, Sierra Club	Harlan, S. L., and D. M. Ruddell. 2011. Climate change and health in cities: impacts of heat and air pollution and potential co-benefits from mitigation and adaptation. <i>Current Opinion in Environmental Sustainability</i> 3:126-134.	Other	Yes	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Hatfield, J. L., et al. 2018. Vulnerability of grain crops and croplands in the Midwest to climatic variability and adaptation strategies. <i>Climatic Change</i> 146(1-2): 263-275. Available at: https://link.springer.com/article/10.1007%2Fs10584-017-1997-x .	Climate change, other	Yes	No
NHTSA-2017-0069-0606	Lou Finazzo, Sierra Club	Hauer, M. E., et al. 2016. Millions projected to be at risk from sea-level rise in the continental United States. <i>Nature Climate Change</i> 6: 691-98.	Climate change, other	Yes	No
NHTSA-2017-0069-0606	Lou Finazzo, Sierra Club	Hauer, M. E. 2017. Migration induced by sea-level rise could reshape the US population landscape. <i>Nature Climate Change</i> 7: 321-327.	Other	Yes	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Hawkes, L., et al. 2009. Climate change and marine turtles. <i>Endangered Species Research</i> 7: 137-154. Available at: https://www.int-res.com/articles/esr2009/7/n007p137.pdf . Accessed: June 4, 2019.	Climate change	Yes	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if provided by commenter)	Issue Addressed by Source	Peer- Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0603	Wesley Dyer, California Air Resources Board	H-D Systems. 2017. Update on Fuel Economy Technologies for Meeting the 2025 CAFE Standards Task 1 Report.	Other	No	No
NHTSA-2017-0069-0603	Wesley Dyer, California Air Resources Board	H-D Systems. 2018. Review of the Technology Costs and Effectiveness Utilized in the Proposed SAFE Rule Final Report.	Other	No	No
NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	He, M., et al. 2018. Projected Changes in Precipitation, Temperature, and Drought Across California's Hydrologic Regions A Report for: California's Fourth Climate Change Assessment. Available at: http://www.climateassessment.ca.gov/techreports/docs/20180827-Projections_CCCA4-EXT-2018-002.pdf .	Climate change	Yes	No
NHTSA-2017-0069-0559	Jason Schwartz, Institute for Policy Integrity	Heal, G., et al. 2017. Labor Productivity and Temperature. 1–33.	Other	Yes	No
NHTSA-2017-0069-0615	Lou Finazzo, Sierra Club	Health Effects Institute. 2010. Traffic-Related Air Pollution: A Critical Review of the Literature on Emissions, Exposure, and Health Effects.	Other	Yes	No
NHTSA-2017-0069-0694	Center for Biological Diversity et al.	Helfand, G., and A. Wolverton. 2011. Evaluating the Consumer Response to Fuel Economy: A Review of Literature. <i>International Review of Environmental and Resource Economics</i> 5(2):103–146. DOI:10.1561/101.00000040.	Other	Yes	No
NHTSA-2017-0069-0615	Lou Finazzo, Sierra Club	Helfand, Gloria. Ann Arbor, MI. U.S. Environmental Protection Agency. May 11, 2017. Letter to Mid-term Evaluation of Model Year 2022-2025 Light-duty Vehicle Greenhouse Gas Emissions Standards - Docket Environmental Protection Agency (EPA)-HQ-OAR-2015-0827. Regarding Society for Benefit-Cost Analysis Annual Meeting.	Other	No	No

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NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Helper, S., et al. 2018. Why undermining fuel efficiency standards would harm the US auto industry. Brookings The Avenue blog. Available at: https://www.brookings.edu/blog/the-avenue/2018/07/02/why-undermining-fuel-efficiency-standards-would-harm-the-us-auto-industry/ .	Other	No	No
NHTSA-2017-0069-0556	Lou Finazzo, Sierra Club Alejandra Nunez, Sierra Club	Hernández, D. L., et al. 2016. Nitrogen pollution is linked to US endangered species declines. <i>BioScience</i> 66: 213–222. doi:10.1093/biosci/biw003.	Air quality, other	Yes	No
NHTSA-2017-0069-0611	Lou Finazzo, Sierra Club	Herring, S., et al. 2018. Explaining Extreme Events of 2016 from a Climate Perspective. American Meteorological Society. <i>Bull Amer. Meteor. Soc.</i> 99 (1). Available at: http://www.ametsoc.net/eee/2016/2016_bams_eee_low_res.pdf . DOI: 10.1175/BAMS-ExplainingExtremeEvents2016.1. Accessed: December 19, 2018.	Climate change	Yes	No
NHTSA-2017-0069-0561	Erin Murphy, Environmental Defense Fund	Heslin Rothenberg, F., and P. C. Mesiti. 2015. Clean Energy Patent Growth Index (CEPGI).	Other	No	No
NHTSA-2017-0069-0559	Jason Schwartz, Institute for Policy Integrity	Heutel, G., et al. 2017. Adaptation and the mortality effects of temperature across U.S. climate regions. NBER WORK. PAP. 23271: 58.	Other	Yes	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	Higashiyama, J. 2009. State automobile dealer franchise laws: have they become the proverbial snake in the grass? SSRN. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1394877 . Accessed: October 24, 2018.	Other	No	No

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NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Hillaker, H. J. 2012. The Drought of 2012 in Iowa. Iowa Department of Agriculture and Land Stewardship. Des Moines, IA. Available at: https://www.iowaagriculture.gov/climatology/weatherSummaries/2012/DroughtIowa2012Revised.pdf .	Climate change	No	No
NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	Hoegh-Guldberg, O., et al. 2018. Chapter 3: Impacts of 1.5 C global warming on natural and human systems. In: Global Warming of 1.5 °C. Intergovernmental Panel on Climate Change. Available at: https://www.ipcc.ch/sr15/ .	Climate change	Yes	No
NHTSA-2018-0067-12378	Alejandra Nunez, Sierra Club Jean Su, Center for Biological Diversity et al.	Hoegh-Guldberg, Ove et al. 2017. Coral reef ecosystems under climate change and ocean acidification. <i>Frontiers in Marine Science</i> . 4. Available at: https://www.frontiersin.org/articles/10.3389/fmars.2017.00158/full . Accessed: June 4, 2019.	Climate change	Yes	No
NHTSA-2017-0069-0606	Lou Finazzo, Sierra Club	Hoglund, L. E. 2015. Gasoline prices: cyclical trends and market developments. Beyond the Numbers: U.S. Bureau of Labor Statistics 4(8).	Other	No	No
NHTSA-2017-0069-0551	Lou Finazzo, Sierra Club	Honeycutt, Michael. Chair, Science Advisory Board. June 21, 2018. Letter to Administrator Scott Pruitt regarding Science Advisory Board (SAB) Consideration of EPA Planned Actions in the Spring 2017 Unified Agenda of Regulatory and Deregulatory Actions and their Supporting Science.	Other	No	No
NHTSA-2017-0069-0605	Alejandra Nunez, Sierra Club	Hönisch, B., et al. 2012. The geological record of ocean acidification. <i>Science</i> 335(6072): 1058-1063. Available at: https://science.sciencemag.org/content/335/6072/1058 .	Other	Yes	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Horton, R., et al. 2015. New York City Panel on Climate Change 2015 Report Chapter 2: Sea Level Rise and Coastal Storms. <i>Annals of the New York Academy of Science</i> doi.org/10.1111/nyas.12593.	Climate change	Yes	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if provided by commenter)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Horton, R., et al. 2014. Ch. 16: Northeast. Climate Change Impacts in the United States: The Third National Climate Assessment, J. M. Melillo, Terese (T.C.) Richmond, and G. W. Yohe, Eds., U.S. Global Change Research Program. Available at: http://s3.amazonaws.com/nca2014/low/NCA3_Full_Report_16_Northeast_LowRes.pdf?download=1 .	Climate change, other	Yes	No
NHTSA-2017-0069-0614	Erin Murphy, Environmental Defense Fund	Howard, P. H., and J. A. Schwartz. 2018. Expert Report.	Air quality	No	No
NHTSA-2017-0069-0559	Lou Finazzo, Sierra Club Jason Schwartz, Institute for Policy Integrity	Hsiang, S., et al. 2017. Estimating economic damage from climate change in the United States. <i>Science</i> . 356: 1362– 1369. Available at: https://science.sciencemag.org/content/356/6345/1362 .	Climate change, other	Yes	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Huenneke, L., et al. 1990. Effects of soil resources on plant invasion and community structure in Californian serpentine grassland. <i>Ecological Society of America</i> 71(2): 478-491. Available at: https://pdfs.semanticscholar.org/7500/45041793d129ba04fb72e5fb99832e1f684a.pdf . Accessed: June 4, 2019.	Other	Yes	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	Huetteman, J., and J. Linn. 2018. The Case of the Disappearing Fuel Cost Savings. September 24, 2018. Available at: http://www.rff.org/blog/2018/case-disappearing-fuel-cost-savings . Accessed: December 18, 2018.	Energy	No	No
NHTSA-2017-0069-0556	Alejandra Nunez, Sierra Club Lou Finazzo, Sierra Club	Hughes, T. P., et al. 2018. Spatial and temporal patterns of mass bleaching of corals in the Anthropocene. <i>Science</i> 359: 80–83.	Climate change, other	Yes	No

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NHTSA-2017-0069-0605	Alejandra Nunez, Sierra Club	Hughson, D. L., et al (eds). 2009. The Mojave Desert: Ecosystem Processes and Sustainability. University of Nevada Press, Las Vegas.	Other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Hurd, Brian H., and Julie Coonrod. 2008. Climate Change and its Implications for New Mexico's Water Resources and Economic Opportunities Technical Report. Final. Las Cruces, NM. NM State University. Available at: https://aces.nmsu.edu/pubs/research/economics/TR45.pdf .	Climate change	No	No
NHTSA-2017-0069-0574	Erin Murphy, Environmental Defense Fund	Hymel, K., et al. 2010. Induced Demand and Rebound Effects in Road Transport. <i>Transportation Research Part B: Methodological</i> 44(10): 1220-1241.	Other	Yes	No
NHTSA-2017-0069-0580	Troy Knecht, South Dakota Corn Growers Association	ICF. 2017. A Life-Cycle Analysis of the Greenhouse Gas Emissions of Corn-Based Ethanol. Prepared for US Department of Agriculture. January 12, 2017. Washington, D.C. Available at: https://www.usda.gov/oce/climate_change/mitigation_technologies/USDAEthanolReport_20170107.pdf . Accessed: December 24, 2018.	Energy	No	No
NHTSA-2017-0069-0555	Simon Mui, National Resources Defense Council (NRDC)	IHS Markit. 2017. Could Lightweighting be the key to meeting your compliance goals? Available at: https://cdn.ihs.com/www/pdf/AUT-BIW-Lightweighting-Infographic.pdf . Accessed: December 21, 2018.	Life cycle assessment	No	No
NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	Illinois Environmental Protection Agency. 2018. Beneficiary Mitigation Plan: Volkswagen Environmental Mitigation Trust Agreement. Available at: https://www2.illinois.gov/epa/Documents/iepa/air-quality/vw-settlement/Illinois%20Beneficiary%20Mitigation%20Plan.pdf .	Climate change, life cycle assessment	No	No

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NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Illinois Environmental Protection Agency. 2018. Beneficiary Mitigation Plan: Volkswagen Environmental Mitigation Trust Agreement. https://www2.illinois.gov/epa/Documents/iepa/air-quality/vw-settlement/Illinois%20Beneficiary%20Mitigation%20Plan.pdf .	Other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Inside EVs. 2018. Monthly Plug-in Sales Scorecard. Available at: https://insideevs.com/monthly-plug-in-sales-scorecard/ . Accessed: October 24, 2018.	Other	No	No
NHTSA-2017-0069-0551	Lou Finazzo, Sierra Club	Institute for Policy Integrity. 2018. Analyzing EPA's Vehicle-Emissions Decisions: Why Withdrawing the 2022-2025 Standards is Economically Flawed. New York, New York.	Other	No	No
NHTSA-2017-0069-0579	Erin Murphy, Environmental Defense Fund	Insurance Institute for Highway Safety. 2018. Benefits of crash avoidance technologies. Highway Loss Data Institute.	Other	No	No
NHTSA-2017-0069-0579	Erin Murphy, Environmental Defense Fund	Insurance Institute for Highway Safety. 2018. Fatality Facts: Vehicle Size and Weight: Passenger Vehicle Occupants 2016. Highway Loss Data Institute. Available at: https://www.iihs.org/iihs/topics/t/vehicle-size-and-weight/fatalityfacts/passenger-vehicles . Accessed: December 24, 2018.	Other	No	No
NHTSA-2017-0069-0601	Wesley Dyer, California Air Resources Board	Interagency Working Group on Social Cost of Greenhouse Gases. 2016. Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866.	Other	No	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if provided by commenter)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Intergovernmental Panel on Climate Change. 2013. Summary for Policymakers. In: Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Stocker, T.F., D. Qin, G.-K. Plattner, M. Tignor, S.K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex and P.M. Midgley (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. Available at: https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5_SPM_FINAL.pdf .	Climate change	Yes	Yes
NHTSA-2017-0069-0568	Lou Finazzo, Sierra Club	Intergovernmental Panel on Climate Change. 2014. Climate Change 2014 - Impacts, Adaptation and Vulnerability: Part A: Global and Sectoral Aspects: Working Group II Contribution to the IPCC Fifth Assessment Report.	Climate change	Yes	Yes
NHTSA-2017-0069-0568	Lou Finazzo, Sierra Club	Intergovernmental Panel on Climate Change. 2014. Climate Change 2014 - Impacts, Adaptation and Vulnerability: Part B: Regional Aspects: Working Group II Contribution to the IPCC Fifth Assessment Report.	Climate change	Yes	Yes
NHTSA-2017-0069-0568	Lou Finazzo, Sierra Club	Intergovernmental Panel on Climate Change. 2014. Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. IPCC, Geneva, Switzerland.	Climate change	Yes	Yes
NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	Intergovernmental Panel on Climate Change. 2018. Changes to Underlying Scientific Technical Assessment to ensure consistency with the approved Summary for Policymakers. Available at: https://www.ipcc.ch/report/sr15/changes-to-the-underlying-scientific-technical-assessment-to-ensure-consistency-with-the-approved-summary-for-policymakers/ .	Climate change	Yes	No

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NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Intergovernmental Panel on Climate Change. 2018. Global Warming of 1.5°C Glossary. Available at: https://www.ipcc.ch/site/assets/uploads/sites/2/2019/02/SR15_AnnexI_Glossary.pdf .	Climate change	Yes	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Intergovernmental Panel on Climate Change. 2018. Global Warming of 1.5°C Headline Statements. Available at: https://www.ipcc.ch/site/assets/uploads/sites/2/2018/07/sr15_headline_statements.pdf .	Climate change	Yes	No
NHTSA-2017-0069-0568	Lou Finazzo, Sierra Club	Intergovernmental Panel on Climate Change. 2018. Special Report: Global warming of 1.5°C. Available at: https://www.ipcc.ch/sr15/ .	Climate change	Yes	No
NHTSA-2017-0069-0722	Environmental Defense Fund et al.	Intergovernmental Panel on Climate Change. 2019. Special Report on Climate Change and Land. Available at: https://www.ipcc.ch/srccl/ .	Climate change, land use	Yes	No
NHTSA-2017-0069-0591	Erin Murphy, Environmental Defense Fund	International Agency for Research on Cancer. 2012. Diesel Engine Exhaust Carcinogenic. Press Release. World Health Organization. June 12, 2012. Available at: https://www.iarc.fr/wp-content/uploads/2018/07/pr213_E.pdf .	Air quality	No	No
NHTSA-2017-0069-0617	Erin Murphy, Environmental Defense Fund	International Council on Clean Transportation. 2015. Light Duty Vehicle Efficiency Standards (January 2015).	Other	No	No
NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	International Council on Clean Transportation. 2017. 2017 Global Update: Light-Duty Vehicle GHG and Fuel Economy Standards. Available at: https://www.theicct.org/publications/2017-global-update-LDV-GHG-FE-standards .	Climate change	Yes	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if provided by commenter)	Issue Addressed by Source	Peer- Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0613	Lou Finazzo, Sierra Club Erin Murphy, Environmental Defense Fund	International Energy Agency. 2017. CO2 Emissions from Fuel Combustion: Overview. 2017. Available at: www.iea.org/publications/freepublications/publication/CO2EmissionsFromFuelCombustion2017Overview.pdf .	Energy, other	No	No
NHTSA-2017-0069-0617	Erin Murphy, Environmental Defense Fund	International Energy Agency. 2018. Global EV Outlook 2018: Towards Cross Modal Electrification.	Other	No	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	International Energy Agency. 2018. Key findings from Global EV Outlook 2018. 2018. Available at: https://www.iea.org/gevo2018/ . Accessed: December 18, 2018.	Energy	No	No
NHTSA-2017-0069-0625 NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	International Energy Agency. 2018. Oil 2018: Analysis and Forecasts to 2023. IEA Market Report Series. Available at: https://www.marinefuels2020.com/mediaroom/iea-market-report-series-oil-2018-analysis-and-forecasts-to-2023/ .	Energy	No	No
NHTSA-2017-0069-0714	Lou Finazzo, Center for Biological Diversity et al.	IPBES. 2019. Global Assessment Report on Biodiversity and Ecosystem Services, Available at: https://ipbes.net/global-assessment-report-biodiversity-ecosystem-services .	Climate change	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Iowa Climate Statement 2017. 2017. Center for Global and Regional Environmental Resilience. Available at: https://www.engineering.uiowa.edu/sites/www.engineering.uiowa.edu/files/wysiwyg_uploads/iowa_climate_statement_2017_its_not_just_the_heat_its_the_humidity_final_august_9_2017.pdf .	Climate change, other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Iowa Department of Homeland Security & Emergency Management. 2011. Final. Missouri River Flood Coordination Task Force Report. Available at: http://publications.iowa.gov/17694/1/HSEMD_AAR_MissouriRiverTF_2011.pdf .	Other	No	No

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NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Iowa Department of Natural Resources Interior Rivers. Available at: https://www.iowadnr.gov/Fishing/Where-to-Fish/Interior-Rivers .	Other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Iowa Flood Center for Legislators. Available at: https://iowafloodcenter.org/resources/for-legislators/ .	Other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Iowa Homeland Security & Emergency Management Iowa Disaster History. Available at: https://www.homelandsecurity.iowa.gov/disasters/iowa_disaster_history.html .	Other	No	No
NHTSA-2017-0069-0559	Jason Schwartz, Institute for Policy Integrity	Isen, A. and W. Reed Walker. 2017. Heat and Long-Run Human Capital Formation. 26.	Other	Yes	No
NHTSA-2017-0069-0694	Erin Murphy, Environmental Defense Fund	Jacobsen, M. R., and V. Benthem. 2015. Vehicle Scrapage and Gasoline Policy. <i>American Economic Review</i> 105(3): 1312–1338. doi:10.1257/aer.20130935.	Other	Yes	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	Johnson and Williams. Characterizing plug-in hybrid electric vehicle consumers most influenced by California's electric vehicle rebate. <i>Transportation Research Record: Journal of the Transportation Research Board</i> 2628: 23–31. Available at: http://dx.doi.org/10.3141/2628-03 .	Other	Yes	No
NHTSA-2017-0069-0585	Lou Finazzo, Sierra Club	Joughin, I., et al. 2014. Marine Ice Sheet Collapse Potentially Under Way for the Thwaites Glacier Basin, West Antarctica. <i>Science</i> 344: 735-738. DOI: 10.1126/science.1249055.	Climate change	Yes	No

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NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	Kahane, C. J. 2010. Relationships between Fatality Risk, Mass, and Footprint in Model Year 1991–1999 and Other Passenger Cars and LTVs, in Final Regulatory Impact Analysis: Corporate Average Fuel Economy for MY 2012–MY 2016 Passenger Cars and Light Trucks, National Highway Traffic Safety Administration. 2010. pp. 464–542.	Other	No	No
NHTSA-2017-0069-0584	Erin Murphy, Environmental Defense Fund	Kahane, C. J. 2015. Lives saved by vehicle safety technologies and associated Federal Motor Vehicle Safety Standards, 1960 to 2012 – Passenger cars and LTVs – With reviews of 26 FMVSS and the effectiveness of their associated safety technologies in reducing fatalities, injuries, and crashes. (Report No. DOT HS 812 069). Washington, DC: National Highway Traffic Safety Administration. Available at: https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812069 .	Other	No	No
NHTSA-2017-0069-0567	R.M. Van Auken, Dynamic Research, Inc.	Kahane, C. J. 2012. Relationships Between Fatality Risk, Mass, and Footprint in Model Year 2000–2007 Passenger Cars and LTVs, Final Report, DOT HS 811 665, National Highway Traffic Safety Administration, Washington, D.C., August 2012 (Docket No. NHTSA-2010-0152-0040).	Other	No	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	Kane, Mark. 2018. Inside EEVs Plug-In Electric Cars Sales In U.S. Surpass 1 Million. October 6, 2018. Available at: https://insideevs.com/1-million-electric-cars-sold-us/ . Accessed: December 18, 2018.	Other	No	No
NHTSA-2017-0069-0585	Lou Finazzo, Sierra Club	Kartha, S., et al. 2018. Cascading biases against poorer countries. <i>Nature Climate Change</i> 8: 348–349. DOI: 10.1038/s41558-018-0152-7.	Other	Yes	No

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NHTSA-2017-0069-0585	Lou Finazzo, Sierra Club	Kay, J., and C. Katz. 2012. Pollution, Poverty and People of Color: Living with Industry. <i>Scientific American</i> Available at: https://www.scientificamerican.com/article/pollution-poverty-people-color-living-industry/ .	Environmental justice	No	No
NHTSA-2017-0069-0532	Wayne Natri, South Coast Air Quality Management District	Kelly Blue Book. 2018. What is 5-Year Cost to Own? Available at: https://www.kbb.com/new-cars/total-cost-of-ownership . Accessed: December 18, 2018.	Other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Kemp, Andrew C., and Benjamin P. Horton. 2013. Contribution of relative sea-level rise to historical hurricane flooding in New York City. <i>Journal of Quaternary Science</i> 28(6): 537-541. doi.org/10.1002/jqs.2653.	Climate change	Yes	No
NHTSA-2017-0069-0574	Erin Murphy, Environmental Defense Fund	Kenneth, S., and K. Van Dender. 2005. The Effect of Improved Fuel Economy on Vehicle Miles Traveled: Estimating the Rebound Effect Using U.S. State Data, 1966-2001. <i>University of California Energy Institute (UCEI)</i> .	Economic change	Yes	No
NHTSA-2017-0069-0620	Lou Finazzo, Sierra Club	Khreis, H., et al. 2017. Exposure to traffic-related air pollution and risk of development of childhood asthma: A systematic review and meta-analysis. <i>Environmental International</i> 100: 1-31. Available at: http://dx.doi.org/10.1016/j.envint.2016.11.012 .	Other	Yes	No
NHTSA-2017-0069-0542	Lou Finazzo, Sierra Club	Kildow, J., et al. 2016. State of US Ocean and Coastal Economies. National Ocean Economics Program.	Other	No	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	Kim, J. J., et al. 2004. Traffic-related air pollution near busy roads: the East Bay Children's Respiratory Health Study. <i>American Journal of Respiratory and Critical Care Medicine</i> 170 (5): 520-6.	Other	Yes	No
NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	Kleeman, M. 2010. Climate Change Impact on Air Quality in California. Report to the CARB. Available at: https://www.arb.ca.gov/research/apr/past/04-349.pdf .	Climate change, air quality	No	No

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NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Klos, P. Z., et al. 2014. Extent of the rain-snow transition zone in the western U.S. under historic and projected climate. <i>Geophysical Research Letters</i> 41: 4560-4568. doi:10.1002/2014GL060500.	Climate change	Yes	No
NHTSA-2017-0069-0574	Erin Murphy, Environmental Defense Fund	Knittel, C., and R. Sandler. 2018. The Welfare Impact of Second-Best Uniform Pigouvian Taxation: Evidence from Transportation. <i>American Economic Journal: Economic Policy</i> 10(4): 211-242.	Other	Yes	No
NHTSA-2017-0069-0617	Erin Murphy, Environmental Defense Fund	Knittel, Christopher R. 2011. Automobiles on Steroids: Product Attribute Trade-Offs and Technological Progress in the Automobile Sector. <i>American Economic Review</i> 2012, 101: 3369:3399.	Other	Yes	No
NHTSA-2017-0069-0613 NHTSA-2017-0069-0604	Erin Murphy, Environmental Defense Fund Lou Finazzo, Sierra Club	Knutson, T. R., et al. 2017. CMIP5 Model-based Assessment of Anthropogenic Influence on Record Global Warmth During 2016. <i>Bull Amer Meter Soc.</i> 99: S11-S15. Available at: https://www.ametsoc.org/ams/index.cfm/publications/bulletin-of-the-american-meteorological-society-bams/explaining-extreme-events-from-a-climate-perspective .	Climate change	Yes	No
NHTSA-2017-0069-0603	Wesley Dyer, California Air Resources Board	Kolwich, Greg. 2013. Light-Duty Vehicle Technology Cost Analysis – European Vehicle Market (Phase 1) Analysis Report BAV 10-449-001B. FEV Inc.	Other	No	No
EPA-HQ-OAR-2018-0283-5486	Michael Oppenheimer, Philip B. Duffy, Emmett Environmental Law & Policy Clinic at Harvard Law School	Kompas, T., et al. 2018. The Effects of Climate Change on GDP by Country and the Global and Economic Gains from Complying with the Paris Climate Accord. <i>Earth's Future</i> 6:1153, 1169, Table A1.	Climate change	Yes	No

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NHTSA-2017-0069-0532	Wayne Nastri, South Coast Air Quality Management District	Kormos, C., and R. Sussman. 2018. Auto Buyers' Valuation of Fuel Economy: A Randomized Stated Choice Experiment. Available at: https://advocacy.consumerreports.org/wp-content/uploads/2018/06/FINAL-Kormos-and-Sussman-2018-%e2%80%93-Auto-buyers-valuation-of-fuel-economy.pdf . Accessed: December 18, 2018.	Other	No	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	Kottsova, Ivana. 2017. Mercedes is spending \$1 billion to go electric in Alabama. September 22, 2017. Available at: https://money.cnn.com/2017/09/22/news/economy/mercedes-alabama-billion-investment-jobs/ . Accessed: December 18, 2018.	Other	No	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	Krupnick, A., et al. 2018. Critiquing the Trump Administration's Analysis of Consumer Behavior in the Proposed CAFE Standards. September 17, 2018. Available at: http://www.rff.org/blog/2018/critiquing-trump-administration-s-analysis-consumer-behavior-proposed-cafe-standards . Accessed: December 18, 2018.	Other	No	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	Krupnick, A., et al. 2018. Questions about the Trump Administration's Cost-Benefit Analysis for its Proposal to Freeze the CAFE Standards. August 20, 2018. Available at: http://www.rff.org/blog/2018/questions-about-trump-administration-s-cost-benefit-analysis-its-proposal-freeze-cafe . Accessed: December 18, 2018.	Other	No	No
EPA-HQ-OAR-2018-0283-7624	Center for Biological Diversity et al.	Kulp, S. A., and B. H. Strauss. 2019. New elevation data triple estimates of global vulnerability to sea-level rise and coastal flooding. <i>Nature Communications</i> . Available at: https://www.nature.com/articles/s41467-019-12808-z .	Climate change	Yes	No

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NHTSA-2017-0069-0530	John Torres, Ohio Corn Wheat Growers Association	Kwasniewski, V., et al. 2015. Petroleum Refinery Greenhouse Gas Emission Variations Related To Higher Ethanol Blends At Different Gasoline Octane Rating And Pool Volume Levels. <i>Biofuels, Bioproducts and Biorefining</i> .10(1): 34-46. DOI:10.1002/bbb.1612.	Air quality, energy	Yes	No
NHTSA-2017-0069-0620	Lou Finazzo, Sierra Club	Kweon, B. S., et al. 2018. Proximity of public schools to major highways and industrial facilities, and students' school performance and health hazards. <i>Environment and Planning B: Urban Analytics and City Science</i> 45(2) 312–329 DOI: 10.1177/0265813516673060.	Other	Yes	No
NHTSA-2017-0069-0706	Andrew Yamamoto	Laffoley, D., et al. 2018. Ocean Connections: An Introduction to Rising Risks From A Warming Ocean. International Union for Conservation of Nature and Natural Resources.	Climate change	No	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	Lambert, Fred. 2018. Tesla to achieve leading \$100/kWh battery cell cost this year, says investor after Gigafactory 1 tour. September 11, 2018. Available at: https://electrek.co/2018/09/11/tesla-100-kwh-battery-cost-investor-gigafactory-1-tour/ . Accessed: December 18, 2018.	Energy	No	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Langdon, C., et al. 2018. Two threatened Caribbean coral species have contrasting responses to combined temperature and acidification stress. <i>Limnology and Oceanography</i> . 63(6): 2450-2464. Available at: https://aslopubs.onlinelibrary.wiley.com/doi/full/10.1002/lno.10952 . Accessed: June 4, 2019.	Climate change	Yes	No
NHTSA-2017-0069-0574	Erin Murphy, Environmental Defense Fund	Langer, A., et al. 2017. From gallons to miles: A disaggregate analysis of automobile travel and externality taxes. <i>Journal of Public Economics</i> : 152: 34–46.	Other	Yes	No
NHTSA-2017-0069-0531	Lou Finazzo, Sierra Club	Le Quere, C., et al. 2017. Global Carbon Budget 2017. <i>Earth Syst. Sci. Data</i> , 10, 405-448, 2018. Available at: https://doi.org/10.5194/essd-10-405-2018 .	Climate change	Yes	No

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NHTSA-2017-0069-0543	Lou Finazzo, Sierra Club	Legislative History of the Clean Air Act Amendments of 1965 and Solid Waste Disposal Act: P.L. 89-272: 79 Stat. 992: October 20, 1965 (1965).	Air quality	No	No
NHTSA-2017-0069-0613 NHTSA-2017-0069-0531	Erin Murphy, Environmental Defense Fund Lou Finazzo, Sierra Club	Lemasson, A. J., et al. 2017. Linking The Biological Impacts Of Ocean Acidification On Oysters To Changes In Ecosystem Services: A Review. <i>Journal of Experimental Marine Biology and Ecology</i> . 492 (2017) 49–62.	Climate change	Yes	No
NHTSA-2017-0069-0559	Jason Schwartz, Institute for Policy Integrity	Lemoine, D., and S. Kapnick. 2015. A top-down approach to projecting market impacts of climate change, NAT. CLIM. CHANG. 7.	Other	Yes	No
NHTSA-2017-0069-0574	Erin Murphy, Environmental Defense Fund	Leung, W. 2015. Three Essays in Energy Economics. Dissertation presented at UC San Diego. Available at: https://escholarship.org/content/qt3h51364m/qt3h51364m.pdf .	Energy, other	No	No
NHTSA-2017-0069-0547	Academy of Integrative Health & Medicine et al.	Levi, J., et al. 2009. Health Problems Heat Up: Climate Change and the Public's Health. Trust for America's Health. Washington, D.C. Available at: https://www.tfah.org/wp-content/uploads/archive//reports/environment/TFAHClimateChangeWeb.pdf/ . Accessed: December 20, 2018.	Climate change	No	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Levitan, D., et al. 2014. Long-term reduced spawning in <i>Orbicella</i> coral species due to temperature stress. <i>Marine Ecology Progress Series</i> . 515: 1-10. Available at: https://www.int-res.com/abstracts/meps/v515/p1-10/ . Accessed: June 4, 2019.	Climate change	Yes	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Lewis, C., et al. 2017. Temporal dynamics of black band disease affecting pillar coral (<i>Dendrogyra cylindrus</i>) following two consecutive hyperthermal events on the Florida Reef Tract. <i>Coral Reefs</i> . 36(2): 427-431. Available at: https://nsuworks.nova.edu/occ_facarticles/956/ . Accessed: June 4, 2019.	Other	Yes	No

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NHTSA-2017-0069-0571	Lou Finazzo, Sierra Club	Lin, M., et al. 2016. US surface ozone trends and extremes from 1980–2014: Quantifying the roles of rising Asian emissions, domestic controls, wildfires, and climate. <i>Atmospheric Chemistry and Physics Discussions</i> : 1–56. 10.5194/acp-2016-1093.	Climate change	Yes	No
NHTSA-2017-0069-0613	Erin Murphy, Environmental Defense Fund	Lin, N., et al. 2016. Hurricane Sandy's Flood Frequency Increasing from Year 1800 to 2100. <i>PNAS</i> 113(43): 12071-12075. Available at: www.pnas.org/content/113/43/12071 .	Climate change	Yes	No
NHTSA-2017-0069-0570	Erin Murphy, Environmental Defense Fund	Linn, J. 2013. The Rebound Effect for Passenger Vehicles. <i>Resources for the Future Discussion Paper</i> No. 13-19-REV. Available at: http://dx.doi.org/10.2139/ssrn.2292007 .	Other	Yes	No
NHTSA-2017-0069-0570	Erin Murphy, Environmental Defense Fund	Linn, J. 2016. The Rebound Effect for Passenger Vehicles, <i>The Energy Journal</i> . Available at: http://dx.doi.org/10.5547/01956574.37.2.jlin .	Other	Yes	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Littell, J. et al. 2013. Forest Ecosystems: Vegetation, Disturbance, and Economics, in <i>Climate Change in the Northwest: Implications for Our Landscapes, Waters, and Communities</i> . Meghan M. Dalton et al. eds. 110-148. Available at: https://link.springer.com/book/10.5822%2F978-1-61091-512-0 .	Climate change	Yes	No
NHTSA-2017-0069-0570	Erin Murphy, Environmental Defense Fund	Liu, Y., et al. 2014. An integrated model for discrete and continuous decisions with application to vehicle ownership, type and usage choices. <i>Transportation Research Part A: Policy and Practice</i> 69: 315–328. 10.1016/j.tra.2014.09.001.	Other	Yes	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Llewellyn, D., and S. Vaddey. 2013. West-Wide Climate Risk Assessment: Upper Rio Grande Impact Assessment. Final. Albuquerque, NM. U.S. Department of the Interior Bureau of Reclamation. Available at: https://www.usbr.gov/watersmart/baseline/docs/urgiamainReport.pdf .	Climate change	No	No

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NHTSA-2017-0069-0559	Jason Schwartz, Institute for Policy Integrity	Lobell, D. B., et al. 2011. Climate trends and global crop production since 1980. <i>Science</i> 333: 80.	Climate change	Yes	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Long, Brian. 2016. Today's Topic: Economic impact of NC agriculture, agribusiness increase to \$84 billion. In the Field Blog. Available at: http://info.ncagr.gov/blog/2016/06/07/todays-topic-economic-impact-of-nc-agriculture-agribusiness-increases-to-84-billion/ .	Other	No	No
NHTSA-2017-0069-0668	Environmental Defense Fund	Long, J. C. S., et al. 2015. An Independent Scientific Assessment of Well Stimulation in California: Executive Summary. An Examination of Hydraulic Fracturing and Acid Stimulations in the Oil and Gas Industry. California Council Science and Technology and Lawrence Berkeley National Laboratory. Available at: https://ccst.us/wp-content/uploads/2015SB4-v2ES.pdf . Accessed: February 5, 2019.	Climate change	Yes	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Los Angeles Department of Water & Power. 2015. Urban Water Management Plan. Available at: https://www.ladwp.com/ladwp/faces/ladwp/aboutus/a-water/a-w-sourcesofsupply/a-w-sos-uwmp;jsessionid=8k04csnGINBQLQLcffmJHzVhjJhGvmyGtv1IkhykP23vfPGv16mM!-1122025690?_adf.ctrl-state=ty6h0ptsh_29&_afLoop=769969106562067&_afWindowMode=0&_afWindowId=null#%40%3F_afWindowId%3Dnull%26_afLoop%3D769969106562067%26_afWindowMode%3D0%26_adf.ctrl-state%3Dcbm7alggm_4 .	Other	No	No

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NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	Lotus Engineering Inc. 2012. Evaluating the Structure and Crashworthiness of a 2020 Model-Year, Mass-Reduced Crossover Vehicle Using FEA Modeling. CARB. Accessed: October 24, 2018. Available at: https://www.arb.ca.gov/msprog/levprog/leviii/final_arb_phase2_report-compressed.pdf . Accessed: February 18, 2019.	Other	No	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Lough, J., et al. 2018. Increasing thermal stress for tropical coral reefs: 1817-2017. <i>Scientific Reports</i> 8(6079). Available at: https://www.nature.com/articles/s41598-018-24530-9 . Accessed: June 4, 2019.	Climate change	Yes	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	Loveday, Steven. 2018. Inside Evs September 2018 Plug-In Electric Vehicle Sales Report Card. October 5, 2018. Available at: https://insideevs.com/september-2018-plug-in-electric-vehicle-sales-report-card/ . Accessed: December 18, 2018.	Other	No	No
NHTSA-2017-0069-0541	Lou Finazzo, Sierra Club	Luedeling E., et al. 2009. Climatic changes lead to declining winter chill for fruit and nut trees in California during 1950–2099. <i>PLoS ONE</i> 4(7): e6166. doi:10.1371/journal.pone.0006166.	Climate change	Yes	No
NHTSA-2017-0069-0585 NHTSA-2017-0069-0584	Lou Finazzo, Sierra Club Erin Murphy, Environmental Defense Fund	Lutsey, N., et al. 2017. Efficiency Technology and Cost Assessment for U.S. 2025–2030 Light-Duty Vehicles. White Paper prepared for The International Council on Clean Transportation. March 2017. Available at: https://www.theicct.org/sites/default/files/publications/US-LDV-tech-potential_ICCT_white-paper_22032017.pdf .	Energy	Yes	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	M. J. Bradley & Associates. 2017. Accelerating the Electric Vehicle Market Potential Roles of Electric Utilities in the Northeast and Mid-Atlantic States. March 2017. Available at: https://www.mjbradley.com/sites/default/files/MJBA_Accelerating_the_Electric_Vehicle_Market_FINAL.pdf . Accessed: December 18, 2018.	Energy	No	No

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NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	M. J. Bradley & Associates. 2017. Electric Vehicle Cost-Benefit Analysis.	Life cycle assessment	No	No
NHTSA-2017-0069-0619	Erin Murphy, Environmental Defense Fund	M. J. Bradley & Associates. 2018. California Transportation Policy Leadership.	Other	No	No
NHTSA-2017-0069-0609	Erin Murphy, Environmental Defense Fund	M. J. Bradley & Associates. 2018. Clean Car Roll-back Estimated costs for American families if U.S. climate pollution and fuel economy standards are relaxed. July 20, 2018.	Climate change	No	No
NHTSA-2017-0069-0619	Erin Murphy, Environmental Defense Fund	M. J. Bradley & Associates. 2018. New Vehicle GHG Emissions Estimates Under Deep Decarbonization Strategies. Available: https://www.mjbradley.com/sites/default/files/New_Vehicle_GHG_Emissions_October2018.pdf . Accessed: February 7, 2019.	Other	No	No
NHTSA-2017-0069-0542	Lou Finazzo, Sierra Club	M. J. Bradley & Associates. 2018. Report on California Technology and Policy Leadership: How California Led the World Toward Cleaner, Advanced Vehicles.	Air quality	No	No
NHTSA-2017-0069-0605 NHTSA-2017-0069-0556	Alejandra Nunez, Sierra Club Lou Finazzo, Sierra Club	Maclean, I. M. D., et al., 2011. Recent Ecological Responses to Climate Change Support Predictions of High Extinction Risk, 108 Proceedings of the National Academy of Sciences of the United States of America 12337.	Climate change	No Yes	No
NHTSA-2017-0069-0585	Lou Finazzo, Sierra Club	Maldonado, J. K., et al. 2013. The impact of climate change on tribal communities in the US: Displacement, relocation, and human rights. <i>Climatic Change</i> 120:601–614. DOI 10.1007/s10584-013-0746-z.	Environmental justice	Yes	No

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NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Mallakpour, Iman, and Gabriele Villarini. 2015. The changing nature of flooding across the central United States. <i>Nature Climate Change</i> 5: 250–254. Available at: https://www.nature.com/articles/nclimate2516 .	Climate change, other	Yes	No
NHTSA-2017-0069-0531	Lou Finazzo, Sierra Club	Mann, M., et al. 2017. Record temperature streak bears anthropogenic fingerprint. <i>Geophysical Research Letter</i> 44:7936–7933. Available at: http://onlinelibrary.wiley.com/doi/10.1002/2017GL074056/abstract . doi:10.1002/2017GL074056.	Climate change	Yes	No
NHTSA-2017-0069-0541	Lou Finazzo, Sierra Club	Mann, Michael, and Peter Gleick. 2015. Climate change and California drought in the 21st century. <i>Proceedings of the National Academy of Sciences</i> 112(13):3858-3859. Available at: https://www.pnas.org/content/pnas/112/13/3858.full.pdf . Accessed: December 20, 2018.	Climate change	Yes	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Marshall, K., et al. 2017. Risks of ocean acidification in the California Current food web and fisheries: Ecosystem model projections. <i>Global Change Biology</i> 23(4): 1525–1539. doi.org/10.1111/gcb.13594.	Climate change, other	Yes	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Maryland Commission on Climate Change. 2015. 2015 Annual Report. Final. MD. Prepared for Larry Hogan, Governor of State of Maryland and the Maryland General Assembly. Available at: https://mde.maryland.gov/programs/Air/ClimateChange/MCCC/Publications/MCCC2015Report.pdf .	Climate change	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Maryland Commission on Climate Change. 2016. 2016 Annual Report. Final. MD. Prepared for Larry Hogan, Governor of State of Maryland and the Maryland General Assembly. Available at: http://mde.maryland.gov/programs/Air/ClimateChange/MCCC/Documents/MCCC_2016_final.pdf .	Climate change	No	No

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NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	Maryland Public Service Commission. 2018. Transforming Maryland's Electric Grid (PC44). 2018. Available at: https://www.psc.state.md.us/transforming-marylands-electric-grid-pc44/ . Accessed: December 18, 2018.	Energy	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Massachusetts Climate Action Partnership. 2015. Massachusetts Wildlife Climate Action Tool – Ecology and Vulnerability Alewife. Available at: http://climateactiontool.org/species/alewife .	Other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Massachusetts Climate Action Partnership. 2015. Massachusetts Wildlife Climate Action Tool –Stressors: Storms and floods. Available at: https://climateactiontool.org/content/storms-and-floods .	Climate change	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Massachusetts Department of Environmental Protection. Apply for MassEVIP Workplace Charging Incentives. Available at: https://www.mass.gov/how-to/apply-for-massevip-workplace-charging-incentives . Accessed: October 21, 2018.	Other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Massachusetts Electric Vehicle Incentive Program. Apply for MassEVIP Fleets Incentives. Available at: https://www.mass.gov/how-to/apply-for-massevip-fleets-incentives . Accessed: October 21, 2018.	Other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Massachusetts Environmental Public Health Tracking. 2014. Pediatric Asthma. Available at: https://matracking.ehs.state.ma.us/Health-Data/Asthma/pediatric.html .	Other	No	No
NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	Massachusetts Executive Office of Energy and Environmental Affairs. 2013. Massachusetts ZEV Action Plan: Roadmap to Reach 30000 ZEV by 2025. Available at: http://opr.ca.gov/docs/Governors_Office_ZEV_Action_Plan_(02-13).pdf .	Life cycle assessment	No	No

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NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Massachusetts Offers Rebates for Electric Vehicles. MORE-EV Program Statistics. Available at: https://mor-ev.org/program-statistics . Accessed: October 21, 2018.	Other	No	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Mathis, J., et al. 2015. Ocean acidification in the surface waters of the Pacific-Arctic boundary regions. <i>Oceanograph</i> . 28(2): 122–135. Available at: https://tos.org/oceanography/article/ocean-acidification-in-the-surface-waters-of-the-pacific-arctic-boundaryreg . Accessed: June 4, 2019.	Climate change	Yes	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Mauger, G. S., et al. 2015. State of Knowledge: Climate Change in Puget Sound. Report prepared for the Puget Sound Partnership and the National Oceanic and Atmospheric Administration. Climate Impacts Group, University of Washington, Seattle. doi:10.7915/CIG93777D.pdf.	Other	No	No
NHTSA-2017-0069-0548	Wesley Dyer, California Air Resources Board	Mazda. 2016. Mazda's Turbocharged SKYACTIV-G 2.5T Engine Wins 2017 Wards '10 Best Engines' Award. Inside Mazda Press Release. December 12, 2016. Available at: https://insidemazda.mazdausa.com/press-release/mazdas-turbocharged-skyactiv-engine-wins-2017-wards-10-best-engines-award/ .	Life cycle assessment	No	No
NHTSA-2017-0069-0584	Erin Murphy, Environmental Defense Fund	Mazda. 2018. Mazda CX-5 ADDS NUMEROUS UPGRADES AFTER BEING ON SALE JUST NINE MONTHS. Inside Mazda. Available at: https://insidemazda.mazdausa.com/press-release/2018-mazda-cx-5-adds-numerous-upgrades/ .	Other	No	No
NHTSA-2017-0069-0552	Lou Finazzo, Sierra Club	McCarthy, Gina. Administrator of the U.S. Environmental Protection Agency. January 12, 2017. Letter to Stakeholders.	Other	No	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	McConnell, R., et al. 2006. Traffic, susceptibility, and childhood asthma. <i>Environmental Health Perspectives</i> 114 (5): 766-72.	Other	Yes	No

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NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	McKibben, S. M., et al. 2017. Climatic regulation of the neurotoxin domoic acid. <i>Proceedings of the National Academy of Sciences</i> 114(2): 239–244. doi.org/10.1073/pnas.1606798114.	Climate change, other	Yes	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	McKinsey and Company. 2017. Electrifying Insights: How Automakers can Drive Electrified Vehicle Sales and Profitability. January 2017. Available at: https://www.mckinsey.com/industries/automotive-and-assembly/our-insights/electrifying-insights-how-automakers-can-drive-electrified-vehicle-sales-and-profitability . Accessed: December 18, 2018.	Other	No	No
NHTSA-2017-0069-0542	Lou Finazzo, Sierra Club	Medellín-Azuara, J., et al. 2016. Economic Analysis of 2016 CA Drought on Agriculture. Center for Watershed Sciences, University of California - Davis.	Climate change	No	No
NHTSA-2017-0069-0613 NHTSA-2017-0069-0531	Erin Murphy, Environmental Defense Fund Lou Finazzo, Sierra Club	Meehla, G. A., et al. 2016. US Daily Temperature Records Past, Present, and Future. <i>Proceedings of the National Academy of Sciences of the United States of America</i> 113(49): 13977–13982.	Climate change	Yes	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Meier, W., et al. 2014. Arctic sea ice transformation: A review of recent observed changes and impacts on biology and human activity. <i>Reviews of Geophysics</i> 52(3): 185-217. Available at: https://agupubs.onlinelibrary.wiley.com/doi/full/10.1002/2013RG000431 . Accessed: June 4, 2019.	Climate change	Yes	No
NHTSA-2017-0069-0531 NHTSA-2017-0069-0613	Lou Finazzo, Sierra Club Erin Murphy, Environmental Defense Fund	Meinshausen, M., et al. 2009. Greenhouse-Gas Emission Targets for Limiting Global Warming to 2°C. <i>Nature: International Journal of Science</i> 458: 1158–1163. doi:10.1038/nature08017.	Climate change	Yes	No

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NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	Meng, Y-Y., et al. 2008. Are frequent asthma symptoms among low-income individuals related to heavy traffic near homes, vulnerabilities, or both? <i>Annals of Epidemiology</i> 18(5):343–350.	Other	Yes	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	Michelle, W., et al. 2012. Traffic-related air toxics and term low birth weight in Los Angeles County, California. <i>Environmental Health Perspectives</i> 120(1): 132–138.	Other	Yes	No
EPA-HQ-OAR-2018-0283-4030	Fond du Lac Band of Lake Superior Chippewa	Minnesota Department of Natural Resources. Climate of Minnesota. Available at: https://www.dnr.state.mn.us/climate/index.html .	Climate change	No	No
EPA-HQ-OAR-2018-0283-5765	Fresh Energy	Minnesota Pollution Control Agency, Minnesota Department of Health. 2019. Life and Breath: How air pollution affects public health in Minnesota. Available at: https://www.pca.state.mn.us/sites/default/files/aaq1-61.pdf .	Air quality	No	No
NHTSA-2017-0069-0617	Erin Murphy, Environmental Defense Fund	MIT Center for Energy and Environmental Policy Research. 2013. Technological Change, Vehicle Characteristics, and the Opportunity Costs of Fuel Economy Standards.	Other	No	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	Mitchell, Russ, and Jessica Meyers. 2017. China is banning traditional auto engines. Its aim: electric car domination. September 12, 2017. Available at: https://www.latimes.com/business/autos/la-fi-hy-china-vehicles-20170911-story.html . Accessed: December 18, 2018.	Energy	No	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	Mitchell, Russ. 2017. BMW plans 25 all-electric and hybrid vehicles by 2025; Jaguar shows off electric E-type. September 7, 2017. Available at: https://www.latimes.com/business/autos/la-fi-hy-bmw-jaguar-ev-20170907-story.html . Accessed: December 18, 2018.	Other	No	No

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NHTSA-2017-0069-0548	Wesley Dyer, California Air Resources Board	Mitsubishi Electric. 2017. Mitsubishi Electric Begins Mass-producing Auto Industry's First Crankshaft ISG System for 48V Hybrid Vehicles. No. 3141. Mitsubishi Electric Corporation Public Relations Division. Available at: http://www.mitsubishielectric.com/news/2017/pdf/1026-b.pdf .	Life cycle assessment	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Mitton, Jeffry B., and Scott M. Ferenberg, 2012. Mountain Pine Beetle develops an unprecedented summer generation in response to climate warming. <i>The American Naturalist</i> 179(5): E163–E171. Available at: https://www.jstor.org/stable/10.1086/665007 .	Climate change	Yes	No
NHTSA-2017-0069-0585	Lou Finazzo, Sierra Club	Moftakhari, H. R., et al. 2015. Increased nuisance flooding along the coasts of the United States due to sea level rise: Past and future. <i>Geophysical Research Letters</i> 42: 9846–9852. doi:10.1002/2015GL066072.	Climate change	Yes	No
NHTSA-2017-0069-0613	Erin Murphy, Environmental Defense Fund	Monahan W. B., and N. A. Fisichelli. 2014. Climate exposure of US national parks in a new era of change. <i>PLoS ONE</i> 9(7): e101302. doi:10.1371/journal.pone.0101302 (2014).	Climate change	Yes	No
NHTSA-2017-0069-0531	Lou Finazzo, Sierra Club	Monahan, William B., and Nicholas A. Fisichelli. 2014. Climate exposure of us national parks in a new era of change. <i>PLoS ONE</i> . 9(7): e101302. doi:10.1371/journal.pone.	Climate change	Yes	No
NHTSA-2017-0069-0531	Lou Finazzo, Sierra Club	Moody's Investor Service. 2017. Environmental Risks: Evaluating The Impact Of Climate Change On US State And Local Issuers. U.S. Public Finance.	Climate change	No	No
NHTSA-2017-0069-0559 NHTSA-2017-0069-0575	Jason Schwartz, Institute for Policy Integrity Richard Corey, California Air Resources Board	Moore, F., et al. 2017. New science of climate change impacts on agriculture implies higher social cost of carbon. <i>Nature Communications</i> 8. Available at: https://www.nature.com/articles/s41467-017-01792-x .	Climate change, other	Yes	No

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NHTSA-2017-0069-0613	Erin Murphy, Environmental Defense Fund	Mora, C., et al. 2017. Twenty-seven ways a heat wave can kill you: deadly heat in the era of climate change. <i>Circulation Cardiovascular Quality Outcomes</i> 10:e004233. Available at: http://circoutcomes.ahajournals.org/content/10/11/e004233 .	Other	Yes	No
NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	Morley, J. W., et al. 2018. Projecting shifts in thermal habitat for 686 species on the North American continental shelf. <i>PLoS one</i> 13(5), p.e0196127.	Climate change	Yes	No
NHTSA-2017-0069-0585	Lou Finazzo, Sierra Club	Morris, J. 2017. The fear of dying' pervades Southern California's oil-polluted enclaves. <i>Pacific Standard</i> . Article published October 18, 2018. Available at: https://psmag.com/environment/southern-californias-oil-polluted-enclaves .	Air quality	No	No
NHTSA-2017-0069-0620	Lou Finazzo, Sierra Club	Morris, Jim. 2017. "The fear of dying" pervades Southern California's oil-polluted enclaves". Center for Public Integrity.	Other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Mote, P. W., et al. 2016. Perspectives on the causes of exceptionally low 2015 snowpack in the western United States. <i>Geophysical Research Letters</i> 43: 10,980–10,988. doi:10.1002/2016GL069965.	Climate change	Yes	No
NHTSA-2017-0069-0585	Lou Finazzo, Sierra Club	Mouginot, J., et al. 2014. Sustained increase in ice discharge from the Amundsen Sea Embayment, West Antarctica, from 1973 to 2013. <i>Geophysical Research Letters</i> 41:1576–1584. doi:10.1002/2013GL059069.	Climate change	Yes	No
NHTSA-2017-0069-0600	Lou Finazzo, Sierra Club	Muhling, B. A., et al. 2017. Projections of the future occurrence, distribution, and seasonality of three <i>Vibrio</i> species in the Chesapeake Bay under a high-emission climate change scenario. <i>GeoHealth</i> 1: 278–296. doi:10.1002/2017GH000089.	Other	Yes	No

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NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Muller, E., et al. 2018. Bleaching causes loss of disease resistance within the threatened coral species <i>Acropora cervicornis</i> . <i>eLife</i> . 7: e35066. Available at: https://elifesciences.org/articles/35066 . Accessed: June 4, 2019.	Climate change	Yes	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Multi-State ZEV Task Force. About Us. Available at: https://www.zevstates.us/ . Accessed: October 19, 2018.	Other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Multi-State ZEV Task Force. Charging Stations. Available at: https://www.zevstates.us/charging-stations/#/find/nearest?fuel=ELEC&ev_levels=2&ev_levels=dc_fast&ev_levels=1 . Accessed: October 24, 2018.	Other	No	No
NHTSA-2017-0069-0556 NHTSA-2017-0069-0605	Lou Finazzo, Sierra Club Alejandra Nunez, Sierra Club	Nagy, K. A., et al. 1998. Nutritional quality of native and introduced food plants of wild desert tortoises. <i>Journal of Herpetology</i> (32)2:260–267. doi: 10.2307/1565306.	Other	Yes	No
NHTSA-2017-0069-0568	Lou Finazzo, Sierra Club	NASA. Global Temperature data. Last updated December 13, 2018. Available at: https://climate.nasa.gov/vital-signs/global-temperature/ .	Climate change	No	No
NHTSA-2017-0069-0521	Kay Rhoads, Sac and Fox Nation	National Academies of Science, Engineering, and Medicine. 2015. Analysis Used by Federal Agencies to Set Fuel Economy and Greenhouse Gas Standards for U.S. Cars Was Generally of High Quality; Some Technologies and Issues Should Be Re-examined. Available at: http://www8.nationalacademies.org/onpinews/newsitem.aspx?recordid=21744&_ga=2.264906447.1521048013.1545141196-1843990908.1545141196 . Accessed: December 18, 2018.	Air quality, life cycle assessment	No	No

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NHTSA-2017-0069-0616	Jaime Yazzie, National Tribal Air Association	National Academies of Science, Engineering, and Medicine. 2015. Analysis Used by Federal Agencies to Set Fuel Economy and Greenhouse Gas Standards for U.S. Cars Was Generally of High Quality; Some Technologies and Issues Should Be Re-examined. Available at: http://www8.nationalacademies.org/onpinews/newsitem.aspx?RecordID=21744 .	Other	No	No
NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	National Academies of Sciences, Engineering, and Medicine. 2010. Advancing the Science of Climate Change, Chapters 2 and 11. Available at: https://www.nap.edu/catalog/12782/advancing-the-science-of-climate-change .	Climate change	Yes	No
NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	National Academies of Sciences, Engineering, and Medicine. 2016. Attribution of Extreme Weather Events in the Context of Climate Change. Washington, DC: The National Academies Press. Available at: https://doi.org/10.17226/21852 .	Climate change	Yes	No
NHTSA-2017-0069-0593	Irene Gutierrez	National Academy of Sciences. 2011. America's Climate Choices. Washington, D.C. 2011. Available at: https://www.nap.edu/resource/12781/ACC-final-brief.pdf . Accessed: December 20, 2018.	Climate change	No	No
NHTSA-2017-0069-0567	R.M. Van Auken, Dynamic Research, Inc.	National Accounts (NIPA). Table 1.1.9. Implicit Price Deflators for Gross Domestic Product, Bureau of Economic Analysis, Suitland, MD. Available at: https://apps.bea.gov/histdata/Releases/GDP_and_PI/2016/Q4/Third_March-30-2017/Section1all_xls.xls Accessed: October 18, 2018.	Other	No	No
NHTSA-2017-0069-0605	Alejandra Nunez, Sierra Club	National Audubon Society. 2014. Audubon's Birds and Climate Change Report. Available at: http://climate.audubon.org/sites/default/files/Audubon-Birds-Climate-Report-v1.2.pdf .	Climate change	No	No

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NHTSA-2017-0069-0556	Lou Finazzo, Sierra Club	National Audubon Society. 2015. Audubon's Birds and Climate Change Report. Conservation Science, National Audubon Society.	Climate change	No	No
NHTSA-2017-0069-0591	Erin Murphy, Environmental Defense Fund	National Coalition for Advanced Transportation. 2018. Letter titled Request for Extension of Public Comment Period for the Proposed Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks and Draft Environmental Impact Statement dated August 29, 2018. Available at: https://www.regulations.gov/document?D=NHTSA-2017-0069-0591 .	Other	No	No
NHTSA-2017-0069-0584	Erin Murphy, Environmental Defense Fund	National Highway Safety Traffic Administration. 2007. The Impact of Safety Standards and Behavioral Trends on Motor Vehicle Fatality Rates. DOT HS 810 777. Available at: https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/810777v3.pdf . Accessed: December 24, 2018.	Other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	National Highway Traffic Safety Administration. 2006. Final Rule: Average Fuel Economy Standards for Light Trucks Model Years 2008-2011. Available at: https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/2006finalrule.pdf .	Other	No	No
NHTSA-2017-0069-0579	Erin Murphy, Environmental Defense Fund	National Highway Traffic Safety Administration. 2011. Quick Reference Guide to Federal Motor Vehicle Safety Standards and Regulations. DOT HS 811 439. Washington, D.C. Available at: https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/fmvss-quickrefguide-hs811439.pdf . Accessed: December 24, 2018.	Other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	National Highway Traffic Safety Administration. 2012. Corporate Average Fuel Economy Standards Passenger Cars and Light Trucks Model Years 2017-2025. Available at: https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/final_eis_summary.pdf .	Other	No	No

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NHTSA-2017-0069-0555	Simon Mui, National Resources Defense Council	National Highway Traffic Safety Administration. 2016. Update to Future Midsize Lightweight Vehicle Findings in Response to Manufacturer Review and IIHS Small-Overlap Testing. DOT HS 812 237. Washington, D.C. Available at: https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/812237_lightweightvehiclereport.pdf . Accessed: December 21, 2018.	Life cycle assess	No	No
NHTSA-2017-0069-0552	Lou Finazzo, Sierra Club	National Highway Traffic Safety Administration. 2018. CAFE Model Peer Review. DOT HS 812 590. Available at: https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/812590-cafe-peer-review.pdf . Accessed: December 21, 2018.	Other	No	No
NHTSA-2017-0069-0591	Erin Murphy, Environmental Defense Fund	National Highway Traffic Safety Administration. 2018. Letter from U.S. DOT to Natural Resources Defense Council (NRDC) dated April 2, 2018. Available at: https://www.regulations.gov/document?D=NHTSA-2017-0069-0591 .	Other	No	No
NHTSA-2017-0069-0615	Lou Finazzo, Sierra Club	National Highway Traffic Safety Administration. 2018. Proposed CAFE and CO2 Standards MY 2021-2026. Interagency Review Briefing.	Other	No	No
NHTSA-2017-0069-0579	Erin Murphy, Environmental Defense Fund	National Highway Traffic Safety Administration. 2018. Traffic Safety Facts Research Note: 2017 Fatal Motor Vehicle Crashes Overview. DOT HS 812 603. Washington, D.C. Available at: https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812603 . Accessed: December 24, 2018.	Other	No	No
NHTSA-2017-0069-0613	Erin Murphy, Environmental Defense Fund	National Intelligence Council. 2016. Implications for US National Security of Anticipated Climate Change. Available at: https://www.dni.gov/files/documents/Newsroom/Reports%20and%20Pubs/Implications_for_US_National_Security_of_Anticipated_Climate_Change.pdf .	Other	No	No

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NHTSA-2017-0069-0605	Alejandra Nunez, Sierra Club	National Marine Fisheries Service and National Oceanic and Atmospheric Administration. 2006. Final Listing Determinations for Elkhorn and Staghorn Coral. Vol. 71, No. 89. Federal Register 26852 - 26872. Available at: https://www.govinfo.gov/content/pkg/FR-2006-05-09/pdf/06-4321.pdf .	Other	No	No
NHTSA-2017-0069-0605	Alejandra Nunez, Sierra Club	National Marine Fisheries Service. 2015. Elkhorn Coral and Staghorn Coral Recovery Plan, Southeast Regional Office. Available at: https://www.fisheries.noaa.gov/action/recovery-plan-elkhorn-and-staghorn-corals .	Other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	National Ocean Economics Program. 2016. State of the U.S. Ocean and Coastal Economies: Coastal States Summaries 2016 Update. Available at: http://midatlanticocean.org/wp-content/uploads/2016/03/CoastalStatesSummaryReports_2016.pdf .	Other	No	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	National Oceanic and Atmospheric Administration. 2012. Threatened Status for the Arctic, Okhotsk, and Baltic Subspecies of the Ringed Seal and Endangered Status for the Ladoga Subspecies of the Ringed Seal; Final Rule. 77 Federal Register 76706. Available at: https://www.federalregister.gov/documents/2012/12/28/2012-31066/endangered-and-threatened-species-threatened-status-for-the-arctic-okhotsk-and-baltic-subspecies-of . Accessed: June 5, 2019.	Other	No	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if provided by commenter)	Issue Addressed by Source	Peer- Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	National Oceanic and Atmospheric Administration. 2012. Threatened Status for the Beringia and Okhotsk Distinct Population Segments of the <i>Erignathus barbatus nauticus</i> Subspecies of the Bearded Seal; Final Rule. 77 Federal Register 76740. Available at: https://www.federalregister.gov/documents/2012/12/28/2012-31068/endangered-and-threatened-species-threatened-status-for-the-beringia-and-okhotsk-distinct-population . Accessed: June 5, 2019.	Other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	National Oceanic and Atmospheric Administration. 2013. National Coastal Population Report: Population Trends from 1970 to 2020. NOAA State of the Coast Report Series. Available at: https://coast.noaa.gov/digitalcoast/training/population-report.html .	Other	No	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	National Oceanic and Atmospheric Administration. 2014. Endangered and Threatened Wildlife and Plants: Final Listing Determinations on Proposal to List 66 Reef-Building Coral Species and to Reclassify Elkhorn and Staghorn Corals. National Marine Fisheries Services. 79 Federal Register 53851-54123. Available at: https://www.federalregister.gov/documents/2014/09/10/2014-20814/endangered-and-threatened-wildlife-and-plants-final-listing-determinations-on-proposal-to-list-66 . Accessed: June 4, 2019.	Other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	National Oceanic and Atmospheric Administration. 2014. Sea Level Rise and Nuisance Flood Frequency Changes around the United States. NOAA Technical Report NOS CO-OPS 073. Available at: https://tidesandcurrents.noaa.gov/publications/NOAA_Technical_Report_NOS_COOPS_073.pdf .	Climate change	No	No

Table B-2. Sources Identified in Comments on the Draft EIS

Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if provided by commenter)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0598	Lou Finazzo, Sierra Club	National Oceanic and Atmospheric Administration. 2015. Recovery Plan Elkhorn Coral (<i>Acropora palmata</i>) and Staghorn Coral (<i>A. cervicornis</i>). March 2015. Available at: https://www.fisheries.noaa.gov/resource/document/recovery-plan-elkhorn-coral-acropora-palmata-and-staghorn-coral-cervicornis .	Other	No	No
NHTSA-2017-0069-0571	Lou Finazzo, Sierra Club	National Oceanic and Atmospheric Administration. 2015. The National Significance of California's Ocean Economy. Available at: https://coast.noaa.gov/data/digitalcoast/pdf/california-ocean-economy.pdf .	Other	No	No
NHTSA-2017-0069-0621	NRDC	National Oceanic and Atmospheric Administration. 2017. Global Climate Report - Annual 2017. Available at: https://www.ncdc.noaa.gov/sotc/global/201713 .	Climate change	Yes	No
NHTSA-2017-0069-0547	Academy of Integrative Health & Medicine et al.	National Oceanic and Atmospheric Administration. 2017. National Centers for Environmental Information, State of the Climate: National Climate Report for Annual 2017, published online January 2018. Available at: https://www.ncdc.noaa.gov/sotc/global/201713 .	Climate change	No	No
NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	National Oceanic and Atmospheric Administration. 2018. Assessing the US Climate in 2017. Available at: https://www.ncei.noaa.gov/news/national-climate-201712 .	Climate change	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	National Oceanic and Atmospheric Administration. 2018. Mean Sea Level Trends for Global Network Stations: Average Seasonal Cycle Data. Available at: https://tidesandcurrents.noaa.gov/sltrends/sltrends_global.shtml .	Climate change	No	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if provided by commenter)	Issue Addressed by Source	Peer- Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0547	Academy of Integrative Health & Medicine et al.	National Oceanic and Atmospheric Administration. 2018. State of the Climate: National Climate Report for Annual 2017. National Centers for Environmental Information. Available at: https://www.ncdc.noaa.gov/sotc/national/201713 . Accessed: December 20, 2018.	Climate change	No	No
NHTSA-2017-0069-0585	Lou Finazzo, Sierra Club	National Oceanic and Atmospheric Administration. 2018. U.S. Billion-Dollar Weather and Climate Disasters: Overview. National Centers for Environmental Information (NCEI). Available at: https://www.ncdc.noaa.gov/billions/ . Accessed: February 7, 2019.	Climate change	No	No
NHTSA-2017-0069-0585	Lou Finazzo, Sierra Club	National Oceanic and Atmospheric Administration. Date Unknown. NOAA Sea Level Rise Viewer. Available at: https://sealevel.nasa.gov/understanding-sea-level/projections/empirical-projections .	Climate change	No	No
NHTSA-2017-0069-0605	Alejandra Nunez, Sierra Club	National Oceanic and Atmospheric Administration. 2010. Proposed Listing of 9 Distinct Population Segments of Loggerhead Sea Turtles, 75 Fed. Reg. 12598-12656.	Other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	National Park Service. 2014. Preserving Coastal Heritage Summary Report. New York City, NY. Available at: https://docs.google.com/viewer?a=v&pid=sites&srcid=ZGVmYXVs dGRvbWVfbnXkZW1vY2xpbWN1bHR8Z3g6MjM0NzUzMTFhYjU4O GY4ZQ .	Climate change	No	No
NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	National Park Service. 2014. Preserving Coastal Heritage Summary Report. April 3-4. Federal Hall National Memorial, New York City. Available at: https://toolkit.climate.gov/reports/preserving-coastal-heritage-summary-report .	Climate change	No	No
NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	National Park Service. 2018. Climate Change Endangers Wildlife. Available at: https://www.nps.gov/pore/learn/nature/climatechange_wildlife.htm .	Climate change	No	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if provided by commenter)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0568	Lou Finazzo, Sierra Club	National Park Service. Climate Change (Everglades National Park). Available at: https://www.nps.gov/ever/learn/nature/climatechange.htm .	Climate change	No	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	National Renewable Energy Laboratory. 2017. Connecting Electric Vehicles to the Grid for Greater Infrastructure Resilience. April 20, 2017. Available at: https://www.nrel.gov/news/program/2017/connecting-electric-vehicles-to-the-grid-for-greater-infrastructure-resilience.html . Accessed: December 18, 2018.	Energy	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	National Research Council of the National Academies. 2004. Atlantic Salmon in Maine. Washington, D.C. The National Academies Press. 50-53. Available at: https://doi.org/10.17226/10892 .	Other	No	No
NHTSA-2017-0069-0613	Erin Murphy, Environmental Defense Fund	National Research Council. 2010. Advancing the Science of Climate Change. Consensus Study Report. Available at: https://www.nap.edu/catalog/12782/advancing-the-science-of-climate-change .	Climate change	Yes	No
NHTSA-2017-0069-0600	Lou Finazzo, Sierra Club	National Research Council. 2010. Advancing the Science of Climate Change. Contributors America's Climate Choices: Panel on Advancing the Science of Climate Change; Board on Atmospheric Sciences and Climate; Division on Earth and Life Studies. Available at: http://nap.edu/12782 .	Climate change	Yes	No
NHTSA-2017-0069-0600	Lou Finazzo, Sierra Club	National Research Council. 2010. Ocean Acidification: A National Strategy to Meet the Challenges of a Changing Ocean Committee on the Development of an Integrated Science Strategy for Ocean Acidification Monitoring, Research, and Impacts Assessment. Available at: http://nap.edu/12904 .	Other	Yes	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if provided by commenter)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0552	Lou Finazzo, Sierra Club	National Research Council. 2011. Assessment of Fuel Economy Technologies for Light-Duty Vehicles. Washington, DC: The National Academies Press. doi.org/10.17226/12924. Available at: https://www.nap.edu/catalog/12924/assessment-of-fuel-economy-technologies-for-light-duty-vehicles .	Other	Yes	No
NHTSA-2017-0069-0613	Erin Murphy, Environmental Defense Fund	National Research Council. 2011. National Security Implications of Climate Change for Naval Forces, Committee on National Security Implications of Climate Change for U.S. Naval Forces. Consensus Study Report. Available at: www.nap.edu/catalog/12914/national-security-implications-of-climate-change-for-us-naval-forces .	Climate change	Yes	No
NHTSA-2017-0069-0613	Erin Murphy, Environmental Defense Fund	National Research Council. 2011. Understanding Earth's Deep Past: Lessons for Our Climate Future. Committee on the Importance of Deep-Time Geologic Records for Understanding Climate Change Impacts. Consensus Study Report. Available at: www.nap.edu/catalog/13111/understanding-earths-deep-past-lessons-for-our-climate-future .	Climate change	Yes	No
NHTSA-2017-0069-0613	Erin Murphy, Environmental Defense Fund	National Research Council. 2012. Sea Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future, Committee on Sea Level Rise in California, Oregon, and Washington. Consensus Study Report. Available at: www.nap.edu/catalog/13389/sea-level-rise-for-the-coasts-of-california-oregon-and-washington .	Climate change	Yes	No
NHTSA-2017-0069-0613	Erin Murphy, Environmental Defense Fund	National Research Council. 2013. Abrupt Impacts of Climate Change: Anticipating Surprises, Committee on Understanding and Monitoring Abrupt Climate Change and Its Impacts. Consensus Study Report. Available at: www.nap.edu/catalog/18373/abrupt-impacts-of-climate-change-anticipating-surprises .	Climate change	Yes	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if provided by commenter)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0600	Lou Finazzo, Sierra Club	National Research Council. 2013. Climate and Social Stress Implications for Security Analysis. Contributors John D. Steinbruner, Paul C. Stern, and Jo L. Husbands, Editors; Committee on Assessing the Impacts of Climate Change on Social and Political Stresses; Board on Environmental Change and Society; Division of Behavioral and Social Sciences and Education. Washington, DC: The National Academies Press. Available at: http://nap.edu/14682 .	Climate change	Yes	No
NHTSA-2017-0069-0521	Kay Rhoads, Sac and Fox Nation	National Research Council. 2015. Cost, Effectiveness, and Deployment of Fuel Economy Technologies for Light-Duty Vehicles. Washington, DC: The National Academies Press. doi.org/10.17226/21744. Available at: https://www.nap.edu/catalog/21744/cost-effectiveness-and-deployment-of-fuel-economy-technologies-for-light-duty-vehicles .	Air quality, life cycle assessment	No	No
NHTSA-2017-0069-0615	Lou Finazzo, Sierra Club,	National Resources Defense Council (NRDC). 2017. Supplying Ingenuity II: U.S. Suppliers of Key Clean, Fuel-Efficient Vehicle Technologies. May. Available at: https://www.nrdc.org/sites/default/files/supplying-ingenuity-clean-vehicle-technologies-report.pdf .	Other	No	No
NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	National Safety Council. 2018. 2017 Estimates Show Vehicle Fatalities Topped 40000 for Second Straight Year. Available at: https://www.nsc.org/road-safety/safety-topics/fatality-estimates .	Other	No	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	Naughton, Keith, et al. 2018. Ford Goes 'All In' on Electric Cars. January 14, 2018. Available at: https://www.bloomberg.com/news/articles/2018-01-14/ford-doubling-electric-vehicle-spending-to-11-billion-by-2022 . Accessed: December 18, 2018.	Other	No	No

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NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Neal, B., et al. 2017. Caribbean massive corals not recovering from repeated thermal stress events during 2005-2013. <i>Ecology and Evolution</i> 7(5): 1339–1353. Available at: https://onlinelibrary.wiley.com/doi/full/10.1002/ece3.2706 . Accessed: June 4, 2019.	Climate change	Yes	No
NHTSA-2017-0069-0591	Erin Murphy, Environmental Defense Fund	Nescaum. 2018. Letter re: Request to Extend Comment Period and Hold Hearing in Centrally Located Northeast ZEV State dated August 24, 2018. Available at: https://www.regulations.gov/document?D=NHTSA-2017-0069-0591 .	Other	No	No
NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	Nescaum. 2018. Multi-State ZEV Action Plan 2018-2021 Accelerating the Adoption of Zero Emission Vehicles. ZEV Task Force. Available at: https://www.nescaum.org/documents/2018-zev-action-plan.pdf .	Life cycle assessment	No	No
NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	Nescaum. 2018. Northeast Corridor Regional Strategy for Electric Vehicle Charging Infrastructure 2018–2021. Available at: https://www.nescaum.org/documents/northeast-regional-charging-strategy-2018.pdf .	Life cycle assessment	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	New Jersey Climate Adaptation Alliance. 2014. A Summary of Climate Change Impacts and Preparedness Opportunities Affecting Natural Resources in New Jersey. Rutgers State University. Available at: https://njadapt.rutgers.edu/docman-lister/working-briefs/106-njcaa-natural-resources/file .	Climate change	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	New Jersey Climate Adaptation Alliance. 2014. A Summary of Climate Change Impacts and Preparedness Opportunities for Telecommunications and Energy Utilities in New Jersey. Rutgers State University. Available at: https://njadapt.rutgers.edu/docman-lister/resource-pdfs/97-njcaa-utilities/file .	Climate change	No	No

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NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	New Jersey Climate Adaptation Alliance. 2014. A Summary of Climate Change Impacts and Preparedness Opportunities for the Coastal Community in New Jersey. Rutgers State University. Available at: https://njadapt.rutgers.edu/docman-lister/working-briefs/108-njcaa-coastal-communities/file .	Climate change	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	New Jersey Climate Adaptation Alliance. 2014. A Summary of Climate Change Impacts and Preparedness Opportunities for the Water Resources Sector in New Jersey. Rutgers State University. Available at: https://njadapt.rutgers.edu/docman-lister/resource-pdfs/98-njcaa-water/file .	Climate change	No	No
NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	New Jersey Department of Environmental Protection. 2018. NJ Alternative Fuel Vehicle Report.	Life cycle assessment	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	New York Attorney General. 2018. New York Attorney General's US EPA FOIA Request.	Other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	New York Attorney General. 2018. New York Attorney General's US NHTSA FOIA Request.	Other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	New York City Department of Environmental Protection Climate Change Program. 2008. Assessment and Action Plan. NYC Wastewater Resiliency Plan: Climate Risk Assessment and Adaptation Study.	Climate change	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	New York City Department of Environmental Protection. 2013. NYC Wastewater Resiliency Plan. Available at: https://www1.nyc.gov/html/dep/pdf/climate/climate-cover-letter-toc.pdf .	Other	No	No

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NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	New York City Panel on Climate Change. 2015. Building the Knowledge Base for Climate Resiliency: New York City Panel on Climate Change 2015 Report. <i>Annals of the New York Academy of Science</i> 1336(1). Available at: http://onlinelibrary.wiley.com/doi/10.1111/nyas.2015.1336.issue-1/issuetoc .	Climate change	Yes	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	New York Department of Environmental Conservation. Grant funding for Municipalities. Available at: https://www.dec.ny.gov/energy/109181.html . Accessed: October 24, 2018.	Other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	New York Department of Environmental Conservation. VW Settlement Information. Available at: https://www.dec.ny.gov/chemical/109784.html . Accessed: October 24, 2018.	Other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	New York Department of Health and Mental Hygiene. Air Pollution and the Health of New Yorkers: The impact of Fine Particles and Ozone. (No year). Available at: https://www1.nyc.gov/assets/doh/downloads/pdf/eode/eode-air-quality-impact.pdf .	Other	No	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	New York Power Authority. 2018. Evolve NY. 2018. Available at: https://www.nypa.gov/innovation/programs/evolveny . Accessed: December 18, 2018.	Energy	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	New York State Energy Research and Development Authority. Charge NY. Available at: https://www.nypa.gov/innovation/programs/chargeny Accessed: October 24, 2018.	Energy	No	No

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NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	New York State Energy Research and Development Authority. Drive Clean Rebate Primary Statistics. Available at: https://www.nyserdera.ny.gov/All-Programs/Programs/Drive-Clean-Rebate/Rebate-Data/Rebate-Stats .	Other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	New York State Energy Research and Development Authority. Electric Vehicle Registration Map. Available at: https://www.nyserdera.ny.gov/All-Programs/Programs/ChargeNY/Support-Electric/Map-of-EV-Registrations . Accessed: Oct. 25, 2018.	Other	No	No
NHTSA-2017-0069-0585	Lou Finazzo, Sierra Club	Newell, R. 2017. Unpacking the Administration's Revised Social Cost of Carbon. Blog Post for Resources for the Future dated October 10, 2017. Available at: http://www.rff.org/blog/2017/unpacking-administration-s-revised-social-cost-carbon .	Climate change	No	No
NHTSA-2017-0069-0571	Lou Finazzo, Sierra Club	Next 10. 2018. The Road Ahead for Zero-Emission Vehicles in California: Market Trends & Policy Analysis. Available at: http://next10.org/zev .	Other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Ney York Thruway Authority. Electric Vehicles. Available at: https://www.thruway.ny.gov/travelers/travelplazas/electric-vehicles.html . Accessed: October 24, 2018.	Other	No	No
EPA-HQ-OAR-2018-0283-5486	Michael Oppenheimer, Philip B. Duffy, Emmett Environmental Law & Policy Clinic at Harvard Law School	Nicholls, R.J., et al. 2017. Climate Change 2007: Impacts, Adaptation, and Vulnerability, Contribution of Working Group to the IPCC's Fourth Assessment Report on Climate Change, Coastal Systems and Low-Lying Areas. p. 325–356.	Climate change	No	Yes
NHTSA-2017-0069-0604	Lou Finazzo, Sierra Club	Ning, L., et al. 2016. Hurricane Sandy's flood frequency increasing from year 1800 to 2100. <i>PNAS</i> 113(43): 12071–12075.	Other	Yes	No

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NHTSA-2017-0069-0722	Environmental Defense Fund et al.	NOAA. 2019. Global Greenhouse Gas Reference Network report, Trends in Atmospheric Carbon Dioxide.	Climate change	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	NOAA Office for Coastal Management. 1975. Shoreline Mileage of the United States. Available at: https://coast.noaa.gov/data/docs/states/shorelines.pdf .	Other	No	No
NHTSA-2017-0069-0682 NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Noll, B., et al. 2018. Analyzing EPAs Vehicle-Emissions Decisions: Why Withdrawing the 2022-2025 Standards is Economically Flawed. Institute for Policy Integrity, NYU School of Law. Available at: https://policyintegrity.org/files/publications/Analyzing_EPAs_Fuel-Efficiency_Decisions_Policy_Brief.pdf .	Other	No	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	North Carolina Clean Energy Technology Center. 2018. 50 States of Electric Vehicles 2017 Policy Review. February 2018. Available at: https://nccleantech.ncsu.edu/wp-content/uploads/2018/06/2017_EVs_Final2-1-1.pdf . Accessed: December 18, 2018.	Energy	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	North Carolina Coastal Resource Commission's Science Panel on Coastal Hazards. 201. North Carolina Sea-Level Rise Assessment Report: 2015 Update to the 2010 Report and 2012 Addendum. Draft. NC. Available at: https://files.nc.gov/ncdeq/Coastal%20Management/documents/PDF/Science%20Panel/2015_SLR_Assessment-FinalDraft-2015429.pdf .	Climate change	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	North Carolina Coastal Resource Commission's Science Panel on Coastal Hazards. 2010. North Carolina Sea-Level Rise Assessment Report. Final. NC. Available at: https://www.sealevel.info/NC_Sea-Level_Rise_Assessment_Report_2010--CRC_Science_Panel.pdf .	Climate change	No	No

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NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	North Carolina Department of Environmental Quality, Division of Coastal Management. Sea Level Rise. Available at: https://deq.nc.gov/about/divisions/coastal-management/coastal-management-hot-topics/sea-level-rise .	Climate change	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	North Carolina Department of Health and Human Services, Division of Public Health. 2015. North Carolina Climate and Health Profile. Final. Available at: http://epi.publichealth.nc.gov/oeec/climate/ClimateAndHealthProfile.pdf .	Climate change	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	North Carolina Department of Health and Human Services, Division of Public Health. 2016. North Carolina Climate and Health Adaptation Plan Update. Available at: http://epi.publichealth.nc.gov/oeec/climate/ClimateAndHealthAdaptationPlan.pdf .	Climate change	No	No
NHTSA-2017-0069-0715	California Air Resources Board	Northcott, D., et al. 2019. Impacts of urban carbon dioxide emissions on sea-air flux and ocean acidification in nearshore waters. <i>PLoS ONE</i> 14(3): e0214403. Available at: https://doi.org/10.1371/journal.pone.0214403 .	Climate change	Yes	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Notz, Dirk et al. 2016. Observed Arctic sea ice loss directly follows anthropogenic CO ₂ emission. <i>Science</i> 354(6313): 747–750. Available at: https://science.sciencemag.org/content/354/6313/747.abstract . Accessed: June 4, 2019.	Climate change	Yes	No
NHTSA-2017-0069-0613 NHTSA-2017-0069-0604	Erin Murphy, Environmental Defense Fund Lou Finazzo, Sierra Club	Nurmagambetov, T., et al. 2017. State-level Medical and Absenteeism Cost of Asthma in the United States. <i>Journal of Asthma</i> 54: 357–370. Available at: www.tandfonline.com/doi/full/10.1080/02770903.2016.1218013 .	Other	Yes	No

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NHTSA-2017-0069-0556	Lou Finazzo, Sierra Club	Hoegh-Guldberg, O., et al. 2007. Coral reefs under climate change and ocean acidification. <i>Science</i> 318: 1737–1742. doi: 10.1126/science.1152509.	Climate change	Yes	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Obbard, M., et al. 2010. Polar Bears: Proceedings of the 15 th Working Meeting of the IUCN/SSC Polar Bear Specialist Group, Copenhagen, Denmark 29 June – 3 July 2009. Available at: https://www.researchgate.net/publication/280384609_Polar_Bears_Proceedings_of_the_15th_Working_Meeting_of_the_IUCNSSC_Polar_Bear_Specialist_Group_29_June-3_July_2009_Copenhagen_Denmark . Accessed June 4, 2019.	Other	Yes	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Ocean Resources Management Plan Working Group & University of Hawaii, Center for Island Climate Adaptation and Policy. A Framework for Climate Change Adaptation in Hawaii. 2009. Final. Honolulu, HI. Available at: http://files.hawaii.gov/dbedt/op/czm/ormp/reports/climate_change_adaptation_framework_final.pdf .	Climate change	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	O'Donnell, James. 2017. Sea Level Rise and Coastal Flood Risk in Connecticut: An Overview. Draft. Connecticut Institute for Resilience and Climate Adaptation. University of Connecticut. Available at: https://circa.uconn.edu/wp-content/uploads/sites/1618/2017/09/ExecSummarySeaLevelRise_J_ODonnell_Sept-2017-1.pdf .	Climate change	No	No
NHTSA-2017-0069-0615	Lou Finazzo, Sierra Club	Office of Environmental Health Hazard Assessment. 2017. Analysis of Refinery Chemical Emissions and Health Effects. Draft Report. California Environmental Protection Agency. Available at: https://oehha.ca.gov/media/downloads/faqs/refinerychemicalsreport092717.pdf . Accessed: February 2, 2019.	Other	No	No

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NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	Office of Environmental Health Hazard Assessment. 2017. Tracking Evaluation of Benefits Impacts of GHG Limits in Disadvantaged Communities Initial Report. California Environmental Protection Agency. Available at: https://oehha.ca.gov/media/downloads/environmental-justice/report/oehhaab32report020217.pdf .	Climate change	No	No
NHTSA-2017-0069-0541	Lou Finazzo, Sierra Club	Office of Environmental Health Hazard Assessment. 2018. Indicators of Climate Change in California. California Environmental Protection Agency. Available at: https://oehha.ca.gov/media/downloads/climate-change/report/2018caindicatorsreportmay2018.pdf . Accessed: December 20, 2018.	Climate change	No	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	Office of Management and Budget. 2003. Regulatory Analysis to the Heads of Executive Agencies and Establishments. Circular A-4. White House. September 17, 2003. Available at: https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/circulars/A4/a-4.pdf . Accessed: February 8, 2019.	Other	No	No
NHTSA-2017-0069-0604	Lou Finazzo, Sierra Club	Office of the President. 2014. The Cost of Delaying Action to Stem Climate Change. Available at: https://obamawhitehouse.archives.gov/sites/default/files/docs/the_cost_of_delaying_action_to_stem_climate_change.pdf . Accessed: February 18, 2018.	Other	No	No
NHTSA-2017-0069-0613	Erin Murphy, Environmental Defense Fund	Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics. 2018. Climate-Related Risk to DoD Infrastructure Initial Vulnerability Assessment Survey (SLVAS) Report. Available at: http://www.oea.gov/sites/default/files/resources/climate-related_risk_to_dod_infrastructure_slvas_report.pdf .	Other	No	No

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NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Office of Water Prediction, National Weather Service. 2016. Hurricane Matthew, 6-10 October 2016 Annual Exceedance Probabilities (AEPs) for the Worst Case 24-Hour Rainfall. Available at: https://www.nws.noaa.gov/ohd/hdsc/aep_storm_analysis/AEP_HurricaneMatthew_October2016.pdf .	Climate change	No	No
NHTSA-2017-0069-0585	Lou Finazzo, Sierra Club	Oil and Gas News. 2015. The Cyclical Business of Oil Price. Blog published on August 9, 2015. Available at: https://www.oilandgaspeople.com/news/4230/the-cyclical-business-of-oil-price/ .	Other	No	No
NHTSA-2017-0069-0552	Lou Finazzo, Sierra Club	Olechiw, Michael. 2018. Assessment of Technologies for Improving Fuel Economy of Light-Duty Vehicles – Phase 3. ALPHA Vehicle Simulation Presentations to Committee. Available at: http://sites.nationalacademies.org/cs/groups/depssite/documents/webpage/deps_191245.pdf .	Other	No	No
NHTSA-2017-0069-0585	Lou Finazzo, Sierra Club	Oliver, E., et al. 2018. Anthropogenic and Natural Influences on Record 2016 Marine Heat Wave. <i>In Explaining Extreme Events of 2016 from a Climate Perspective. Bulletin of American Meteorological Society</i> 99(1): S44–S48. DOI:10.1175/BAMS-D-17-0093.1.	Climate change	Yes	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Olson, J., et al. 2017. Collar temperature sensor data reveal long-term patterns in southern Beaufort Sea polar bear den distribution on pack ice and land. <i>Marine Ecology Progress Series</i> 564: 211–224. Available at: https://www.int-res.com/abstracts/meps/v564/p211-224/ . Accessed: June 4, 2019.	Other	Yes	No

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NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	Oregon Department of Environmental Quality. 2018. VW Environmental Mitigation Plan for Oregon. Available at: https://digital.osl.state.or.us/islandora/object/osl:301430 .	Climate change, life cycle assessment	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Oregon Department of Environmental Quality. 2018. Electric Vehicles in Oregon. Available at: https://www.oregon.gov/deq/FilterDocs/CFP-electricvehicles.pdf .	Other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Oregon Department of Environmental Quality. 2018. VW Environmental Mitigation Program for the State of Oregon. Available at: https://www.oregon.gov/deq/FilterDocs/VWmitigplan.pdf .	Other	No	No
NHTSA-2017-0069-0594	Ali Mirzakhali, Oregon Department of Environmental Quality	Oregon Department on Environmental Quality. 2018. DEQ Requests Comments on EPA's Proposed Fuel Efficiency and Coal Standards. October 23, 2018.	Climate change	No	No
NHTSA-2017-0069-0585	Lou Finazzo, Sierra Club	O'Rourke, D., and S. Connolly. 2003. Just Oil? The Distribution of Environmental and Social Impacts of Oil Production and Consumption. <i>Annual Review of Environment and Resources</i> 28:587–617. doi: 10.1146/annurev.energy.28.050302.105617. Available at: https://www.annualreviews.org/doi/abs/10.1146/annurev.energy.28.050302.105617 .	Environmental justice, other	Yes	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Orr, J., et al. 2005. Anthropogenic ocean acidification over the twenty-first century and its impact on calcifying organisms. <i>Nature</i> 437: 681–686. Available at: https://www.nature.com/articles/nature04095 . Accessed: June 4, 2019.	Other	Yes	Yes

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if provided by commenter)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Osborne, E., et al. Arctic Report Card 2018. National Oceanic and Atmospheric Administration. Available at: https://www.actic.noaa.gov/Report-Card . Accessed: June 5, 2019.	Climate change	Yes	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Overland, J., et al. 2014. When will the summer arctic be nearly sea ice-free? <i>Geophysical Research Letters</i> 40: 2097–2101. Available at: https://www.researchgate.net/publication/267541077_When_Will_the_Summer_Arctic_Be_Nearly_Sea_Ice-Free . Accessed: June 5, 2019.	Climate change	Yes	No
NHTSA-2017-0069-0585	Lou Finazzo, Sierra Club	Pacala, S., et al. 2004. Stabilization wedges: solving the climate problem for the next 50 years with current technologies. <i>Science</i> 305:968–972. doi: 10.1126/science.1100103.	Climate change	Yes	No
NHTSA-2017-0069-0611	Lou Finazzo, Sierra Club	Pachauri, R. K., et al. 2014. Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. 2014. Available at: http://epic.awi.de/37530/ . Accessed: December 19, 2018.	Climate change	No	No
NHTSA-2017-0069-0598	Lou Finazzo, Sierra Club	Pacifici, M., et al. 2017. Species' traits influenced their response to recent climate change. <i>Nature Climate Change</i> February 13, 2017. doi: 10.1038/nclimate3223 Available at: https://www.nature.com/articles/nclimate3223 .	Climate change, other	Yes	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Pagano, A., et al. 2012. Long-distance swimming by polar bears (<i>Ursus maritimus</i>) of the southern Beaufort Sea during years of extensive open water. <i>Canadian Journal of Zoology</i> 90(5): 663-676. Available at: https://pubs.er.usgs.gov/publication/70136255 . Accessed: June 5, 2019.	Other	Yes	No

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NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Pagano, A., et al. 2018. High-energy, high-fat lifestyle challenges an Arctic apex predator, the polar bear. <i>Science</i> 359(6375): 568–572. Available at: https://science.sciencemag.org/content/359/6375/568 . Accessed: June 5, 2019.	Other	Yes	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Parkinson, C., et al. 2014. Spatially mapped reductions in the length of the Arctic sea ice season. <i>Geophysical Research Letters</i> 41(12): 4316–4322. Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4373179/ . Accessed: June 5, 2019.	Climate change	Yes	No
NHTSA-2017-0069-0579	Erin Murphy, Environmental Defense Fund	Parks, Richard. 1977. Determinants of scrapping rates for postwar vintage automobiles. <i>Econometrica</i> 45(5):1099–1115. doi: 10.2307/1914061.	Other	Yes	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Parmesan, C., et al. 2003. A globally coherent fingerprint of climate change impacts across natural systems. <i>Nature</i> 421(6918): 37–42. Available at: https://www.ncbi.nlm.nih.gov/pubmed/12511946 . Accessed: June 5, 2019.	Climate change	Yes	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Parmesan, Camille. 2006. Ecological and evolutionary responses to recent climate change. <i>Annual Review of Ecology, Evolution and Systematics</i> 37(1): 637–669. Available at: https://www.annualreviews.org/doi/abs/10.1146/annurev.ecolsys.37.091305.110100 . Accessed: June 5, 2019.	Climate change	Yes	No
NHTSA-2017-0069-0554	Environmental Law Project, University of Pennsylvania Law School	Parrish, D. D., et al. 2016. Air Quality Improvement in Los Angeles—Perspectives for Developing Cities, 10 FRONTIERS OF ENVTL. SCI. & ENGINEERING 1.	Air quality	Yes	No

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NHTSA-2017-0069-0604	Lou Finazzo, Sierra Club	Pecl, G. T., et al. 2017. Biodiversity redistribution under climate change: Impacts on ecosystems and human well-being. <i>Science</i> 355 (6332):1-9.	Other	Yes	No
NHTSA-2017-0069-0532	Wayne Natri, South Coast Air Quality Management District	Perry, N., et al. 2018. The Road Ahead for Zero-Emission Vehicles in California: Market Trends and Policy Analysis. Next 10. Available at: http://next10.org/sites/default/files/ca-zev-brief.pdf . Accessed: December 18, 2018.	Other	No	No
NHTSA-2017-0069-0604	Lou Finazzo, Sierra Club	Peters, G. P., et al. 2015. Measuring a fair and ambitious climate agreement using cumulative emissions. <i>Environ. Res. Lett.</i> 10: 105004.	Climate change	Yes	No
NHTSA-2017-0069-0584	Erin Murphy, Environmental Defense Fund	Peterson, G. 2018. Vehicle Lightweighting: A Review of the Safety of Reduced Weight Passenger Cars and Light Duty Trucks. Final Report. Prepared for Consumers Union. October 2018. Available at: https://advocacy.consumerreports.org/wp-content/uploads/2018/10/CU-MMTC-Safety-Study-10-24-2018.pdf .	Other	No	No
NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	Pierce, D., et al. 2018. Climate, Drought, and Sea Level Rise Scenarios for California's Fourth Climate Change Assessment. Available at: http://www.climateassessment.ca.gov/techreports/docs/20180827-Projections_CCCA4-CEC-2018-006.pdf .	Climate change	Yes	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Pilfold, N., et al. 2017. Migratory response of polar bears to sea ice loss: to swim or not to swim. <i>Ecography</i> 40(1): 189-199. Available at: https://onlinelibrary.wiley.com/doi/abs/10.1111/ecog.02109 . Accessed: June 5, 2019.	Other	Yes	No

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EPA-HQ-OAR-2018-0283-5765	Fresh Energy	Pratt, G. C., et al. 2015. Traffic, air pollution, minority and socio-economic status: Addressing inequities in exposure and risk. <i>Int J Environ Res Public Health</i> . Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4454972 .	Air quality, environmental justice	Yes	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Pryor, S. C., et al. 2014. Ch. 18: Midwest. Climate Change Impacts in the United States: The Third National Climate Assessment, J. M. Melillo, Terese (T.C.) Richmond, and G. W. Yohe, Editors., U.S. Global Change Research Program, 418-440. DOI:10.7930/J0J1012N.	Climate change, other	Yes	No
NHTSA-2017-0069-0567	R.M. Van Auken, Dynamic Research, Inc.	Puckett, S. M., and J. C. Kindleberger. Relationships between Fatality Risk, Mass, and Footprint in Model Year 2003-2010 Passenger Cars and LTVs –Preliminary Report, John A. Volpe National Transportation Systems Center for the National Highway Traffic Safety Administration, Washington, D.C., June 2016 (Docket No. NHTSA-2016-0068-0012). Available at: https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/2016-prelim-relationship-fatalityrisk-mass-footprint-2003-10.pdf .	Other	No	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	Ragland, D. R. 2018. Strategies to Improve Traffic Safety in the United States and Comments on Safety Impacts of Potential Rollback of Vehicle Efficiency Standards. Safe Transportation Research and Education Center (SafeTREC). University of California, Berkeley. October 23, 2018. Available at: https://ww2.arb.ca.gov/sites/default/files/2018-10/10-23-2018_Ragland_SafeTREC-Traffic_Safety_Strategies.pdf .	Other	No	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	Ragland, D. R., et al. 2018. Safety Impacts of Potential Rollback of Vehicle Efficiency Standards and Policies/Countermeasures to Increase Safety. Safe Transportation Research and Education Center. University of California Berkeley.	Other	No	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if provided by commenter)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0605	Alejandra Nunez, Sierra Club	Randall, C. J., and R. van Woesik. 2015. Contemporary White-band disease in Caribbean corals driven by climate change. <i>Nature Climate Change</i> . doi: 10.1038/nclimate2530. Available at: https://www.nature.com/articles/nclimate2530 .	Climate change	Yes	No
NHTSA-2017-0069-0604	Lou Finazzo, Sierra Club	Raupach, M. R., et al. 2014. Sharing a quota on cumulative carbon emissions. <i>Nature Climate Change</i> 4: 873–879.	Other	Yes	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Ray, G. C., et al. 2016. Decadal Bering Sea seascape change: consequences for Pacific walrus and indigenous hunters. <i>Ecological Applications</i> 26(1): 150702125101008. Available at: https://www.researchgate.net/publication/282515325_Decadal_Bering_Sea_Seascape_Change_Consequences_for_Pacific_Walrus_es_and_Indigenous_Hunters . Accessed: June 5, 2019.	Other	Yes	
NHTSA-2017-0069-0605	Alejandra Nunez, Sierra Club	Reece, J. S., et al. 2013. Sea Level Rise, Land Use, and Climate Change Influence the Distribution of Loggerhead Turtle Nests at the Largest USA Rookery (Melbourne Beach, Florida). 493:259–274. <i>Marine Ecology Progress Series</i> .	Climate change	Yes	No
EPA-HQ-OAR-2018-0283-5486	Michael Oppenheimer, Philip B. Duffy, Emmett Environmental Law & Policy Clinic at Harvard Law School	Reed, K.A., et al. 2018. The Human Influence on Hurricane Florence. Stony Brook University, School of Marine and Atmospheric Sciences. Available at: https://cpb-us-e1.wpmucdn.com/you.stonybrook.edu/dist/4/945/files/2018/09/climate_change_Florence_0911201800Z_final-262u19i.pdf .	Climate change, other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Reeder, W., et al. 2013. Coasts: Complex Changes Affecting the Northwest's Diverse Shorelines, in <i>Climate Change in the Northwest: Implications for Our Landscapes, Waters, and Communities</i> . Meghan M. Dalton et al. eds. 67-109. Available at: https://link.springer.com/book/10.5822%2F978-1-61091-512-0 .	Climate change	Yes	No

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NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Regehr, E., et al. 2010. Survival and breeding of polar bears in the southern Beaufort Sea in relation to sea ice. <i>Journal of Animal Ecology</i> 79(1): 117–127. Available at: https://besjournals.onlinelibrary.wiley.com/doi/full/10.1111/j.1365-2656.2009.01603.x . Accessed: June 5, 2019.	Other	Yes	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Regehr, E., et al. 2016. Conservation status of polar bears (<i>Ursus maritimus</i>) in relation to projected sea-ice declines. <i>Biology Letters</i> 12(12). Available at: https://royalsocietypublishing.org/doi/10.1098/rsbl.2016.0556 . Accessed: June 5, 2019.	Other	Yes	No
NHTSA-2017-0069-0568	Lou Finazzo, Sierra Club	Reid C. E., et al. 2016. Critical review of health impacts of wildfire smoke exposure. <i>Environmental Health Perspectives</i> 124:1334–1343. Available at: http://dx.doi.org/10.1289/ehp.1409277 .	Other	Yes	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Repetto, Robert. 2012. New Mexico's Rising Economic Risks from Climate Change. Final. New York City, NY. DEMOS. Available at: https://www.demos.org/sites/default/files/publications/UpdatedNMFULLReport.pdf .	Climate change, other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Rhode Island Executive Climate Change Coordinating Council (EC4) Science and Technical Advisory Board (STAB). 2016. Annual Report to the Full Council of the EC4, appendix to Rhode Island Executive Climate Change Coordinating Council Annual Report. 33-35. Available at: http://climatechange.ri.gov/documents/ar0616.pdf .	Climate change	No	No
NHTSA-2017-0069-0682 NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Rhode Island Office of Energy Resources. 2018. Charge Up! Program Description. Available at: http://www.energy.ri.gov/documents/Transportation/Charge%20Up!%20Application.pdf .	Life cycle assessment, other	No	No

Table B-2. Sources Identified in Comments on the Draft EIS

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NHTSA-2017-0069-0703	Erin Murphy; Center for Biological Diversity, Conservation Law Foundation, Environmental Defense Fund, Natural Resources Defense Council, Public Citizen, Inc., Sierra Club, Union of Concerned Scientists	Rhodium Group, Energy & Climate Staff. 2019. Preliminary US Emissions Estimates for 2018. Available at: https://rhg.com/research/preliminary-us-emissions-estimates-for-2018 .	Other	No	No
NHTSA-2017-0069-0602	Susan T Conti, Alliance of Automobile Manufacturers	Rice, Paul Jackson. Chief Counsel, Washington, D.C. National Highway Safety Administration. (June 8, 2019) - Letter to the Honorable Joseph T. Curran, Jr., Attorney General, State of Maryland regarding Maryland Fuel Economy Legislation.	Other	No	No
NHTSA-2017-0069-0600	Lou Finazzo, Sierra Club	Richter-Menge, J., et al. 2017. Arctic Report Card 2017. Available at: http://www.arctic.noaa.gov/Report-Card .	Other	No	No
NHTSA-2017-0069-0621	National Resources Defense Council	Ricke, K., et al. 2018. Country-level social cost of carbon. <i>Nature Climate Change</i> 8:895-900. doi: 10.1038/s41558-018-0282-y.	Climate change	Yes	No
NHTSA-2017-0069-0627	Sierra Club	Rignot, E., et al. 2014. Widespread, rapid grounding line retreat of Pine Island, Thwaites, Smith, and Kohler glaciers, West Antarctica, from 1992 to 2011. <i>Geophysical Research Letters</i> 41(10):3502–3509.	Other	Yes	No

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NHTSA-2017-0069-0604	Lou Finazzo, Sierra Club	Risser, M. D., and Wehner, M. F. 2017. Attributable human-induced changes in the likelihood and magnitude of the observed extreme precipitation during Hurricane Harvey. <i>Geophysical Research Letters</i> 44(12):457–412,464. doi.org/10.1002/2017GL075888.	Other	Yes	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	Rissman, Jeffrey. 2017. The Future of Electric Vehicles in the U.S. September 2017. Available at: https://energyinnovation.org/wp-content/uploads/2017/09/Future-of-EVs-Research-Note_FINAL.pdf?utm_source=newsletter&utm_medium=email&utm_campaign=newsletter_axiosgenerate&stream=politics . Accessed: December 18, 2018.	Energy	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Rissman, Jeffrey. 2017. The Future of Electric Vehicles in The U.S., Part 1: 65%-75% New Light-Duty Vehicle Sales by 2050. Forbes. Available at: https://www.forbes.com/sites/energyinnovation/2017/09/14/the-future-of-electric-vehicles-in-the-u-s-part-1-65-75-new-light-duty-vehicle-sales-by-2050/#619eaf3fe289 .	Other	No	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	Roberts, David. 2017. The World's Largest Car Market Just Announced an Imminent End to Gas and Diesel Cars. September 13, 2017. Available at: https://www.vox.com/energy-and-environment/2017/9/13/16293258/ev-revolution . Accessed: December 18, 2018.	Other	No	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Rode, K., et al. 2010. Reduced body size and cub recruitment in polar bears associated with sea ice decline. <i>Ecological Applications</i> 20(3): 768-782. Available at: https://www.ncbi.nlm.nih.gov/pubmed/20437962 . Accessed: June 5, 2019.	Other	Yes	No

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NHTSA-2017-0069-0543	Lou Finazzo, Sierra Club	Rogelj, J., et al. 2018. Mitigation Pathways Compatible with 1.5°C in the Context of Sustainable Development. In: An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty. [V. Masson-Delmotte, P. Zhai, H. O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J. B. R. Matthews, Y. Chen, X. Zhou, M. I. Gomis, E. Lonnoy, T. Maycock, M. Tignor, T. Waterfield (eds.)]. In Press.	Climate change	Yes	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	Rogers, G. 2018. Technical Review of: The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks, Final Report. Prepared by Roush Industries.	Other	No	No
NHTSA-2017-0069-0613	Erin Murphy, Environmental Defense Fund	Romanovsky, V. E., et al. 2017. Terrestrial Permafrost, in Arctic Report Card 2017. Available at: http://www.arctic.noaa.gov/report-card .	Climate change	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Romine, B. M., et al. 2013. Are beach erosion rates and sea-level rise related in Hawaii? <i>Global and Planetary Change</i> 108: 149–157. doi.org/10.1016/j.gloplacha.2013.06.009.	Climate change	Yes	No
NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	Roos, Michelle. (E4 Strategic Solutions). 2018. Climate Justice Summary Report. California's Fourth Climate Change Assessment. Publication number: SUM-CCCA4-2018-012. Available at: http://www.climateassessment.ca.gov/state/docs/20180827-ClimateJusticeSummary.pdf . Accessed: February 5, 2019.	Climate change	Yes	No

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NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Root, T., et al. 2003. Fingerprints of global warming on wild animals and plants. <i>Nature</i> 421(6918): 57–60. Available at: https://www.ncbi.nlm.nih.gov/pubmed/12511952 . Accessed: June 5, 2019.	Other	Yes	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Rosekind, Mark, and John Bozzella. 2016. Auto Alliance Letter from Mitch Bainwol and John Bozzella to Mark Rosekind, PhD and Gina McCarthy Re Petition for Direct Final Rule with Regard to Various Aspects of the Corporate Average Fuel Economy Program and the Greenhouse Gas Program. Available at: https://www.epa.gov/sites/production/files/2016-09/documents/petition_to_epa_from_auto_alliance_and_global_automakers.pdf .	Other	No	No
NHTSA-2017-0069-0559	Jason Schwartz, Institute for Policy Integrity	Roson, Roberto, and Sartori Martina. 2016. Estimation of climate change damage functions for 140 regions in the GTAP 9 database. <i>Journal Global Economic Analysis</i> 1: 78–115.	Climate change	Yes	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Roth, L., et al. 2013. Tracking Acropora fragmentation and population structure through thermal-stress events. <i>Ecological Modelling</i> 263: 223–232. Available at: https://www.researchgate.net/publication/257130753_Tracking_Acropora_fragmentation_and_population_structure_through_the_rmal-stress_events . Accessed: June 5, 2019.	Other	Yes	No
NHTSA-2017-0069-0620	Lou Finazzo, Sierra Club	Rowangould, Gregory M. 2013. A Census of the US Near-Roadway Population - Public Health and Environmental Justice Considerations. <i>Transportation Research Part D: Transport and Environment</i> 25: 59-67. doi.org/10.1016/j.trd.2013.08.003.	Air quality, environmental justice, other	Yes	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	Ruiz, Paul. 2018. The Fuse U.S. Reaches 1 Million Electric Vehicle Sales. October 11, 2018. Available at: http://energyfuse.org/u-s-reaches-1-million-electric-vehicle-sales/ . Accessed: December 18, 2018.	Other	No	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if provided by commenter)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Runkle, J., et al. 2017. Massachusetts State Climate Summary. NOAA Technical Report NESDIS 149-MA. Available at: https://statesummaries.ncics.org/chapter/MA .	Climate change	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Runkle, J., et al. 2017: New Jersey State Climate Summary. NOAA Technical Report NESDIS 149-NJ. Available at: https://statesummaries.ncics.org/nj .	Climate change	No	No
NHTSA-2017-0069-0568	Lou Finazzo, Sierra Club	Runting, R. K., et al. 2017. Incorporating climate change into ecosystem service assessments and decisions: a review. <i>Global Change Biology</i> 23:28–41. doi:10.1111/gcb.13457.	Climate change	Yes	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Sampson, Donald. 2015. Columbia River Basin Tribes Climate Change Capacity Assessment. Final. Portland OR. Hatfield School of Government, Portland State University. Available at: http://atntribes.org/climatechange/wp-content/uploads/2017/11/ColBasinTribes_CCCassessment.pdf .	Climate change	No	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	San Joaquin Valley Air Pollution Control District. 2016. 2016 Plan for the 2008 8-Hour Ozone Standard. Available at: http://valleyair.org/Air_Quality_Plans/Ozone-Plan-2016.htm . Accessed: December 18, 2018.	Air quality	No	No
EPA-HQ-OAR-2018-0283-5765	Fresh Energy	Sanchez, T., et al. 2003. Moving to Equity: Addressing Inequitable Impacts of Transportation Policies on Minorities. Cambridge, MA: The Civil Rights Project at Harvard University. Available at: https://civilrightsproject.ucla.edu/research/metro-and-regional-inequalities/transportation/moving-to-equity-addressing-inequitable-effects-of-transportation-policies-on-minorities/sanchez-moving-to-equity-transportation-policies.pdf .	Other	Yes	No

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NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Saunders, Stephen, Dan Findlay, and Tom Easley. 2012. Doubled Trouble: More Midwestern Extreme Storms. Final. The Rocky Mountain Climate Organization and the Natural Resource Defense Council. Available at: http://www.rockymountainclimate.org/images/Doubled%20Trouble.pdf .	Climate change, other	No	No
NHTSA-2017-0069-0531 NHTSA-2017-0069-0605	Lou Finazzo, Sierra Club Alejandra Nunez, Sierra Club	Scheffers B. R., et al. 2016. The Broad Footprint of Climate Change from Genes to Biomes to People. <i>Science</i> 35(6313): 719. doi: 10.1126/science.aaf7671.	Climate change	Yes	No
NHTSA-2017-0069-0559	Jason Schwartz, Institute for Policy Integrity	Schlenker, Wolfram, and Michael J. Roberts. 2009. Nonlinear temperature effects indicate severe damages to U.S. crop yields under climate change. <i>Proceedings of the National Academy Science</i> 106: 15594–8.	Climate change	Yes	No
NHTSA-2017-0069-0559	Jason Schwartz, Institute for Policy Integrity	Schlenker, W., et al. 2013. US maize adaptability. <i>Nature Climate Change</i> 3:690–691.	Climate change	Yes	No
NHTSA-2017-0069-0559	Jason Schwartz, Institute for Policy Integrity	Schlenker, Wolfram. 2010. Crop Responses to Climate and Weather: Cross-Section and Panel Models, in David Lobell & Marshall Burke (eds.) <i>Climate Change And Food Security</i> . 37:99–108.	Climate change	Yes	No
NHTSA-2017-0069-0568	Lou Finazzo, Sierra Club	Schleussner, C. F., et al. 2016. Differential climate impacts for policy-relevant limits to global warming: the case of 1.5 °C and 2 °C. <i>Earth System Dynamics</i> 7:327-351. doi.org/10.5194/esd-7-327-2016.	Climate change	Yes	No

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NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Schleussner, C. F., et al. 2016. Science and policy characteristics of the Paris Agreement temperature goal. <i>Nature Climate Change</i> 6: 827–835. Available at: https://core.ac.uk/download/pdf/52954970.pdf . Accessed: June 5, 2019.	Climate change	Yes	No
NHTSA-2017-0069-0568	Lou Finazzo, Sierra Club	Schmeltz, M. T., et al. 2016. Economic burden of hospitalizations for heat-related illnesses in the United States, 2001–2010. <i>International Journal of Environmental Research and Public Health</i> 13(9):894. doi:10.3390/ijerph13090894.	Other	Yes	No
NHTSA-2017-0069-0541	Lou Finazzo, Sierra Club	Schoettle, B., and M. Sivak. 2014. An Overview of CAFE Credits and Incorporation of the Benefits of On-Board Carbon Capture. University of Michigan, Transportation Research Institute. UMTRI-2014-15.	Other	No	No
EPA-HQ-OAR-2018-0283-5471	Community Action to Promote Healthy Environments	Schulz, A. J., et al. 2018. Independent and joint contributions of Fine particulate matter exposure and population vulnerability to mortality in the Detroit Metropolitan area. <i>International Journal of Environmental Research and Public Health</i> 15(6):1209.	Air quality	Yes	No
NHTSA-2017-0069-0568	Lou Finazzo, Sierra Club	Schwartz, A. M., et al. 2017. Surveillance for Lyme Disease — United States, 2008–2015. <i>MMWR Surveillance Summaries</i> . 66(No. SS-22):1–12. doi: http://dx.doi.org/10.15585/mmwr.ss6622a1 . Available at: www.cdc.gov/mmwr/volumes/66/ss/ss6622a1.htm .	Other	Yes	No
NHTSA-2017-0069-0605	Alejandra Nunez, Sierra Club	Selmants, P. C., et al. 2012. Realistic plant species losses reduce invasion resistance in a California serpentine grassland. <i>Journal of Ecology</i> 100:723–731. doi: 10.1111/j.1365-2745.2011.01949.x.	Other	Yes	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Semenza, J. C., et al. 1996. Heat-related deaths during the July 1995 heat wave in Chicago. <i>New England Journal of Medicine</i> 335:84-90. doi: 10.1056/NEJM199607113350203.	Climate change, other	Yes	No

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NHTSA-2017-0069-0559	Jason Schwartz, Institute for Policy Integrity	Semenza, J. C., et al. 2012. Climate change and microbiological water quality at California beaches. <i>ECOHEALTH</i> 9:293–297.	Other	Yes	No
NHTSA-2017-0069-0619	Erin Murphy, Environmental Defense Fund	Senators Tom Carper, Dianne Feinstein, and Edward J. Markey. 2018. Letter to Environmental Protection Agency (EPA) and Department of Transportation (DOT). October 25, 2018.	Other	No	No
NHTSA-2017-0069-0559	Jason Schwartz, Institute for Policy Integrity	Severen, C., et al. 2016. A Forward Looking Ricardian Approach: Do Land Markets Capitalize Climate Change Forecasts? <i>NBER WORK. PAP.</i> 22413: 46.	Other	Yes	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	Shankleman, Jess. 2017. The Electric Car Revolution Is Accelerating. July 6, 2017. Available at: https://www.bloomberg.com/news/articles/2017-07-06/the-electric-car-revolution-is-accelerating . Accessed: December 18, 2018.	Energy	No	No
NHTSA-2017-0069-0567	R.M. Van Auken, Dynamic Research, Inc.	Shaulof, M., et al. 2018. Draft CAFE Model Documentation, John A. Volpe National Transportation Systems Center, Cambridge, MA, July 2018. Available at: ftp://ftp.nhtsa.dot.gov/CAFE/2021-2026_CAFE_NPRM/CAFE_Model/CAFE_Model/CAFE_Model_Documentation_NPRM_2018.pdf . Accessed: August 2018.	Other	No	No
NHTSA-2017-0069-0547	Academy of Integrative Health & Medicine et al.	Shea, K. M., and the Committee on Environmental Health. 2007. Global Climate Change and Children's Health. <i>Pediatrics</i> . 120; e1359. Adhoot, et al., 2015. Available at: http://pediatrics.aappublications.org/content/pediatrics/120/5/1149.full.pdf/ . Accessed: December 20, 2018.	Climate change	No	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	Sheldon, T., and R. Dua. 2018. Gasoline savings from clean vehicle adoption. <i>Energy Policy</i> . (120):418-424. doi.org/10.1016/j.enpol.2018.05.057 . Accessed: October 24, 2018.	Other	Yes	No

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NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Sherbakov, T., et al. 2018. Ambient temperature and added heat wave effects on hospitalizations in California from 1999 to 2009. <i>Environmental Research</i> 160:83–90. Available at: https://www.sciencedirect.com/science/article/pii/S0013935117310009 .	Climate change, other	Yes	No
NHTSA-2017-0069-0627	Lou Finazzo, Sierra Club	Shindell, D. T., 2015. The social cost of atmospheric release. <i>Climatic Change</i> 130(2): 313–326.	Climate change	Yes	No
NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	Shindell, D., and K. Jiang. 2018. Chapter 2: Mitigation pathways compatible with 1.5 C in the context of sustainable development. In: Global Warming of 1.5 °C. Intergovernmental Panel on Climate Change. Available at: https://www.ipcc.ch/sr15/ .	Climate change	Yes	No
NHTSA-2017-0069-0627 NHTSA-2017-0069-0613 NHTSA-2017-0069-0531	Lou Finazzo, Sierra Club Erin Murphy, Environmental Defense Fund Lou Finazzo, Sierra Club	Shindell, D., et al. 2018. Quantified, localized health benefits of accelerated carbon dioxide emissions reductions. Supplementary Information. <i>Nature Climate Change</i> 8:291–295. Available at: https://www.nature.com/articles/s41558-018-0108-y .	Climate change, other	Yes	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Shoaff, John. October 23, 2018. Letter from John Shoaff (US EPA) to Ellen Peter (CA ARB) US EPA FOIA Response.	Other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Shortle, J., et al. 2009. Pennsylvania Climate Impact Assessment: Report to the Department of Environmental Protection. Final. PA. Environment and Natural Resource Institute, The Pennsylvania State University. Available at: http://files.dep.state.pa.us/Energy/Office%20of%20Energy%20and%20Technology/OETDPortalFiles/Climate%20Change%20Advisory%20Committee/7000-BK-DEP4252%5B1%5D.pdf .	Climate change	No	No

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NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Shortle, J., et al. 2015. Pennsylvania Climate Impacts Assessment Update. Final. PA. Environment and Natural Resource Institute, The Pennsylvania State University. Available at: https://www.pennfuture.org/Files/Admin/Pennsylvania-Climate-Impacts-Assessment-Update---2700-BK-DEP4494.compressed.pdf .	Climate change	No	No
NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	Sievanen, L., et al. 2018. California's Coast and Ocean Summary Report. California's Fourth Climate Change Assessment. Publication number: SUMCCC4A-2018-011. Available at: http://www.climateassessment.ca.gov/state/docs/20180827-OceanCoastSummary.PDF . Accessed: February 5, 2019.	Climate change	Yes	No
NHTSA-2017-0069-0627	Lou Finazzo, Sierra Club	Silva, R., et al. 2017. Future global mortality from changes in air pollution attributable to climate change. <i>Nature Climate Change</i> 7:647–651.	Climate change	Yes	No
NHTSA-2017-0069-0531	Lou Finazzo, Sierra Club	Simon, F., et al. 2018. Anthropogenic forcings and associated changes in fire risk In Western North America and Australia during 2015/16. <i>Bulletin of the American Meteorological Society</i> . doi:10.1175/BAMS-D-17-0096.1.	Climate change	Yes	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Simpson, M., et al. 2009. An Overview of Modeling Climate Change Impacts in the Caribbean Region with contribution from the Pacific Islands. United Nations Development Programme. Available at: https://coralreefwatch.noaa.gov/satellite/publications/UNDP_Final_Report.pdf . Accessed: June 5, 2019.	Climate change	No	No

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NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Sims R., et al. 2014: Transport. In: Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Edenhofer, O., et al. (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. Available at: https://www.ipcc.ch/site/assets/uploads/2018/02/ipcc_wg3_ar5_chapter8.pdf .	Climate change	Yes	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	Singer, M. 2017. Consumer Views: Fuel Economy, Plug-in Electric Vehicle Battery Range, and Willingness to Pay for Vehicle Technology. National Renewable Energy Laboratory. Available at: https://www.nrel.gov/docs/fy17osti/68201.pdf . Accessed: October 24, 2018.	Other	No	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	Singer, M. 2017. The Barriers to Acceptance of Plug-in Electric Vehicles: 2017 Update. National Renewable Energy Laboratory. NREL/TP-5400-70371. Available at: https://www.nrel.gov/docs/fy18osti/70371.pdf . Accessed: October 24, 2018.	Other	No	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	Singh, H., et al. 2016. Update to future midsize lightweight vehicle findings in response to manufacturer review and IIHS small-overlap testing. Report No. DOT HS 812 237. Washington, DC: National Highway Traffic Safety Administration. 2016.	Other	No	No
NHTSA-2017-0069-0575 NHTSA-2017-0069-0601	Richard Corey, California Air Resources Board Wesley Dyer, California Air Resources Board	Sivaram, V., and M. A. Levi. 2015. Automobile Fuel Economy Standards in a Lower-Oil-Price World. <i>Council on Foreign Relations Discussion Paper</i> . Available at: https://cfrd8-files.cfr.org/sites/default/files/pdf/2015/10/CAFE_Standards_Paper.pdf .	Other	No	No

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NHTSA-2017-0069-0603	Wesley Dyer, California Air Resources Board	Slowik, P., et al. 2016. Assessment of Next-Generation Electric Vehicle Technologies. International Council on Clean Transportation. October 2016. Washington, D.C. Available at: https://www.theicct.org/sites/default/files/publications/Next%20Gen%20EV%20Tech_white-paper_ICCT_31102016.pdf . Accessed: February 8, 2019.	Other	No	No
NHTSA-2017-0069-0570	Erin Murphy, Environmental Defense Fund	Small, K. A., and K. V. Dender. 2007. Fuel Efficiency and Motor Vehicle Travel: The Declining Rebound Effect. <i>The Energy Journal</i> (28)1:25–51.	Other	Yes	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Small-Lorenz, S. L., et al. 2017. Building Ecological Solutions to Coastal Community Hazards. The National Wildlife Federation. Washington, DC. Available at: https://www.nj.gov/dep/oclup/docs/bescch-final.pdf .	Climate change, other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Smith, Dorian. 2016. 2015 Washington Timber Harvest Report. Final. Department of Natural Resources. Available at: https://www.dnr.wa.gov/publications/em_obe_wa_timber_harvest_2015_final2.pdf .	Other	No	No
NHTSA-2017-0069-0591	Erin Murphy, Environmental Defense Fund	Smith, M. T., et al. 2007. Benzene Exposure and Risk of Non-Hodgkin Lymphoma. <i>Cancer Epidemiol Biomarkers and Prevention</i> 16(3):385–91. doi: 10.1158/1055-9965.EPI-06-1057. Available at: http://cebp.aacrjournals.org/content/16/3/385.short .	Other	Yes	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Snover, A. K., et al. 2013. Climate Change Impacts and Adaptations in Washington State: Technical Summaries for Decision Makers. State of Knowledge Report prepared for the Washington State Department of Ecology. Climate Impacts Group, University of Washington, Seattle.	Climate change	No	No

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NHTSA-2017-0069-0591	Erin Murphy, Environmental Defense Fund	Snyder, R. 2012. Leukemia and Benzene. <i>International Journal of Environmental Research and Public Health</i> 9:2875-2893. doi:10.3390/ijerph9082875. Available at: https://www.mdpi.com/1660-4601/9/8/2875 .	Other	Yes	No
NHTSA-2017-0069-0627	Lou Finazzo, Sierra Club	Socolow, R. 2011. Wedges reaffirmed. <i>Bulletin of the Atomic Scientists</i> . Available at: https://thebulletin.org/2011/09/wedges-reaffirmed/ .	Climate change	No	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	South Coast Air Quality Management District. 2018. Final 2016 AQMP-CARB/EPA/SIP Submittal. 2018. Available at: http://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/final-2016-aqmp . Accessed: December 18, 2018.	Air quality	No	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	Southern California Association of Governments. 2012. Regional Transportation Plan 2012-2035, Environmental Justice Appendix. Available at: http://rtpscs.scag.ca.gov/Documents/2012/final/SR/2012fRTP_EnvironmentalJustice.pdf .	Environmental justice	No	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	Southern California Association of Governments. 2016. The 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy. April 2016. Available at: http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS.pdf . Accessed: December 18, 2018.	Energy	No	No

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NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	Southern California Edison. 2017. Testimony of Southern California Edison Company in Support of its Application of Southern California Edison Company (U 338-E) For Approval of its 2017 Transportation Electrification Proposals. January 20, 2017. Available at: http://www3.sce.com/sscc/law/dis/dbattach5e.nsf/0/DCE79F91023F1624882581A7000A702C/\$FILE/A1701021-SCE-01-Various-TE%20Testimony%20Errata%20Clean%20Verison.pdf . Accessed: December 18, 2018.	Energy	No	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	Southern California Edison. 2018. Prepared Testimony in Support of Southern California Edison Company's Application for Approval of its Charge Ready 2 Infrastructure and Market Education Programs. June 26, 2018. Available at: http://www3.sce.com/sscc/law/dis/dbattach5e.nsf/0/269F29887CEF2390882582C20065927E/\$FILE/A1806015-SCE-01-Charge%20Ready%20%20Testimony.pdf . Accessed: December 18, 2018.	Other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Spada, G., et al. 2013. The gravitationally consistent sea-level fingerprint of future terrestrial ice loss. <i>Geophysical Research Letters</i> 40(3):482–486. doi: 10.1029/2012GL053000.	Climate change	Yes	No
NHTSA-2017-0069-0580	Troy Knecht, South Dakota Corn Growers Association	Speth, R., et al. 2014. Economic and Environmental Benefits of Higher-Octane Gasoline. <i>Environmental Science & Technology</i> . doi: 10.1021/es405557p.	Energy	Yes	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Spooner, F., et al. 2018. Rapid warming is associated with population decline among terrestrial birds and mammals globally. <i>Global Change Biology</i> 24(10): 4521–4531. Available at: https://onlinelibrary.wiley.com/doi/full/10.1111/gcb.14361 . Accessed: June 5, 2019.	Other	Yes	No

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NHTSA-2017-0069-0580	Troy Knecht, South Dakota Corn Growers Association	Stackelberg, K., et al. 2013. Public health impacts of secondary particulate formation from aromatic hydrocarbons in gasoline. <i>Environmental Health</i> 201312:19. doi.org/10.1186/1476-069X-12-19.	Energy	Yes	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	Stanton, E., et al. 2018. Review of August 2018 NHTSA/EPA Proposed Rulemaking Reducing the Stringency of CAFE and CO ₂ Standards. <i>AEC-2018-09-WP-01. Applied Economics Clinic</i> .	Others	No	No
NHTSA-2017-0069-0570	Erin Murphy, Environmental Defense Fund	Stapleton, L., et al. 2016. Estimating direct rebound effects for personal automotive travel in Great Britain. <i>Energy Economics</i> 54:313–325.	Other	Yes	No
NHTSA-2017-0069-0570	Erin Murphy, Environmental Defense Fund	Stapleton, L., et al. 2017. Peak car and increasing rebound: a closer look at car travel trends in Great Britain. <i>Transportation Research Part D: Transport and Environment</i> : 53:217–233. ISSN 1361-9209.	Other	Yes	No
NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	State of the Union. 2007. Twenty in Ten: Strengthening Americas Energy Security. Available at: https://georgewbush-whitehouse.archives.gov/stateoftheunion/2007/initiatives/energy.html .	Energy	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	State of Washington Department of Commerce. Washington State Forest Products Sector. Available at: https://www.commerce.wa.gov/growing-the-economy/key-sectors/forest-products/ .	Other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	State Zero-Emission Vehicle Programs. 2013. Memorandum of Understanding. Available at: https://www.arb.ca.gov/newsrel/2013/8s_zev_mou.pdf .	Other	No	No
NHTSA-2017-0069-0554	Environmental Law Project, University of Pennsylvania Law School	Statista. 2016. U.S. automobile registrations in 2016, by state. Available at: https://www.statista.com/statistics/196010/total-number-of-registered-automobiles-in-the-us-by-state/ . Accessed: December 21, 2018.	Other	No	No

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NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	Statista. 2018. Light vehicle retail sales in the United States from 1977-2017. Available at: https://www.statista.com/statistics/199983/us-vehicle-sales-since-1951/ .	Life cycle assessment	No	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	Statista. 2018. Tesla's estimated U.S. market share from January 2018 to November 2018. November 2018. Available at: https://www.statista.com/statistics/519579/market-share-of-tesla-in-the-united-states/ . Accessed: December 18, 2018.	Other	No	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	Steffen, W., et al. 2018. Trajectories of the Earth System in the Anthropocene, <i>Proceedings of the National Academy of Sciences</i> 115(33)8252–8259. doi.org/10.1073/pnas.1810141115.	Climate change	Yes	No
NHTSA-2017-0069-0542	Lou Finazzo, Sierra Club	Ewing, S. A., et al. 2010. Pb Isotopes as an Indicator of the Asian Contribution to Particulate Air Pollution in Urban California. <i>Environmental Science and Technology</i> 44:8911–8916. Available at: https://pubs.acs.org/doi/pdf/10.1021/es101450t .	Air quality	Yes	No
NHTSA-2017-0069-0556	Lou Finazzo, Sierra Club	Amstrup, S. C., et al. 2007. Forecasting Range wide status of Polar Bears at Selected Times in the 21st Century. US Geological Society. Reston, VA.	Other	No	No
NHTSA-2017-0069-0556	Lou Finazzo, Sierra Club	Amstrup, S. C., et al. 2010. Greenhouse gas mitigation can reduce sea ice loss and increase polar bear persistence. <i>Nature</i> 468:955–958.	Air quality	Yes	No
NHTSA-2017-0069-0601	Wesley Dyer, California Air Resources Board	Steven Rose Energy & Environmental Analysis Research Group, EPRI. 2014. Understanding the Social Cost of Carbon: A Technical Assessment. U.S. Energy Association. Available at: http://epri.co/3002004657 .	Other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Stevenson, J. 2016. Documenting the Drought. The Climate Circulator. Available at: https://www.agclimate.net/2016/06/01/documenting-the-drought/ .	Climate change	No	No

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NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	Stoddard, H. Global and U.S. Automotive Outlook. Wards Intelligence. Accessed: October 24, 2018. Available at: https://www.chicagofed.org/~media/others/events/2018/automotive-outlook-symposium/stoddard-pdf.pdf .	Other	No	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	Strandroth, J., et al. 2011. The correlation between pedestrian injury severity in real-life crashes and Euro NCAP pedestrian test results. <i>Traffic injury prevention</i> . 12(6)604-613. Item 0003 in Docket No. NHTSA-2010-0152.	Other	Yes	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Strauss, B., et al. 2015. Carbon choices determine US cities committed to futures below sea level. <i>Proceedings of the National Academies of Sciences</i> 112(44):13508-13513. Available at: https://doi.org/10.1073/pnas.1511186112 .	Climate change	Yes	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Strauss, B., et al. 2014. California, Oregon, Washington and the Surging Sea: A vulnerability assessment with projections for sea level rise and coastal flood risk. Climate Central Research Report.	Climate change	Yes	No
NHTSA-2017-0069-0595	Tyler Kaspar, 1854 Treaty Authority	Stults, M., et al. 2016. Climate Change Vulnerability Assessment and Adaptation Plan: 1854 Ceded Territory Including the Bois Forte, Fond du Lac, and Grand Portage Reservations. Duluth, MN: 1854 Ceded Territory. Available at: http://www.1854treatyauthority.org/images/ClimateAdaptationPlan_Final-July_2016-optimized(1).pdf . Accessed: December 18, 2018.	Climate change	No	No
NHTSA-2017-0069-0570	Erin Murphy, Environmental Defense Fund	Su, Q. 2012. A quantile regression analysis of the rebound effect: Evidence from the 2009 National Household Transportation Survey in the United States. <i>Energy Policy</i> 45:368-377. doi:101016/j.enpol201202045.	Other	Yes	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Surging Seas. Climate Central. Available at: http://sealevel.climatecentral.org/maps/google-earth-video-global-cities-at-risk-from-sea-level-rise .	Climate change	Yes	No

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NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	Tesla. 2018. Annual Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934. 2018. Available at: https://www.sec.gov/Archives/edgar/data/1318605/000156459018002956/sla-10k_20171231.htm . Accessed: December 18, 2018.	Other	No	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	Tesla. 2018. Charge on the Road. 2018. Available at: https://www.tesla.com/supercharger . Accessed: December 18, 2018.	Other	No	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	Tesla. 2018. Destination Charging Locations. 2018. Available at: https://www.tesla.com/destination-charging . Accessed: December 18, 2018.	Other	No	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	Tesla. 2018. Tesla Gigafactory. 2018. Available at: https://www.tesla.com/gigafactory . Accessed: December 18, 2018.	Other	No	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	Tesla. 2018. Tesla Third Quarter 2018 Update. 2018. Available at: http://ir.tesla.com/static-files/725970e6-eda5-47ab-96e1-422d4045f799 . Accessed: December 18, 2018.	Other	No	No
NHTSA-2017-0069-0613	Erin Murphy, Environmental Defense Fund	Tett, S. F.B., et al. 2018. Anthropogenic Forcings and Associated Changes in Fires Risk in Western North America and Australia During 2015/16. BAMS 99:S60. American Meteorological Society. Available at: https://doi.org/10.1175/BAMS-D-17-0096.1 . doi:10.1175/BAMS-D-17-0096.1	Climate change	Yes	No
NHTSA-2017-0069-0547	Academy of Integrative Health & Medicine et al.	Thaller, E., et al. 2008. Moderate Increases in Ambient PM 2.5 and 9 Ozone Are Associated With Lung Function Decreases in Beach Lifeguards. 2008. <i>Journal of Occupational and Environmental Medicine</i> 50:202-211.	Other	No	No

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NHTSA-2017-0069-0605	Alejandra Nunez, Sierra Club	Thomas, C. D., et al. 2004. Extinction Risk from Climate Change. <i>Nature</i> 427:145.	Climate change	Yes	No
NHTSA-2017-0069-0679	Environmental Defense Fund	Thorne, James H., Joseph Wraithwall, and Guido Franco. 2018. California's Changing Climate 2018. California's Fourth Climate Change Assessment, California Natural Resources Agency Available at: http://www.climateassessment.ca.gov/state/docs/20180827-SummaryBrochure.pdf . Accessed: February 5, 2019.	Climate change	Yes	No
NHTSA-2017-0069-0579	Erin Murphy, Environmental Defense Fund	Tierney, Susan, and Paul Hibbard. 2018. Vehicle Fuel-Economy and Air-Pollution Standards: A Literature Review of the Rebound Effect. Analysis Group. Available at: https://www.analysisgroup.com/globalassets/uploadedfiles/content/insights/publishing/ag_fuel_economy_rebound_effect_june_2018.pdf . Accessed: December 24, 2018.	Other	No	No
NHTSA-2017-0069-0555	Simon Mui, National Resources Defense Council	Transport Canada. 2015. Light-Duty Truck Weight Reduction Study with Crash Model, Feasibility and Cost Analysis (September 24, 2015). Available at: https://www.tc.gc.ca/en/programs-policies/programs/ecotechnology-vehicles-program/etv-technical-papers/light-duty-truck-weight-reduction-study-crash-model-feasibility-cost-analysis.html#summary . Accessed: December 21, 2018.	Life cycle assessment	No	No
NHTSA-2017-0069-0617	Erin Murphy, Environmental Defense Fund	Transport Policy. 2018. EU: Light Duty: GHG Emissions.	Other	No	No
NHTSA-2017-0069-0609	Erin Murphy, Environmental Defense Fund	TransportPolicy.net. 2018. South Korea: Light-Duty: Fuel Economy and GHG. 2018. Available at: https://www.transportpolicy.net/standard/south-korea-light-duty-fuel-economy-and-ghg/ . Accessed: December 19, 2018.	Climate change	No	No

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EPA-HQ-OAR-2018-0283-5486	Michael Oppenheimer, Philip B. Duffy, Emmett Environmental Law & Policy Clinic at Harvard Law School	Trenberth, K.E., et al. 2018. Hurricane Harvey Links to Ocean Heat Content and Climate Change Adaption. <i>Earth's Future</i> 6:730. Available at: https://agupubs.onlinelibrary.wiley.com/doi/10.1029/2018EF000825 .	Climate change	Yes	No
NHTSA-2017-0069-0605	Alejandra Nunez, Sierra Club	Tzankova, S., et al. 2011. Can the ESA Address the Threats of Atmospheric Nitrogen Deposition? Insights from the Case of the Bay Checkerspot Butterfly, <i>Harvard Environmental Law Review</i> . Vol. 35.	Other	Yes	No
NHTSA-2017-0069-0571	Lou Finazzo, Sierra Club	U. S. Census Bureau. 2011. The Older Population: 2010. Available at: https://www.census.gov/content/dam/Census/library/publications/2011/dec/c2010br-09.pdf .	Other	No	No
NHTSA-2017-0069-0574	Erin Murphy, Environmental Defense Fund	U. S. Census Bureau. Historical Income Tables. Table P-1. Available at: https://www.census.gov/data/tables/time-series/demo/income-poverty/historical-income-people.html Accessed October 15, 2018.	Other	No	No
NHTSA-2017-0069-0548	Wesley Dyer, California Air Resources Board	U.S. Advanced Battery Consortium, LLC. 2018. USABC Cost Model 2018. Available at: https://www.uscar.org/guest/article_view.php?articles_id=143 . Accessed: December 21, 2018.	Life cycle assessment	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	U.S. Army Corps of Engineers. 2013. Event Study: 2012 Low-Water and Mississippi River Lock 27 Closures. https://www.lrd.usace.army.mil/Portals/73/docs/Navigation/PCXIN/Drought_2012_Report_-FINAL_2013-08-30.pdf .	Other	No	No
NHTSA-2017-0069-0627	Lou Finazzo, Sierra Club	U.S. Bureau of Economic Analysis. FRED. Table Total Vehicle Sales.	Other	No	No

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NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	U.S. Census Bureau. 2000. Population Profile of the United States: 2000 (Internet Release). Available: https://www.census.gov/census2000/states/us.html	Other	No	No
NHTSA-2017-0069-0542	Lou Finazzo, Sierra Club	U.S. Census Bureau. 2011. Census Bureau Age and Sex Composition: 2010 Census Briefs.	Other	No	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	U.S. Census Bureau. 2018. Census Bureau Reveals Fastest-Growing Large Cities. Available at: https://www.census.gov/newsroom/press-releases/2018/estimates-cities.html .	Other	No	No
NHTSA-2017-0069-0541	Lou Finazzo, Sierra Club	U.S. Census Bureau. 2018. Supplemental-Poverty Measure: Current Population Reports. P60-265.	Environmental justice	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	U.S. Census Bureau. Annual Estimates of the Population of Combined Statistical Areas: April 2010 to July 2011, U.S. Census Bureau. Available at: https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_10_5YR_B01003&prodType=table .	Other	No	No
NHTSA-2017-0069-0568	Lou Finazzo, Sierra Club	U.S. Congress. 2016. Heat Stress 2016 Fast Fact. Office of Compliance. Available at: https://www.compliance.gov/sites/default/files/Heat%20Stress%202016%20Fast%20Fact_1.pdf .	Other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	U.S. Department of Agriculture. 2018. Iowa's Rank in United States Agriculture. Available at: https://www.nass.usda.gov/Statistics_by_State/Iowa/Publications/Rankings/IA-2018-Rankings.pdf .	Other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	U.S. Department of Energy Alternative Fuels Data Center. Alternative Fueling Station Locator. Available at: https://afdc.energy.gov/stations/#/analyze?region=US-NY&fuel=ELEC . Accessed October 24, 2018.	Energy	No	No

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NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	U.S. Department of Energy and Environmental Protection Agency. 2018. Hybrids, Diesels, and Alternative Fuel Cars. 2018. Available at: https://www.fueleconomy.gov/feg/alternatives.shtml . Accessed: December 18, 2018.	Energy	No	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	U.S. Department of Energy. 2016. Maps and Data - AFV and HEV Model Offerings, by Manufacturer. 2018. Available at: https://afdc.energy.gov/data/ . Accessed: December 18, 2018.	Energy	No	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	U.S. Department of Energy. 2017. Electric-Drive Vehicles. September 2017. Available at: https://www.afdc.energy.gov/uploads/publication/electric_vehicles.pdf . Accessed: December 18, 2018.	Energy	No	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	U.S. Department of Energy. 2018. Alternative Fueling Station by Fuel Type. December 18, 2018. Available at: https://www.afdc.energy.gov/data/10332 . Accessed: December 18, 2018.	Energy	No	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	U.S. Department of Energy. 2018. Alternative Fueling Station Counts by State. December 18, 2018. Available at: https://afdc.energy.gov/stations/states . Accessed: December 18, 2018.	Energy	No	No
NHTSA-2017-0069-0541	Lou Finazzo, Sierra Club	U.S. Department of Energy. 2018. Alternative Fuels Data Center: Ethanol Vehicle Emissions. Available at: https://afdc.energy.gov/vehicles/flexible_fuel_emissions.html . Accessed: December 20, 2018.	Energy, air quality	No	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	U.S. Department of Energy. 2018. Emissions from Hybrid and Plug-In Electric Vehicles. May 28, 2017. Available at: https://afdc.energy.gov/vehicles/electric_emissions.html . Accessed: December 18, 2018.	Air quality	No	No

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NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	U.S. Department of Energy. 2018. Fuel Prices. 2018. Available at: https://afdc.energy.gov/fuels/prices.html . Accessed: December 18, 2018.	Energy	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	U.S. Department of the Interior Office of Congressional and Legislative Affairs. 2016. Testimony of Dan Ashe, Director, U.S. Fish and Wildlife Service, Department of The Interior, Before the U.S. House Of Representatives, Committee on Oversight and Government Reform, Subcommittee on Interior, Regarding Barriers to Recovery and Delisting of Listed Species Under the Endangered Species Act of 1973. Available at: https://www.doi.gov/ocl/esa-delisting .	Other	No	No
NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	U.S. Department of the Interior, Fish and Wildlife Service. 2008. Expectations for Consultation on Actions that Would Emit Greenhouse Gases. Memorandum in reference to FWS/AES/DCHRS/036143. Available at: https://www.fws.gov/policy/m0331.pdf . Accessed: February 5, 2019.	Climate change	No	No
NHTSA-2017-0069-0579	Erin Murphy, Environmental Defense Fund	U.S. Department of Transportation and U.S. Environmental Protection Agency. MYs 2021-2026 CAFE Proposal - by the Numbers. EPA-420-F-18-901. Available at: https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockkey=P100V26H.pdf . Accessed: December 24, 2018.	Other	No	No
NHTSA-2017-0069-0551	Lou Finazzo, Sierra Club	U.S. Department of Transportation. 2002. Secretary's Policy Statement on Information Quality. Washington, D.C.	Other	No	No
NHTSA-2017-0069-0552	Lou Finazzo, Sierra Club	U.S. Department of Transportation. 2018. Memorandum - Implementation of Departmental Scientific Integrity Policy. Updated: June 7, 2017. Washington, D.C.	Other	No	No

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NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	U.S. Dept. Of Energy Alternative Fuels Data Center. 2018. US Alternative Fueling Stations by Fuel Type. Last updated September 2018. Available at: www.afdc.energy.gov/data/10332 .	Energy	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	U.S. Dept. Of Energy Alternative Fuels Data Center. Connecticut Transportation Data for Alternative Fuels and Vehicles. Available at: https://www.afdc.energy.gov/states/ct . Accessed October 24, 2018.	Energy	No	No
NHTSA-2017-0069-0584	Erin Murphy, Environmental Defense Fund	U.S. Energy Information Administration. 2018. Annual Energy Outlook 2018: with projections to 2050. Washington, D.C. Available at: https://www.eia.gov/outlooks/aeo/pdf/AEO2018.pdf . Accessed: December 24, 2018.	Energy	No	No
NHTSA-2017-0069-0605	Alejandra Nunez, Sierra Club	U.S. Energy Information Administration, Annual Energy Outlook 2017. 2017. https://www.eia.gov/outlooks/aeo/ (last visited Mar. 23, 2018).	Energy	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	U.S. Energy Information Administration. 2012. Table 5.1a Petroleum and Other Liquids Overview, Selected Years, 1949-2011. In: Annual Energy Review 2011 (page 118). Available at: https://www.eia.gov/totalenergy/data/annual/pdf/aer.pdf .	Energy	No	No
NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	U.S. Energy Information Administration. 2013. US energy intensity projected to continue its steady decline through 2040. Available at: https://www.eia.gov/todayinenergy/detail.php?id=10191 . Accessed: February 5, 2019.	Energy	No	No

Table B-2. Sources Identified in Comments on the Draft EIS

Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if provided by commenter)	Issue Addressed by Source	Peer- Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	U.S. Energy Information Administration. 2017. Annual Energy Outlook 2017. Available at: https://www.eia.gov/outlooks/aeo/data/browser/#/?id=48-AEO2017&ion=1-0&cases=ref2017&start=2015&end=2050&f=A&linechart=~ref2017-d120816a.26-48-AEO2017.1-0~ref2017-d120816a.52-48-AEO2017.1-0&map=ref2017-d120816a.5-48-AEO2017.1-0&ctype=linechart&sourcekey=0 . Accessed: October 19, 2018.	Other	No	No
NHTSA-2017-0069-0614	Erin Murphy, Environmental Defense Fund	U.S. Energy Information Administration. 2017. EIA US Imports of Refined Gasoline.	Other	No	No
NHTSA-2017-0069-0614	Erin Murphy, Environmental Defense Fund	U.S. Energy Information Administration. 2017. Petroleum & Other Liquids.	Other	No	No
NHTSA-2017-0069-0593	Irene Gutierrez	U.S. Energy Information Administration. 2017. Power Sector Carbon Dioxide Emissions Fall Below Transportation Sector Emissions. January 19, 2017. Available at: https://www.eia.gov/todayinenergy/detail.php?id=29612 . Accessed: December 18, 2018.	Climate change, energy	No	No
NHTSA-2017-0069-0621	Natural Resources Defense Council	U.S. Energy Information Administration. 2017. Today in Energy. Available at: https://www.eia.gov/todayinenergy/detail.php?id=29612# .	Energy	No	No
NHTSA-2017-0069-0574	Erin Murphy, Environmental Defense Fund	U.S. Energy Information Administration. 2018. AEO Energy Outlook 2018: Table 20 (Macroeconomic Indicators). Available at: https://www.eia.gov/outlooks/aeo/data/browser/#/?id=18-AEO2018&cases=ref2018&sourcekey=0 . Accessed: October 15, 2018.	Other	No	No

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NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	U.S. Energy Information Administration. 2018. Annual Energy Outlook 2018 with Projections to 2050. February 6, 2018. Available at: https://www.eia.gov/outlooks/aeo/pdf/AEO2018.pdf . Accessed: December 18, 2018.	Energy	No	No
NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	U.S. Energy Information Administration. 2018. FAQ: How much petroleum does the US import and export. Available at: https://www.eia.gov/tools/faqs/faq.php?id=727&t=6 . Accessed: February 5, 2019.	Energy	No	No
NHTSA-2017-0069-0579	Erin Murphy, Environmental Defense Fund	U.S. Energy Information Administration. 2018. Frequently Asked Questions: How much gasoline does the United States Consume? Available at: https://www.eia.gov/tools/faqs/faq.php?id=23&t=10 . Accessed: December 24, 2018.	Other	No	No
NHTSA-2017-0069-0532	Wayne Nastri, South Coast Air Quality Management District	U.S. Energy Information Administration. 2018. Gasoline Explained: Gasoline Price Fluctuations. Available at: https://www.eia.gov/energyexplained/index.php?page=gasoline_fluctuations . Accessed: December 18, 2018.	Other	No	No
NHTSA-2017-0069-0611	Lou Finazzo, Sierra Club	U.S. Energy Information Administration. 2018. How Much Petroleum Does the United States Import and Export? April 4, 2018.	Energy	No	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	U.S. Energy Information Administration. 2018. Real Petroleum Prices: Transportation: Motor Gasoline. Available at: https://www.eia.gov/outlooks/aeo/data/browser/#/?id=12-AEO2018®ion=0-0&cases=ref2018~effrelaxall&start=2016&end=2050&f=A&linechart=~ref2018-d121317a.30-12-AEO2018~effrelaxall-d030918a.30-12-AEO2018&sourcekey=0 .	Other	No	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if provided by commenter)	Issue Addressed by Source	Peer- Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0611	Lou Finazzo, Sierra Club	U.S. Energy Information Administration. 2018. U.S. Energy Facts Explained. September 20, 2018.	Energy	No	No
NHTSA-2017-0069-0568	Lou Finazzo, Sierra Club	U.S. Energy Information Administration. Frequently Asked Questions: What are U.S. energy-related carbon dioxide emissions by source and sector? Last updated June 6, 2018. Available at: https://www.eia.gov/tools/faqs/faq.php?id=75&t=11 .	Energy, climate change	No	No
NHTSA-2017-0069-0568	Lou Finazzo, Sierra Club	U.S. Energy Information Administration. Power sector carbon dioxide emissions fall below transportation sector emissions. Last updated January 19, 2017. Available at: https://www.eia.gov/todayinenergy/detail.php?id=29612# .	Climate change	No	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	U.S. Energy Information Administration. Reference Case Table 39. Available at: https://www.eia.gov/outlooks/aeo/tables_ref.php . Accessed: October 24, 2018.	Other	No	No
NHTSA-2017-0069-0532	Wayne Nastri, South Coast Air Quality Management District	U.S. Energy Information Agency. 2018. Annual Energy Outlook. Table: International Petroleum and Other Liquids Supply, Disposition and Prices. Available at: https://www.eia.gov/outlooks/aeo/data/browser/#/?id=19-AEO2018&cases=ref2018& .	Energy	No	No
NHTSA-2017-0069-0574	Erin Murphy, Environmental Defense Fund	U.S. Environmental Protection Agency and National Highway Traffic Safety Administration. 2018. Preliminary Regulatory Impact Analysis: The Safer Affordable Fuel-Efficient (SAFE) Vehicle Rule for Model Year 2021-2026 Passenger Cars and Light Trucks. Available at: https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/ld_cafe_co2_nhtsa_2127-al76_epa_pria_181016.pdf . Accessed: February 5, 2019.	Other	No	No

Appendix B Sources Identified in Public Comments

Table B-2. Sources Identified in Comments on the Draft EIS

Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if provided by commenter)	Issue Addressed by Source	Peer- Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0543	Lou Finazzo, Sierra Club	U.S. Environmental Protection Agency and National Highway Traffic Safety Administration. 2016. Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles - Phase 2 Regulatory Impact Analysis. EPA-420-R-16-900.	Air quality	No	No
NHTSA-2017-0069-0694	Center for Biological Diversity et al.	U.S. Environmental Protection Agency, National Highway Traffic Safety Administration and California Air Resources Board. 2016. Draft Technical Assessment Report: Midterm Evaluation of Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards for Model Years 2022-2025. EPA-420-D-16-900. (July 2016).	Air quality, other	No	No
NHTSA-2017-0069-0571	Lou Finazzo, Sierra Club	U.S. Environmental Protection Agency. 1974. Monitoring and Air Quality Trends Report. Monitoring and Data Analysis Division. Monitoring and Reports Branch. Research Triangle Park, NC. Available at: https://nepis.epa.gov/Exe/ZyNET.exe/9100ZAAI.txt?ZyActionD=ZyDocument&Client=EPA&Index=1976%20Thru%201980&Docs=&Query=&Time=&EndTime=&SearchMethod=1&TocRestrict=n&Toc=&TocEntry=&QField=&QFieldYear=&QFieldMonth=&QFieldDay=&UseQField=&IntQFieldOp=0&ExtQFieldOp=0&XmlQuery=&File=D%3A%5CZYFILES%5CINDEX%20DATA%5C76THRU80%5CTXT%5C0000020%5C9100ZAAI.txt&User=ANONYMOUS&Password=anonymous&SortMethod=h%7C-&MaximumDocuments=1&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Display=hpfr&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page&MaximumPages=1&ZyEntry=2#	Air quality	No	No
NHTSA-2017-0069-0542	Lou Finazzo, Sierra Club	U.S. Environmental Protection Agency. 1977. National Air Quality, Monitoring, and Emissions Trends Report. EPA-450/2-78-052.	Air quality	No	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if provided by commenter)	Issue Addressed by Source	Peer- Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0591	Erin Murphy, Environmental Defense Fund	U.S. Environmental Protection Agency. 2002 Health assessment document for diesel engine exhaust. Prepared by the National Center for Environmental Assessment, Washington, DC, for the Office of Transportation and Air Quality; EPA/600/8-90/057F. National Technical Information Service, Springfield, VA. PB2002-107661. Available at: https://cfpub.epa.gov/ncea/risk/recordisplay.cfm?deid=29060 .	Other	No	No
NHTSA-2017-0069-0601	Wesley Dyer, California Air Resources Board	U.S. Environmental Protection Agency. 2008. Technical Support Document on Benefits of Reducing GHG Emissions.	Other	No	No
NHTSA-2017-0069-0547	Academy of Integrative Health & Medicine et al.	U.S. Environmental Protection Agency. 2009. Integrated Science Assessment for Particulate Matter (Final Report). U.S. Environmental Protection Agency, Washington, DC, EPA/600/R-08/139F. Available at: https://cfpub.epa.gov/ncea/risk/recordisplay.cfm?deid=216546 . Accessed: December 21, 2018.	Air quality	No	No
EPA-HQ-OAR-2018-0283-5486	Michael Oppenheimer, Philip B. Duffy, Emmett Environmental Law & Policy Clinic at Harvard Law School	U.S. Environmental Protection Agency. 2009. Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(A) of the Clean Air Act. Available at: https://www.epa.gov/ghgemissions/endangerment-and-cause-or-contribute-findings-greenhouse-gases-under-section-202a-clean .	Climate change, air quality	No	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	U.S. Environmental Protection Agency. 2010 (updated 2014). Guidelines for Preparing Economic Analysis. National Center for Environmental Economics.	Other	Yes	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if provided by commenter)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0603	Wesley Dyer, California Air Resources Board	U.S. Environmental Protection Agency. 2011. Light-Duty Vehicle Technology Cost Analysis, Mild Hybrid and Valvetrain Technology. Assessment and Standards Division, Office of Transportation and Air Quality.	Other	No	No
NHTSA-2017-0069-0541	Lou Finazzo, Sierra Club	U.S. Environmental Protection Agency. 2012. Clean Air Act § 209(B) Waiver Support Document Submitted By The California Air Resources Board. EPA-HQ-OAR-2012-0562-0004.	Other	No	No
NHTSA-2017-0069-0619	Erin Murphy, Environmental Defense Fund	U.S. Environmental Protection Agency. 2012. Regulatory Impact Analysis: Final Rulemaking for 2017-2025 Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards.	Other	No	No
NHTSA-2017-0069-0552	Lou Finazzo, Sierra Club	U.S. Environmental Protection Agency. 2012. Scientific Integrity Policy. Office of the Science Advisor.	Other	No	No
NHTSA-2017-0069-0619	Erin Murphy, Environmental Defense Fund	U.S. Environmental Protection Agency. 2012. Joint Technical Support Document: Final Rulemaking for 2017-2025 Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards.	Other	No	No
NHTSA-2017-0069-0584	Erin Murphy, Environmental Defense Fund	U.S. Environmental Protection Agency. 2013. Estimating the Benefit per Ton of Reducing PM2.5 Precursors from 17 Sectors. Technical Support Document. January 2013. Available at: https://www.epa.gov/sites/production/files/2014-10/documents/sourceapportionmentbpttsd.pdf .	Other	No	No
NHTSA-2017-0069-0547	Academy of Integrative Health & Medicine et al.	U.S. Environmental Protection Agency. 2013. Integrated Science Assessment of Ozone and Related Photochemical Oxidants (Final Report). U.S. Environmental Protection Agency, Washington, DC, EPA/600/R-10/076F. Available at: https://cfpub.epa.gov/ncea/isa/recordisplay.cfm?deid=247492 . Accessed: December 21, 2018.	Air quality	No	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if provided by commenter)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0614	Erin Murphy, Environmental Defense Fund	U.S. Environmental Protection Agency. 2013. Technical Support Document Estimating the Benefit per Ton of Reducing PM2.5 Precursors from 17 Sectors.	Other	No	No
NHTSA-2017-0069-0605	Alejandra Nunez, Sierra Club	U.S. Environmental Protection Agency. 2015. Regulatory Impact Analysis for the Clean Power Plan Final Rule, Tables ES-2 and ES-3.	Other	No	No
NHTSA-2017-0069-0551	Lou Finazzo, Sierra Club	U.S. Environmental Protection Agency. 2015. Peer Review Handbook. Science and Technology Policy Council. 4th Edition. EPA/100/B-15/001. Washington, D.C.	Other	No	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	U.S. Environmental Protection Agency. 2016. Fast Facts on Transportation Greenhouse Gas Emissions. Last Updated: July 2018. Available at: https://www.epa.gov/greenvehicles/fast-facts-transportation-greenhouse-gas-emissions . Accessed: October 24, 2018.	Climate change	No	No
NHTSA-2017-0069-0591	Erin Murphy, Environmental Defense Fund	U.S. Environmental Protection Agency. 2016. Light-Duty Automotive Technology, Carbon Dioxide Emissions, and Fuel Economy Trends: 1975 Through 2016. Trends MPG CO2 Report. EPA-420-R-16-010. November 2016. Available at: https://fueleconomy.gov/feg/pdfs/420r16010.pdf .	Other	No	No
NHTSA-2017-0069-0591	Erin Murphy, Environmental Defense Fund	U.S. Environmental Protection Agency. 2016. Proposed Determination on the Appropriateness of the Model Year 2022-2025 Light-Duty Vehicle Greenhouse Gas Emissions Standards under the Midterm Evaluation. November 2016. EPA-420-R-16-020. Available at: https://www.epa.gov/regulations-emissions-vehicles-and-engines/midterm-evaluation-light-duty-vehicle-greenhouse-gas#proposed=determination .	Air quality	No	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if provided by commenter)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0593	Irene Gutierrez	U.S. Environmental Protection Agency. 2017. Basis for Denial of Petitions to Reconsider and Petitions to Stay the CAA section 111(d) Emission Guidelines for Greenhouse Gas Emissions and Compliance Times for Electric Utility Generating Units. Available at: https://archive.epa.gov/epa/sites/production/files/2017-01/documents/basis_for_denial_of_petitions_to_reconsider_and_petitions_to_stay_the_final_cpp.pdf .	Air quality	No	No
NHTSA-2017-0069-0615	Lou Finazzo, Sierra Club	U.S. Environmental Protection Agency. 2017. Environmental Protection Agency (EPA) Comments on Reported 'high efficiency (low CO2) bias' of ALPHA results by LPM/OMEGA.	Other	No	No
NHTSA-2017-0069-0591	Erin Murphy, Environmental Defense Fund	U.S. Environmental Protection Agency. 2017. Final Determination on the Appropriateness of the Model Year 2022-2025 Light-Duty Vehicle Greenhouse Gas Emissions Standards under the Midterm Evaluation. January 2017. EPA-420-R-17-001. Available at: https://19january2017snapshot.epa.gov/sites/production/files/2017-01/documents/420r17001.pdf .	Air quality	No	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	U.S. Environmental Protection Agency. 2017. Integrated Review Plan for the Secondary National Ambient Air Quality Standards for Ecological Effects of Oxides of Nitrogen, Oxides of Sulfur and Particulate Matter. EPA-452/R-17-002. National Center for Environmental Assessment. Research Triangle Park, North Carolina. Available at: https://www3.epa.gov/ttn/naaqs/standards/no2so2sec/data/irp-nox-sox-pm-eco.pdf . Accessed: June 5, 2019.	Air Quality	No	No
NHTSA-2017-0069-0547	Academy of Integrative Health & Medicine et al.	U.S. Environmental Protection Agency. 2017. Integrated Science Assessment for Sulfur Oxides—Health Criteria. EPA/600/R-17/451. December 2017. Available at: https://www.epa.gov/isa/integrated-science-assessment-isa-sulfur-oxides-health-criteria . Accessed: December 21, 2018.	Air quality	No	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if provided by commenter)	Issue Addressed by Source	Peer- Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0555	Simon Mui, National Resources Defense Council	U.S. Environmental Protection Agency. 2017. Light-Duty Automotive Technology Carbon Dioxide Emissions, and Fuel Economy Trends Report. EPA-420-R-18-001. Available at: https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100TGDW.pdf . Accessed: December 21, 2018.	Air quality	No	No
NHTSA-2017-0069-0613	Erin Murphy, Environmental Defense Fund	U.S. Environmental Protection Agency. 2017. Multi-Model Framework for Quantitative Sectoral Impacts Analysis: A Technical Report for the Fourth National Climate Assessment. Washington, DC. Available at: https://cfpub.epa.gov/si/si_public_record_Report.cfm?dirEntryId=335095 .	Climate change	Yes	No
NHTSA-2017-0069-0615	Lou Finazzo, Sierra Club	U.S. Environmental Protection Agency. 2017. Stakeholder Meeting with Auto Alliance and Global Automakers and their contractor, Novation Analytics, and Environmental Protection Agency (EPA) Technical Response to Assertions of 'ALPHA-to-OMEGA Bias'.	Other	No	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	U.S. Environmental Protection Agency. 2018. Air Quality - National Summary. July 25, 2018. Available at: https://www.epa.gov/air-trends/air-quality-national-summary . Accessed: December 18, 2018.	Air quality	No	No
NHTSA-2017-0069-0615	Lou Finazzo, Sierra Club	U.S. Environmental Protection Agency. 2018. Comments on NPRM sent to OMB titled "EO 12866 Review", published June 29, 2018.	Other	No	No
NHTSA-2017-0069-0521	Kay Rhoads, Sac and Fox Nation	U.S. Environmental Protection Agency. 2018. Criteria Air Pollutants. Available at: https://www.epa.gov/criteria-air-pollutants . Accessed: December 18, 2018.	Air quality	No	No

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NHTSA-2017-0069-0521	Kay Rhoads, Sac and Fox Nation	U.S. Environmental Protection Agency. 2018. FY 2018-2022 U.S. EPA Strategic Plan. Office of Planning, Analysis, and Accountability. EPA-190-R-18-003. Washington, D.C. Available at: https://www.epa.gov/sites/production/files/2018-08/documents/fy-2018-2022-epa-strategic-plan-print.pdf . Accessed: December 20, 2018.	Other	No	No
NHTSA-2017-0069-0541	Lou Finazzo, Sierra Club	U.S. Environmental Protection Agency. 2018. Green Book: Criteria Pollutant Nonattainment Summary Report.	Air quality	No	No
NHTSA-2017-0069-0554	Environmental Law Project, University of Pennsylvania Law School	U.S. Environmental Protection Agency. 2018. Ground-Level Ozone Pollution. Available at: https://www.epa.gov/ozone-pollution . Accessed: December 21, 2018.	Air quality	No	No
NHTSA-2017-0069-0523	Stuart Spencer, Arkansas Department of Environmental Quality	U.S. Environmental Protection Agency. 2018. Ground-Level Ozone Pollution: Table of Historical Ozone National Ambient Air Quality Standards (NAAQS). Available at: https://www.epa.gov/ground-level-ozone-pollution/table-historical-ozone-national-ambient-air-quality-standards-naaqs . Accessed: December 18, 2018.	Air quality	No	No
NHTSA-2017-0069-0568	Lou Finazzo, Sierra Club	U.S. Environmental Protection Agency. 2018. Health Effects of Ozone Pollution. Last updated October 10, 2018. Available at: https://www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution .	Air quality	No	No
NHTSA-2017-0069-0676	Environmental Defense Fund	U.S. Environmental Protection Agency. 2018. Inventory of US Greenhouse Gas Emissions and Sinks 1990-2016. Available at: https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks .	Climate change	No	No

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NHTSA-2017-0069-0584	Erin Murphy, Environmental Defense Fund	U.S. Environmental Protection Agency. 2018. Light-Duty Automotive Technology, Carbon Dioxide Emissions, and Fuel Economy Trends: 1975 Through 2017. EPA-420-R-18-001. Available at: https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100TGDW.pdf . Accessed: December 24, 2018.	Other	No	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	U.S. Environmental Protection Agency. 2018. Memorandum on EPA's Environmental Justice and Community Revitalization Priorities. Available at: https://www.epa.gov/sites/production/files/2018-02/documents/epa_ej_memo_02.23.2018.pdf .	Environmenta l justice	No	No
NHTSA-2017-0069-0552	Lou Finazzo, Sierra Club	U.S. Environmental Protection Agency. 2018. Optimization Model for reducing Emissions of Greenhouse Gases from Automobiles (OMEGA). Available at: https://www.epa.gov/regulations-emissions-vehicles-and-engines/optimization-model-reducing-emissions-greenhouse-gases . Accessed: December 21, 2018.	Air quality	No	No
NHTSA-2017-0069-0551	Lou Finazzo, Sierra Club	U.S. Environmental Protection Agency. 2018. Peer Review of EPA's Response Surface Equation Report. Final Report. EPA-420-R-18-006.	Other	No	No
NHTSA-2017-0069-0607	Erin Murphy, Environmental Defense Fund	U.S. Environmental Protection Agency. 2018. Proposed CAFE and CO2 Standards MYs 2021 through 2026. June 13, 2018.	Air quality	No	No
NHTSA-2017-0069-0611	Lou Finazzo, Sierra Club	U.S. Environmental Protection Agency. 2018. Regulatory Impact Analysis for the Proposed Emission Guidelines for Greenhouse Gas Emissions from Existing Electric Utility Generating Units; Revisions to Emission Guideline Implementing Regulations; Revisions to New Source Review Program. August 2018.	Air quality, climate change	No	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if provided by commenter)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0607	Erin Murphy, Environmental Defense Fund	U.S. Environmental Protection Agency. 2018. Summary Points from EPA Review of CAFE Model (NPRM version) –Effect of EPA Code Revisions. June 18, 2018.	Other	No	No
NHTSA-2017-0069-0616	Jaime Yazzie, National Tribal Air Association	U.S. Environmental Protection Agency. 2018. U.S. Transportation Sector Greenhouse Gas Emissions 1990-2016. Office of Transportation and Air Quality. EPA-420-F-18-013.	Air quality	No	No
NHTSA-2017-0069-0521	Kay Rhoads, Sac and Fox Nation	U.S. Environmental Protection Agency. 2018. U.S. Transportation Sector Greenhouse Gas Emissions 1990-2016. Office of Transportation and Air Quality. EPA-420-F-18-013. Available at: https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100USI5.pdf . Accessed: December 20, 2018.	Air quality	No	No
NHTSA-2017-0069-0616	Jaime Yazzie, National Tribal Air Association	U.S. Environmental Protection Agency. 2018. Working Together: Fiscal Year 2018-2022 U.S. EPA Strategic Plan. EPA-190-R-18-003. Available at: https://www.epa.gov/planandbudget/strategicplan . Accessed: February 5, 2019.	Other	No	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	U.S. Environmental Protection Agency. Benefits and Costs of the Clean Air Act. https://www.epa.gov/clean-air-act-overview/benefits-and-costs-clean-air-act .	Air quality	No	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	U.S. Environmental Protection Agency. Designations in US EPA Regions for the 2008 8-Hour Ozone National Ambient Air Quality Standards. Available at: https://www3.epa.gov/region9/air/maps/pdfs/air1100018-7.pdf .	Air quality	No	No
NHTSA-2017-0069-0616	Jaime Yazzie, National Tribal Air Association	U.S. Environmental Protection Agency. Fast Facts on Transportation Greenhouse Gas Emissions. Available at: https://www.epa.gov/greenvehicles/fast-facts-transportation-greenhouse-gas-emissions .	Other	No	No

Table B-2. Sources Identified in Comments on the Draft EIS

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NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	U.S. Fish and Wildlife Service & National Oceanic and Atmospheric Administration. 1986. Interagency Cooperation - Endangered Species Act of 1973, as Amended; Final Rule. 51 Federal Register 19926. Available at: https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd494615.pdf . Accessed: June 5, 2019.	Other	No	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	U.S. Fish and Wildlife Service and Canadian Wildlife Service. 2007. International Recovery Plan for the Whooping Crane (<i>Grus americana</i>), Third Revision. Prepared for Recovery of Nationally Endangered Wildlife and U.S. Fish and Wildlife Service. Ottawa and Albuquerque, NM. Available at: https://www.nrc.gov/docs/ML1118/ML111880004.pdf . Accessed: June 5, 2019.	Other	No	No
NHTSA-2017-0069-0605	Alejandra Nunez, Sierra Club	U.S. Fish and Wildlife Service and National Marine Fisheries Service. 1998. Endangered Species Consultation Handbook.	Other	No	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	U.S. Fish and Wildlife Service, National Oceanic and Atmospheric Administration. 2011. Determination of Nine Distinct Populations Segments of Loggerhead Sea Turtles as Endangered or Threatened; Final Rule. 76 Federal Register 58867. Available at: https://www.federalregister.gov/documents/2011/09/22/2011-23960/endangered-and-threatened-species-determination-of-nine-distinct-population-segments-of-loggerhead . Accessed: June 5, 2019.	Other	No	No

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NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	U.S. Fish and Wildlife Service, National Oceanic and Atmospheric Administration. 2016. Endangered and Threatened Wildlife and Plants; Final Rule To List Eleven Distinct Population Segments of the Green Sea Turtle (<i>Chelonia mydas</i>) as Endangered or Threatened and Revision of Current Listings Under the Endangered Species Act; Final Rule. 81 Federal Register 20057. Available at: https://www.federalregister.gov/documents/2016/04/06/2016-07587/endangered-and-threatened-wildlife-and-plants-final-rule-to-list-eleven-distinct-population-segments Accessed: June 5, 2019.	Other	No	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	U.S. Fish and Wildlife Service. 1987. Blue Ridge Goldenrod (<i>Solidago spithamaea</i> Curtis) Recovery Plan. Prepared for U.S. Fish and Wildlife Service, Southeast Region. Atlanta, GA. Available at: https://babel.hathitrust.org/cgi/pt?id=mdp.39015032453329&view=1up&seq=7 . Accessed: June 5, 2019.	Other	No	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	U.S. Fish and Wildlife Service. 1988. Recovery Plan for Zuni Fleabane (<i>Erigeron rhizomax</i> Cronquist). Prepared for U.S. Fish and Wildlife Service, New Mexico Ecological Services Field Office. Albuquerque, NM. Available at: https://www.fs.fed.us/wildflowers/Rare_Plants/profiles/TEP/erigeron_rhizomatus/documents/ZuniFleabaneRP.pdf . Accessed: June 5, 2019.	Other	No	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	U.S. Fish and Wildlife Service. 1989. Mancos milkvetch <i>Astragalus humillimus</i>) recovery plan. Prepared for U.S. Fish and Wildlife Service, Region 2. Albuquerque, NM. Available at: https://esadocs.defenders-cci.org/ESAdocs/recovery_plan/891220.pdf . Accessed: June 5, 2019.	Other	No	No

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NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	U.S. Fish and Wildlife Service. 1990. Harperella (Ptilimnium nodosum) Recovery Plan. Prepared for U.S. Fish and Wildlife Service, Region 5. Newton Corner, MA. Available at: https://ecos.fws.gov/docs/recovery_plan/910305b.pdf . Accessed: June 5, 2019.	Other	No	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	U.S. Fish and Wildlife Service. 1991. Cheat Mountain Salamander (Plethodon nettingi) Recovery Plan. Prepared for U.S. Fish and Wildlife Service, Region 5. Newton Corner, MA. Available at: https://www.amphibians.org/wp-content/uploads/2019/04/Cheat-Mountain-Salamander.pdf . Accessed: June 5, 2019.	Other	No	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	U.S. Fish and Wildlife Service. 1992. Roanoke Logperch (Percina rex) Recovery Plan. Prepared for U.S. Fish and Wildlife Service, Region 5. Newton Corner, MA. Available at: https://www.fws.gov/northeast/virginiafield/pdf/PARTNERS/longleaf_pine/logperch_recovery_plan.pdf . Accessed: June 5, 2019.	Other	No	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	U.S. Fish and Wildlife Service. 1993. Dwarf Wedge Mussel (Alasmidonta heterodon) Recovery Plan. Prepared for U.S. Fish and Wildlife Service, Region 5. Hadley, MA. Available at: https://www.fws.gov/northeast/pafo/pdf/Dwarf%20wedgemussel%20Recovery%20Plan.pdf . Accessed: June 5, 2019.	Other	No	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	U.S. Fish and Wildlife Service. 1994. Shenandoah Salamander (Plethodon shenandoah) Recovery Plan. Prepared for U.S. Fish and Wildlife Service, Region 5. Hadley, MA. Available at: https://ecos.fws.gov/docs/recovery_plan/940929a.pdf . Accessed: June 5, 2019.	Other	No	No

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NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	U.S. Fish and Wildlife Service. 1996. Recovery Plan for Roan Mountain Bluet (<i>Hedyotis purpurea</i> (L.) Torrey & Gray var. <i>montana</i> (Small) Fosberg). Prepared for U.S. Fish and Wildlife Service, Southeast Region. Atlanta, GA. Available at: https://ecos.fws.gov/docs/recovery_plan/960513.pdf . Accessed: June 5, 2019.	Other	No	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	U.S. Fish and Wildlife Service. 1997. Recovery Plan for the Rock Gnome Lichen (<i>Gymnoderma lineare</i>). Prepared for U.S. Fish and Wildlife Service, Southeast Region. Atlanta, GA. Available at: https://ecos.fws.gov/docs/recovery_plan/970930b.pdf . Accessed: June 5, 2019.	Other	No	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	U.S. Fish and Wildlife Service. 2000. Recovery Plan for <i>Liatris helleri</i> (Heller's Blazing Star). Prepared for U.S. Fish and Wildlife Service, Southeast Region. Atlanta, GA. Available at: https://ecos.fws.gov/docs/recovery_plan/000128.pdf . Accessed: June 5, 2019.	Other	No	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	U.S. Fish and Wildlife Service. 2000. Recovery Plan for Mobile River Basin Aquatic Ecosystem). Prepared for U.S. Fish and Wildlife Service, Southeast Region. Atlanta, GA. Available at: http://www.ag.auburn.edu/auxiliary/alcfwru/coalition/mrbrecovery.pdf . Accessed: June 5, 2019.	Other	No	No

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NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	U.S. Fish and Wildlife Service. 2003. Recovery Plan for Endangered Fat Threeridge (<i>Amblema neislerii</i>), Shinyrayed Pocketbook (<i>Lampsilis subangulata</i>), Gulf Moccasinshell (<i>Medionidus penicillatus</i>), Ochlockonee Moccasinshell (<i>Medionidus simpsonianus</i>), Oval Pigtoe (<i>Pleurobema pyriforme</i>) and Threatened Chipola Slabshell (<i>Elliptio chipolaensis</i>), and Purple Bankclimber (<i>Elliptioideus sloatianus</i>). Prepared for U.S. Fish and Wildlife Service, Southeast Region. Atlanta, GA. Available at: https://ecos.fws.gov/docs/recovery_plan/030930.pdf . Accessed: June 5, 2019.	Other	No	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	U.S. Fish and Wildlife Service. 2005. Recovery Plan for Six Mobile River Basin Aquatic Snails (<i>Cylindrical Lioplax</i> , <i>Flat Pebblesnail</i> , <i>Plicate Rocksnail</i> , <i>Painted Rocksnail</i> , <i>Round Rocksnail</i> , <i>Lacy Elimia</i>). Prepared for U.S. Fish and Wildlife Service, Southeast Region. Atlanta, GA. Available at: https://ecos.fws.gov/docs/recovery_plan/051202.pdf . Accessed: June 5, 2019.	Other	No	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	U.S. Fish and Wildlife Service. 2007. Chiricahua Leopard Frog (<i>Rana chiricahuensis</i>) Final Recovery Plan. Prepared for U.S. Fish and Wildlife Service, Southwest Region. Albuquerque, NM. Available at: https://www.fws.gov/southwest/es/arizona/Documents/Species_Docs/CLF/Final_CLF_Plan.pdf . Accessed: June 5, 2019.	Other	No	No
NHTSA-2017-0069-0605	Alejandra Nunez, Sierra Club	U.S. Fish and Wildlife Service. 2008. Determination of Threatened Status for the Polar Bear (<i>Ursus maritimus</i>) Throughout Its Range, 73 Federal Register 28212, 28293.	Other	No	No
NHTSA-2017-0069-0605	Alejandra Nunez, Sierra Club	U.S. Fish and Wildlife Service. 2009. Bay Checkerspot Butterfly (<i>Euphydryas editha bayensis</i>) 5-Year Review: Summary and Evaluation, Sacramento Fish and Wildlife Office.	Other	No	No

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Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if provided by commenter)	Issue Addressed by Source	Peer-Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
NHTSA-2017-0069-0598	Lou Finazzo, Sierra Club	U.S. Fish and Wildlife Service. 2009. Quino Checkerspot Butterfly (<i>Euphydryas editha quino</i>) 5-Year Review: Summary and Evaluation. August 13, 2009.	Other	No	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	U.S. Fish and Wildlife Service. 2010. <i>Clarkia Franciscana</i> (Presidio <i>clarkia</i>), 5-Year Review: Summary and Evaluation. U.S. Fish and Wildlife Service, Sacramento Fish and Wildlife Office. Sacramento, CA. Available at: https://esadocs.defenders-cci.org/ESAdocs/five_year_review/doc3590.pdf . Accessed: June 5, 2019.	Other	No	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	U.S. Fish and Wildlife Service. 2010. Designation of Critical Habitat for the Polar Bear (<i>Ursus maritimus</i>) in the United States; Final Rule. 75 Federal Register 76085. Available at: https://www.federalregister.gov/documents/2010/12/07/2010-29925/angered-and-threatened-wildlife-and-plants-designation-of-critical-habitat-for-the-polar-bear . Accessed: June 5, 2019.	Other	No	No
NHTSA-2017-0069-0605	Alejandra Nunez, Sierra Club	U.S. Fish and Wildlife Service. 2010. Mojave Population of the Desert Tortoise (<i>Gopherus agassizii</i>) 5-Year Review: Summary and Evaluation, Tortoise Recovery Office.	Other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	U.S. Fish and Wildlife Service. 2012. Consequences for Wildlife. Last updated Nov. 13, 2012. Available at: https://www.fws.gov/home/climatechange/impacts.html .	Climate change	No	No

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NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	U.S. Fish and Wildlife Service. 2013. Endangered and Threatened Wildlife and Plants; Determination of Endangered Status for <i>Chromolaena frustrata</i> (Cape Sable Thoroughwort), <i>Consolea corallicola</i> (Florida Semaphore Cactus), and <i>Harrisia aboriginum</i> (Aboriginal Prickly-Apple); Final Rule. 78 Federal Register 63795. Available at: https://www.federalregister.gov/documents/2013/10/24/2013-24177/endangered-and-threatened-wildlife-and-plants-determination-of-endangered-status-for-chromolaena . Accessed: June 5, 2019.	Other	No	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	U.S. Fish and Wildlife Service. 2013. Endangered and Threatened Wildlife and Plants; Endangered Species Status for the Florida Bonneted Bat; Final Rule. 78 Federal Register 61003. Available at: https://www.federalregister.gov/documents/2013/10/02/2013-23401/endangered-and-threatened-wildlife-and-plants-endangered-species-status-for-the-florida-bonneted-bat . Accessed: June 5, 2019.	Other	No	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	U.S. Fish and Wildlife Service. 2015. Endangered and Threatened Wildlife and Plants; Endangered Species Status for <i>Trichomanes punctatum</i> ssp. <i>Floridanum</i> ; Final Rule. 80 Federal Register 60439. Available at: https://www.federalregister.gov/documents/2015/10/06/2015-25299/endangered-and-threatened-wildlife-and-plants-endangered-species-status-for-trichomanes-punctatum . Accessed: June 5, 2019.	Other	No	No
NHTSA-2017-0069-0605	Alejandra Nunez, Sierra Club	U.S. Fish and Wildlife Service. 2016. Polar bear (<i>Ursus maritimus</i>) Conservation Management Plan, Final, USFWS Region 7, Anchorage, Alaska.	Other	No	No

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NHTSA-2017-0069-0605	Alejandra Nunez, Sierra Club	U.S. Fish and Wildlife Service. 2017. Polar Bear (<i>Ursus maritimus</i>) 5-Year Review: Summary and Evaluation, U.S. Fish and Wildlife Service, Marine Mammals Management, Anchorage, Alaska.	Other	No	No
NHTSA-2017-0069-0541	Lou Finazzo, Sierra Club	U.S. Global Change Research Program. 2016. Our Changing Planet: The U.S. Global Change Research Program for Fiscal Year 2017. Washington, DC. Available at: https://www.globalchange.gov/browse/reports/our-changing-planet-fy-2017 . Accessed: December 20, 2018.	Climate change	No	No
NHTSA-2017-0069-0541	Lou Finazzo, Sierra Club	U.S. Global Change Research Program. 2016. The Impacts of Climate Change on Human Health in the United States: A Scientific Assessment. Washington, DC. Available at: https://s3.amazonaws.com/climatehealth2016/low/ClimateHealth2016_FullReport_small.pdf . Accessed: December 20, 2018.	Climate change	Yes	No
NHTSA-2017-0069-0547 NHTSA-2018-0067-12378	Academy of Integrative Health & Medicine et al. Jean Su, Center for Biological Diversity et al.	U.S. Global Change Research Program. 2017. Climate Science Special Report: Fourth National Climate Assessment, Volume I [Wuebbles, D.J., D.W. Fahey, K.A. Hibbard, D.J. Dokken, B.C. Stewart, and T.K. Maycock (eds.)]. U.S. Global Change Research Program, Washington, DC, USA, 470 pp, doi: 10.7930/J0J964J6.	Climate change	Yes	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	U.S. Global Change Research Program. 2018. Fourth National Climate Assessment Volume 2: Impacts, Risks, and Adaptation in the United States. U.S. Global Change Research Program. Washington, DC. Available at: https://nca2018.globalchange.gov/ . Accessed: June 5, 2019.	Climate change	Yes	No

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NHTSA-2017-0069-0693	Rafael Pagán and Madeleine Green, citizens	U.S. Global Change Research Program. 2018: Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, Volume II [Reidmiller, D.R., C.W. Avery, D.R. Easterling, K.E. Kunkel, K.L.M. Lewis, T.K. Maycock, and B.C. Stewart (eds.)]. U.S. Global Change Research Program, Washington, DC, USA, 1515 pp. doi: 10.7930/NCA4.2018.	Climate change	Yes	No
NHTSA-2017-0069-0543	Lou Finazzo, Sierra Club	U.S. Government Accountability Office. 2010. Vehicle Fuel Economy NHTSA and EPA's Partnership for Setting Fuel Economy and Greenhouse Gas Emissions Standards Improved Analysis and Should Be Maintained. Report to the Chairman, Subcommittee on Energy and Environment, Committee on Energy and Commerce, House of Representatives.GAO-10-336. Washington, D.C.	Other	No	No
NHTSA-2017-0069-0600	Lou Finazzo, Sierra Club	U.S. Government Accountability Office. 2017. Climate Change Adaptation: DOD Needs to Better Incorporate Adaptation into Planning and Collaboration at Overseas Installations. Available at: https://www.gao.gov/assets/690/688323.pdf .	Other	No	No
NHTSA-2017-0069-0613	Erin Murphy, Environmental Defense Fund	U.S. Government Accountability Office. 2017. Climate Change: Information on Potential Economic Effects Could Help Guide Federal Efforts to Reduce Fiscal Exposure. https://www.gao.gov/assets/690/687466.pdf .	Other	No	No
NHTSA-2017-0069-0531	Lou Finazzo, Sierra Club	U.S. Government Accountability Office. 2017. Information on Potential Economic Effects Could Help Guide Federal Efforts to Reduce Fiscal Exposure. Report to Congressional Requesters. GAO-17-720. Washington, D.C.	Climate change	No	No
NHTSA-2017-0069-0614	Erin Murphy, Environmental Defense Fund	U.S. Government. 2016. Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis – Under Executive Order 12866.	Other	No	No

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NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	UBS. 2017. Q-Series UBS Evidence Lab Electric Car Teardown – Disruption Ahead? May 18, 2017. Available at: https://neo.ubs.com/shared/d1wkuDIEbYPjF/ . Accessed: December 18, 2018.	Energy	No	No
NHTSA-2017-0069-0604 NHTSA-2017-0069-0613	Lou Finazzo, Sierra Club Erin Murphy, Environmental Defense Fund	Underwood, B. S., et al. 2017. Increased costs to US pavement infrastructure from future temperature rise. <i>Nature Climate Change</i> 7:704-710.	Other	Yes	No
NHTSA-2017-0069-0571	Lou Finazzo, Sierra Club	Union of Concerned Scientists 2011. Climate Change and Your Health: Rising Temperatures, Worsening Ozone Pollution. Available at: https://www.ucsusa.org/global_warming/science_and_impacts/impacts/climate-change-and-ozone-pollution.html#.XBwWzVw3k2w .	Climate change, other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Union of Concerned Scientists. 2007. Confronting Climate Change in the U.S. Northeast: New Jersey. Available at: https://www.state.nj.us/dep/cleanair/hearings/pdf/09_confronting.pdf .	Climate change	No	No
NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	Union of Concerned Scientists. 2014. Landmarks at Risk. Available at: https://www.ucsusa.org/global_warming/science_and_impacts/impacts/national-landmarks-at-risk-from-climate-change.html#.XBqqbGhKg2w .	Climate change	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Union of Concerned Scientists. 2014. National Landmarks at Risk. Available at: https://www.ucsusa.org/sites/default/files/legacy/assets/documents/global_warming/National-Landmarks-at-Risk-Executive-Summary.pdf .	Other	No	No

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NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	Union of Concerned Scientists. 2016. Delivering Opportunity: How Electric Buses and Trucks Can Create Jobs and Improve Public Health in California. October 2016. Available at: https://www.ucsusa.org/sites/default/files/attach/2016/10/UCS-Electric-Buses-Report.pdf . Accessed: December 18, 2018.	Other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Union of Concerned Scientists. 2016. On the Front Lines of Rising Seas: Joint Base Anacostia- Bolling and Washington Navy Yard. Available at: https://www.ucsusa.org/global-warming/science-and-impacts/impacts/sea-level-rise-flooding-joint-base-anacostia-bolling-and-washington-navy-yard#.XGxkU2yWwZN .	Climate change	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Union of Concerned Scientists. 2017. When Rising Seas Hit Home: Fact Sheet: North Carolina Faces Chronic Inundation. Available at: https://www.ucsusa.org/sites/default/files/attach/2017/07/when-rising-seas-hit-home-northcarolina-fact-sheet.pdf .	Climate change	No	No
NHTSA-2017-0069-0225	Alejandra Nunez, Sierra Club	Union of Concerned Scientists. 2018. New EPA Administrator, Same Bad Idea—Car Standard Rollbacks Would be Awful. Available at: https://blog.ucsusa.org/dave-cooke/new-epa-administrator-same-bad-idea-car-standard-rollbacks-would-be-awful . Accessed: December 17, 2018.	Air quality	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Union of Concerned Scientists. 2018. Underwater: Rising Seas, Chronic Floods, and the Implications for U.S. Coastal Real Estate. Available at: https://www.ucsusa.org/sites/default/files/attach/2018/06/underwater-analysis-full-report.pdf .	Climate change, other	No	No
NHTSA-2017-0069-0620	Lou Finazzo, Sierra Club	United Church of Christ Justice & Witness Ministries. 2007. Toxic Wastes and Race at Twenty 1987-2007.	Other	No	No

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NHTSA-2017-0069-0714	Lou Finazzo, Center for Biological Diversity et al.	United Nations. 2019. UN Report: Nature's Dangerous Decline 'Unprecedented'; Species Extinction Rates 'Accelerating.' Available at: https://www.un.org/sustainabledevelopment/blog/2019/05/nature-decline-unprecedented-report/ .	Climate change	No	No
NHTSA-2017-0069-0600	Lou Finazzo, Sierra Club	United Nations Framework Convention on Climate Change. 2015. Report on the structured expert dialogue on the 2013-2015 review. 42nd Session June 2015.	Climate change	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	United Nations Framework on Climate Change. The Paris Agreement. Available at: https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement .	Climate change	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	University of Maryland, Center for Integrative Environmental Research. 2008. Economic Impacts of Climate Change on North Carolina. Final. Available at: http://cier.umd.edu/climateadaptation/North%20Carolina%20Economic%20Impacts%20of%20Climate%20Change%20Full%20Report.pdf .	Climate change, other	No	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	University of Southern California Environmental Health Centers. References: Living Near Busy Roads or Traffic Pollution. Available at: https://envhealthcenters.usc.edu/infographics/infographic-living-near-busy-roads-or-traffic-pollution/references-living-near-busy-roads-or-traffic-pollution .	Other	No	No
NHTSA-2017-0069-0555	Simon Mui, National Resources Defense Council (NRDC)	Unknown. 2013. Venza Aluminum BIW Concept Study. Available at: http://www.drivealuminum.org/wp-content/uploads/2017/05/Venza.FullStudy_2013MAY15.pdf . Accessed: December 21, 2018.	Life cycle assessment	No	No

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NHTSA-2017-0069-0613 NHTSA-2017-0069-0604	Erin Murphy, Environmental Defense Fund Lou Finazzo, Sierra Club	Upton, J. 2017. Breathing Fire, Climate Central. Available at: www.climatecentral.org/news/breathing-fire-california-air-quality-smoke-waves-21754 . Accessed: February 18, 2019.	Air quality, other	No	No
EPA-HQ-OAR-2018-0283-5765	Fresh Energy	Urban Institute. 2015. Asthma in Low Income Communities. Available at: https://societyhealth.vcu.edu/media/society-health/pdf/HousingReDev-Practices-Asthma-4.1.15.pdf .	Air quality, environmental justice	No	No
NHTSA-2017-0069-0605	Alejandra Nunez, Sierra Club	Urban, M. C. 2015. Accelerating extinction risk from climate change. <i>Science</i> . 348:571.	Climate change	Yes	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	Urman, R., et al. 2014. Associations of children's lung function with ambient air pollution: joint effects of regional and near-roadway pollutants. <i>Thorax</i> . 69(6):540-547. DOI: 10.1136/thoraxjnl-2012-203159.	Other	Yes	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Vallano, D., et al. 2012. Simulated nitrogen deposition enhances the performance of an exotic grass relative to native serpentine grassland competitors. <i>Plant Ecology</i> . 213(6): 1015-1026. Available at: https://hero.epa.gov/hero/index.cfm/reference/details/reference_id/1571002 . Accessed: June 6, 2019.	Other	Yes	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	Van Auken, R. M., and J.W. Zellner. 2013. Docket No. NHTSA-2010-0152-0063.	Other	No	No
NHTSA-2017-0069-0611 NHTSA-2017-0069-0600	Lou Finazzo, Sierra Club	Van der Wiel, K., et al. 2017. Rapid attribution of the August 2016 flood-inducing extreme precipitation in south Louisiana to climate change. <i>Hydrology. And Earth System Sciences</i> . 21: 897. Available at: www.hydrol-earth-syst-sci.net/21/897/2017/ .	Climate change	Yes	No

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NHTSA-2017-0069-0605	Alejandra Nunez, Sierra Club	Van Hooidonk, R., et al. 2014. Opposite latitudinal gradients in projected ocean acidification and bleaching impacts on coral reefs. <i>Global Change Biology</i> . 20:103-112. doi: 10.1111/gcb.12394.	Other	Yes	No
NHTSA-2017-0069-0682 NHTSA-2017-0069-0600	States of California, Connecticut, Delaware, et al. Lou Finazzo, Sierra Club	Van Oldenborgh, G. J., et al. 2017. Attribution of extreme rainfall from hurricane Harvey. August 2017. <i>Environmental Research Letters</i> . 12:124009. Available at: https://doi.org/10.1088/1748-9326/aa9ef2 .	Climate change	Yes	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	van Woesik, Robert et al. 2017. Coral disease hotspots in the Caribbean. <i>Ecosphere</i> . 8(5): e01814. Available at: https://esajournals.onlinelibrary.wiley.com/doi/10.1002/ecs2.1814 . Accessed: June 6, 2019.	Other	Yes	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	Vaughan, Adam. 2017. The Guardian Jaguar Land Rover to make only electric or hybrid cars from 2020. 2017. Available at: https://www.theguardian.com/business/2017/sep/07/jaguar-land-rover-electric-hybrid-cars-2020 . Accessed: December 18, 2018.	Other	No	No
NHTSA-2017-0069-0604 NHTSA-2017-0069-0613	Lou Finazzo, Sierra Club Erin Murphy, Environmental Defense Fund	Vazquez, D. P., et al. 2017. Ecological and evolutionary impacts of changing climatic variability. <i>Biol Rev</i> 92: 22-42.	Other	Yes	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	VELOZ. 2018. "6_june_2018_Dashboard_PEV_Sales_veloz.pdf." Available at: http://www.veloz.org/wp-content/uploads/2018/07/6_june_2018_Dashboard_PEV_Sales_veloz.pdf . Accessed: October 24, 2018.	Other	No	No

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NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	VELOZ. 2018. Monthly EV Sales. Available at: http://www.velopz.org/wp-content/uploads/2018/10/9_sept_2018_Dashboard_PEV_Sales_veloz-1.pdf .	Other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Vermont Climate Assessment. VT's Changing Climate. Available at: http://vtclimate.org/vts-changing-climate/ .	Climate change	No	No
NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	Vermont Climate Cabinet. 2014. Vermont Zero Emission Vehicle Action Plan. Available at: https://dec.vermont.gov/sites/dec/files/aqc/mobile-sources/documents/Final%20VT%20ZEV%20Action%20Plan_080114.pdf .	Life cycle assessment	No	No
NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	Vermont Department of Buildings and General Services. 2016. 2016 Vermont State agency Energy Plan. Available at: https://bgs.vermont.gov/sites/bgs/files/files/energy-environment/2016-State-Agency-Energy-Plan.pdf .	Energy	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Vermont Department of Environmental Conservation. Zero Emission Vehicles. Available at: https://dec.vermont.gov/air-quality/mobile-sources/lev/zev .	Other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Vermont Department of Health. 2019. Climate Change and Tickborne Diseases. Available at: http://www.healthvermont.gov/health-environment/climate-health/tickborne-diseases .	Climate change	No	No
NHTSA-2017-0069-0605	Alejandra Nunez, Sierra Club	Veron, J. E. N., et al. 2009. The Coral Reef Crisis: the Critical Importance of <350 ppm CO ₂ . <i>Marine Pollution Bulletin</i> 58:1428.	Other	Yes	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	Vlasic, Bill, and Neal Boudette. 2017. G.M. and Ford Lay Out Plans to Expand Electric Models. October 2, 2017, Available at: https://www.nytimes.com/2017/10/02/business/general-motors-electric-cars.html . Accessed: December 18, 2018.	Other	No	No

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EPA-HQ-OAR-2018-0283-5486	Michael Oppenheimer, Philip B. Duffy, Emmett Environmental Law & Policy Clinic at Harvard Law School	Vose, J., et al. 2016. Effects of Drought on Forest and Rangelands in the United States: A Comprehensive Science Synthesis. U.S. Forest Service. Available at: https://www.srs.fs.usda.gov/pubs/gtr/gtr_wo93b.pdf .	Other	No	No
NHTSA-2017-0069-0570	Erin Murphy, Environmental Defense Fund	Wadud, Z., et al. 2009. Modelling fuel demand for different socio-economic groups. <i>Applied Energy</i> (86)12:2740-2749.	Other	Yes	No
NHTSA-2017-0069-0579	Erin Murphy, Environmental Defense Fund	Walker, Fanklin. 1968. Determinants of auto scrappage. The Review of Economics and Statistics. The MIT Press. 50(4):503-506. doi: 10.2307/1926820.	Other	No	No
NHTSA-2017-0069-0611	Lou Finazzo, Sierra Club	Walsh, John E., et al. 2018. The high latitude heat wave of 2016 and its impact on Alaska. <i>American Meteorological Society</i> . January 2018.	Climate change	Yes	No
EPA-HQ-OAR-2018-0283-5486	Michael Oppenheimer, Philip B. Duffy, Emmett Environmental Law & Policy Clinic at Harvard Law School	Walthall, C. L., et al. 2013. Climate Change and Agriculture in the United States: Effects and Adaptation. USDA Technical Bulletin.	Climate change	No	Yes
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Wang, M., et al. 2010. Climate projections for selected large marine ecosystems. <i>Journal of Marine Systems</i> . 79(3-4): 258-266. Available at: https://www.pmel.noaa.gov/foci/publications/2010/wang0641.pdf . Accessed: June 6, 2019.	Climate change	Yes	No

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NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Wang, Muyin et al. 2015. Projected future duration of the sea-ice-free season in the Alaskan Arctic. <i>Progress in Oceanography</i> . 136: 50-59. Available at: http://adsabs.harvard.edu/abs/2015PrOce.136.50W . Accessed: June 6, 2019.	Climate change	Yes	No
NHTSA-2017-0069-0574	Erin Murphy, Environmental Defense Fund	Wang, T., and C. Chen. 2014. Impact of fuel price on vehicle miles traveled (VMT): do the poor respond in the same way as the rich? <i>Transportation</i> : 41(1):91-105.	Other	Yes	No
NHTSA-2017-0069-0562	Lou Finazzo, Sierra Club	Warren, R., et al. 2013. Quantifying the benefit of early climate change mitigation in avoiding biodiversity loss. <i>Nature Climate Change</i> . 3:678-682. doi: 10.1038/nclimate1887.	Climate change	Yes	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Warren, R., et al. 2009. Increasing impacts of climate change upon ecosystems with increasing global mean temperature rise. <i>Climatic Change</i> . 106(2): 141-177. Available at: https://www.researchgate.net/publication/227320135_Increasing_impacts_of_climate_change_upon_ecosystems_with_increasing_global_mean_temperature_rise . Accessed: June 6, 2019.	Climate change	Yes	No
NHTSA-2017-0069-0605	Alejandra Nunez, Sierra Club	Warren, R., et al. 2013. Quantifying the benefit of early climate change mitigation in avoiding biodiversity loss. <i>Nature Climate Change</i> . 3:678.	Climate change	Yes	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Washington Forest Protection Association. Sustainable Forestry. Available at: http://www.wfpa.org/sustainable-forestry/ .	Other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Washington Shellfish Initiative. Washington: A Shellfish State. Available at: http://www.governor.wa.gov/sites/default/files/WSI%20factsheet.pdf .	Other	No	No

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NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	Washington State Department of Transportation. 2015. Washington State Electric Vehicle Action Plan 2015-2020. Available at: http://www.wsdot.wa.gov/NR/rdonlyres/28559EF4-CD9D-4CFA-9886-105A30FD58C4/0/WAEVActionPlan2014.pdf .	Life cycle assessment	No	No
NHTSA-2017-0069-0566	Wesley Dyer, California Air Resources Board	Wasserstein, R. L., et al. 2016. The ASA's statement on p-Values: context, process, and purpose. <i>The American Statistician</i> . 70(2):129-133. doi:10.1080/00031305.2016.1154108.	Other	Yes	No
NHTSA-2017-0069-0568	Lou Finazzo, Sierra Club	Watts, N., et al. 2018. The Lancet Countdown on health and climate change: from 25 years of inaction to a global transformation for public health. <i>The Lancet</i> 391(10120):581-630. Available at: https://doi.org/10.1016/S0140-6736(17)32464-9 .	Climate change, other	Yes	No
EPA-HQ-OAR-2018-0283-7625	Center for Biological Diversity et al.	Watts, N., et al. 2019. The 2019 report of The <i>Lancet</i> Countdown on health and climate change: ensuring that the health of a child born today is not defined by a changing climate. <i>The Lancet</i> 394(10211):1836–1878. Available at: https://www.lancetcountdown.org/2019-report/ .	Climate change, other	Yes	No
NHTSA-2017-0069-0570	Erin Murphy, Environmental Defense Fund	Weber, S., and M. Farsi. 2014. Travel distance, fuel efficiency, and vehicle weight: An estimation of the rebound effect using individual data in Switzerland. <i>IRENE Working Papers 14-03, IRENE Institute of Economic Research</i> .	Other	Yes	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Webster, P. J., et al. 2005. Changes in Tropical Cyclone Number, Duration, and Intensity in a Warming Environment. <i>Science</i> . 309:1844-1846. Available at: http://science.sciencemag.org/content/309/5742/1844.full .	Climate change	Yes	No
NHTSA-2017-0069-0605 NHTSA-2017-0069-0562	Alejandra Nunez, Sierra Club Lou Finazzo, Sierra Club	Weiss, Stuart B. 1999. Cars, cows and checkerspot butterflies: nitrogen deposition and management of nutrient-poor grasslands for a threatened species. <i>Conservation Biology</i> . 13:1476.	Other	Yes	No

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NHTSA-2017-0069-0611	Lou Finazzo, Sierra Club	Weitzman, Martin L. 1998. Why the far-distant future should be discounted at its lowest possible rate. <i>Journal of Environmental Economics and Management</i> . 36:201-208. August 11, 1998.	Climate change	Yes	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	Wenzel, T. 2012. An Analysis of the Relationship between Casualty Risk Per Crash and Vehicle Mass and Footprint for Model Year 2000–2007 Light Duty Vehicles. Lawrence Berkeley National Laboratory Report. Available at: http://eta-publications.lbl.gov/sites/default/files/lbnl-5697e.pdf . Accessed: October 24, 2018.	Other	No	No
NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	Wenzel, T. 2018. Assessment of NHTSAs Report ‘Relationships Between Fatality Risk, Mass, and Footprint in Model Year 2004-2011 Passenger Cars and LTVs’ (LBNL Phase 1). LBNL-2001137. Available at: https://eta.lbl.gov/publications/assessment-nhtsa-s-report-3 .	Other	Yes	No
NHTSA-2017-0069-0567	R.M. Van Auken, Dynamic Research, Inc.	Wenzel, T. Assessment of NHTSA’s Report “Relationships Between Fatality Risk, Mass, and Footprint in Model Year 2003-2010 Passenger Cars and LTVs”, LBNL-1005177, Lawrence Berkeley National Laboratory, Berkeley, CA, June 2016 (Docket No. NHTSA-2016-0068-0006).	Other	No	No
NHTSA-2017-0069-0570	Erin Murphy, Environmental Defense Fund	Wenzel, T. P., and Fujita, K. S. 2018. Elasticity of Vehicle Miles of Travel to Changes in the Price of Gasoline and the Cost of Driving in Texas. <i>Lawrence Berkeley National Lab</i> .	Other	No	No
NHTSA-2017-0069-0575	Richard Corey, California Air Resources Board	Wenzel, Thomas P. “Relationship between US Societal Fatality Risk per Vehicle Miles of Travel and Mass, for Individual Vehicle Models over Time (Model Year)”. 2016 LBNL-1006316.	Other	No	No

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NHTSA-2017-0069-0584	Erin Murphy, Environmental Defense Fund	Wenzel, Tom. 2018. Assessment of NHTSA's Report "Relationships Between Fatality Risk, Mass, and Footprint in Model Year 2004-2011 Passenger Cars and LTVs" (LBNL Phase 1). Ernest Orlandon Lawrence Berkley National Laboratory. LBNL-2001137. Available at: http://eta-publications.lbl.gov/sites/default/files/lbnl-2001137.pdf . Accessed: December 24, 2018.	Life cycle assessment, other	No	No
NHTSA-2017-0069-0682 NHTSA-2017-0069-0570 NHTSA-2017-0069-0574 NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al. Erin Murphy, Environmental Defense Fund	West, J., et al. 2015. Vehicle Miles (Not) Traveled: Why Fuel Economy Requirements Don't Increase Household Driving. NBER Working Paper No. 21194. <i>Journal of Public Economics</i> . 145(C)65-81. Available at: https://doi.org/10.1016/j.jpubeco.2016.09.009 .	Other	No	No
NHTSA-2017-0069-0574	Erin Murphy, Environmental Defense Fund	West, R., and D. Pickrell. 2011. Factors Affecting Vehicle Use in Multiple-Vehicle Households. Presentation at the 2009 NHTS Workshop.	Other	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	Westerling, Anthony LeRoy. 2016. Increasing western US forest wildfire activity: sensitivity to changes in the timing of spring. <i>Philosophical Transactions Royal Society B</i> . 371: 20150178. Available at: http://dx.doi.org/10.1098/rstb.2015.0178 .	Climate change	Yes	No
NHTSA-2017-0069-0682	States of California, Connecticut, Delaware, et al.	Westerling, L. 2018. Wildfire Simulations for California's Fourth Climate Change Assessment Projecting Changes in Extreme Wildfire Events with a Warming Climate. A Report for: California's Fourth Climate Change Assessment. Available at: http://www.climateassessment.ca.gov/events/docs/20181210-Slides_Westerling.pdf .	Climate change	Yes	No

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NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	White House Office of the Press Secretary. 2014. Fact Sheet: What Climate Change Means for New Mexico and the Southwest. Available at: https://obamawhitehouse.archives.gov/sites/default/files/docs/state-reports/NEWMEXICO_NCA_2014.pdf .	Climate change	No	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	White House. 2017. Remarks by President Trump at American Center for Mobility. Detroit, MI. Available at: https://www.whitehouse.gov/briefings-statements/remarks-president-trump-american-center-mobility-detroit-mi/ .	Other	No	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Whiteman, John et al. 2015. Summer declines in activity and body temperature offer polar bears limited energy savings. <i>Science</i> . 349(6245): 295-298. Available at: https://science.sciencemag.org/content/349/6245/295.abstract . Accessed: June 6, 2019.	Other	Yes	No
NHTSA-2017-0069-0604	Lou Finazzo, Sierra Club	Wiens, John J. 2016. Climate-related local extinctions are already widespread among plant and animal species. <i>PLoS Biology</i> . 14(12): e2001104. doi:10.1371/journal.pbio.2001104.	Other	Yes	No
NHTSA-2017-0069-0562	Lou Finazzo, Sierra Club	Wiens, John. 2016. Climate-Related Local Extinctions Are Already Widespread among Plant and Animal Species. <i>PLoS Biol</i> 14(12): e2001104. doi:10.1371/journal.pbio.2001104.	Other	Yes	No
NHTSA-2017-0069-0542 NHTSA-2017-0069-0625	Lou Finazzo, Sierra Club States of California, Connecticut, Delaware, et al.	Williams, A. P., et al. 2015. Contribution of anthropogenic warming to California drought during 2012–2014. <i>Geophysical Research Letters</i> . 42:6819–6828. doi:10.1002/2015GL064924.	Climate change	Yes	No

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NHTSA-2017-0069-0723	California Air Resources Board	Williams, A. P., et al. 2019. Observed Impacts of Anthropologic Climate Change on Wildfires in California. <i>Earth's Future</i> . Available at: https://agupubs.onlinelibrary.wiley.com/doi/full/10.1029/2019EF001210 .	Climate change	Yes	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Williams, Dana et al. 2017. Thermal stress exposure, bleaching response, and mortality in the threatened coral <i>Acropora palmata</i> . <i>Marine Pollution Bulletin</i> . 124(1): 189-197. Available at: https://www.sciencedirect.com/science/article/pii/S0025326X17305829?via%3Dihub#! . Accessed: June 6, 2019.	Other	Yes	No
NHTSA-2017-0069-0597	Devin O'Connor, National Coalition for Advanced Transportation	Winton, Neil. 2017. Electric Car Price Parity Expected Next Year. May 22, 2017. Available at: https://www.forbes.com/sites/neilwinton/2017/05/22/electric-car-price-parity-expected-next-year-report/#368be9fa7922 . Accessed: December 18, 2018.	Other	No	No
NHTSA-2018-0067-12378	Jean Su, Center for Biological Diversity et al.	Witt, Matthew et al. 2010. Predicting the impacts of climate change on a globally distributed species: the case of the loggerhead turtle. <i>Journal of Experimental Biology</i> . 213: 901-911. Available at: http://jeb.biologists.org/content/213/6/901 . Accessed by 6/6/2019.	Other	Yes	No
NHTSA-2017-0069-0548	Wesley Dyer, California Air Resources Board	Witzenburg, Gary. 2019. First Drive: 2019 Ram 1500 eTorque Mild Hybrid. <i>Truck Trend</i> .	Life cycle assessment	No	No
NHTSA-2017-0069-0571	Lou Finazzo, Sierra Club	Working Group of the California Ocean Protection Council Science Advisory Team. 2017. Rising Seas in California. Available at: http://www.opc.ca.gov/webmaster/ftp/pdf/docs/rising-seas-in-california-an-update-on-sea-level-rise-science.pdf .	Climate change	Yes	No

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NHTSA-2017-0069-0495	Michael MacCracken, Climate Institute	World Bank. 2012. Why a 4°C Warmer World Must be Avoided. A report for the World Bank by the Potsdam Institute for Climate Impact Research and Climate Analytics. Washington, D.C.	Climate change	No	No
NHTSA-2017-0069-0495	Michael MacCracken, Climate Institute	World Bank. 2013. Turn Down the Heat: Climate Extremes, Regional Impacts, and the Case for Resilience. A report for the World Bank by the Potsdam Institute for Climate Impact Research and Climate Analytics. Washington, D.C.	Climate change	Yes	No
NHTSA-2017-0069-0495	Michael MacCracken, Climate Institute	World Bank. 2014. Turn Down the Heat: Confronting the New Climate Normal. Prepared by the Potsdam Institute for Climate Impact Research and Climate Analytics. Washington, D.C.	Climate change	Yes	No
NHTSA-2017-0069-0553	Erin Murphy, Environmental Defense Fund	World Health Organization. 2018. Bulletin of the World Health Organization: Public Health Round Up.	Other	No	No
NHTSA-2017-0069-0613	Erin Murphy, Environmental Defense Fund	World Meteorological Organization (WMO) and Global Atmosphere Watch. 2017. The State of Greenhouse Gases in the Atmosphere Based on Global Observations through 2016. WMO Greenhouse Gas Bulletin No.13. Available at: https://library.wmo.int/opac/doc_num.php?explnum_id=4022 .	Climate change	No	No
NHTSA-2017-0069-0531	Lou Finazzo, Sierra Club	World Meteorological Organization. 2017. WMO Greenhouse Gas Bulletin: The State of Greenhouse Gases in the Atmosphere Based on Global Observations through 2016. October 30, 2017.	Air quality	No	No
NHTSA-2017-0069-0613 NHTSA-2017-0069-0600	Erin Murphy, Environmental Defense Fund Lou Finazzo, Sierra Club	Wright, D. B., et al. 2015. Regional climate model projections of rainfall from U.S. landfalling tropical cyclones. CLIM. DYN. 43(11-12): 3365-3379. Available at: https://link.springer.com/article/10.1007%2Fs00382-015-2544-y .	Climate change	Yes	No

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NHTSA-2017-0069-0531 NHTSA-2017-0069-0613	Lou Finazzo, Sierra Club Erin Murphy, Environmental Defense Fund	Young, H. S., et al. 2016. Patterns, Causes, and Consequences of Anthropocene Defaunation. <i>Annual Review of Ecology, Evolution, and Systematics</i> . 47:333–58. 10.1146/annurev-ecolsys-112414-054142 .	Climate change, other	Yes	No
NHTSA-2017-0069-0722	Environmental Defense Fund et al.	Yumashev, D., et al. 2019. Climate policy implications of nonlinear decline of Arctic land permafrost and other cryosphere elements. <i>Nature Communications</i> . Available at: https://www.nature.com/articles/s41467-019-09863-x .	Climate change	Yes	No
NHTSA-2017-0069-0568	Lou Finazzo, Sierra Club	Zador, S., et al. 2017. Ground Fisheries in the Eastern Bering Sea. NOAA Arctic Program. Available at: https://www.arctic.noaa.gov/Report-Card/Report-Card-2017/ArtMID/7798/ArticleID/693/Groundfish-Fisheries-in-the-Eastern-Bering-Sea.xx .	Other	Yes	No
NHTSA-2017-0069-0625	States of California, Connecticut, Delaware, et al.	ZEV Program Implementation Task Force. 2014. Multi-State ZEV Action Plan. Available at: https://www.nescaum.org/documents/multi-state-zev-action-plan.pdf/ .	Other	No	No
NHTSA-2017-0069-0611	Lou Finazzo, Sierra Club	Zhao, C., et al. Temperature increase reduces global yields of major crops in four independent estimates. <i>Proceedings of the National Academy of Sciences</i> . 114(35):9326-9331. August 2017. doi: 10.1073/pnas.1701762114 .	Climate change	Yes	No

Table B-2. Sources Identified in Comments on the Draft EIS

Comment No. (EIS Docket Number)	Commenter	Full Title and Citation of Source (with a link, if provided by commenter)	Issue Addressed by Source	Peer- Reviewed? (Yes/No)	Included in IPCC's Fifth Assessment Report? (Yes/No)
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Notes:

EIS = environmental impact statement; IPCC = Intergovernmental Panel on Climate Change; NHTSA = National Highway Traffic Safety Administration; EPA = U.S. Environmental Protection Agency; CAFE = Corporate Average Fuel Economy; SUV = sport-utility vehicle; PM2.5 = particulate matter less than 2.5 microns in diameter; PM10 = particulate matter less than 10 microns in diameter; E10 = fuel with 1% concentration of ethanol. E85 = fuel with 85% concentration of ethanol; OEM = original equipment manufacturer; 3-D = 3-dimensional; CMIP = Coupled Model Intercomparison Project; DICE = Dynamic Integrated Climate-Economy; FUND = Climate Framework for Uncertainty, Negotiation and Distribution; PAGE = Policy Analysis of the Greenhouse Effect; NEPA = National Environmental Policy Act; CEQ = Council on Environmental Quality; GDP = gross domestic product; OECD = Organisation for Economic Co-Operation and Development; OMEGA = Optimization Model for Reducing Emissions of Greenhouse Gases from Automobiles; ALPHA = Advanced Light-Duty Powertrain and Hybrid Analysis; RTI = Research Triangle Institute; CVT = continuously variable transmission; MOVES = Motor Vehicle Emission Simulator

APPENDIX C

Life-Cycle Assessment Studies

**Final Environmental Impact Statement for the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for
Model Year 2021–2026 Passenger Cars and Light Trucks**

Table C-1. Studies Analyzed in Chapter 6, Life-Cycle Assessment of Vehicle Energy, Material, and Technology Impacts

Study Analyzed	Technologies and Materials Covered	Life-Cycle Boundaries ^a	Environmental Impacts Estimated
Ahmadi, L., A. Yip, M. Fowler, S.B. Young, and R.A. Fraser. 2014. Environmental feasibility of re-use of electric vehicle batteries. <i>Sustain. Energy Technology Assessment</i> 6:64-74. doi:10.1016/j.seta.2014.01.006.	EV Li-ion batteries	Cradle to grave	GHG emissions
Arbabzadeh, M., J. X. Johnson, R. De Kleine, and G. A. Keoleian. (2015). Vanadium redox flow batteries to reach greenhouse gas emissions targets in an off-grid configuration. <i>Applied Energy</i> , 146, 397-408.	Vanadium redox flow batteries; energy storage systems	Cradle to grave	GHG emissions
Archsmith, J., A. Kendall, and D. Rapson. 2015. From cradle to junkyard: assessing the life cycle greenhouse gas benefits of electric vehicles. <i>Research in Transportation Economics</i> 52:72–90.	EVs	Cradle to grave plus well to wheels	GHG emissions
Bandivadekar, A., K. Bodek, L. Cheah, C. Evans, T. Groode, J. Heywood, E. Kasseris, K. Kromer, and M. Weiss. 2008. On the Road in 2035: Reducing Transportation’s Petroleum Consumption and GHG Emissions. MIT Laboratory for Energy and the Environment. Report No. LFEE 2008 - 05 RP. Massachusetts Institute of Technology: Cambridge, MA. Available at: http://web.mit.edu/sloan-auto-lab/research/beforeh2/otr2035/ . (Accessed: February 15, 2018).	Lightweighting; vehicle design; engine downsizing; BEVs; fuel-cell vehicles; HSS; aluminum	Cradle to grave	Energy requirements; GHG emissions
Baroth, A., S. Karanam, and R. McKay. 2012. Life Cycle Assessment of Lightweight Noryl* GTX* Resin Fender and Its Comparison with Steel Fender. Society of Automotive Engineers (SAE) Paper 2012-01-0650. doi:10.4271/2012-01-0650.	Plastic, resin, and polymer composites; lightweighting	Cradle to grave	GHG emissions, energy requirements
Bertram, M., K. Buxmann, and P. Furrer. 2009. Analysis of Greenhouse Gas Emissions Related to Aluminum Transport Applications. <i>The International Journal of Life Cycle Assessment</i> 14(1):62–69. doi:10.1007/s11367-008-0058-0.	Aluminum; steel; cast iron	Cradle to grave	GHG emissions
Birat, J.P., L. Rocchia, V. Guérin, and M. Tuchman. 2003. Ecodesign of the Automobile, Based on Steel Sustainability. Society of Automotive Engineers (SAE) International Paper 2003-01-2850. doi:10.4271/2003-01-2850.	Aluminum; steel; recycling	Cradle to grave	CO ₂ emissions
Boland, S., and S. Unnasch. 2014. Carbon Intensity of Marginal Petroleum and Corn Ethanol Fuels. Life Cycle Associates Report. LCA.6075.83.2014, Prepared for Renewable Fuels Association. Available at: http://ethanolrfa.3cdn.net/8f1f5d7e868d849da0_gam6b4eab.pdf . (Accessed: February 15, 2018).	Petroleum fuel from crude oil, corn ethanol	Well to wheels	GHG emissions

Table C-1. Studies Analyzed in Chapter 6, Life-Cycle Assessment of Vehicle Energy, Material, and Technology Impacts

Study Analyzed	Technologies and Materials Covered	Life-Cycle Boundaries ^a	Environmental Impacts Estimated
Boland, C., R. DeKleine, A. Moorthy, G. Keoleian, H. C. Kim, E. Lee, and T.J. Wallington. 2014. A Life Cycle Assessment of Natural Fiber Reinforced Composites in Automotive Applications. Society of Automotive Engineers (SAE) Technical Paper 2014-01-1959. doi:10.4271/2014-01-1959.	Glass-fiber-reinforced polymer, cellulose-fiber-reinforced polymer, polymer composites, lightweighting	Cradle to grave	Fuel use, GHG emissions
Boustani, A., S. Sahni, T. Gutowski, and S. Graves. 2010. Tire Remanufacturing and Energy Savings. Environmentally Benign Manufacturing Laboratory, Sloan School of Management, Massachusetts Institute of Technology. Available at: http://web.mit.edu/ebm/www/Publications/MITEI-1-h-2010.pdf . (Accessed: February 15, 2018).	Tires	Not applicable	Fuel use, energy requirements
Bush, L., T. Skrzek, and D. Wagner. 2015. Comparative LCA Study of Lightweight Auto Parts of MMLV Mach-I Vehicle as per ISO 14040/44 LCA Standards and CSA Group 2014 LCA Guidance Document for Auto Parts. <i>Engineering Solutions for Sustainability</i> . In: Fergus J.W., Mishra B., Anderson D., Sarver E.A., Neelameggham N.R. (eds) <i>Engineering Solutions for Sustainability</i> . Springer, Cham.	Aluminum, steel, iron, lightweighting	Cradle to grave	Acidification potential, eutrophication potential, GHG emissions, ozone depletion, ozone creation, energy requirements
Cáceres, C. H. 2009. Transient Environmental Effects of Light Alloy Substitutions in Transport Vehicles. <i>Materials & Design</i> 30(8):2813–2822. doi:10.1016/j.matdes.2009.01.027.	Magnesium, aluminum	Gate to gate	Recycled materials
Canter, C. E., J. B. Dunn, J. Han, Z. Wang, and M. Wang., 2016. Policy implications of allocation methods in the life cycle analysis of integrated corn and corn stover ethanol production. <i>BioEnergy Research</i> 9(1): 77–87.	Combined ethanol, grain ethanol, stover ethanol	Well to wheels	GHG emissions
CARB (California Air Resources Board). 2015. Staff Report: Calculating Carbon Intensity Values from Indirect Land Use Change and Crop Based Biofuels. Appendix I: Detailed Analysis for Indirect Land Use Change. Available at: http://www.arb.ca.gov/regact/2015/lcfs2015/lcfs15appi.pdf . (Accessed: February 15, 2018).	Biomass based ethanol, biodiesel	Cradle to gate (land use change)	GHG emissions
Cecchel, S., G. Cornacchia, A. Panvini, A. 2016. Cradle-to-Gate Impact Assessment of a High-Pressure Die-Casting Safety-Relevant Automotive Component. <i>JOM</i> 65(9):2443-2448. doi:10.1007/s11837-016-2046-3.	Aluminum, high pressure die casting	Cradle to cradle (excludes use phase)	GHG emissions

Table C-1. Studies Analyzed in Chapter 6, Life-Cycle Assessment of Vehicle Energy, Material, and Technology Impacts

Study Analyzed	Technologies and Materials Covered	Life-Cycle Boundaries ^a	Environmental Impacts Estimated
Cheah, L., J. B. Heywood, and R. Kirchain. 2009. Aluminum Stock and Flows in U.S. Passenger Vehicles and Implications for Energy Use. <i>Journal of Industrial Ecology</i> 13(5):718–734. doi:10.1111/j.1530-9290.2009.00176x. Available at: http://onlinelibrary.wiley.com/doi/10.1111/j.1530-9290.2009.00176x/full . (Accessed: February 15, 2018).	Aluminum	Not applicable	Energy requirements
Cheah, L. 2010. Cars on a Diet: The Material and Energy Impacts of Passenger Vehicle Weight Reduction in the U.S. Massachusetts Institute of Technology: Cambridge, MA. Available at: http://web.mit.edu/sloan-auto-lab/research/beforeh2/files/LCheah_PhD_thesis_2010.pdf . (Accessed: February 15, 2018).	Magnesium, aluminum, HSS, polymer composites	Cradle to grave	Energy requirements, GHG emissions
Cheah, L., and J. B. Heywood. 2011. Meeting U.S. Passenger Vehicle Fuel Economy Standards in 2016 and Beyond. <i>Energy Policy</i> 39(1):454–466. Available at: http://web.mit.edu/sloan-auto-lab/research/beforeh2/files/Cheah%20&%20Heywood%202010.pdf . (Accessed: February 15, 2018).	Lightweighting, HEVs, PHEVs, advanced diesel	Not applicable	None
Chen, W.-Q., and T. Graedel. 2012a. Dynamic Analysis of Aluminum Stocks and Flows in the United States: 1900–2009. <i>Ecological Economics</i> 81:92–102. doi:10.1016/j.ecolecon.2012.06.008.	Aluminum	Not applicable	None
Chen, W.-Q., and T. Graedel. 2012b. Anthropogenic Cycles of the Elements: A Critical Review. <i>Environmental Science & Technology</i> 46(16):8574–8586. doi:10.1021/es3010333.	Aluminum, steel	Not applicable	None
CMU GDI (Carnegie Mellon University, Green Design Institute). 2008. Economic Input-Output Life Cycle Assessment (EIO-LCA), US 1997 Industry Benchmark model. Available at: http://www.eiolca.net . (Accessed: February 15, 2018).	Various	Cradle to grave	GHG emissions, energy requirements, water withdrawals, air emissions (CO, VOCs, NO _x , SO ₂ , NH ₃ , and PM), hazardous waste, toxic releases, land use, water pollution, human health impacts

Table C-1. Studies Analyzed in Chapter 6, Life-Cycle Assessment of Vehicle Energy, Material, and Technology Impacts

Study Analyzed	Technologies and Materials Covered	Life-Cycle Boundaries ^a	Environmental Impacts Estimated
Colett, J. 2013. Impacts of Geographic Variation on Aluminum Lightweighted Plug-in Hybrid Electric Vehicle Greenhouse Gas Emissions. University of Michigan: Ann Arbor, MI. Available at: http://deepblue.lib.umich.edu/bitstream/handle/2027.42/101902/Joe%20Colett%20Thesis%20December%202013.pdf?sequence=1 . (Accessed: February 15, 2018).	Aluminum	Cradle to gate	GHG emissions
Continental. 1999. Life Cycle Assessment of a Car Tire. Hannover, Germany. Available at: https://www.continental-corporation.com/resource/blob/47500/b64cfd62d7c37b31e0141cb618756f86/oekobilanz-en-data.pdf . (Accessed: February 15, 2018).	Tires	Cradle to grave	Fuel use, energy requirements, water use, air emissions including CO and VOCs, GHG emissions, water pollution, acidification, eutrophication
Dai, Q., J. C. Kelly, L. Gaines, and M. Wang. 2019. Life Cycle Analysis of Lithium-Ion Batteries for Automotive Applications. <i>Batteries</i> , 5(2):48.	EV Li-ion batteries	Cradle to gate	Energy requirements, GHG emissions
Das, S. 2011. Life Cycle Assessment of Carbon Fiber-Reinforced Polymer Composites. <i>The International Journal of Life Cycle Assessment</i> 16(3):268–282. doi:10.1007/s11367-011-0264-z.	Steel, carbon-fiber-reinforced polymer	Cradle to grave	Energy requirements, GHG emissions
Das, S. 2014. Life Cycle Energy and Environmental Assessment of Aluminum-Intensive Vehicle Design. Society of Automotive Engineers (SAE) <i>International Journal of Materials and Manufacturing</i> 7(3):588–595. doi:10.4271/2014-01-1004.	Lightweighting, aluminum, HSS, steel	Cradle to grave	Energy requirements, GHG emissions
Delogu, M., F. Del Pero, F. Romoli, and M. Pierini. 2015. Life Cycle Assessment of a Plastic Air Intake Manifold. <i>International Journal of Life Cycle Assessment</i> , 20(10), 1429-1443. doi:10.1007/s11367-015-0946-z.	Plastics, air intake manifold, lightweighting	Cradle to grave	Energy requirements, acidification, eutrophication, GHG emissions, ozone depletion, ozone creation
Dubreuil, A., L. Bushi, S. Das, A. Tharumarajah, and G. Xianzheng. 2010. A Comparative Life Cycle Assessment of Magnesium Front End Autoparts. Presented at Society of Automotive Engineers (SAE) 2010 World Congress and Exhibition. doi:10.4271/2012-01-2325.	Magnesium, aluminum, steel	Cradle to grave	Energy requirements, GHG emissions, criteria air pollutant emissions

Table C-1. Studies Analyzed in Chapter 6, Life-Cycle Assessment of Vehicle Energy, Material, and Technology Impacts

Study Analyzed	Technologies and Materials Covered	Life-Cycle Boundaries ^a	Environmental Impacts Estimated
Dunn, J. B., L. Gaines, J. Sullivan, and M. Q. Wang. 2012. Impact of recycling on cradle-to-gate energy consumption and greenhouse gas emissions of automotive Li-ion batteries. <i>Environmental Science & Technology</i> 46(22):12704–12710. doi:10.1021/es302420z.	EV Li-ion batteries	Non-use (cradle to gate and end-of-life)	Energy requirements, GHG emissions
Dunn, J. B., S. Mueller, H. Y. Kwon, and M. Q. Wang. 2013. Land-use change and greenhouse gas emissions from corn and cellulosic ethanol. <i>Biotechnology for Biofuels</i> 6(1):51. doi:doi.org/10.1186/1754-6834-6-51. Available at: https://biotechnologyforbiofuels.biomedcentral.com/articles/10.1186/1754-6834-6-51 . (Accessed: February 15, 2018).	Corn and cellulosic ethanol	Gate to gate (land-use change)	GHG emissions
Dunn, J. B., L. Gaines, J. C. Kelly, C. James, and K. G. Gallagher. 2015a. The significance of Li-ion batteries in electric vehicle life-cycle energy and emissions and recycling's role in its reduction. <i>Energy & Environmental Science</i> 8(1):158–168. doi: 10.1039/C4EE03029J.	EVs, EV Li-ion batteries	Cradle to grave	Energy requirements, GHG emissions
Dunn, J. B., Z. Qin, S. Mueller, H. Kwon, M. Wander, M. Wang. 2015b. Carbon Calculator for Land Use Change from Biofuels Production (CCLUB), Users' Manual and Technical Documentation (No. ANL/ESD/12-5 Rev. 2). Argonne National Laboratory (ANL). Available at: https://greet.es.anl.gov/publications . (Accessed: February 15, 2018).	Biomass based ethanol, soy biodiesel	Cradle to gate (land use change)	GHG emissions
Easton, M., M. Gibson, A. Beer, M. Barnett, C. Davies, Y. Durandet, S. Blacket, X. Chen, N. Birbilis, and T. Abbot. 2012. The Application of Magnesium Alloys to the Lightweighting of Automotive Structures. <i>Sustainable Automotive Technologies</i> 2012:17–23. doi: 10.1007/978-3-642-24145-1_3.	Magnesium alloys	Not applicable	GHG emissions
Ehrenberger, S., and H. E. Friedrich. 2013. Life-Cycle Assessment of the Recycling of Magnesium Vehicle Components. <i>JOM</i> 65(10):1303-1309. doi:10.1007/s11837-013-0703-3.	Magnesium	Cradle to grave	GHG emissions
Elgowainy, A., J. Han, L. Poch, M. Wang, A. Vyas, M. Mahalik, and A. Rousseau. 2010. Well-to-Wheels Analysis of Energy Use and Greenhouse Gas Emissions of Plug-in Hybrid Electric Vehicles. ANL/ESD/10-1. Argonne National Laboratory: Argonne, IL. Available at: https://energy.gov/eere/fuelcells/downloads/well-wheels-analysis-energy-use-and-greenhouse-gas-emissions-plug-hybrid . (Accessed: February 15, 2018).	PHEVs using gasoline, diesel, E85 corn ethanol, and a hydrogen fuel cell	Well to wheels	GHG emissions, energy requirements

Table C-1. Studies Analyzed in Chapter 6, Life-Cycle Assessment of Vehicle Energy, Material, and Technology Impacts

Study Analyzed	Technologies and Materials Covered	Life-Cycle Boundaries ^a	Environmental Impacts Estimated
<p>Elgowainy, A., J. Han, J. Ward, F. Joseck, D. Gohlke, A. Lindauer, T. Ramsden, M. Bidy, M. Alexander, S. Barnhart, and I. Sutherland. 2016. Cradle-to-Grave Lifecycle Analysis of US Light Duty Vehicle-Fuel Pathways: A Greenhouse Gas Emissions and Economic Assessment of Current (2015) and Future (2025-2030) Technologies (ANL/ESD-16/7). Argonne National Laboratory: Argonne, IL. Available at: https://greet.es.anl.gov/publication-c2g-2016-report. (Accessed: February 15, 2018).</p>	<p>Internal combustion engine vehicles using gasoline, diesel, CNG, and LPG, FFVs using E85 corn ethanol, HEVs using gasoline, PHEVs using gasoline, FCEVs using hydrogen, and BEVs with 90- and 210-mile ranges</p>	<p>Cradle to grave and well to wheels</p>	<p>GHG emissions, energy requirements</p>
<p>Ellingsen, L. A. W., G. MajeauBettez, B. Singh, A. K. Srivastava, L. O. Valøen, and A. H. Strømman. 2014. Life cycle assessment of a lithium-ion battery vehicle pack. <i>Journal of Industrial Ecology</i> 18(1):113–124. doi:10.1111/jiec.12072.</p>	<p>EV Li-ion batteries</p>	<p>Cradle to gate</p>	<p>GHG emissions</p>
<p>Elliott, J., B. Sharma, N. Best, M. Glotter, J. B. Dunn, I. Foster, F. Miguez, S. Mueller, and M. Wang. 2014. A spatial modeling framework to evaluate domestic biofuel-induced potential land use changes and emissions. <i>Environmental Science & Technology</i> 48(4):2488 –2496. doi:10.1021/es404546r.</p>	<p>Biofuel</p>	<p>Gate to gate (land-use change)</p>	<p>GHG emissions</p>
<p>Englander, J. G., and A. R. Brandt. 2014. Oil Sands Energy Intensity Analysis for GREET Model Update. Department of Energy Resources Engineering, Stanford University. Palo Alto, CA. Available at: https://greet.es.anl.gov/publication-lca-update-oil-sands. (Accessed: February 15, 2018).</p>	<p>Oil sands</p>	<p>Gate to gate</p>	<p>GHG emissions</p>
<p>EPA (U.S. Environmental Protection Agency). 2013. Application of LifeCycle Assessment to Nanoscale Technology: Li-ion Batteries for Electric Vehicles. Design for the Environment Program. Office of Pollution Prevention and Toxics. Available at: https://www.epa.gov/sites/production/files/2014-01/documents/lithium_batteries_lca.pdf. (Accessed: February 15, 2018).</p>	<p>EVs, EV Li-ion batteries</p>	<p>Cradle to grave</p>	<p>Energy requirements, GHG emissions, abiotic depletion potential, water pollution, human health impacts, ozone depletion potential</p>

Table C-1. Studies Analyzed in Chapter 6, Life-Cycle Assessment of Vehicle Energy, Material, and Technology Impacts

Study Analyzed	Technologies and Materials Covered	Life-Cycle Boundaries ^a	Environmental Impacts Estimated
EPA. 2014. Peer Review of Light-Duty Vehicle Mass-Reduction and Cost Analysis —Midsize Crossover Utility Vehicle (FEV Report). EPA-420-R-12-019. Washington DC. Available at: https://nepis.epa.gov/Exe/ZyPDF.cgi/P100EW1M.PDF?Dockey=P100EW1M.PDF . (Accessed: February 15, 2018).	Plastics, HSS, magnesium, lightweighting	Not applicable	Not applicable
Faria, R., P. Marques, R. Garcia, P. Moura, F. Freire, J. Delgado, and A.T. de Almeida. 2014. Primary and secondary use of electric mobility batteries from a life cycle perspective. <i>Journal of Power Sources</i> 262:169–177. doi: 10.1016/j.jpowsour.2014.03.092.	EV Li-ion batteries	Cradle to grave	GHG emissions
Farquharson, D., P. Jaramillo, G. Schivley, K. Klima, and D. R. Carlson. 2016. Beyond Global Warming Potential: A Comparative Application of Climate Impact Metrics for the Life Cycle Assessment of Coal and Natural Gas Based Electricity. <i>Journal of Industrial Ecology</i> . doi:10.1111/jiec.12475. Available at: http://repository.cmu.edu/cgi/viewcontent.cgi?article=1166&context=epp . (Accessed: February 28, 2018).	Coal, natural gas, electricity generation	Cradle to gate	GHG emissions, global temperature change, technology warming, radiative forcing
Gaines, L., J. Sullivan, A. Burnham, and I. Belharouak. 2011. Life-Cycle Analysis for Lithium-Ion Battery Production and Recycling. Paper No. 11-3891. Argonne National Laboratory. 90th Annual Meeting of the Transportation Research Board. Washington, DC. Available at: https://www.researchgate.net/publication/265158823_Paper_No_11-3891_Life-Cycle_Analysis_for_Li-ion_Battery_Production_and_Recycling . (Accessed: February 28, 2018).	EV Li-ion batteries	Cradle to grave	Energy requirements
Galitsky, C., and E. Worrell. 2008. Energy Efficiency Improvement and Cost Saving Opportunities for the Vehicle Assembly Industry: An ENERGY STAR Guide for Energy and Plant Managers. Lawrence Berkeley National Laboratory. Berkeley, CA. Available at: http://escholarship.org/uc/item/33x4p6p9 . (Accessed: February 28, 2018).	Energy efficiency during vehicle assembly, hydroforming	Gate to gate	Energy requirements
Gaustad, G., E. Olivetti, and R. Kirchain. 2012. Improving aluminum recycling: A survey of sorting and impurity removal technologies. <i>Resources, Conservation and Recycling</i> 58(2012):79 – 87. doi: http://dx.doi.org/10.1016/j.resconrec.2011.10.010 .	Lightweighting	Not Applicable	None

Table C-1. Studies Analyzed in Chapter 6, Life-Cycle Assessment of Vehicle Energy, Material, and Technology Impacts

Study Analyzed	Technologies and Materials Covered	Life-Cycle Boundaries ^a	Environmental Impacts Estimated
Geyer, R. 2008. Parametric Assessment of Climate Change Impacts of Automotive Material Substitution. <i>Environmental Science & Technology</i> 42(18):6973–6979.	Lightweighting, aluminum, HSS, steel	Material production and vehicle use stages only	GHG emissions
Ghandi, A., S. Yeh, A. R. Brandt, K. Vafi, H. Cai, M. Q. Wang, B. R. Scanlon, and R. C. Reedy. 2015. Energy intensity and greenhouse gas emissions from crude oil production in the Eagle Ford Region: Input data and analysis methods. UC Davis Institute of Transportation Studies. Prepared for Argonne National Laboratory: Argonne, IL. Available at: https://greet.es.anl.gov/publication-eagle-ford-oil . (Accessed: February 28, 2018).	Gasoline, diesel, jet fuel	Well to wheels	GHG emissions, energy requirements
Gibson, T. 2000. Life Cycle Assessment of Advanced Materials for Automotive Applications. <i>Society of Automotive Engineers, Inc.</i> 109(6):1932–1941. doi: https://doi.org/10.4271/2000-01-1486 .	Nine advanced and conventional materials including graphite, titanium, steel, aluminum, and carbon composites	Cradle to grave	Energy use, GHG emissions, air emissions including SO _x and NO _x , water emissions, solid waste, HF
Gradin, K. T., S. Poulidikidou, A. Bjorklund, and C. Luttrupp. 2017. Scrutinising the electric vehicle material backpack. <i>Journal of Cleaner Production</i> . doi:10.1016/j.jclepro.2017.12.035.	EV Li-ion batteries	Cradle to gate	GHG emissions, energy requirements
Hakamada, M., T. Furuta, Y. Chino, Y. Chen, H. Kusuda, and M. Mabuchi. 2007. Life Cycle Inventory Study on Magnesium Alloy Substitution in Vehicles. <i>Energy</i> 32(8):1352–1360. doi:10.1016/j.energy.2006.10.020.	Magnesium, steel, aluminum	Cradle to grave	Energy requirements, CO ₂ emissions
Halvorson, A. D. 2014. Nitrogen Fertilizer Source and Management Effects on Nitrous Oxide Emissions. 16th World Fertilizer Congress of CIEC, Rio de Janeiro, Brazil, 20-24 October, 68–71.	EVs	Cradle to grave	Aggregated environmental impact score
Hawkins, T., O. Gausen, and A. Stromman. Environmental impacts of hybrid and electric vehicles—a review. 2012. <i>International Journal of Life Cycle Assessment</i> . 17:997–1014. doi:10.1007/s11367-012-0440-9.	EVs	Cradle to grave	GHG emissions, abiotic depletion potential, water pollution, human health impacts

Table C-1. Studies Analyzed in Chapter 6, Life-Cycle Assessment of Vehicle Energy, Material, and Technology Impacts

Study Analyzed	Technologies and Materials Covered	Life-Cycle Boundaries ^a	Environmental Impacts Estimated
Hawkins, T. R., B. Singh, G. Majeau-Bettez, and A. H. Strømman. 2013. Comparative environmental life cycle assessment of conventional and electric vehicles. <i>Journal of Industrial Ecology</i> 17(1):53–64. doi:10.1111/j.1530-9290.2012.00532x. Available at: http://onlinelibrary.wiley.com/doi/10.1111/j.1530-9290.2012.00532.x/full . (Accessed: February 28, 2018).	EVs	Cradle to grave	GHG emissions, energy requirements, water pollution, air emissions including PM, human health impacts
Heath, G.A., P. O'Donoghue, D. J. Arent, and M. Bazilian. 2014. Harmonization of initial estimates of shale gas life cycle greenhouse gas emissions for electric power generation. <i>Proceedings of the National Academy of Sciences</i> 111(31):E3167 –E3176. doi:10.1073/pnas.1309334111. Available at: http://www.pnas.org/content/111/31/E3167 . (Accessed: February 28, 2018).	Shale gas	Well to wire	GHG emissions
Held, M. and M. Schücking. 2019. Utilization effects on battery electric vehicle life-cycle assessment: A case-driven analysis of two commercial mobility applications. <i>Transportation Research Part D: Transport and Environment</i> 75:87–105.	EVs	Cradle to grave	GHG emissions
Hendrickson, T.P., O. Kavvada, N. Shah, R. Sathre, and C. D. Scown. 2015. Life-cycle implications and supply chain logistics of electric vehicle battery recycling in California. <i>Environmental Research Letters</i> 10(1):014011. doi:10.1088/1748-9326/10/1/014011.	EV Li-ion batteries	Nonuse (cradle to gate and end-of-life)	Energy requirements, GHG emissions, air emissions (PM, NO _x , SO ₂ , and VOCs), water consumption, water withdrawals
Heuss, R., N. Muller, W. V. Sintern, A. Starke, A. Tschiesner, A. 2012. Lightweight, heavy impact. McKinsey and Company. Available at: https://www.mckinsey.com/~media/mckinsey/dotcom/client_service/automotive%20and%20assembly/pdfs/lightweight_heavy_impact.ashx . (Accessed: February 28, 2018).	Carbon fiber reinforced polymers, plastics, aluminum, magnesium	Not applicable	Not applicable
Holland, S., E. Mansur, N. Muller, and A. Yates. 2015. Measuring the Spatial Heterogeneity in Environmental Externalities from Driving: A Comparison of Gasoline and Electric Vehicles. NBER Working Paper, (21291). Available at: https://pdfs.semanticscholar.org/38fe/39ccbbc15deddc571b9f991426a32dd992ed.pdf . (Accessed: February 28, 2018).	Electric and internal combustion vehicles	Not applicable	PM emissions

Table C-1. Studies Analyzed in Chapter 6, Life-Cycle Assessment of Vehicle Energy, Material, and Technology Impacts

Study Analyzed	Technologies and Materials Covered	Life-Cycle Boundaries ^a	Environmental Impacts Estimated
Hottle, T., C. Caffrey, J. McDonald, and R. Dodder. 2017. Critical Factors Affecting Life Cycle Assessments of Material Choice for Vehicle Mass Reduction. <i>Transportation Research Part D</i> . 56. 241-257.	Steel, iron, plastics, aluminum, magnesium, lightweighting	Cradle to grave	Energy requirements, GHG emissions
Johnson, M.C. and J. L. Sullivan. 2014. Lightweight Materials for Automotive Application: An Assessment of Material Production Data for Magnesium and Carbon Fiber. September 2014. Argonne National Laboratory: Argonne, IL. Available at: http://www.ipd.anl.gov/anlpubs/2014/09/107574.pdf . (Accessed: February 28, 2018).	Magnesium, carbon fiber reinforced polymers	Not applicable	GHG emissions
Kaiserle, S., M. Dahmen, and O. Gudukurt. 2011. Eco-Efficiency of Laser Welding Applications. Proc. SPIE 8065. SPIE Eco-Photonics 2011: Sustainable Design, Manufacturing, and Engineering Workforce Education for a Green Future. 8065T. doi:10.1117/12.888794.	Laser welding	Cradle to grave	Energy requirements, material use
Kawamoto, R., H. Mochizuki, Y. Moriguchi, T. Nakano, M. Motohashi, Y. Sakai, and A. Inaba. 2019. Estimation of CO2 emissions of internal combustion engine vehicle and battery electric vehicle using LCA. <i>Sustainability</i> 11(9):2690.	EVs, EV Li-ion batteries	Cradle to grave	Energy requirements, GHG emissions
Kelly, J. C., J. L. Sullivan, A. Burnham, and A. Elgowainy. 2015. Impacts of Vehicle Weight Reduction via Material Substitution on Life-Cycle Greenhouse Gas Emissions. <i>Environmental Science & Technology</i> 49(20):12535–12542. doi:10.1021/acs.est.5b03192.	AHSS, wrought aluminum, cast aluminum, magnesium, carbon fiber reinforced polymers, lightweighting	Cradle to grave	GHG emissions
Keoleian, G. A., and K. Kar. 1999. Life Cycle Design of Air Intake Manifolds. In: Phase I: 2.0 L Ford Contour Air Intake Manifold. EPA/600/R-99/023. US Environmental Protection Agency. National Risk Management Research Laboratory: Cincinnati, Ohio. Available at: < http://nepis.epa.gov/EPA/html/DLwait.htm?url=/Exe/ZyPDF.cgi?Dockey=P1006GAR.PDF >. (Accessed: February 28, 2018).	Aluminum, nylon composite	Cradle to grave	Energy requirements, GHG emissions, solid waste, air emissions, water effluents

Table C-1. Studies Analyzed in Chapter 6, Life-Cycle Assessment of Vehicle Energy, Material, and Technology Impacts

Study Analyzed	Technologies and Materials Covered	Life-Cycle Boundaries ^a	Environmental Impacts Estimated
Khanna, V., and B. R. Bakshi. 2009. Carbon Nanofiber Polymer Composites: Evaluation of Life Cycle Energy Use. <i>Environmental Science & Technology</i> 43(6):2078–2084. doi:10.1021/es802101x.	Polymer nanocomposite, CNF and CNF-GF hybrid polymer, carbon nanofiber-reinforced polymer nanocomposite, carbon nanofiber glass-fiber hybrid PNCs, steel	Cradle to gate and use stage	Energy requirements
Kim, H. J., C. McMillian, G. A. Keoleian, and S. J. Skerlos. 2010a. Greenhouse Gas Emissions Payback for Lightweighted Vehicles Using Aluminum and High - Strength Steel. <i>Journal of Industrial Ecology</i> 14(6):929–946. doi:10.1111/j.1530-9290.2010.00283x.	Lightweighting, aluminum, HSS	Cradle to grave	GHG emissions
Kim, H. J., G. A. Keoleian, and S. J. Skerlos. 2010b. Economic Assessment of Greenhouse Gas Emissions Reduction by Vehicle Lightweighting Using Aluminum and High Strength Steel. <i>Journal of Industrial Ecology</i> 15(1):64–80. doi:10.1111/j.1530-9290.2010.00288x.	Lightweighting, aluminum, HSS, steel, glass-fiber reinforced plastic	Cradle to grave	Energy requirements, GHG emissions
Kim, H. C., T. J. Wallington, J. L. Sullivan, and G. Keoleian. 2015. Life Cycle Assessment of Vehicle Lightweighting: Novel Mathematical Methods to Estimate Use-Phase Fuel Consumption. <i>Environmental Science & Technology</i> 49(16):10209–10216. doi:10.1021/acs.est.5b01655.	Lightweighting, fuel reduction value estimation, magnesium, carbon fiber composites	Cradle to gate	GHG emissions
Kocańda, A., and H. Sadłowska. 2008. Automotive Component Development by Means of Hydroforming. <i>Archives of Civil and Mechanical Engineering</i> 8(3):55–72. doi:10.1016/S1644-9665(12)60163-0.	Hydroforming	Not an LCA, but focuses on manufacturing and design, with some attention to use	Some discussion of fuel efficiency savings, but not quantified

Table C-1. Studies Analyzed in Chapter 6, Life-Cycle Assessment of Vehicle Energy, Material, and Technology Impacts

Study Analyzed	Technologies and Materials Covered	Life-Cycle Boundaries ^a	Environmental Impacts Estimated
<p>Koffler, C., and J. Provo. 2012. Comparative Life Cycle Assessment of Aluminum and Steel Truck Wheels. Prepared by PE International, Inc. and Five Winds Strategic Consulting for Alcoa, Inc. Available at: http://www.alcoawheels.com/alcoawheels/north_america/en/pdf/Alcoa_Comparative_LCA_of_Truck_Wheels_with_CR_statement.pdf. (Accessed: February 28, 2018).</p>	<p>Truck wheels, aluminum, steel</p>	<p>Cradle to grave</p>	<p>Primary energy demand, acidification potential, eutrophication potential, GHG emissions, ozone depletion potential, smog formation potential, human toxicity, eco-toxicity</p>
<p>Lamb, B.K., S. L. Edburg, T. W. Ferrara, T. Howard, M. R. Harrison, C. E. Kolb, A. Townsend-Small, W. Dyck, A. Possolo and J. R. Whetstone., 2015. Direct measurements show decreasing methane emissions from natural gas local distribution systems in the United States. <i>Environmental Science & Technology</i> 49(8):5161-5169. doi: 10.1021/es505116p. Available at: https://pubs.acs.org/doi/pdf/10.1021/es505116p. (Accessed: February 28, 2018).</p>	<p>Natural gas distribution</p>	<p>Cradle to gate (distribution infrastructure)</p>	<p>Methane emissions</p>
<p>Lattanzio, R. K. 2014. Canadian Oil Sands: Life-Cycle Assessments of Greenhouse Gas Emissions. Congressional Research Service. Available at: https://www.fas.org/sgp/crs/misc/R42537.pdf. (Accessed: February 28, 2018).</p>	<p>Oil sands</p>	<p>Well to wheels</p>	<p>GHG emissions</p>
<p>Laurenzi, I. J. 2015. Life Cycle Assessment of North American Shale Gases. In: <i>Proceedings of the 4th International Gas Processing Symposium</i>. Qatar, October 2014. <i>Advances in Gas Processing</i> 4(317–325). doi:10.1016/B978-0-444-63461-0.50033-X.</p>	<p>Shale oil, electricity generation</p>	<p>Cradle to gate</p>	<p>GHG emissions, water consumption</p>
<p>Laurenzi, I. J., J. A. Bergerson, and K. Motazed. 2016. Life cycle greenhouse gas emissions and freshwater consumption associated with Bakken tight oil. <i>Proceedings of the National Academy of Sciences</i> 113(48), E7672–E7680. doi:10.1073/pnas.1607475113. Available at: http://www.pnas.org/content/113/48/E7672. (Accessed: February 28, 2018).</p>	<p>Shale oil</p>	<p>Well to wheels</p>	<p>GHG emissions, water consumption</p>
<p>Li, B., X. Gao, J. Li, and C. Yuan. 2014. Life cycle environmental impact of high-capacity lithium ion battery with silicon nanowires anode for electric vehicles. <i>Environmental Science & Technology</i> 48(5):3047–3055. doi:10.1021/es4037786.</p>	<p>EV Li-ion batteries</p>	<p>Nonuse (cradle to gate and end-of-life)</p>	<p>Abiotic depletion potential, GHG emissions, water pollution, ozone depletion potential, human health impacts, toxic releases</p>

Table C-1. Studies Analyzed in Chapter 6, Life-Cycle Assessment of Vehicle Energy, Material, and Technology Impacts

Study Analyzed	Technologies and Materials Covered	Life-Cycle Boundaries ^a	Environmental Impacts Estimated
Li, H., W. Zhang, Q. Li, and B. Chen. 2015. Updated CO ₂ emission from Mg production by Pidgeon process: Implications for automotive application life cycle. <i>Resources, Conservation and Recycling</i> 100:41–48. doi:doi.org/10.1016/j.resconrec.2015.04.008.	Magnesium	Not applicable	GHG emissions
Litovitz, A., A. Curtright, S. Abramzon, N. Burger, and C. Samaras. 2013. Estimation of regional air-quality damages from Marcellus Shale natural gas extraction in Pennsylvania. <i>Environmental Research Letters</i> , 8(1):014017. doi:10.1088/1748-9326/8/1/014017. Available at: http://iopscience.iop.org/article/10.1088/1748-9326/8/1/014017/meta . (Accessed: February 28, 2018).	Natural gas production	Cradle to gate	Criteria air pollutants, human health impacts
Liu, G., and D. Muller. 2012. Addressing sustainability in the aluminum industry: a critical review of life cycle assessments. <i>Journal of Cleaner Production</i> 35:108–117. doi:10.1016/j.jclepro.2012.05.030.	Aluminum manufacturing, recycling	Not applicable	GHG emissions
Lloyd, S. M., and L. B. Lave. 2003. Life Cycle Economic and Environmental Implications of Using Nanocomposites in Automobiles. <i>Environmental Science & Technology</i> 37(15):3458–3466. doi:10.1021/es026023q.	Steel, aluminum, clay-polypropylene nanocomposite	Cradle to gate	Energy requirements, GHG emissions, criteria air pollutants, fuel/ electricity use, resource depletion, water use, hazardous waste generation, toxic releases
Luk, J. M., H. C. Kim, R. De Kleine, T. J. Wallington, and H. L. MacLean. Review of the Fuel Saving, Life Cycle GHG Emission, and Ownership Cost Impacts of Lightweighting Vehicles with Different Powertrains. <i>Environmental Science & Technology</i> 51 (15):8215–8228. doi: 10.1021/acs.est.7b00909.	Lightweighting, EVs, internal combustion vehicles, HEVs, powertrain sizing	Cradle to grave	Energy requirements, GHG emissions
Lutsey, N., J. Regnier, A. Burke, M. Melaina, J. Bremson, and M. Keteltas. 2006. Institute of Transportation Studies. University of California, Davis. UCD—ITS—RR—06-11. Available at: https://itspubs.ucdavis.edu/wp-content/themes/ucdavis/pubs/download_pdf.php?id=1044 . (Accessed: February 28, 2018).	Tires, TPMS	Not applicable	Fuel use, energy requirements, waste generation

Table C-1. Studies Analyzed in Chapter 6, Life-Cycle Assessment of Vehicle Energy, Material, and Technology Impacts

Study Analyzed	Technologies and Materials Covered	Life-Cycle Boundaries ^a	Environmental Impacts Estimated
<p>Lyon, D. R., D. Zavala-Araiza, R. A. Alvarez, R. Harriss, V. Palacios, X. Lan, R. Talbot, T. Lavoie, P. Shepson, T. I. Yacovitch, and S. C. Herndon. 2015. Constructing a spatially resolved methane emission inventory for the Barnett Shale region. <i>Environmental Science & Technology</i>, 49(13):8147-8157. doi:10.1021/es506359c. Available at: https://pubs.acs.org/doi/abs/10.1021/es506359c. (Accessed: February 28, 2018).</p>	<p>Natural gas production</p>	<p>Cradle to gate</p>	<p>Methane emissions</p>
<p>McLaren, J., J. Miller, E. O’Shaughnessy, E. Wood, and E. Shapiro. 2016. Emissions Associated with Electric Vehicle Charging: Impact of Electricity Generation Mix, Charging Infrastructure Availability, and Vehicle Type. NREL/TP-6A20-64852. April 2016. National Renewable Energy Laboratory. Available at: https://www.afdc.energy.gov/uploads/publication/ev_emissions_impact.pdf. (Accessed: February 28, 2018).</p>	<p>EVs, electricity generation</p>	<p>Cradle to gate</p>	<p>GHG emissions</p>
<p>Marchese, A. J., T. L. Vaughn, D. J. Zimmerle, D. M. Martinez, L. L. Williams, A. L. Robinson, A. L. Mitchell, R. Subramanian, D. S. Tkacik, J. R. Roscioli, and S. C. Herndon. 2015. Methane emissions from United States natural gas gathering and processing. <i>Environmental Science & Technology</i>. 49(17):10718–10727. doi: 10.1021/acs.est.5b02275. Available at: https://pubs.acs.org/doi/abs/10.1021/acs.est.5b02275. (Accessed: February 28, 2018).</p>	<p>Natural gas production</p>	<p>Cradle to gate</p>	<p>Methane emissions</p>
<p>Mayyas, A. T., A. Qattawi, A. R. Mayyas, and M. A. Omar. 2012a. Life cycle assessment-based selection for a sustainable lightweight body-in-white design. <i>Energy</i> 39(1):412–425. doi:doi.org/10.1016/j.energy.2011.12.033.</p>	<p>Lightweighting, HSS, aluminum, magnesium, carbon fiber/epoxy composite, glass fiber composite</p>	<p>Cradle to grave</p>	<p>Energy requirements, GHG emissions</p>
<p>Milovanoff, A., H. C. Kim, R. De Kleine, T. J. Wallington, I. D. Posen, and H. L. MacLean. 2019. A Dynamic Fleet Model of U.S. Light-Duty Vehicle Lightweighting and Associated Greenhouse Gas Emissions from 2016 to 2050. <i>Environmental Science & Technology</i> 53: 2199–2208. doi.org/10.1021/acs.est.8b04249.</p>	<p>Lightweighting, HSS, aluminum</p>	<p>Cradle to grave</p>	<p>GHG emissions</p>

Table C-1. Studies Analyzed in Chapter 6, Life-Cycle Assessment of Vehicle Energy, Material, and Technology Impacts

Study Analyzed	Technologies and Materials Covered	Life-Cycle Boundaries ^a	Environmental Impacts Estimated
Modaresi, R., S. Pauliuk, A. N. Løvik, and D. B. Müller. 2014. Global Carbon Benefits of Material Substitution in Passenger Cars until 2050 and the Impact on the Steel and Aluminum Industries. <i>Environmental Science & Technology</i> 48(18):10776–10784. doi: 10.1021/es502930w. Available at: http://pubs.acs.org/doi/pdf/10.1021/es502930w . (Accessed: February 28, 2018).	HSS, aluminum	Cradle to gate (fleet-wide impacts)	GHG emissions
Mohapatra, S., and S. Das. 2014. Introduction of High Strength Steel for Commercial Vehicles—Light Weighting of Vehicles. Society of Automotive Engineers (SAE) Technical Paper 2014-28-0002. doi:10.4271/2014-28-0002.	Lightweighting, HSS	Not applicable	Energy requirements, GHG emissions
Morales, M., J. Quintero, R. Conejeros, and G. Aroca. 2015. Life cycle assessment of lignocellulosic bioethanol: environmental impacts and energy balance. <i>Renewable and Sustainable Energy Reviews</i> 42:1349–1361. doi:10.1016/j.rser.2014.10.097.	Lignocellulosic bioethanol	Well to wheels	GHG emissions, energy requirements
Munjurulimana, D., A. Kulkarni, D. Nagwanshi, J. Thambi, et al. 2016. Society of Automotive Engineers (SAE) Paper 2016-01-0399. Body-in-White Reinforcements for Light-Weight Automobiles. doi:10.4271/2016-01-0399.	Thermoplastics, polymer composites	Not applicable	Not applicable
Murphy, C. W. and A. Kendall. 2015. Life cycle analysis of biochemical cellulosic ethanol under multiple scenarios. <i>Gcb Bioenergy</i> 7(5):1019–1033. doi:10.1111/gcbb.12204.	Corn stover and switchgrass biochemical cellulosic ethanol, petroleum-based liquid fuels	Field to blending terminal	GHG emissions, air pollutants (CO, NO _x , SO _x , PM, Pb, ozone, and NMVOCs), environmental indicators including global warming potential, acidification potential, eutrophication potential, and fossil energy
Nealer, R., and T. P. Hendrickson. 2015. Review of recent lifecycle assessments of energy and greenhouse gas emissions for electric vehicles. <i>Current Sustainable/Renewable Energy Reports</i> 2(3):66–73. doi:10.1007/s40518-015-0033x. Available at: https://link.springer.com/article/10.1007/s40518-015-0033-x . (Accessed: February 28, 2018).	EVs	Various	GHG emissions

Table C-1. Studies Analyzed in Chapter 6, Life-Cycle Assessment of Vehicle Energy, Material, and Technology Impacts

Study Analyzed	Technologies and Materials Covered	Life-Cycle Boundaries ^a	Environmental Impacts Estimated
<p>NETL (National Energy Technology Laboratory). 2015. Approaches to Developing a Cradle-to-Grave Life Cycle Analysis of Conventional Petroleum Fuels Produced in the U.S. with an Outlook to 2040. DOE/NETL-2016/1749. October 2015. Available at: https://www.netl.doe.gov/energy-analyses/temp/ApproachestoDevelopingaCradle-to-GraveLCAofConvPetroleumFuelsProducedinUSOutlookto2040_100715.pdf. (Accessed: February 28, 2018).</p>	<p>Conventional oil production</p>	<p>Well to wheel</p>	<p>GHG emissions</p>
<p>Nitta, S. and Y. Moriguchi. 2011. New Methodology of Life Cycle Assessment for Clean Energy Vehicle and New Car Model. Society of Automotive Engineers (SAE) Technical Paper 2011-01-0851. doi:10.4271/2011-01-0851.</p>	<p>Hydrogen fuel cells</p>	<p>Cradle to grave</p>	<p>GHG emissions, waste generation, energy requirements</p>
<p>Notter, D. A., M. Gauch, R. Widmer, P. Wäger, A. Stamp, R. Zah, and H-J. Althaus. 2010. Contribution of Li-ion Batteries to the Environmental Impact of Electric Vehicles. <i>Environmental Science & Technology</i> 44(17):6550–6556. doi:10.1021/es903729a. Available at: http://pubs.acs.org/doi/ipdf/10.1021/es903729a. (Accessed: February 28, 2018).</p>	<p>EV Li-ion batteries</p>	<p>Cradle to grave</p>	<p>Energy requirements, GHG emissions/global warming potential, criteria air pollutants, resource depletion, Ecoindicator 99</p>
<p>Onat, N. C., M. Kucukvar, and O. Tatari. 2015. Conventional, hybrid, plug-in hybrid or electric vehicles? State-based comparative carbon and energy footprint analysis in the United States. <i>Applied Energy</i> 150:36–49. doi:10.1016/j.apenergy.2015.04.001.</p>	<p>HEVs, PHEVs, EVs</p>	<p>Cradle to grave and well to wheels</p>	<p>GHG emissions, energy requirements</p>
<p>Overly, J. G., R. Dhingra, G. A. Davis, and S. Das. 2002. Environmental Evaluation of Lightweight Exterior Body Panels in New Generation Vehicles. Paper 2002-01-1965. Society of Automotive Engineers (SAE) International. doi:10.4271/2002-01-1965.</p>	<p>Aluminum, carbon-fiber-reinforced polymer, glass-fiber-reinforced polymer</p>	<p>Cradle to grave</p>	<p>CO₂ emissions, particulate matter emissions, eutrophication, photochemical smog, solid and hazardous waste generation, water quality</p>
<p>Palazzo, J., and R. Geyer. 2019. Consequential life cycle assessment of automotive material substitution: Replacing steel with aluminum in production in north American vehicles. <i>Environmental Impact Assessment Review</i> 75:47–58. doi.org/10.1016/j.eiar.2018.12.001.</p>	<p>Lightweighting, HSS, aluminum</p>	<p>Cradle to grave</p>	<p>GHG emissions, energy requirements</p>

Table C-1. Studies Analyzed in Chapter 6, Life-Cycle Assessment of Vehicle Energy, Material, and Technology Impacts

Study Analyzed	Technologies and Materials Covered	Life-Cycle Boundaries ^a	Environmental Impacts Estimated
Patterson, J., M. Alexander, and A. Gurr. 2011. Preparing for a Life Cycle CO2 Measure. Ricardo plc and Low Carbon Vehicle Partnership. RD.11/124801.4. Available at: http://www.lowcvp.org.uk/assets/presentations/1405%20Patterson,%20Ricardo%20-%20life-cycle%20assessment%20(LC%20seminar).pdf . (Accessed: February 28, 2018).	Gasoline vehicles, diesel vehicles, PHEVs, EREVs, EVs, FCEVs	Not applicable	GHG emissions
PE International. 2012. Life Cycle Assessment of Polymers in an Automotive Assist Step. Prepared for the American Chemistry Council. Boston, MA. Available at: https://plastics.americanchemistry.com/Education-Resources/Publications/Life-Cycle-Assessment-of-Polymers-in-an-Automotive-Assist-Step.pdf . (Accessed February 28, 2018).	Carbon fiber reinforced polymers	Cradle to grave	GHG emissions, energy requirements
Pike, E., and S. Schneider. 2013. Passenger Vehicle Replacement Tire Efficiency Study. Energy Solutions. Prepared for South Coast Air Quality Management District. Available at: https://energy-solution.com/library-item/passenger-vehicle-replacement-tire-efficiency-study/ . (Accessed: February 28, 2018).	Aerodynamics and drag reduction	Not applicable	Fuel use
Raugei, M., D. Morrey, A. Hutchinson, and P. Winfield. 2015. A coherent life cycle assessment of a range of lightweighting strategies for compact vehicles. <i>Journal of Cleaner Production</i> 108:1168–1176. doi: doi.org/10.1016/j.jclepro.2015.05.100 .	Aluminum, magnesium, carbon fiber reinforced polymers	Cradle to grave	GHG emissions criteria pollutants, energy requirements
Rooks, B. 2001. Tailor-Welded Blanks Bring Multiple Benefits to Car Design. <i>Assembly Automation</i> 21(4):323–329. doi:10.1108/EUM0000000006014.	Tailor-welded blanks	Not applicable	Not applicable
Rosenfeld, J., J. Lewandrowski, T. Hendrickson, K. Jaglo, K. Moffroid, and D. Pape. 2018. A Life-Cycle Analysis of the Greenhouse Gas Emissions from Corn-Based Ethanol. Report prepared by ICF under USDA Contract No. AG-3142-D-17-0161. September 5, 2018.	Corn ethanol	Well to wheels	GHG emissions
Ryan, N. A., J. X. Johnson, and G. A. Keoleian. 2016. Comparative Assessment of Models and Methods to Calculate Grid Electricity Emissions. <i>Environmental Science & Technology</i> . 50(17):8937–8953. doi: 10.1021/acs.est.5b05216.	EVs, electricity generation	Well to tank	GHG emissions

Table C-1. Studies Analyzed in Chapter 6, Life-Cycle Assessment of Vehicle Energy, Material, and Technology Impacts

Study Analyzed	Technologies and Materials Covered	Life-Cycle Boundaries ^a	Environmental Impacts Estimated
Samaras, C, and K. Meisterling. 2008. Life cycle assessment of greenhouse gas emissions from plug-in hybrid vehicles: implications for policy. <i>Environmental Science & Technology</i> 42(9):3170–3176. doi:10.1021/es702178s. Available at: https://pubs.acs.org/doi/abs/10.1021/es702178s . (Accessed: February 28, 2018).	Batteries (NiMH and Li-ion)	Cradle to gate	Energy requirements, GHG emissions
Sathre, R., C. D. Scown, O. Kavvada, and T. P. Hendrickson. 2015. Energy and climate effects of second-life use of electric vehicle batteries in California through 2050. <i>Journal of Power Sources</i> . 288:82-91. doi: 10.1016/j.jpowsour.2015.04.097.	EV Li-ion batteries, energy storage systems	Cradle to grave	Energy requirements, GHG emissions
Saur, K., M. Schuckert, J. Gediga, H. Florin, and J. Hesselbach. 1997. LCA Study on Tires With Reduced Roll Resistance. Society of Automotive Engineers (SAE) Technical Paper 971159. Affiliated with PE Product Engineering GmbH and University of Stuttgart, Germany. doi:10.4271/971159.	Tires	Cradle to grave (excluding end-of-life)	Fuel use, energy requirements, GHG emissions, water pollution
Scown, C. D., W. W. Nazaroff, U. Mishra, B. Strogon, A. B. Lobscheid, E. Masanet, N. J. Santero, A. Horvath, and T. E. McKone. 2012. Lifecycle greenhouse gas implications of US national scenarios for cellulosic ethanol production. <i>Environmental Research Letters</i> 7(1):014011. doi:10.1088/1748-9326/7/1/019502. Available at: http://iopscience.iop.org/article/10.1088/1748-9326/7/1/014011a . (Accessed: February 28, 2018).	Cellulosic ethanol	Gate to gate (land-use impacts)	GHG emissions
Searchinger, T., R. Heimlich, R. A. Houghton, F. Dong, A. Elobied, J. Fabiosa, S. Tokgoz, D. Hayes, and T.-H. Yu. 2008. Use of U.S. Croplands for Biofuels Increases Greenhouse Gases through Emissions from Land-Use Change. <i>Science</i> 319(5867):1238–1240. doi:10.1126/science.1151861. Available at: http://science.sciencemag.org/content/319/5867/1238.full . (Accessed: February 28, 2018).	Corn ethanol, biomass ethanol	Well to wheels	GHG emissions
Sebastian, B. M., and M. A. Thimons. 2017. Life Cycle Greenhouse Gas and Energy Study of Automotive Lightweighting. Prepared for Steel Recycling Institute. Available at: https://shop.steel.org/products/life-cycle-greenhouse-gas-and-energy-study-of-automotive-lightweighting-full-report . (Accessed: July 25, 2019).	Lightweighting, HSS, aluminum	Cradle to grave	Energy requirements, GHG emissions

Table C-1. Studies Analyzed in Chapter 6, Life-Cycle Assessment of Vehicle Energy, Material, and Technology Impacts

Study Analyzed	Technologies and Materials Covered	Life-Cycle Boundaries ^a	Environmental Impacts Estimated
Sebastian, B. M., M. A. Thimons, and K. Mahbubani. 2018. Consequential Life Cycle Greenhouse Gas Study of Automotive Lightweighting with Advanced High Strength Steel (AHSS) and Aluminum. Prepared for Steel Recycling Institute and Steel Market Development Institute. Available at: https://shop.steel.org/products/consequential-life-cycle-greenhouse-gas-study-of-automotive-lightweighting-with-advanced-high-strength-steel-ahss-and-aluminum . (Accessed: July 25, 2019).	Lightweighting, HSS, aluminum	Cradle to grave	Energy requirements, GHG emissions
Siler-Evans, K., I. Azevedo, and G. Morgan. 2012. Marginal emissions factors for the U.S. electricity system. <i>Environmental Science & Technology</i> . 46(9):4742–4748. doi: 10.1021/es300145v.	Electricity generation	Fuel combustion	GHG emissions
Sivertsen, L. K., J. Ö. Haagenen, and D. Albright. 2003. A Review of the Life Cycle Environmental Performance of Automotive Magnesium. Society of Automotive Engineers (SAE) Paper 2003-01-0641. March 3, 2003. doi:10.4271/2003-01-0641.	Magnesium, aluminum	Cradle to grave	Recycled materials
Shan, Z., S. Qin, Q. Liu, and F. Liu. 2012. Key Manufacturing Technology and Equipment for Energy Saving and Emissions Reduction in Mechanical Equipment Industry. <i>International Journal of Precision Engineering and Manufacturing</i> 13(7):1095–1100. doi:10.1007/s12541-012-0143y.	Digital technology, new material, near-net shape forming technology, clean production, short production process technology, waste-free manufacturing technology, automatic control technology, remanufacturing and reusing technology	Cradle to grave	Energy requirements, GHG emissions

Table C-1. Studies Analyzed in Chapter 6, Life-Cycle Assessment of Vehicle Energy, Material, and Technology Impacts

Study Analyzed	Technologies and Materials Covered	Life-Cycle Boundaries ^a	Environmental Impacts Estimated
Shinde, P., K. Ravis, N. Nehru, S. Pawar, B. Balakrishnan, and V. Nair. 2016. Light Weight BIW Solutions for Improving Functional Properties: A Review. Society of Automotive Engineers (SAE) Paper 2016-01-8138. doi:10.4271/2016-01-8138.	Magnesium, aluminum, polymer composites, tailored blanks, hydroforming, welding, die casting	Not applicable	GHG emissions
Spitzley, D. V., and G. A. Keoleian. 2001. Life Cycle Design of Air Intake Manifolds. In: Phase II: Lower Plenum of the 5.4: F-250 Intake Manifold, Including Recycling Scenarios. US Environmental Protection Agency (Eds.). National Risk Management Research Laboratory: Cincinnati, OH.	5.4 liter Ford F-250 with three different air intake manifolds: (1) a 2.89-kilogram lost-core composite used in most of the 5.4 liter engines, (2) a 5.58-kilogram sand-cast aluminum manifold currently used in Ford's 5.4-liter natural gas vehicles, and (3) a 2.89- kilogram vibration welded composite	Cradle to grave	Energy, solid waste, air pollutant emissions, GHG emissions, water pollution discharges
Sproesser, G., Y. Chang, A. Pittner, M. Finkbender, and M. Rethmeier. 2015. Life Cycle Assessment of welding technologies for thick metal plate welds. <i>Journal of Cleaner Production</i> 108:46–53. doi: 10.1016/j.jclepro.2015.06.121.	Manual metal Arc welding, automatic laser-arc hybrid welding, and gas metal Arc welding	Cradle to grave	GHG emissions, criteria pollutants
Sternberg, A., and A. Bardow. 2015. Power-to-What? –Environmental assessment of energy storage systems. <i>Energy & Environmental Science</i> 8.2 (2015):389–400. doi:10.1039/C4EE03051F.	Vanadium redox flow batteries, energy storage systems	Cradle to grave	GHG emissions, energy requirements

Table C-1. Studies Analyzed in Chapter 6, Life-Cycle Assessment of Vehicle Energy, Material, and Technology Impacts

Study Analyzed	Technologies and Materials Covered	Life-Cycle Boundaries ^a	Environmental Impacts Estimated
Stodolsky, F., A. Vyas, R. Cuenca, and L. Gaines. 1995. Life-Cycle Energy Savings Potential from Aluminum-Intensive Vehicles. Argonne National Laboratory. Conference Paper. 1995 Total Life Cycle Conference & Exposition. October 16–19, 1995. Vienna, Austria. doi:10.4271/951837.	Lightweighting, aluminum, and recycling technology	Cradle to grave	Energy requirements and fuel use
Sullivan, J. L., A. Burnham, and M. Wang. 2010. Energy-Consumption and Carbon-Emission Analysis of Vehicle and Component Manufacturing. ANL/ESD/10-6. Argonne National Laboratory: Argonne, IL. September 2010. Available at: http://greet.es.anl.gov/publication-vehicle_and_components_manufacturing . (Accessed: February 28, 2018).	Aluminum, steel, iron, plastics, polymer, brass, copper, and lead	Gate to gate	None
Tamayao, M. A. M., J. J. Michalek, C. Hendrickson, and I. M. Azevedo. 2015. Regional variability and uncertainty of electric vehicle life cycle CO ₂ emissions across the United States. <i>Environmental Science & Technology</i> 49(14):8844-8855. doi:10.1021/acs.est.5b00815.	EVs, PHEVs, HEVs	Well to wheels and battery cradle to gate	GHG emissions
Tempelman, E. 2011. Multi-Parametric Study of the Effect of Materials Substitution of Life Cycle Energy Use and Waste Generation of Passenger Car Structures. <i>Transportation Research Part D: Transport and Environment</i> 16(7):476–485. doi:10.1016/j.trd.2011.05.007.	Lightweighting, HSS, fiber-reinforced plastics, aluminum	Cradle to grave	Energy requirements, waste generation
Tessum, C. W., J. D. Hill, and J. D. Marshall. 2014. Life cycle air quality impacts of conventional and alternative light-duty transportation in the United States. <i>Proceedings of the National Academy of Sciences</i> 111(52):18490–18495. doi:10.1073/pnas.1406853111.	Gasoline, diesel, CNG, corn ethanol and corn stover, EVs	Well to wheels and battery cradle to gate	GHG emissions, air pollutant emissions including NO _x , PM, SO _x , VOCs, NH ₃
Tharumarajah, A., and P. Koltun. 2007. Is There an Environmental Advantage of Using Magnesium Components for Light-Weighting Cars? <i>Journal of Cleaner Production</i> 15(11-12):1007–1013. doi:10.1016/j.jclepro.2006.05.022.	Lightweighting, magnesium, aluminum, and magnesium casting	Cradle to grave	GHG emissions

Table C-1. Studies Analyzed in Chapter 6, Life-Cycle Assessment of Vehicle Energy, Material, and Technology Impacts

Study Analyzed	Technologies and Materials Covered	Life-Cycle Boundaries ^a	Environmental Impacts Estimated
<p>Theiss, T., T. Alleman, A. Brooker, A. Elgowainy, G. Fioroni, J. Han, S. Huff, C. Johnson, M. Kass, P. Leiby, R. U. Martinez, R. McCormick, K. Moriarty, E. Newes, G. Oladosu, J. Szybist, J. Thomas, M. Wang, and B. West. 2016. Summary of High-Octane Mid-Level Ethanol Blends Study. ORNL/TM-2016/42. July 2016. Prepared by Oak Ridge National Laboratory, National Renewable Energy Laboratory, and Argonne National Laboratory. Available at: http://info.ornl.gov/sites/publications/files/pub61169.pdf. (Accessed: February 28, 2018).</p>	<p>HOFs, corn ethanol, corn stover ethanol</p>	<p>Well to wheels</p>	<p>GHG emissions</p>
<p>Tong, F., P. Jaramillo, and I. M. L. Azevedo. 2015. Comparison of Life Cycle Greenhouse Gases from Natural Gas Pathways for Light-Duty Vehicles. <i>Energy Fuels</i>. 29 (9): 6008-6018. doi: 10.1021/acs.energyfuels.5b01063.</p>	<p>EVs, compressed natural gas vehicles, natural gas production</p>	<p>Well to wheels</p>	<p>GHG emissions</p>
<p>Ungureanu, C. A., S. Das, and I. S. Jawahir. 2007. Life - Cycle Cost Analysis: Aluminum Versus Steel in Passenger Cars. Pgs. 11-24 in: <i>Aluminum Alloys for Transportation, Packaging, Aerospace, and Other Applications</i>. S.K. Das and W. Yin (Eds.). The Minerals, Metals & Materials Society (TMS):Orlando, FL. 234 pp.</p>	<p>Lightweighting</p>	<p>Cradle to grave</p>	<p>GHG emissions and energy requirements</p>
<p>Wang, M., M. Wu, and H. Huo. 2007. Life-Cycle Energy and Greenhouse Gas Emission Impacts of Different Corn Ethanol Plant Types. <i>Environmental Research Letters</i> 2 (2007):024001. doi:10.1088/1748-9326/2/2/024001. Available at: http://iopscience.iop.org/1748-9326/2/2/024001/pdf/erl7_2_024001.pdf. (Accessed: February 28, 2018).</p>	<p>Corn ethanol</p>	<p>Well to wheels</p>	<p>GHG emissions, energy requirements</p>
<p>Wang, M., J. Han, J. B. Dunn, H. Cai, and A. Elgowainy. 2012. Well-to-wheels energy use and greenhouse gas emissions of ethanol from corn, sugarcane and cellulosic biomass for US use. <i>Environmental Research Letters</i> 7(4):045905. doi:10.1088/1748-9326/7/4/045905. Available at: http://iopscience.iop.org/article/10.1088/1748-9326/7/4/045905. (Accessed: February 28, 2018).</p>	<p>Ethanol from corn, sugarcane, and cellulosic biomass</p>	<p>Well to wheels</p>	<p>GHG emissions</p>

Table C-1. Studies Analyzed in Chapter 6, Life-Cycle Assessment of Vehicle Energy, Material, and Technology Impacts

Study Analyzed	Technologies and Materials Covered	Life-Cycle Boundaries ^a	Environmental Impacts Estimated
Wang, Z., J. B. Dunn, J. Han, and M. Q. Wang. 2015. Influence of corn oil recovery on life-cycle greenhouse gas emissions of corn ethanol and corn oil biodiesel. <i>Biotechnology for Biofuels</i> 8(1):178. doi:10.1186/s13068-015-0350-8. Available at: https://biotechnologyforbiofuels.biomedcentral.com/articles/10.1186/s13068-015-0350-8 . (Accessed: February 28, 2018).	Corn ethanol, corn oil biodiesel	Well to wheels	GHG emissions
Weber, C. L., and C. Clavin. 2012. Life cycle carbon footprint of shale gas: Review of evidence and implications. <i>Environmental Science & Technology</i> 46(11):5688–5695. doi:10.1021/es300375n.	Shale gas	Well to wire	GHG emissions
Wei, H., Y. Zhang, L. Tan, and Z. Zhong. 2015. Energy efficiency evaluation of hot-wire laser welding based on process characteristic and power consumption. <i>Journal of Cleaner Production</i> 87:255–262. doi:10.1016/j.jclepro.2014.10.009.	Hot wire laser welding, cold wire laser welding	Not applicable	Not applicable
Weis, A., P. Jaramillo, and J. Michalek. 2016. Consequential life cycle air emissions externalities for plug-in electric vehicles in the PJM interconnection. <i>Environmental Research Letters</i> 11(2):024009. doi:10.1088/1748-9326/11/2/024009. Available at: http://iopscience.iop.org/article/10.1088/1748-9326/11/2/024009 . (Accessed: February 28, 2018).	PHEVs, HEVs	Cradle to use-phase	GHG emissions, air pollutant emissions including VOCs, CO, NO _x , PM, SO ₂
Weiss, M. A., J. B. Heywood, E. M. Drake, A. Schafer, and F. F. AuYeung. 2000. On the Road in 2020: A Lifecycle Analysis of New Automobile Technologies. Energy Laboratory Report MIT EL 00-003. Massachusetts Institute of Technology: Cambridge, MA. Available at: http://web.mit.edu/energylab/www/pubs/el00-003.pdf . (Accessed: February 28, 2018).	Lightweighting, HEVs, EVs, fuel cells, HSS, aluminum, plastics, alternative fuels	Cradle to grave	Energy requirements, GHG emissions
Witik, R. A., J. Payet, V. Michaud, C. Ludwig, and J. E. Manson. 2011. Assessing the Life Cycle Costs and Environmental Performance of Lightweight Materials in Automotive Applications. <i>Composites: Part A</i> 42:1694–1709. doi:10.1016/j.compositesa.2011.07.024. Available at: http://www.ekoconception.eu/fr/wp-content/uploads/2013/03/PUBLI.13-WITIK-ET-AL.-PUBLI.13-2011-ASSESSING-THE-LIFE-CYCLE-COSTS-AND-ENVIRONMENTAL-PERFORMANCE-OF-LIGHTWEIGHT-MATERIALS-IN-AUTOMOBILE-APPLICATIONS.pdf . (Accessed: February 28, 2018).	Carbon fiber reinforced polymer	End of life, recycling	GHG emissions

Table C-1. Studies Analyzed in Chapter 6, Life-Cycle Assessment of Vehicle Energy, Material, and Technology Impacts

Study Analyzed	Technologies and Materials Covered	Life-Cycle Boundaries ^a	Environmental Impacts Estimated
Volkswagen. 2008. The DSG Dual-Clutch Gearbox Environmental Commendation –Background Report. Available at: www.evosoft.dk/diagrams/ec_dsg_background.pdf . (Accessed: February 28, 2018).	Dual clutch transmission	Cradle to grave	Energy requirements, fuel use, GHG emissions, air emissions including CO, SO ₂ , NO _x , and NMVOCs, eutrophication, ozone depletion, acidification, raw material consumption
Zavala-Araiza, D., D. R. Lyon, R. A. Alvarez, K. J. Davis, R. Harriss, S. C. Herndon, A. Karion, E. A. Kort, B. K. Lamb, X. Lan, and A. J. Marchese. 2015. Reconciling divergent estimates of oil and gas methane emissions. <i>Proceedings of the National Academy of Sciences</i> , 112(51):15597–15602. doi:10.1073/pnas.1522126112. Available at: http://www.pnas.org/content/112/51/15597 . (Accessed: February 28, 2018).	Natural gas production	Cradle to gate	Methane emissions
Zavala-Araiza, D., D. Lyon, R. A. Alvarez, V. Palacios, R. Harriss, X. Lan, R. Talbot, and S. P. Hamburg. 2015. Toward a functional definition of methane super-emitters: Application to natural gas production sites. <i>Environmental Science & Technology</i> , 49(13):8167–8174. doi:10.1021/acs.est.5b00133. Available at: https://pubs.acs.org/doi/abs/10.1021/acs.est.5b00133 . (Accessed: February 28, 2018).	Natural gas production	Cradle to gate	Methane emissions
Zhang, Y., and A. Kendall. 2016. Life Cycle Performance of Cellulosic Ethanol and Corn Ethanol from a Retrofitted Dry Mill Corn Ethanol Plant. <i>BioEnergy Research</i> 10(1):183–198. doi:10.1007/s12155-016-9776-5.	Cellulosic ethanol, corn ethanol	Well to wheels	GHG emissions, energy requirements

Notes:

^a Cradle to gate = assessment of a partial product life cycle that includes the raw material extraction and manufacturing stages, and transportation between these stages; cradle to grave = life-cycle assessment that includes all five stages of a product’s life cycle (i.e., raw material extraction, manufacturing, vehicle use, end-of-life management, and transportation between the various stages); gate to gate = assessment of a partial product life-cycle that includes only the manufacturing stage.

EV = electric vehicle; GHG = greenhouse gas; PHEV = plug-in hybrid electric vehicle; HSS = high-strength steel; CO₂ = carbon dioxide; CO = carbon monoxide; VOC = volatile organic compound; NO_x = nitrogen oxides; SO₂ = sulfur dioxide; NH₃ = ammonia; PM = particulate matter; Li-ion = lithium-ion; E85 ethanol fuel blend of 85 percent ethanol fuel and 15% gasoline or other hydrocarbon; CNG = compressed natural gas; LPG = liquefied petroleum gas; FFV = flexible-fuel vehicles; HEV = hybrid electric vehicle; FCEV = fuel cell electric vehicle; AHSS = advanced high strength steel; CNF = carbon nanofiber; CNF-GF = carbon nanofiber-glass fiber; PNC = polymer nanocomposite; LCA = life-cycle analysis; TPMS = tire pressure management system; SO_x = oxides of sulfur; Pb = lead; NMVOCs = nonmethane volatile organic compounds; EREV = extended range electric vehicle; NiMH = nickel-metal hydride; HOF = high-octane fuel; HF = hydrogen fluoride

APPENDIX D

U.S. Passenger Cars and Light Truck Results Reported Separately

**Final Environmental Impact Statement for the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for
Model Year 2021–2026 Passenger Cars and Light Trucks**

Table D-1. Fuel Consumption and Increase in Fuel Consumption by Alternative (billion gasoline gallon equivalent total for calendar years 2020–2050)

	Alt 0 No Action	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7
Fuel Consumption								
Cars	1,482	1,594	1,591	1,583	1,584	1,564	1,560	1,537
Light trucks	1,889	2,004	2,000	1,988	1,977	1,950	1,932	1,919
All light-duty vehicles	3,371	3,598	3,591	3,571	3,561	3,514	3,492	3,456
Increase in Fuel Use Compared to the No Action Alternative								
Cars		112	108	101	101	82	78	55
Light trucks		115	111	98	88	61	43	29
All light-duty vehicles		226	220	200	189	142	120	85

Table D-2. Nationwide Criteria Pollutant Emissions (tons/year) in 2025 from Passenger Cars and Light Trucks, by Vehicle Type and Alternative

Vehicle Class	Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Carbon monoxide (CO)								
Cars tailpipe	5,579,330	5,557,014	5,558,129	5,559,363	5,560,018	5,563,019	5,568,106	5,567,759
Cars upstream	47,155	48,006	47,974	47,893	47,908	47,652	47,717	47,478
Trucks tailpipe	6,733,718	6,697,269	6,698,874	6,701,948	6,703,032	6,713,562	6,711,737	6,718,137
Trucks upstream	57,181	58,085	58,047	57,965	57,921	57,762	57,383	57,691
Total	12,417,383	12,360,373	12,363,024	12,367,168	12,368,879	12,381,995	12,384,943	12,391,066
Nitrogen oxides (NO_x)								
Cars tailpipe	286,877	285,481	285,547	285,622	285,661	285,911	286,128	286,190
Cars upstream	90,237	91,976	91,911	91,749	91,786	91,257	91,395	90,924
Trucks tailpipe	503,896	500,918	501,044	501,249	501,336	502,134	502,109	502,576
Trucks upstream	109,965	112,020	111,948	111,783	111,688	111,294	110,541	111,064
Total	990,975	990,397	990,450	990,404	990,472	990,596	990,173	990,754
Particulate matter (PM_{2.5})								
Cars tailpipe	8,919	8,891	8,893	8,894	8,895	8,898	8,907	8,905
Cars upstream	6,915	7,057	7,051	7,038	7,042	6,998	7,010	6,973
Trucks tailpipe	11,172	11,114	11,117	11,123	11,125	11,143	11,137	11,148
Trucks upstream	8,453	8,632	8,626	8,613	8,605	8,568	8,510	8,544
Total	35,459	35,694	35,687	35,668	35,667	35,608	35,563	35,570
Sulfur oxides (SOX)								
Cars tailpipe	3,430	3,518	3,515	3,507	3,510	3,483	3,490	3,469
Cars upstream	68,011	68,314	68,300	68,245	68,201	68,148	68,149	67,932
Trucks tailpipe	4,309	4,391	4,388	4,380	4,374	4,344	4,362	4,320
Trucks upstream	78,734	78,065	78,015	77,953	77,974	78,415	77,667	78,986
Total	154,484	154,288	154,217	154,085	154,060	154,389	153,668	154,707

Appendix D U.S. Passenger Car and Light Truck Results Reported Separately

Vehicle Class	Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Volatile organic compounds (VOCs)								
Cars tailpipe	392,136	389,597	389,706	389,837	389,910	390,430	390,694	390,911
Cars upstream	169,862	174,090	173,934	173,565	173,697	172,381	172,730	171,710
Trucks tailpipe	540,117	536,917	537,054	537,263	537,351	538,200	538,206	538,680
Trucks upstream	209,796	216,393	216,251	215,882	215,619	214,231	212,178	213,147
Total	1,311,911	1,316,996	1,316,945	1,316,547	1,316,577	1,315,242	1,313,808	1,314,448

Table D-3. Nationwide Criteria Pollutant Emissions (tons/year) in 2035 from Passenger Cars and Light Trucks, by Vehicle Type and Alternative

Vehicle Class	Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Carbon monoxide (CO)								
Cars tailpipe	3,269,669	3,323,846	3,323,064	3,320,643	3,318,618	3,307,695	3,319,182	3,299,251
Cars upstream	41,692	44,583	44,528	44,282	44,176	43,569	43,407	42,746
Trucks tailpipe	3,923,909	3,890,225	3,892,271	3,895,661	3,898,514	3,904,610	3,892,537	3,910,148
Trucks upstream	51,645	53,116	53,035	52,896	52,763	52,643	51,874	52,514
Total	7,286,915	7,311,771	7,312,898	7,313,481	7,314,071	7,308,517	7,306,999	7,304,659
Nitrogen oxides (NO_x)								
Cars tailpipe	147,469	149,433	149,407	149,324	149,251	148,841	149,341	148,555
Cars upstream	76,237	82,090	81,967	81,482	81,337	80,218	79,952	78,631
Trucks tailpipe	215,302	213,259	213,362	213,543	213,679	214,049	213,667	214,443
Trucks upstream	95,336	99,488	99,337	98,951	98,604	97,996	96,260	97,374
Total	534,343	544,269	544,074	543,299	542,871	541,104	539,220	539,004
Particulate matter (PM_{2.5})								
Cars tailpipe	6,956	7,046	7,044	7,041	7,038	7,024	7,046	7,012
Cars upstream	5,843	6,327	6,316	6,277	6,268	6,182	6,163	6,055
Trucks tailpipe	8,708	8,630	8,635	8,642	8,652	8,663	8,630	8,674
Trucks upstream	7,341	7,746	7,735	7,697	7,664	7,594	7,442	7,523
Total	28,847	29,749	29,729	29,657	29,623	29,462	29,282	29,265
Sulfur oxides (SO_x)								
Cars tailpipe	2,878	3,181	3,173	3,150	3,151	3,107	3,101	3,035
Cars upstream	65,598	66,737	66,785	66,597	66,155	65,269	64,844	64,470
Trucks tailpipe	3,827	4,054	4,048	4,014	3,987	3,911	3,924	3,836
Trucks upstream	76,405	71,060	70,954	71,517	71,908	73,997	73,859	76,042
Total	148,708	145,032	144,959	145,278	145,201	146,284	145,728	147,383
Volatile organic compounds (VOCs)								
Cars tailpipe	172,467	173,983	173,975	173,912	173,848	173,506	174,089	173,311
Cars upstream	143,212	157,768	157,399	156,280	156,288	154,102	153,778	150,604
Trucks tailpipe	226,246	224,065	224,170	224,348	224,462	224,862	224,602	225,324
Trucks upstream	181,513	199,423	199,117	197,582	196,306	192,796	186,388	189,268
Total	723,438	755,238	754,661	752,122	750,905	745,266	738,857	738,507

Table D-4. Nationwide Criteria Pollutant Emissions (tons/year) in 2050 from Passenger Cars and Light Trucks, by Vehicle Type and Alternative

Vehicle Class	Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Carbon monoxide (CO)								
Cars tailpipe	2,214,202	2,341,106	2,334,557	2,334,467	2,334,325	2,295,946	2,294,816	2,270,425
Cars upstream	44,418	47,261	47,249	47,030	46,768	46,401	46,158	45,471
Trucks tailpipe	2,426,457	2,558,770	2,553,340	2,547,061	2,543,814	2,526,911	2,477,683	2,488,028
Trucks upstream	54,223	52,122	52,152	52,103	52,176	52,489	52,877	53,213
Total	4,739,300	4,999,260	4,987,297	4,980,660	4,977,083	4,921,747	4,871,534	4,857,136
Nitrogen oxides (NO_x)								
Cars tailpipe	92,228	97,439	97,172	97,167	97,160	95,590	95,557	94,546
Cars upstream	75,481	81,589	81,463	81,074	80,723	79,727	79,255	77,961
Trucks tailpipe	101,256	106,526	106,312	106,065	105,943	105,257	103,258	103,714
Trucks upstream	94,054	95,174	95,094	94,687	94,483	94,137	93,773	93,934
Total	363,020	380,729	380,041	378,993	378,308	374,710	371,843	370,155
Particulate matter (PM_{2.5})								
Cars tailpipe	5,167	5,437	5,421	5,421	5,422	5,341	5,344	5,296
Cars upstream	5,497	6,019	6,004	5,975	5,955	5,859	5,821	5,719
Trucks tailpipe	6,439	6,780	6,766	6,749	6,743	6,697	6,570	6,597
Trucks upstream	6,945	7,311	7,297	7,248	7,213	7,135	7,046	7,033
Total	24,048	25,546	25,487	25,392	25,332	25,032	24,782	24,645
Sulfur oxides (SO_x)								
Cars tailpipe	2,249	2,590	2,573	2,560	2,561	2,484	2,463	2,409
Cars upstream	90,205	90,511	90,934	90,559	89,633	90,486	90,245	89,385
Trucks tailpipe	3,067	3,627	3,609	3,556	3,509	3,391	3,305	3,208
Trucks upstream	102,631	78,626	79,242	80,528	82,080	86,450	91,336	94,033
Total	198,151	175,354	176,358	177,203	177,784	182,812	187,349	189,036
Volatile organic compounds (VOCs)								
Cars tailpipe	90,174	95,467	95,202	95,184	95,162	93,532	93,482	92,424
Cars upstream	115,733	132,032	131,271	130,588	130,548	126,990	125,948	123,287
Trucks tailpipe	90,706	95,517	95,333	95,111	94,984	94,352	92,560	92,920
Trucks upstream	152,613	180,333	179,502	177,125	175,031	169,751	163,084	161,669
Total	449,226	503,349	501,308	498,008	495,724	484,624	475,075	470,300

Table D-5. Nationwide Toxic Air Pollutant Emissions (tons/year) in 2025 from Passenger Cars and Light Trucks, by Vehicle Type and Alternative

Vehicle Class	Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Acetaldehyde								
Cars tailpipe	3,784	3,775	3,776	3,776	3,776	3,777	3,781	3,779
Cars upstream	33	34	33	33	33	33	33	33
Trucks tailpipe	4,781	4,755	4,757	4,759	4,760	4,767	4,765	4,770
Trucks upstream	41	42	42	42	42	41	41	41
Total	8,638	8,606	8,607	8,610	8,611	8,619	8,621	8,623
Acrolein								
Cars tailpipe	215	214	214	214	214	214	215	214
Cars upstream	4	5	5	5	5	5	5	5
Trucks tailpipe	242	241	241	241	241	241	241	241
Trucks upstream	6	6	6	6	6	6	6	6
Total	467	465	465	465	465	466	466	466
Benzene								
Cars tailpipe	12,184	12,120	12,123	12,127	12,129	12,140	12,150	12,153
Cars upstream	662	679	679	677	678	673	674	670
Trucks tailpipe	17,182	17,082	17,087	17,094	17,096	17,123	17,122	17,138
Trucks upstream	821	847	846	845	844	838	831	833
Total	30,849	30,729	30,735	30,743	30,747	30,774	30,777	30,794
1,3-Butadiene								
Cars tailpipe	1,589	1,584	1,584	1,584	1,584	1,585	1,587	1,586
Cars upstream	7	7	7	7	7	7	7	7
Trucks tailpipe	2,049	2,037	2,038	2,039	2,039	2,042	2,042	2,044
Trucks upstream	9	9	9	9	9	9	9	9
Total	3,654	3,637	3,638	3,639	3,640	3,643	3,645	3,646
Diesel particulate matter (DPM)								
Cars tailpipe	21	21	21	21	21	21	21	21
Cars upstream	31,069	31,721	31,697	31,638	31,653	31,454	31,506	31,336
Trucks tailpipe	7	7	7	7	7	7	7	7
Trucks upstream	38,060	38,850	38,825	38,765	38,728	38,557	38,327	38,445
Total	69,157	70,599	70,550	70,430	70,409	70,039	69,861	69,808
Formaldehyde								
Cars tailpipe	2,630	2,619	2,620	2,620	2,621	2,622	2,624	2,624
Cars upstream	246	252	252	251	251	249	250	248
Trucks tailpipe	3,676	3,655	3,656	3,657	3,658	3,664	3,663	3,667
Trucks upstream	307	314	314	314	313	311	311	309
Total	6,858	6,841	6,842	6,843	6,843	6,846	6,849	6,849

Table D-6. Nationwide Toxic Air Pollutant Emissions (tons/year) in 2035 from Passenger Cars and Light Trucks, by Vehicle Type and Alternative

Vehicle Class	Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Acetaldehyde								
Cars tailpipe	2,863	2,911	2,910	2,908	2,907	2,897	2,908	2,890
Cars upstream	27	30	30	30	30	30	30	29
Trucks tailpipe	3,450	3,420	3,422	3,425	3,428	3,433	3,421	3,438
Trucks upstream	36	39	39	38	38	37	37	37
Total	6,377	6,401	6,402	6,402	6,403	6,397	6,395	6,393
Acrolein								
Cars tailpipe	157	160	160	160	160	159	160	159
Cars upstream	4	4	4	4	4	4	4	4
Trucks tailpipe	167	166	166	166	166	166	166	167
Trucks upstream	5	5	5	5	5	5	5	5
Total	333	335	335	335	335	335	335	334
Benzene								
Cars tailpipe	6,132	6,213	6,213	6,209	6,206	6,188	6,210	6,175
Cars upstream	558	616	615	610	611	602	601	588
Trucks tailpipe	7,675	7,605	7,609	7,615	7,619	7,632	7,618	7,646
Trucks upstream	711	783	782	776	770	755	732	740
Total	15,076	15,218	15,218	15,210	15,206	15,178	15,160	15,150
1,3-Butadiene								
Cars tailpipe	952	969	968	968	967	964	967	961
Cars upstream	6	7	7	7	7	7	6	6
Trucks tailpipe	1,069	1,060	1,061	1,062	1,062	1,064	1,061	1,066
Trucks upstream	8	8	8	8	8	8	8	8
Total	2,035	2,044	2,044	2,044	2,044	2,042	2,043	2,041
Diesel particulate matter (DPM)								
Cars tailpipe	3	3	3	3	3	3	3	3
Cars upstream	26,697	29,022	28,968	28,782	28,753	28,355	28,275	27,759
Trucks tailpipe	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Trucks upstream	33,764	35,779	35,724	35,527	35,358	34,965	34,314	34,570
Total	60,465	64,804	64,696	64,313	64,114	63,323	62,592	62,333
Formaldehyde								
Cars tailpipe	1,562	1,587	1,586	1,585	1,584	1,579	1,585	1,575
Cars upstream	206	228	228	226	226	223	222	218
Trucks tailpipe	1,884	1,868	1,869	1,870	1,872	1,875	1,870	1,878
Trucks upstream	271	291	290	288	286	280	278	275
Total	3,924	3,973	3,973	3,969	3,968	3,957	3,955	3,945

Table D-7. Nationwide Toxic Air Pollutant Emissions (tons/year) in 2050 from Passenger Cars and Light Trucks, by Vehicle Type and Alternative

Vehicle Class	Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Acetaldehyde								
Cars tailpipe	2,032	2,147	2,141	2,141	2,140	2,105	2,104	2,083
Cars upstream	21	25	25	24	24	24	24	23
Trucks tailpipe	2,253	2,372	2,368	2,362	2,359	2,343	2,299	2,307
Trucks upstream	29	35	34	34	33	32	31	31
Total	4,336	4,579	4,567	4,561	4,558	4,504	4,459	4,444
Acrolein								
Cars tailpipe	114	120	120	120	120	118	118	117
Cars upstream	3	3	3	3	3	3	3	3
Trucks tailpipe	114	120	120	119	119	118	116	116
Trucks upstream	4	5	5	5	5	4	4	4
Total	234	248	248	247	247	244	242	240
Benzene								
Cars tailpipe	3,761	3,983	3,972	3,971	3,970	3,902	3,900	3,855
Cars upstream	436	502	499	497	497	482	478	467
Trucks tailpipe	3,750	3,948	3,941	3,932	3,926	3,900	3,826	3,841
Trucks upstream	582	703	699	689	680	657	629	621
Total	8,530	9,137	9,111	9,089	9,073	8,941	8,833	8,785
1,3-Butadiene								
Cars tailpipe	656	696	694	693	693	681	681	673
Cars upstream	5	5	5	5	5	5	5	5
Trucks tailpipe	638	673	671	670	669	664	651	654
Trucks upstream	6	8	8	7	7	7	7	7
Total	1,305	1,381	1,378	1,376	1,375	1,357	1,344	1,338
Diesel particulate matter (DPM)								
Cars tailpipe	0	0	0	0	0	0	0	0
Cars upstream	24,279	26,804	26,717	26,585	26,512	26,028	25,850	25,380
Trucks tailpipe	0	0	0	0	0	0	0	0
Trucks upstream	30,999	33,361	33,278	33,006	32,797	32,305	31,783	31,615
Total	55,278	60,165	59,995	59,591	59,309	58,333	57,634	56,995
Formaldehyde								
Cars tailpipe	1,049	1,111	1,108	1,108	1,107	1,088	1,088	1,076
Cars upstream	161	186	185	184	184	178	177	173
Trucks tailpipe	1,065	1,121	1,119	1,116	1,115	1,107	1,087	1,091
Trucks upstream	219	260	259	255	252	243	236	230
Total	2,494	2,678	2,670	2,663	2,658	2,618	2,587	2,570

Table D-8. Carbon Dioxide Emissions and Emissions Increases (MMTCO₂) from All Passenger Cars, 2021–2100 by Alternative, Direct and Indirect Impacts^a

Alternative	Total Emissions	Emissions Increases Compared to No Action	Percent (%) Emissions Increases Compared to No Action Alternative Emissions
Alt. 0—No Action	37,300	--	--
Alt. 1	41,300	4,000	11%
Alt. 2	41,100	3,800	10%
Alt. 3	40,900	3,600	10%
Alt. 4	40,900	3,600	10%
Alt. 5	40,100	2,800	8%
Alt. 6	39,900	2,600	7%
Alt. 7	39,200	1,800	5%

Notes:

^a The numbers in this table have been rounded for presentation purposes. As a result, the reductions do not reflect the exact differences between the values.

MMTCO₂ = million metric tons of carbon dioxide.

Table D-9. Carbon Dioxide Emissions and Emissions Increases (MMTCO₂) from All Light Trucks, 2021–2100 by Alternative, Direct and Indirect Impacts^a

Alternative	Total Emissions	Emissions Increases Compared to No Action	Percent (%) Emissions Increases Compared to No Action Alternative Emissions
Alt. 0—No Action	48,600	--	--
Alt. 1	53,400	4,900	10%
Alt. 2	53,300	4,700	10%
Alt. 3	52,800	4,200	9%
Alt. 4	52,300	3,800	8%
Alt. 5	51,300	2,700	6%
Alt. 6	50,500	1,900	4%
Alt. 7	49,800	1,200	2%

Notes:

^a The numbers in this table have been rounded for presentation purposes. As a result, the reductions do not reflect the exact differences between the values.

MMTCO₂ = million metric tons of carbon dioxide.

Table D-10. Emissions of Greenhouse Gases (MMTCO₂e per year) from All Passenger Cars by Alternative, Direct and Indirect Impacts^a

Year	Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Carbon dioxide (CO₂)								
2020	677	679	679	679	679	678	678	678
2040	501	556	554	551	551	543	541	529
2060	437	493	490	488	487	475	472	462
2080	434	489	487	484	484	472	468	459
2100	403	455	453	450	450	439	436	427
Methane (CH₄)								
2020	23	23	23	23	23	23	23	23
2040	17	19	19	19	19	19	18	18
2060	15	17	17	17	17	17	17	16
2080	15	17	17	17	17	17	16	16
2100	14	16	16	16	16	15	15	15
Nitrous oxide (N₂O)								
2020	8	8	8	8	8	8	8	8
2040	6	7	7	7	7	7	7	7
2060	5	6	6	6	6	6	6	6
2080	5	6	6	6	6	6	6	6
2100	5	5	5	5	5	5	5	5
Total (all GHGs)								
2020	708	710	710	710	710	708	709	708
2040	524	581	580	577	577	569	566	554
2060	458	516	513	511	510	498	494	484
2080	454	512	510	507	506	494	491	481
2100	423	476	474	472	471	460	456	447

Notes:

^a Emissions from 2051–2100 were scaled using the rate of change for the U.S. transportation fuel consumption from the GCAM Reference scenario. These assumptions project a slight decline over this period.

GHG = greenhouse gas; MMTCO₂e = million metric tons carbon dioxide equivalent.

Table D-11. Emissions of Greenhouse Gases (MMTCO₂e per year) from All Light Trucks by Alternative, Direct and Indirect Impacts^a

Year	Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Carbon dioxide (CO₂)								
2020	801	802	802	802	802	801	802	801
2040	648	696	695	689	683	671	664	658
2060	576	651	648	641	634	619	606	595
2080	572	646	644	636	630	614	602	591
2100	532	601	599	592	586	571	560	550
Methane (CH₄)								
2020	27	27	27	27	27	27	27	27
2040	22	23	23	23	23	23	22	22
2060	20	22	22	22	22	21	21	21
2080	20	22	22	22	22	21	21	20
2100	19	20	20	20	20	20	19	19
Nitrous oxide (N₂O)								
2020	9	9	9	9	9	9	9	9
2040	8	8	8	8	8	8	8	8
2060	7	8	8	8	8	7	7	7
2080	7	8	8	8	8	7	7	7
2100	6	7	7	7	7	7	7	7
Total (all GHGs)								
2020	837	839	839	838	838	838	838	837
2040	677	728	726	720	715	701	694	688
2060	603	681	678	670	664	647	634	623
2080	599	676	673	666	659	643	630	618
2100	557	629	626	619	613	598	585	575

Notes:

^a Emissions from 2051–2100 were scaled using the rate of change for the U.S. transportation fuel consumption from the GCAM Reference scenario. These assumptions project a slight decline over this period.

GHG = greenhouse gas; MMTCO₂e = million metric tons carbon dioxide equivalent.

Table D-12. Carbon Dioxide Concentrations, Global Mean Surface Temperature Increase, Sea-Level Rise, and Ocean Acidification (GCAM Reference) from Passenger Cars by Alternative, Direct and Indirect Impacts^a

Alternative	CO ₂ Concentration (ppm)			Global Mean Surface Temperature Increase (°C) ^{b, c}			Sea-Level Rise (cm) ^{b, d}			Ocean Acidification (pH) ^e		
	2040	2060	2100	2040	2060	2100	2040	2060	2100	2040	2060	2100
Totals by Alternative												
Alt. 0 No Action	479.04	565.44	789.11	1.287	2.008	3.484	22.87	36.56	76.28	8.4099	8.3476	8.2176
Alt. 1	479.10	565.60	789.45	1.287	2.009	3.485	22.87	36.57	76.31	8.4099	8.3475	8.2174
Alt. 2	479.10	565.59	789.44	1.287	2.009	3.485	22.87	36.57	76.31	8.4099	8.3475	8.2174
Alt. 3	479.09	565.58	789.42	1.287	2.009	3.485	22.87	36.57	76.31	8.4099	8.3475	8.2174
Alt. 4	479.09	565.58	789.42	1.287	2.009	3.485	22.87	36.57	76.31	8.4099	8.3475	8.2174
Alt. 5	479.08	565.55	789.35	1.287	2.009	3.485	22.87	36.57	76.30	8.4099	8.3475	8.2175
Alt. 6	479.08	565.55	789.33	1.287	2.009	3.485	22.87	36.57	76.30	8.4099	8.3475	8.2175
Alt. 7	479.07	565.52	789.27	1.287	2.009	3.485	22.87	36.57	76.30	8.4099	8.3475	8.2175
Increases Under Action Alternatives												
Alt. 1	0.06	0.16	0.35	0.000	0.001	0.001	0.00	0.01	0.03	0.0000	-0.0001	-0.0002
Alt. 2	0.06	0.15	0.34	0.000	0.001	0.001	0.00	0.01	0.03	0.0000	-0.0001	-0.0002
Alt. 3	0.05	0.14	0.32	0.000	0.001	0.001	0.00	0.01	0.03	0.0000	-0.0001	-0.0002
Alt. 4	0.05	0.14	0.31	0.000	0.001	0.001	0.00	0.01	0.03	0.0000	-0.0001	-0.0002
Alt. 5	0.04	0.11	0.25	0.000	0.001	0.001	0.00	0.01	0.02	0.0000	-0.0001	-0.0001
Alt. 6	0.04	0.11	0.23	0.000	0.001	0.001	0.00	0.00	0.02	0.0000	-0.0001	-0.0001
Alt. 7	0.03	0.08	0.16	0.000	0.000	0.001	0.00	0.00	0.01	0.0000	-0.0001	-0.0001

Notes:

^a The numbers in this table have been rounded for presentation purposes. As a result, the reductions might not reflect the exact difference of the values in all cases. This analysis was simulated using the same methodology as reported in Section 5.3; however, it includes only emissions changes for passenger cars.

^b The values for global mean surface temperature and sea-level rise are relative to the average of the years 1986–2005.

^c Temperature changes reported as 0.000 are more than zero but less than 0.001.

^d Sea-level rise changes reported as 0.00 are more than zero but less than 0.01.

^e Ocean Acidification changes reported as 0.0000 are less than zero but more than -0.0001.

CO₂ = carbon dioxide; C = degrees Celsius; ppm = parts per million; cm = centimeters; GCAM = Global Change Assessment Model.

Table D-13. Carbon Dioxide Concentrations, Global Mean Surface Temperature Increase, Sea-Level Rise, and Ocean Acidification (GCAM Reference) from Light Trucks by Alternative, Direct and Indirect Impacts^a

Alternative	CO ₂ Concentration (ppm)			Global Mean Surface Temperature Increase (°C) ^{b, c}			Sea-Level Rise (cm) ^{b, d}			Ocean Acidification (pH) ^e		
	2040	2060	2100	2040	2060	2100	2040	2060	2100	2040	2060	2100
Totals by Alternative												
Alt. 0 No Action	479.04	565.44	789.11	1.287	2.008	3.484	22.87	36.56	76.28	8.4099	8.3476	8.2176
Alt. 1	479.09	565.62	789.54	1.287	2.009	3.486	22.87	36.57	76.32	8.4099	8.3475	8.2174
Alt. 2	479.09	565.61	789.53	1.287	2.009	3.486	22.87	36.57	76.32	8.4099	8.3475	8.2174
Alt. 3	479.08	565.59	789.48	1.287	2.009	3.486	22.87	36.57	76.31	8.4099	8.3475	8.2174
Alt. 4	479.08	565.57	789.44	1.287	2.009	3.485	22.87	36.57	76.31	8.4099	8.3475	8.2174
Alt. 5	479.06	565.53	789.35	1.287	2.009	3.485	22.87	36.57	76.30	8.4099	8.3475	8.2175
Alt. 6	479.06	565.51	789.28	1.287	2.009	3.485	22.87	36.57	76.30	8.4099	8.3475	8.2175
Alt. 7	479.05	565.48	789.22	1.287	2.008	3.485	22.87	36.56	76.29	8.4099	8.3476	8.2175
Increases Under Alternatives												
Alt. 1	0.05	0.17	0.44	0.000	0.001	0.002	0.00	0.01	0.04	0.0000	-0.0001	-0.0002
Alt. 2	0.05	0.17	0.42	0.000	0.001	0.002	0.00	0.01	0.04	0.0000	-0.0001	-0.0002
Alt. 3	0.04	0.15	0.38	0.000	0.001	0.002	0.00	0.01	0.03	0.0000	-0.0001	-0.0002
Alt. 4	0.04	0.13	0.34	0.000	0.001	0.001	0.00	0.01	0.03	0.0000	-0.0001	-0.0002
Alt. 5	0.02	0.09	0.24	0.000	0.001	0.001	0.00	0.00	0.02	0.0000	-0.0001	-0.0001
Alt. 6	0.02	0.07	0.17	0.000	0.000	0.001	0.00	0.00	0.01	0.0000	0.0000	-0.0001
Alt. 7	0.01	0.04	0.11	0.000	0.000	0.000	0.00	0.00	0.01	0.0000	0.0000	-0.0001

Notes:

^a The numbers in this table have been rounded for presentation purposes. As a result, the reductions might not reflect the exact difference of the values in all cases. This analysis was simulated using the same methodology as reported in Section 5.3; however, it includes only emissions changes for light trucks.

^b The values for global mean surface temperature and sea-level rise are relative to the average of the years 1986–2005.

^c Temperature changes reported as 0.000 are more than zero but less than 0.001.

^d Sea-level rise changes reported as 0.00 are more than zero but less than 0.01.

^e Ocean Acidification changes reported as 0.0000 are less than zero but more than -0.0001.

CO₂ = carbon dioxide; °C = degrees Celsius; ppm = parts per million; cm = centimeters; GCAM = Global Change Assessment Model.

Table D-14. Carbon Dioxide Emissions and Emissions Increases (MMTCO₂) from All Passenger Cars, 2021–2100 by Alternative, Cumulative Impacts^a

Alternative	Total Emissions	Emissions Increases Compared to No Action	Percent (%) Emissions Increases Compared to No Action Alternative Emissions
Alt. 0—No Action	37,300	--	--
Alt. 1	41,300	4,000	11%
Alt. 2	41,100	3,800	10%
Alt. 3	40,900	3,600	10%
Alt. 4	40,900	3,600	10%
Alt. 5	40,100	2,800	8%
Alt. 6	39,900	2,600	7%
Alt. 7	39,200	1,800	5%

Notes:

^a The numbers in this table have been rounded for presentation purposes. As a result, the reductions do not reflect the exact differences between the values.

MMTCO₂ = million metric tons of carbon dioxide.

Table D-15. Carbon Dioxide Emissions and Emissions Increases (MMTCO₂) from All Light Trucks, 2021–2100 by Alternative, Cumulative Impacts^a

Alternative	Total Emissions	Emissions Increases Compared to No Action	Percent (%) Emissions Increases Compared to No Action Alternative Emissions
Alt. 0—No Action	48,600	--	--
Alt. 1	53,400	4,900	10%
Alt. 2	53,300	4,700	10%
Alt. 3	52,800	4,200	9%
Alt. 4	52,300	3,800	8%
Alt. 5	51,300	2,700	6%
Alt. 6	50,500	1,900	4%
Alt. 7	49,800	1,200	2%

Notes:

^a The numbers in this table have been rounded for presentation purposes. As a result, the reductions do not reflect the exact differences between the values.

MMTCO₂ = million metric tons of carbon dioxide.

Table D-16. Emissions of Greenhouse Gases (MMTCO₂e per year) from All Passenger Cars by Alternative, Cumulative Impacts^a

Year	Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Carbon dioxide (CO₂)								
2020	677	679	679	679	679	678	678	678
2040	501	556	554	551	551	543	541	529
2060	437	493	490	488	487	475	472	462
2080	434	489	487	484	484	472	468	459
2100	403	455	453	450	450	439	436	427
Methane (CH₄)								
2020	23	23	23	23	23	23	23	23
2040	17	19	19	19	19	19	18	18
2060	15	17	17	17	17	17	17	16
2080	15	17	17	17	17	17	16	16
2100	14	16	16	16	16	15	15	15
Nitrous oxide (N₂O)								
2020	8	8	8	8	8	8	8	8
2040	6	7	7	7	7	7	7	7
2060	5	6	6	6	6	6	6	6
2080	5	6	6	6	6	6	6	6
2100	5	5	5	5	5	5	5	5
Total (all GHGs)								
2020	708	710	710	710	710	708	709	708
2040	524	581	580	577	577	569	566	554
2060	458	516	513	511	510	498	494	484
2080	454	512	510	507	506	494	491	481
2100	423	476	474	472	471	460	456	447

Notes:

^a Emissions from 2051–2100 were scaled using the rate of change for the U.S. transportation fuel consumption from the GCAM Reference scenario. These assumptions project a slight decline over this period.

GHG = greenhouse gas; MMTCO₂e = million metric tons carbon dioxide equivalent.

Table D-17. Emissions of Greenhouse Gases (MMTCO₂e per year) from All Light Trucks by Alternative, Cumulative Impacts^a

Year	Alt. 0 No Action	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Carbon dioxide (CO₂)								
2020	801	802	802	802	802	801	802	801
2040	648	696	695	689	683	671	664	658
2060	576	651	648	641	634	619	606	595
2080	572	646	644	636	630	614	602	591
2100	532	601	599	592	586	571	560	550
Methane (CH₄)								
2020	27	27	27	27	27	27	27	27
2040	22	23	23	23	23	23	22	22
2060	20	22	22	22	22	21	21	21
2080	20	22	22	22	22	21	21	20
2100	19	20	20	20	20	20	19	19
Nitrous oxide (N₂O)								
2020	9	9	9	9	9	9	9	9
2040	8	8	8	8	8	8	8	8
2060	7	8	8	8	8	7	7	7
2080	7	8	8	8	8	7	7	7
2100	6	7	7	7	7	7	7	7
Total (all GHGs)								
2020	837	839	839	838	838	838	838	837
2040	677	728	726	720	715	701	694	688
2060	603	681	678	670	664	647	634	623
2080	599	676	673	666	659	643	630	618
2100	557	629	626	619	613	598	585	575

Notes:

^a Emissions from 2051–2100 were scaled using the rate of change for the U.S. transportation fuel consumption from the GCAM Reference scenario. These assumptions project a slight decline over this period.

GHG = greenhouse gas; MMTCO₂e = million metric tons carbon dioxide equivalent.

Table D-18. Carbon Dioxide Concentrations, Global Mean Surface Temperature Increase, Sea-Level Rise, and Ocean Acidification (GCAM 6.0) from Passenger Cars by Alternative, Cumulative Impacts^a

Alternative	CO ₂ Concentration (ppm)			Global Mean Surface Temperature Increase (°C) ^{b, c}			Sea-Level Rise (cm) ^{b, d}			Ocean Acidification (pH) ^e		
	2040	2060	2100	2040	2060	2100	2040	2060	2100	2040	2060	2100
Totals by Alternative												
Alt. 0 No Action	472.56	546.00	687.29	1.216	1.810	2.838	22.16	35.15	70.22	8.4150	8.3609	8.2723
Alt. 1	472.62	546.16	687.62	1.216	1.811	2.839	22.16	35.16	70.26	8.4149	8.3607	8.2721
Alt. 2	472.62	546.15	687.61	1.216	1.811	2.839	22.16	35.16	70.25	8.4149	8.3608	8.2721
Alt. 3	472.61	546.14	687.59	1.216	1.811	2.839	22.16	35.16	70.25	8.4149	8.3608	8.2721
Alt. 4	472.61	546.14	687.59	1.216	1.811	2.839	22.16	35.16	70.25	8.4149	8.3608	8.2721
Alt. 5	472.60	546.12	687.52	1.216	1.811	2.839	22.16	35.16	70.25	8.4149	8.3608	8.2721
Alt. 6	472.60	546.11	687.50	1.216	1.811	2.839	22.16	35.16	70.24	8.4149	8.3608	8.2722
Alt. 7	472.59	546.08	687.44	1.216	1.811	2.839	22.16	35.16	70.24	8.4149	8.3608	8.2722
Increases Under Alternatives												
Alt. 1	0.06	0.15	0.33	0.000	0.001	0.002	0.00	0.01	0.03	0.0000	-0.0001	-0.0002
Alt. 2	0.06	0.15	0.32	0.000	0.001	0.001	0.00	0.01	0.03	0.0000	-0.0001	-0.0002
Alt. 3	0.05	0.14	0.30	0.000	0.001	0.001	0.00	0.01	0.03	0.0000	-0.0001	-0.0002
Alt. 4	0.05	0.14	0.30	0.000	0.001	0.001	0.00	0.01	0.03	0.0000	-0.0001	-0.0002
Alt. 5	0.04	0.11	0.23	0.000	0.001	0.001	0.00	0.01	0.02	0.0000	-0.0001	-0.0001
Alt. 6	0.04	0.10	0.22	0.000	0.001	0.001	0.00	0.01	0.02	0.0000	-0.0001	-0.0001
Alt. 7	0.03	0.07	0.16	0.000	0.000	0.001	0.00	0.00	0.02	0.0000	-0.0001	-0.0001

Notes:

^a The numbers in this table have been rounded for presentation purposes. As a result, the reductions might not reflect the exact difference of the values in all cases. This analysis was simulated using the same methodology as reported in Section 5.3; however, it includes only emissions changes for passenger cars.

^b The values for global mean surface temperature and sea-level rise are relative to the average of the years 1986–2005.

^c Temperature changes reported as 0.000 are more than zero but less than 0.001.

^d Sea-level rise changes reported as 0.00 are more than zero but less than 0.01.

^e Ocean acidification changes reported as 0.0000 are less than zero but more than -0.0001.

CO₂ = carbon dioxide; °C = degrees Celsius; ppm = parts per million; cm = centimeters; GCAM = Global Change Assessment Model.

Table D-19. Carbon Dioxide Concentrations, Global Mean Surface Temperature Increase, Sea-Level Rise, and Ocean Acidification (GCAM 6.0) from Light Trucks by Alternative, Cumulative Impacts^a

Alternative	CO ₂ Concentration (ppm)			Global Mean Surface Temperature Increase (°C) ^{b, c}			Sea-Level Rise (cm) ^{b, d}			Ocean Acidification (pH) ^e		
	2040	2060	2100	2040	2060	2100	2040	2060	2100	2040	2060	2100
Totals by Alternative												
Alt. 0 No Action	472.56	546.00	687.29	1.216	1.810	2.838	22.16	35.15	70.22	8.4150	8.3609	8.2723
Alt. 1	472.61	546.18	687.70	1.216	1.811	2.840	22.16	35.16	70.26	8.4149	8.3607	8.2720
Alt. 2	472.61	546.17	687.69	1.216	1.811	2.840	22.16	35.16	70.26	8.4149	8.3607	8.2721
Alt. 3	472.60	546.15	687.65	1.216	1.811	2.840	22.16	35.16	70.26	8.4149	8.3608	8.2721
Alt. 4	472.60	546.14	687.61	1.216	1.811	2.839	22.16	35.16	70.25	8.4149	8.3608	8.2721
Alt. 5	472.58	546.10	687.52	1.216	1.811	2.839	22.16	35.16	70.24	8.4149	8.3608	8.2721
Alt. 6	472.58	546.07	687.45	1.216	1.811	2.839	22.16	35.15	70.24	8.4149	8.3608	8.2722
Alt. 7	472.57	546.05	687.39	1.216	1.811	2.838	22.16	35.15	70.23	8.4149	8.3608	8.2722
Increases Under Alternatives												
Alt. 1	0.05	0.17	0.42	0.000	0.001	0.002	0.00	0.01	0.04	0.0000	-0.0001	-0.0002
Alt. 2	0.05	0.17	0.40	0.000	0.001	0.002	0.00	0.01	0.04	0.0000	-0.0001	-0.0002
Alt. 3	0.04	0.15	0.36	0.000	0.001	0.002	0.00	0.01	0.04	0.0000	-0.0001	-0.0002
Alt. 4	0.04	0.13	0.32	0.000	0.001	0.002	0.00	0.01	0.03	0.0000	-0.0001	-0.0002
Alt. 5	0.02	0.09	0.23	0.000	0.001	0.001	0.00	0.00	0.02	0.0000	-0.0001	-0.0001
Alt. 6	0.02	0.07	0.16	0.000	0.000	0.001	0.00	0.00	0.02	0.0000	0.0000	-0.0001
Alt. 7	0.01	0.04	0.10	0.000	0.000	0.001	0.00	0.00	0.01	0.0000	0.0000	-0.0001

Notes:

^a The numbers in this table have been rounded for presentation purposes. As a result, the reductions might not reflect the exact difference of the values in all cases. This analysis was simulated using the same methodology as reported in Section 5.3; however, it includes only emissions changes for light trucks.

^b The values for global mean surface temperature and sea-level rise are relative to the average of the years 1986–2005.

^c Temperature changes reported as 0.000 are more than zero but less than 0.001.

^d Sea-level rise changes reported as 0.00 are more than zero but less than 0.01.

^e Ocean acidification changes reported as 0.0000 are less than zero but more than -0.0001.

CO₂ = carbon dioxide; °C = degrees Celsius; ppm = parts per million; cm = centimeters; GCAM = Global Change Assessment Model.

APPENDIX E

Air Quality Modeling and Health Impacts Assessment

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Acronyms and Abbreviations

AMET	Atmospheric Model Evaluation Tool
AQS	Air Quality System
BenMAP-CE	Environmental Benefits Mapping and Analysis Program – Community Edition
CAFE	Corporate Average Fuel Economy
CMAQ	Community Multiscale Air Quality
CO	carbon monoxide
COI	cost of illness
CSN	Chemical Speciation Network
EGU	electric generating unit
EIS	Environmental Impact Statement
EPA	U.S. Environmental Protection Agency
FEM	federal equivalent method
FRIA	Final Regulatory Impact Analysis
FRM	federal reference method
GREET	Greenhouse Gas, Regulated Emissions and Energy Used in Transportation
IMPROVE	Interagency Monitoring of Protected Visual Environments
IPM®	Integrated Planning Model
LD	Light-duty
µg/m ³	micrograms per cubic meter
MCIP	Meteorology-Chemistry Interface Processor
MOVES	Motor Vehicle Emission Simulator
NAAQS	National Ambient Air Quality Standards
NH ₃	ammonia
NHTSA	National Highway Traffic Safety Administration
NO _x	oxides of nitrogen
PAVE	Package for Analysis and Visualization of Environmental
PM10	Coarse particulates (particulate matter with an aerodynamic diameter equal to or less than 10 microns)
PM2.5	Fine particulates (particulate matter with an aerodynamic diameter equal to or less than 2.5 microns)
ppb	parts per billion
SAFE	Safer Affordable Fuel-Efficient
SEARCH	SouthEastern Aerosol Research and Characterization
SMOKE	Sparse-Matrix Operator Kernel Emissions
SO ₂	sulfur dioxide
µg/m ³	micrograms per cubic meter
VMT	vehicle miles traveled
VOCs	volatile organic compounds
VSL	value of statistical life
WRF	Weather Research and Forecasting Model
WTP	willingness to pay

E.1 INTRODUCTION

This appendix summarizes the application of air quality modeling tools to assess the impacts on air quality and the related health effects of the National Highway Traffic Safety Administration’s (NHTSA) final Corporate Average Fuel Economy (CAFE) standards for model year (MY) 2021–2016 passenger cars and light trucks. The air quality modeling and health effects analysis focused on ozone and fine particulate matter equal to or less than 2.5 microns in diameter (PM_{2.5}).

As indicated in NHTSA’s notice of intent to prepare an EIS for new CAFE standards for MY 2022–2025 passenger cars and light trucks¹ and the Draft Environmental Impact Statement (EIS)² (NHTSA 2018), NHTSA performed photochemical air quality modeling based on the inputs and emissions forecasts used in the Draft EIS. For the Final EIS, NHTSA modified some of the alternatives considered for the MY 2021–2026 CAFE standards. (See Section 2.2, *Proposed Action and Alternatives*, for details of the alternatives considered in the Final EIS.) In addition, NHTSA has revised certain inputs and assumptions in the CAFE Model that affect emissions projections. (See Section 2.3.1, *CAFE Model*, for a discussion of underlying model inputs and assumptions.) As a result, the emissions forecasts for the Final EIS differ from those in the Draft EIS, and the resulting health effects differ for the Final EIS as well. As explained below, this appendix projects small net decreases in nationwide adverse health effects, resulting in net health and monetized benefits compared to the No Action Alternative. These decreases in health effects are driven primarily by decreases in tailpipe emissions of oxides of nitrogen (NO_x) and PM_{2.5} due to the vehicle miles traveled (VMT) rebound effect and, because large populations are located near roadways, the relatively high level of population exposure to tailpipe emissions. Although upstream emissions increase under the Draft EIS alternatives and CAFE model projections, the associated increases in health effects are not as large as the decreases due to decreased tailpipe emissions. As a result, the net changes in adverse health effects estimated in this appendix are predicted to be decreases. Projected monetized benefits as a result of the small net decrease in nationwide health effects are presented in Section VII of the Final Regulatory Impact Analysis (FRIA) alongside the projected monetized health effects estimated by the CAFE model using EPA’s “benefit-per-ton” approach, which is explained in more detail in Section VI.D of the preamble to the final rule.

For the Final EIS, both tailpipe and upstream emissions of NO_x and PM_{2.5} are predicted to increase under the action alternatives, as described in Chapter 4, *Air Quality*. Tailpipe emissions of sulfur dioxide (SO₂) are predicted to increase under the action alternatives while upstream emissions of SO₂ are predicted to decrease by greater amounts, yielding decreases in total SO₂ emissions under the action alternatives.

Although the modeling described below does not reflect the health effects that would be associated with the Final EIS alternatives and CAFE model projections, it documents how the analysis is performed and how the spatial distributions of emissions sources and populations influence the results. The analysis illustrates how predicted health effects change with different assumptions and indicates the magnitudes of predicted changes in health effects to be expected from changes in emissions. If the photochemical air quality modeling described below was repeated with the Final EIS data, the results

¹ Notice of Intent to Prepare an Environmental Impact Statement for Model Year 2022–2025 Corporate Average Fuel Economy Standards, 82 FR 34740 (July 26, 2017).

² To accommodate the substantial time required to complete the air quality modeling analysis, NHTSA initiated air quality modeling before the inputs and emissions forecasts for the Final EIS were finalized. Therefore, NHTSA used the inputs and emissions forecasts for the Proposed Action and alternatives as stated in the Draft EIS for the analysis in this report.

likely would show very small increases in adverse health effects associated with the changes in tailpipe emissions, as well as small increases in adverse health effects associated with the changes in upstream emissions. Overall, the increases in adverse health effects likely would be greater than described in the analysis below, and likely would be of the same order of magnitude as the health effects reported in the Draft EIS (Table 4.2.3-1). For example, the increase in mortality might be tens to a few hundred cases per year.

E.1.1 Objective

The objective of this study was to use air quality modeling and health-related benefits analysis tools to examine the air quality–related consequences of the Proposed Action and, specifically, to quantify the expected future air quality and health-related benefits associated with the alternative fuel efficiency standards NHTSA considered in its Draft EIS. To support this objective, NHTSA estimated air quality changes and health-related benefits at the national scale based on a detailed analysis of air quality and health effects throughout the contiguous 48 states.

Different regions of the country could experience either a net increase or a net decrease in emissions because of the Proposed Action and alternatives, depending on the relative magnitude of the changes in emissions from decreased fuel economy, decreased vehicle use, and increased fuel production and distribution under each alternative. The air quality analysis in this appendix addresses regional differences using grid-based air quality modeling and analysis techniques, which account for local and regional differences in emissions and many of the other factors (such as meteorology and atmospheric processes) that affect air quality and the resulting health effects at any given location.

This air quality modeling analysis is intended as a screening application of both the Community Multiscale Air Quality (CMAQ) model and the Environmental Benefits Mapping and Analysis Program (BenMAP) tool for the purposes of quantifying and comparing the air quality and health-related benefits of the Proposed Action and alternatives.

E.1.2 Methodology

To examine and quantify the air quality and health-related benefits associated with implementing the final CAFE standards for MY 2021–2026 light-duty vehicles and alternatives, NHTSA performed a national-scale photochemical air quality modeling and health benefit assessment with the following key steps:

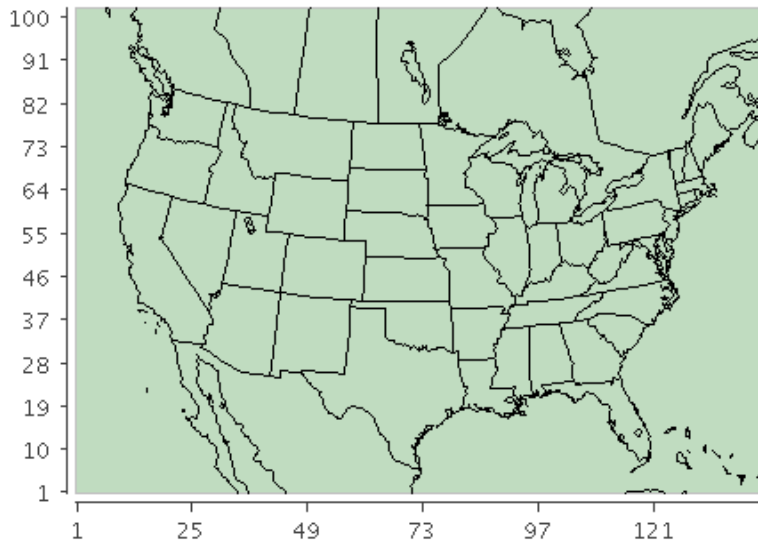
- Preparing emission inventories
- Modeling air quality
- Assessing air quality–related health impacts

The following widely used tools were used for the air quality and health effects assessment:

- Sparse-Matrix Operator Kernel Emissions (SMOKE) processing tool (version 3.7) to prepare model-ready emissions.
- CMAQ model (version 5.2.1) to quantify air quality changes for the different fuel economy alternatives.
- Environmental Benefits Mapping and Analysis Program—Community Edition (BenMAP-CE) tool (version 1.4) to assess the health-related impacts of the simulated changes in air quality.

The national-scale modeling analysis employed the standard CMAQ continental modeling domain, shown in Figure E.1.2-1. The horizontal resolution of the grid for this modeling domain is 36 kilometers (22.4 miles). Air quality and health-related impacts were calculated for each grid cell in the entire contiguous United States (48 states). Although the modeling domain does not include all 50 states, nearly all of the affected emissions and population are included in the domain; therefore, the results are expected to represent those for a national-scale analysis.

Figure E.1.2-1 Community Multiscale Air Quality Modeling Domain



NHTSA applied the CMAQ model for an annual simulation period using meteorological inputs for a base year of 2011. The U.S. Environmental Protection Agency (EPA) provided the meteorological inputs.

NHTSA performed modeling for 2035 (although the emission inputs represented a variety of different projection years, including 2030, 2035, and 2040, based on best available data) and the results were used to examine the action alternatives considered in the Draft EIS. As in the Draft EIS, NHTSA chose 2035 for analysis of the various fuel economy alternatives because a large proportion of vehicles in operation are expected to meet the level of the standards set forth by 2035. EPA provided up-to-date, projected, national-scale emissions data for 2040 for motor vehicles and for 2030 for all other sources. The emissions were processed for the 36-kilometer (22.4-mile) resolution modeling domain using SMOKE. The resulting model-ready inventories contain emissions for all criteria pollutants (as required for photochemical modeling) for multiple source categories (sectors), including on-road mobile sources, non-road mobile sources (e.g., construction equipment, locomotives, ships, and aircraft), electric generating unit (EGU) point sources, non-EGU point sources, area sources, and biogenic sources.

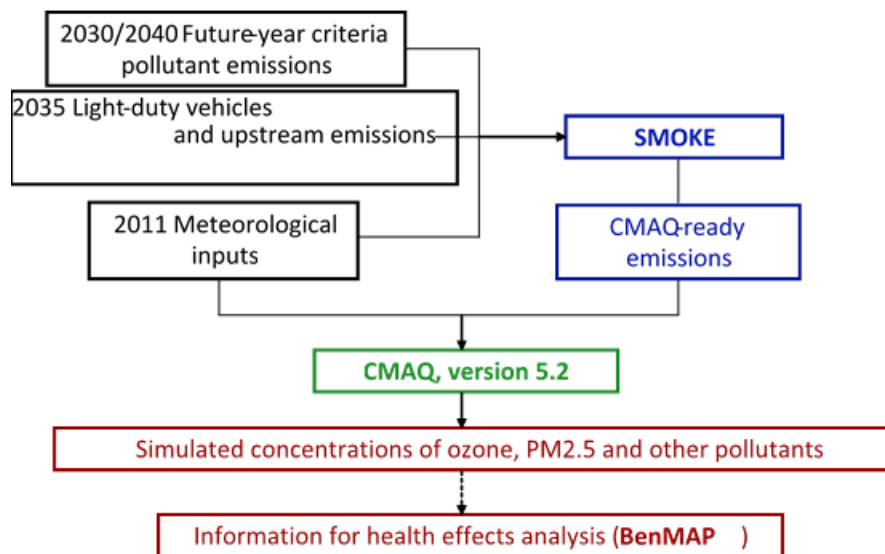
NHTSA developed a baseline emissions inventory for the No Action Alternative. Following preparation of baseline emissions inventories, the baseline emissions for the light-duty vehicle portion of the on-road mobile emissions and the relevant upstream categories were replaced with data reflecting the alternatives analyzed in the Draft EIS. NHTSA calculated national estimates of on-road emissions for these vehicle classes for 2035. Downstream emissions from light-duty vehicles were estimated using the most recent version of EPA's Motor Vehicle Emissions Simulator (MOVES2014) model based on a variety of inputs, including vehicle type, age, fuel type and vehicle technology. To estimate upstream emissions changes resulting from decreased downstream fuel consumption, the analysis uses emissions factors

from the Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation model (GREET) model (version 2017 developed by the U.S. Department of Energy, Argonne National Laboratory). Upstream emission factors for gasoline, diesel, E85 (a blend of 15 percent gasoline and 85 percent ethanol, by volume), and electricity were taken from the GREET model in 5-year increments beginning in 1985 and ending in 2040.

NHTSA then applied CMAQ for each alternative, using the emissions specific to each alternative. The simulated difference in air quality between the No Action Alternative and each action alternative represents the change in air quality associated with that alternative. Following the application of CMAQ, NHTSA processed the CMAQ outputs for input to the BenMAP-CE health effects analysis tool, and used BenMAP-CE to estimate the health impacts and monetized health-related benefits associated with the changes in air quality simulated by CMAQ for each of the action alternatives. The BenMAP-CE tool includes health impact functions, which relate a change in the concentration of a pollutant with a change in the incidence of a health endpoint. BenMAP-CE also calculates the economic value of health impacts. For this study, the health effects analysis considered the effects of ozone and PM_{2.5}. The PM_{2.5} analysis includes sulfate and nitrate particulates (secondary PM_{2.5}) formed from emissions of SO₂ and NO_x, respectively. BenMAP-CE does not estimate health impacts associated with changes in directly emitted SO₂, carbon monoxide (CO), and other emissions. Health effects were calculated at the 36-kilometer scale (grid cell size) and aggregated nationally to determine overall impact.

Figure E.1.2-2 shows the components of the NHTSA air quality modeling and health-related benefits analysis. Note that both the emissions and meteorological inputs are used by SMOKE.

Figure E.1.2-2. Diagram of Air Quality Modeling and Health-Related Benefits Analysis



E.1.3 Model Applications

NHTSA designed the modeling analysis to examine the air quality impacts and related health benefits associated with selected alternatives to support the development of the Final EIS for the final rule to set CAFE standards for MY 2021–2026 light-duty vehicles. The modeling analysis examines direct and indirect impacts, as discussed in the Draft EIS (NHTSA 2018), for eight alternatives and the No Action Alternative. For this modeling analysis, the No Action Alternative is the baseline—it assumes that NHTSA

would not amend the CAFE standards for MY 2021 light-duty vehicles and that NHTSA would finalize the MY 2022–2025 augural CAFE standards as described in the 2012 joint final rule.

NHTSA also considers eight action alternatives, Alternatives 1 through 8, which would require average annual increases in fuel economy ranging from 0.0 percent for light-duty vehicles (Alternative 1) to 2.0 percent (passenger cars) and 3.0 percent (light trucks) (Alternative 8) from year to year. These action alternatives are as follows:

- **Alternative 1.** Alternative 1 would require a 0.0 percent average annual fleet-wide increase in fuel economy for both passenger cars and light trucks for MYs 2021–2026. This alternative revises the MY 2021 standards to the MY 2020 levels and carries those numbers forward for MYs 2021–2026. Alternative 1 was the agency’s Preferred Alternative in the NPRM and Draft EIS. It is not the agency’s Preferred Alternative in the Final EIS.
- **Alternative 2.** Alternative 2 would require a 0.5 percent average annual fleet-wide increase in fuel economy for both passenger cars and light trucks for MYs 2021–2026.
- **Alternative 3.** Alternative 3 would require a 0.5 percent average annual fleet-wide increase in fuel economy for both passenger cars and light trucks for MYs 2021–2026. This alternative would phase out air conditioning and off-cycle adjustment procedures beginning with MY 2022 and fully phase them out in MY 2026.
- **Alternative 4.** Alternative 4 would require a 1.0 percent average annual fleet-wide increase in fuel economy for passenger cars and a 2.0 percent average annual increase in fuel economy for light trucks for MYs 2021–2026.
- **Alternative 5.** Alternative 5 would require a 1.0 percent average annual fleet-wide increase in fuel economy for passenger cars and a 2.0 percent average annual increase in fuel economy for light trucks for MYs 2022–2026. Alternative 5 would make no changes to the current CAFE standards for MY 2021.
- **Alternative 6.** Alternative 6 would require a 2.0 percent average annual fleet-wide increase in fuel economy for passenger cars and a 3.0 percent average annual increase in fuel economy for light trucks for MYs 2021–2026.
- **Alternative 7.** Alternative 7 would require a 2.0 percent average annual fleet-wide increase in fuel economy for passenger cars and a 3.0 percent average annual increase in fuel economy for light trucks for MYs 2021–2026. Like Alternative 3, Alternative 7 would also phase out air conditioning and off-cycle adjustment procedures beginning with MY 2022 and fully phase them out in MY 2026.
- **Alternative 8.** Alternative 8 would require a 2.0 percent average annual fleet-wide increase in fuel economy for passenger cars and a 3.0 percent average annual increase in fuel economy for light trucks for MYs 2022–2026. Alternative 8 would make no changes to the current CAFE standards for MY 2021.

For purposes of its analysis, NHTSA assumes that the MY 2026 CAFE standards for each alternative would continue indefinitely. For each analysis, NHTSA calculated the health effects and monetized health effects associated with each alternative in relation to the baseline of the No Action Alternative for that analysis.

NHTSA has not modeled the Final EIS Preferred Alternative in this analysis, because it was not explicitly modeled in the Draft EIS. However, in terms of the level of stringency, the Final EIS Preferred Alternative falls approximately between Draft EIS Alternatives 3 and 4; therefore, it would be anticipated to have had environmental impacts that fall between those alternatives if it had been modeled for the Draft EIS and included in this analysis.

E.2 EMISSIONS INVENTORY PREPARATION

This section summarizes the data, methods, and procedures used to prepare emissions inventories for use in the air quality modeling analysis of the proposed scenarios. NHTSA developed criteria pollutant tailpipe emissions estimates for light-duty vehicles for each alternative, and upstream emissions estimates that account for the effects each of those alternatives would have on emissions associated with various upstream activities related to the extraction of oil (feedstock recovery); feedstock transportation; fuel refining; and fuel transportation, storage, and distribution. NHTSA then substituted the light-duty vehicle tailpipe emissions and associated upstream emissions estimated for each alternative for the light-duty vehicle emissions in the EPA inventory, a national emissions database originally developed by EPA for air quality modeling. NHTSA modeled the impacts for an annual simulation period. Emissions inventories were prepared for 2035 (although the emission inputs represented a variety of different projection years including 2030, 2035, and 2040, based on best available data). NHTSA prepared detailed emissions projections for each of the alternatives for 2035. EPA provided projections at the national scale for 2040 for motor vehicles and for 2030 for all other sources.

E.2.1 Emissions Data and Methods

The CMAQ model requires input of hourly criteria pollutant emissions of both anthropogenic and biogenic sources that have been spatially allocated to the appropriate grid cells and chemically speciated for the CB6 chemical mechanism used in the model. NHTSA processed and prepared the modeling inventories for CMAQ using EPA's SMOKE software (version 3.7). NHTSA derived the emission inventories prepared for the modeling analysis for all sectors, in part, based on the 2011/2030/2040 emissions data under the EPA's 2011v6.2 platform.

The SMOKE emission input files include the following sectors:

- Particulate emissions from fugitive dust sources.
- Agricultural ammonia emissions.
- Agricultural burning emissions.
- Emissions from Category 1 and 2 commercial marine vessel sources in ports and navigable waterways as well as offshore emissions in the Atlantic and Pacific Oceans and the Gulf of Mexico. Railway emissions are also part of this sector.
- Ocean-going Class 3 marine vessel port and underway emissions within or close to the United States mainland.
- Area-source emissions not included in other sectors.
- Off-highway mobile source emissions.
- On-highway mobile source emissions.
- Area-source oil and gas emissions.
- Particulate emissions from fugitive dust sources in Canada.
- Area-source emissions from Canada and Mexico.
- Mobile-source emissions from Canada and Mexico.
- Point-source emissions from Canada, Mexico, and offshore areas.
- Point-source emissions from electric generating units (calculated using the Integrated Planning Model [IPM®]).
- Point-source emissions from industrial activities.

- Point-source emissions from year-specific controlled burning and wild fires.
- Point-source oil and gas emissions.
- Area-source residential wood combustion emissions.
- Biogenic emissions generated using the BEIS model, version 3.6.1.

These files included emissions data and related information for the contiguous United States, along with the emissions for the portions of Canada, Mexico, and offshore areas included in the modeling domain. The modeling inventories include the following pollutants: volatile organic compounds (VOC), NO_x, CO, SO₂, PM_{2.5}, coarse particulate matter equal to or less than 10 microns in diameter (PM₁₀), and ammonia (NH₃).

NHTSA calculated the expected changes in on-road mobile emissions for light-duty vehicles and upstream emissions associated with these vehicle classes (NHTSA 2018). For each pollutant, total emissions for all states and Washington, D.C. were provided for light-duty vehicles and for the upstream emissions associated with fuel production for these vehicle classes for the No Action Alternative and action alternatives. As part of the emissions processing, NHTSA incorporated this information into the modeling input files for each simulation, as detailed in Section E.2.2, *Emissions Processing Procedures*.

E.2.2 Emissions Processing Procedures

As noted previously, NHTSA used SMOKE version 3.7 to process the emissions and prepare CMAQ-ready inputs for the action alternatives using source sector files and other emissions information. NHTSA prepared the modeling inventories with the following steps:

- Processing the emissions for all source sectors using the SMOKE programs and inputs.
- Substituting the on-road mobile and upstream emissions to reflect the No Action Alternative and action alternatives.
- Reviewing and performing quality assurance checks.

E.2.2.1 Preparation of On-Road Mobile Emission Inputs

The SMOKE on-road mobile input files contain monthly, county-level emissions for criteria pollutants by MOVES-based vehicle type and roadway type. Table E.2.2.1-1 lists the vehicle types, classified as light-duty or medium- and heavy-duty vehicles. Table E.2.2.1-2 lists the various roadway types.

Table E.2.2.1-1. Vehicle Types in EPA’s SMOKE Input Files for On-Road Mobile Sources

LD/MDHD	Vehicle Type	Fuel Type
LD	Motorcycles	Gasoline
LD	Passenger cars	Gasoline
LD	Passenger trucks	Gasoline
LD	Light commercial trucks	Gasoline
LD	Passenger cars	Diesel
LD	Passenger trucks	Diesel
LD	Light commercial trucks	Diesel
LD	Passenger cars	Ethanol (E85)
LD	Passenger trucks	Ethanol (E85)
LD	Light commercial trucks	Ethanol (E85)

LD/MDHD	Vehicle Type	Fuel Type
MDHD	Transit buses	Gasoline
MDHD	School buses	Gasoline
MDHD	Refuse trucks	Gasoline
MDHD	Single unit short-haul trucks	Gasoline
MDHD	Motor homes	Gasoline
MDHD	Intercity buses	Diesel
MDHD	Transit buses	Diesel
MDHD	School buses	Diesel
MDHD	Refuse trucks	Diesel
MDHD	Single unit short-haul truck	Diesel
MDHD	Single unit long-haul trucks	Diesel
MDHD	Motor homes	Diesel
MDHD	Combination short-haul truck	Diesel
MDHD	Combination long-haul trucks	Diesel
MDHD	Transit buses	Compressed natural gas (CNG)

LD = light duty; MDHD = medium- and heavy-duty

Table E.2.2.1-2. Roadway Types in EPA’s SMOKE Input Files for On-Road Mobile Sources

Area Type	Description
Rural	Rural restricted access
Rural	Rural unrestricted access
Rural	Urban restricted access
Rural	Urban unrestricted access
Urban	Rural restricted access
Urban	Rural unrestricted access
Urban	Urban restricted access
Urban	Urban unrestricted access

The Proposed Action applies only to the light-duty vehicles shown in Table E.2.2.1-1. To incorporate the NHTSA 2035 emission estimates for each action alternative into the emission input files, NHTSA modified the SMOKE mobile source input files such that the NHTSA-specific emissions were substituted for the light-duty vehicle categories to create modified SMOKE input files. The steps involved in this process are as follows:

- **Step 1. Calculate the county-level light-duty vehicles emissions for the alternatives.** Allocate total U.S. emissions for light-duty vehicles for NO_x, VOC, CO, SO₂, and PM_{2.5} for each alternative to the county level, based on VMT fractions for all U.S. counties provided by EPA.
- **Step 2. Calculate the county-level total 2040 emissions based on the EPA-provided on-road sector SMOKE input files.** Using a utility program specifically developed for this analysis (*ann_cty_ld_cap_ems*), calculate the annual county-level light-duty vehicle emissions.

- **Step 3. Calculate adjustment factors for light-duty vehicles for the alternatives.** Using utility programs specifically developed for this analysis (*cal_fac_car* and *cal_fac_ltk*), calculate the ratios of county-level emissions for a specified alternative to EPA 2040 on-road mobile emissions for cars and light trucks, respectively.
- **Step 4. Apply the adjustment factors for light-duty vehicles to the EPA 2040 on-road mobile SMOKE input file for each alternative.** Using a utility program specifically developed for this analysis (*adj_ld_ems*), apply the county-level adjustment factors for light-duty vehicles for a specified alternative to the EPA 2040 on-road mobile SMOKE input files to prepare updated SMOKE input files.

E.2.2.2 Preparation of Upstream Emission Inputs

As noted previously, the Proposed Action is expected to affect the upstream emissions associated with the extraction of oil (feedstock recovery); feedstock transportation; fuel refining; and fuel transportation, storage, and distribution. The upstream emissions are associated with a variety of equipment, processes, and activities involved in the production of fuel, including oil-field extraction equipment (e.g., drills and pumps); oil refining (e.g., boilers and heaters); and transportation, storage, and distribution of the fuel. For this analysis, the EPA Source Classification Codes associated with these activities and equipment types were identified, which included sources from five sectors (nonpoint, non-IPM[®] point, point oil and gas, nonpoint oil and gas, and locomotive and Category 1 and Category 2 marine vessels).³ For each alternative, NHTSA provided estimates of upstream emissions, by pollutant, associated with the light-duty vehicles only. However, the EPA SMOKE input files for 2030/2040 contain emissions for all vehicle types. To incorporate the NHTSA upstream emissions estimates into the EPA SMOKE files, NHTSA assumed that 50 percent of the total upstream emissions are associated with the production of fuel for light-duty vehicles (EPA 2009a). Based on using the EPA Source Classification Codes for the sources and source types associated with upstream emissions, NHTSA substituted estimates of the emissions for each alternative for the corresponding EPA emissions to prepare modified SMOKE inputs for each source type category. The categories include nonpoint (e.g., oil and gas production, petroleum and petroleum product transport), non-IPM[®] point (e.g., petroleum product storage at refineries), point oil and gas (e.g., petroleum industry), and nonpoint oil and gas (e.g., oil and gas production) files. For the locomotive and Category 1 and 2 marine vessel upstream emissions, the adjustments were only made to the percentages of upstream emissions related to the transport of petroleum products. Specifically, the adjustments were made to 3 percent of the locomotive emissions and 28 percent of marine vessel emissions identified by the EPA Source Classification Code list. These estimates were based on information from the American Association of Railroads (AAR 2014) and the Texas Transportation Institute (TTI 2012), respectively.

Regarding upstream emissions for each alternative, NHTSA considered only emissions occurring domestically and did not consider emissions from the transport of crude oil or refined gasoline to the United States. The upstream emissions estimates were based on the following assumptions:

- 50 percent of the fuel increase in the alternatives would represent increased imports of refined gasoline and therefore would increase domestic emissions only during fuel transportation, storage, and distribution and not from feedstock recovery, feedstock transportation, and fuel refining.

³ Category 1 and 2 marine diesel engines are small to medium size engines that provide power to fishing vessels, tugboats, push-boats, supply vessels and a number of other vessels that service ports and harbors. They range in size from 500 to 8,000 kilowatts or 700 to 11,000 horsepower, and are often used as generators for supplying auxiliary power on vessels.

- 90 percent of the increase in domestic fuel refining would increase imports of crude petroleum and therefore would not increase domestic emissions from feedstock recovery and feedstock transportation.
- 10 percent of the increase in domestic fuel refining would increase domestic production of crude petroleum, which would increase domestic emissions from feedstock recovery and feedstock transportation.

NHTSA estimated these percentages using several scenarios from the Energy Information Administration Annual Energy Outlook (EIA 2008).

E.2.2.3 Emission Processing and Quality Assurance Procedures

Once the modified mobile source and upstream-related SMOKE input files reflecting the alternatives were developed, the files were processed by SMOKE and merged with the other source category input files to prepare model-ready inputs for CMAQ. The general procedures to prepare the modeling inventories, using various programs included with SMOKE, were as follows:

- Modify on-road mobile source SMOKE input files using emissions data and related information.
- Modify upstream-related SMOKE input files using emissions data and related information.
- Chemically speciate input criteria pollutants into the CB6 chemical mechanism species, as required by CMAQ.
- Temporally distribute the input annual and monthly emissions into hourly emissions.
- Spatially distribute input emissions to the modeling grid.
- Merge emissions from all source categories into the CMAQ model-ready files.
- Review and ensure the quality of the inventory processing procedures and results.

The emission inventory processing quality assurance procedures included the development and examination of tabular emission summaries and graphical display products. Tabular summaries were prepared to examine emission totals for various steps of emissions processing. Summaries for input emissions were based on the input inventory data: monthly emissions for the on-road and non-road mobile sectors and annual emissions for other sectors for criteria pollutants. Summaries for output emissions were based on the SMOKE output reports—daily emissions for each species included in the chemical mechanism for each sector. The output daily emissions were summed over all days in the year and the species were summed for the criteria pollutants. The emissions were summarized for each alternative by state and sector, and comparisons were made between the input emissions and output emissions for each sector to ensure consistency.

In addition to the tabular summaries, various graphical displays were prepared for one day of each month (the 15th of each month was randomly selected) to examine the spatial distribution and temporal variation for each sector and the final merged emissions using the Package for Analysis and Visualization of Environmental (PAVE) data graphical plotting package.⁴

⁴ PAVE is available from the University of North Carolina Institute for the Environment at <http://www.ie.unc.edu/cempd/EDSS>.

E.2.3 Emission Summaries

As described in Section E.1.3, *Model Applications*, for this air quality analysis NHTSA modeled nine alternatives: the No Action Alternative (Alternative 0)⁵, and Alternatives 1 through 8. Thus, nine modeling emission inventories were prepared. Using the original and modified inputs, NHTSA used the SMOKE emissions processing system to prepare the CMAQ model-ready hourly emission inventory inputs for each simulation for the 36-kilometer resolution national grid. Although the processed emission inventories were prepared for the full list of CB06 emission species, most of the presentation and discussion that follows focuses on VOC, NO_x, SO₂, and primary PM_{2.5} emissions.

Table E.2.3-1 lists national (48-state) annual emission totals for each pollutant by sector for each alternative simulated. Table E.2.3-2 lists annual emission totals for all sectors combined for the alternatives and analyses. The emission totals reflect the expected emission changes from upstream sources and on-road motor vehicles based on the stringency of the alternatives.

To illustrate and check the reasonableness of the spatial distribution of emissions throughout the modeling domain, NHTSA prepared and examined daily emission density plots for selected days. NHTSA used emissions associated with the No Action Alternative to check the reasonableness of the spatial distribution of emissions. Figures E.2.3-1 through E.2.3-4 show daily emissions for July 15 for VOC, NO_x, SO₂, and PM_{2.5} for the 36-kilometer resolution NHTSA modeling domain. The date and time appearing on this and all subsequent figures refer to the meteorological base year (2011) and start hour for the selected day or averaging period. The minimum and maximum values for any location in the domain are also provided, along with their grid cell (x,y) locations. NHTSA selected a summer day for display because it is included in both the ozone season and the annual simulation period. The plots show the spatial distribution of emissions under the No Action Alternative, with larger emissions in the more populated areas of the eastern United States and California, and smaller emissions in the less-populated areas of the interior western United States and areas of Canada and Mexico. The VOC emissions plots also include biogenic emissions, with larger emissions associated with the more forested regions of the southeastern United States and Canada. The PM_{2.5} emissions are associated with various anthropogenic mobile and industrial sources, and agricultural burning and wildfires.

Table E.2.3-1. National Emissions by Sector for the NHTSA Future-Year Modeling Analyses, by Alternative (thousands tons/year)

Pollutant	Sector	Alt 0	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
VOC	EGU	31	31	31	31	31	31	31	31	31
	Non-EGU point	5,691	5,696	5,696	5,696	5,695	5,694	5,693	5,692	5,693
	Non-point (Area)	7,219	7,239	7,238	7,237	7,234	7,231	7,228	7,225	7,226
	Non-road	1,252	1,252	1,252	1,252	1,252	1,252	1,252	1,252	1,252
	On-road	465	450	451	452	453	456	458	461	460
NO _x	EGU	956	956	956	956	956	956	956	956	956
	Non-EGU point	2,105	2,114	2,113	2,113	2,112	2,110	2,109	2,107	2,108
	Non-point (area)	1,521	1,522	1,522	1,522	1,521	1,521	1,521	1,521	1,521
	Non-road	1,506	1,510	1,510	1,510	1,509	1,508	1,508	1,507	1,507
	On-road	1,052	1,038	1,039	1,040	1,042	1,045	1,046	1,049	1,048

⁵ Alternative 0 is referred to as the No Action Alternative in the text. In tables and figures. Alternatives 0 through 8 are abbreviated as Alt 0 through Alt 8.

Pollutant	Sector	Alt 0	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
CO	EGU	730	730	730	730	730	730	730	730	730
	Non-EGU point	23,294	23,299	23,298	23,298	23,298	23,297	23,296	23,295	23,295
	Non-point (area)	5,619	5,619	5,619	5,619	5,619	5,619	5,619	5,619	5,619
	Non-road	15,380	15,381	15,381	15,381	15,381	15,380	15,380	15,380	15,380
	On-road	6,956	6,651	6,673	6,694	6,728	6,793	6,822	6,886	6,868
SO ₂	EGU	973	973	973	973	973	973	973	973	973
	Non-EGU point	1,093	1,102	1,101	1,100	1,099	1,098	1,096	1,095	1,095
	Non-point (area)	157	157	157	157	157	157	157	157	157
	Non-road	10	10	10	10	10	10	10	10	10
	On-road	10	10	10	10	10	10	10	10	10
PM10	EGU	186	186	186	186	186	186	186	186	186
	Non-EGU point	2,667	2,667	2,667	2,667	2,667	2,667	2,667	2,667	2,667
	Non-point (area)	9,439	9,439	9,439	9,439	9,439	9,439	9,439	9,439	9,439
	Non-road	87	87	87	87	87	87	87	87	87
	On-road	242	241	241	241	241	241	241	242	241
PM2.5	EGU	142	142	142	142	142	142	142	142	142
	Non-EGU point	2,186	2,187	2,187	2,187	2,187	2,187	2,186	2,186	2,186
	Non-point (area)	2,008	2,008	2,008	2,008	2,008	2,008	2,008	2,008	2,008
	Non-road	81	81	81	81	81	81	81	81	81
	On-road	32	31	31	31	31	31	31	32	32
NH ₃	EGU	42	42	42	42	42	42	42	42	42
	Non-EGU point	402	402	402	402	402	402	402	402	402
	Non-point (area)	3,719	3,719	3,719	3,719	3,719	3,719	3,719	3,719	3,719
	Non-road	5	5	5	5	5	5	5	5	5
	On-road	94	94	94	94	94	94	94	94	94

Notes:

CO = carbon monoxide; EGU = electric generating unit; NH₃ = ammonia; NO_x = oxides of nitrogen; PM10 = particulate matter with diameter equal to or less than 10 microns; PM2.5 = particulate matter with diameter equal to or less than 2.5 microns; SO₂ = sulfur dioxide; VOC = volatile organic compounds

Table E.2.3-2. National Emissions for All Sectors Combined for the NHTSA Future-Year Modeling Analyses, by Alternative (thousands tons/year)

Pollutant	Alt 0	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
VOC	14,659	14,668	14,668	14,667	14,666	14,665	14,663	14,661	14,662
NO _x	7,141	7,140	7,140	7,140	7,140	7,141	7,140	7,140	7,141
CO	51,979	51,680	51,701	51,722	51,755	51,819	51,847	51,910	51,892
SO ₂	2,243	2,252	2,251	2,251	2,249	2,248	2,246	2,245	2,245
PM10	12,621	12,620	12,620	12,620	12,620	12,621	12,621	12,621	12,621
PM2.5	4,449	4,449	4,449	4,449	4,449	4,449	4,449	4,449	4,449
NH ₃	4,262	4,262	4,262	4,262	4,262	4,262	4,262	4,262	4,262

Notes:

CO = carbon monoxide; NH₃ = ammonia; NO_x = oxides of nitrogen; PM10 = particulate matter with diameter equal to or less than 10 microns; PM2.5 = particulate matter with diameter equal to or less than 2.5 microns; SO₂ = sulfur dioxide; VOC = volatile organic compounds

Figure E.2.3-1. Daily Volatile Organic Compound Emissions for July 15: No Action Alternative

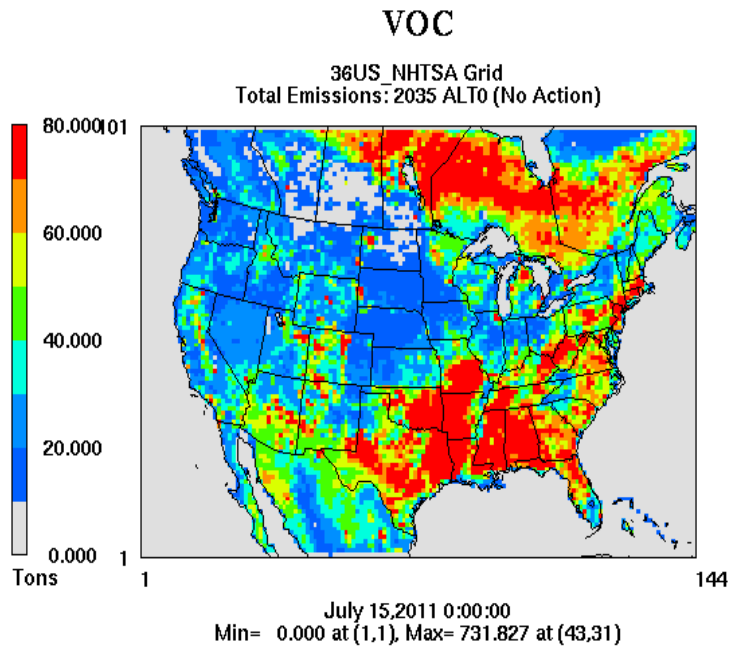


Figure E.2.3-2. Daily Oxides of Nitrogen Emissions for July 15: No Action Alternative

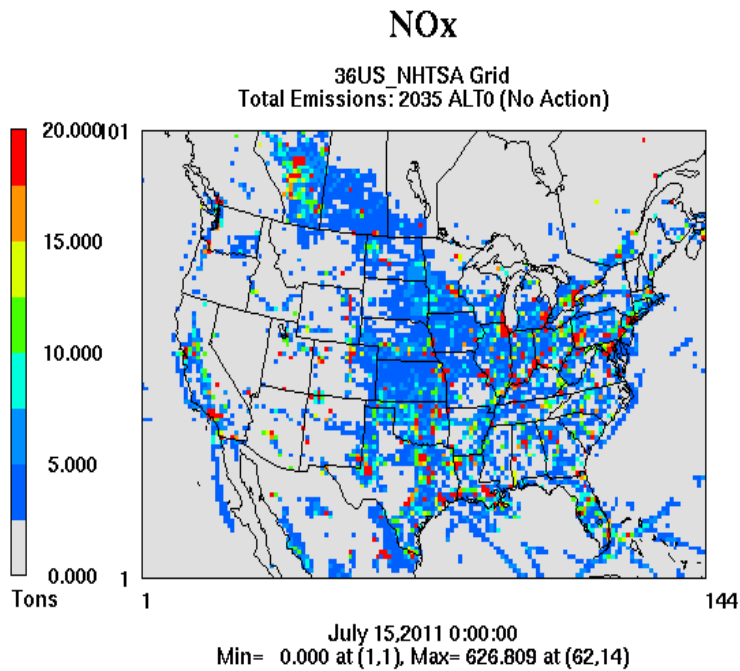


Figure E.2.3-3. Daily Sulfur Dioxide Emissions for July 15: No Action Alternative

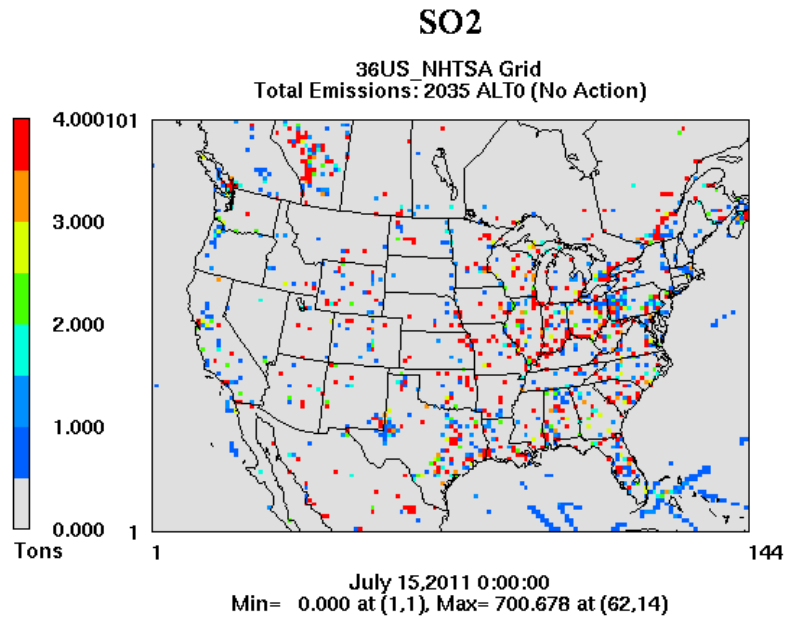
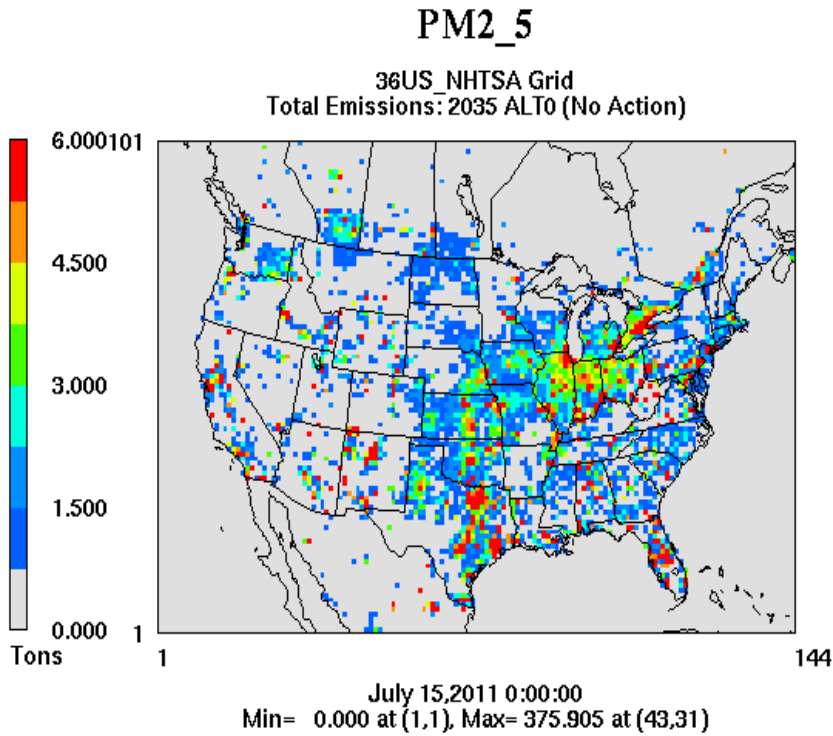


Figure E.2.3-4. Daily PM_{2.5} Emissions for July 15: No Action Alternative



Figures E.2.3-5 through E.2.3-8 illustrate the spatial distribution of differences (or changes) in emissions for the action alternatives compared to the No Action Alternative. The figure presents difference plots for VOC, NO_x, SO₂, and PM_{2.5}, comparing the emissions under Alternative 1 with the emissions under the No Action Alternative. The difference plots for these two alternatives were selected for presentation because Alternative 1 is the least stringent alternative, which is compared to the No Action Alternative (the most stringent alternative). Therefore, the comparison of these two alternatives shows the greatest range of potential impacts and is best suited to illustrate the spatial distribution of the differences (or changes). The difference plots illustrate where the changes in emissions are expected to occur throughout the 36-kilometer resolution modeling domain. The bright green area indicates no or negligible change in emissions.

The figures indicate overall increases in VOC and SO₂ emissions due to the relative larger increases associated with the upstream sources despite the smaller magnitude of reduction from on-road mobile emission (cars and light trucks). These upstream increased emission changes are concentrated along the Gulf Coast of Texas and Louisiana. The changes in NO_x and PM_{2.5} emissions reflect the combination of reductions from on-road mobile sources (light-duty vehicles) and increases from upstream sources.

Figure E.2.3-5. Difference in Daily Volatile Organic Compound Emissions for July 15 for Alternative 1 Compared to No Action Alternative

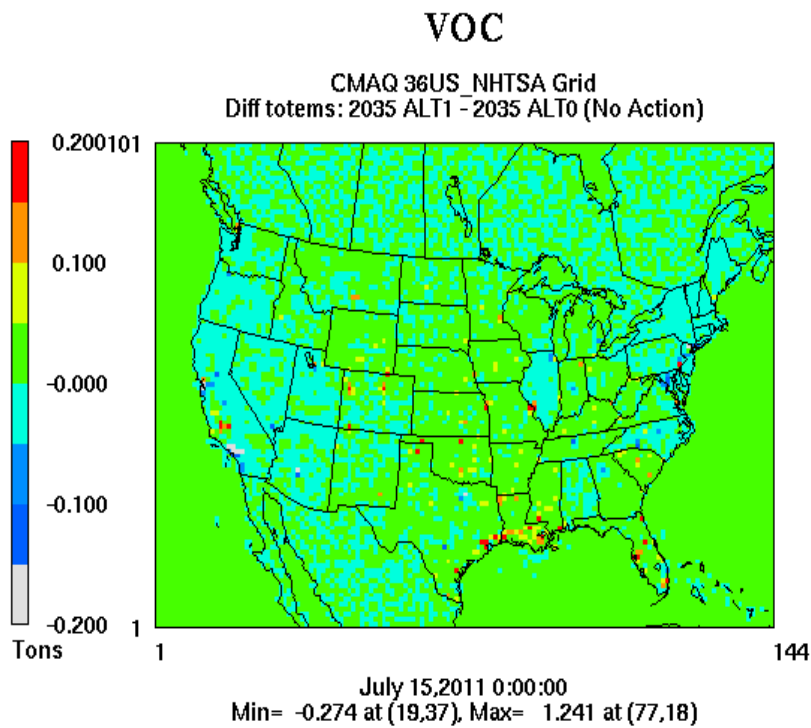


Figure E.2.3-6. Difference in Daily Oxide of Nitrogen Emissions for July 15 for Alternative 1 Compared to No Action Alternative

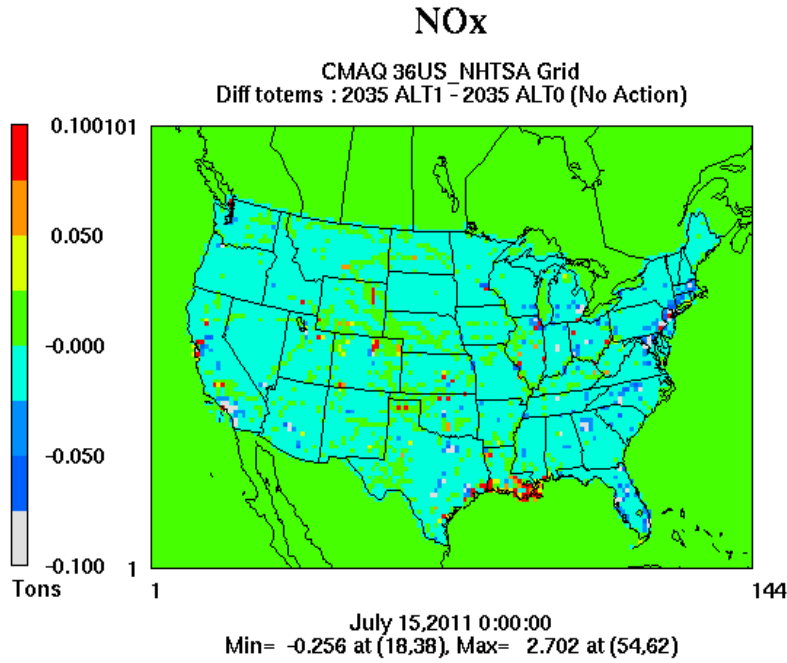


Figure E.2.3-7. Difference in Daily Sulfur Dioxide Emissions for July 15 for Alternative 1 Compared to No Action Alternative

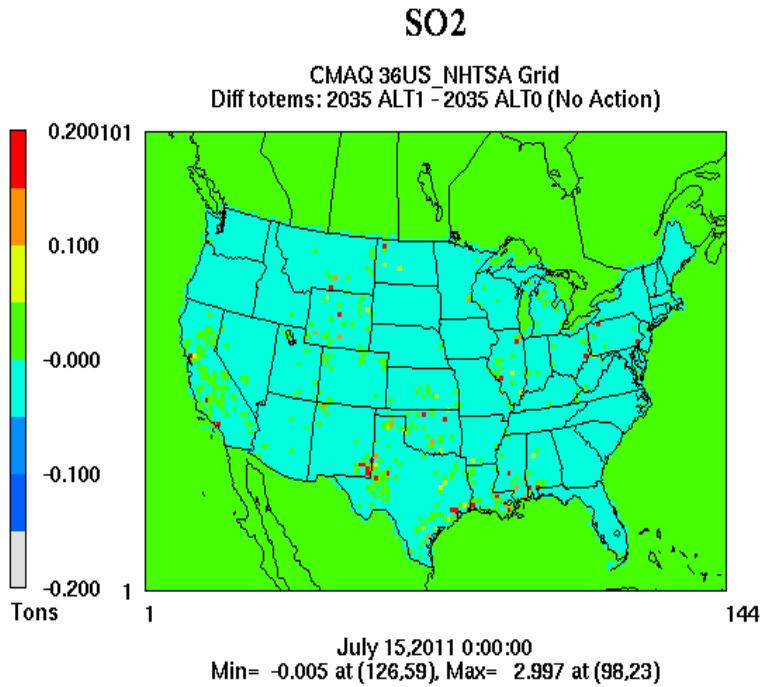
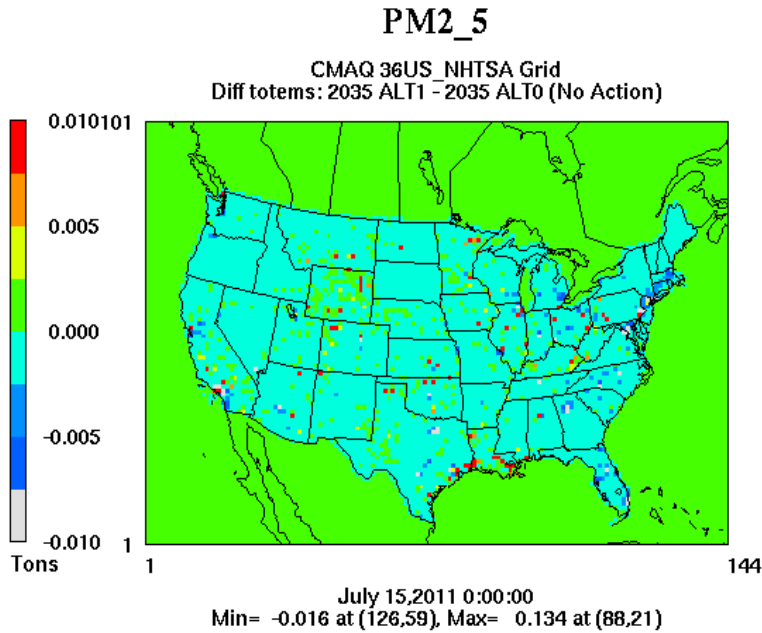


Figure E.2.3-8. Difference in Daily PM2.5 Emissions for July 15 for Alternative 1 Compared to No Action Alternative



Figures E.2.3-9 through E.2.3-12 present national emission estimates for the future year by source sector under the No Action Alternative and Alternatives 1 through 8. Emissions of VOC, NO_x, SO₂, and PM2.5 are shown.

Figure E.2.3-9. National Volatile Organic Compound Emissions by Alternative

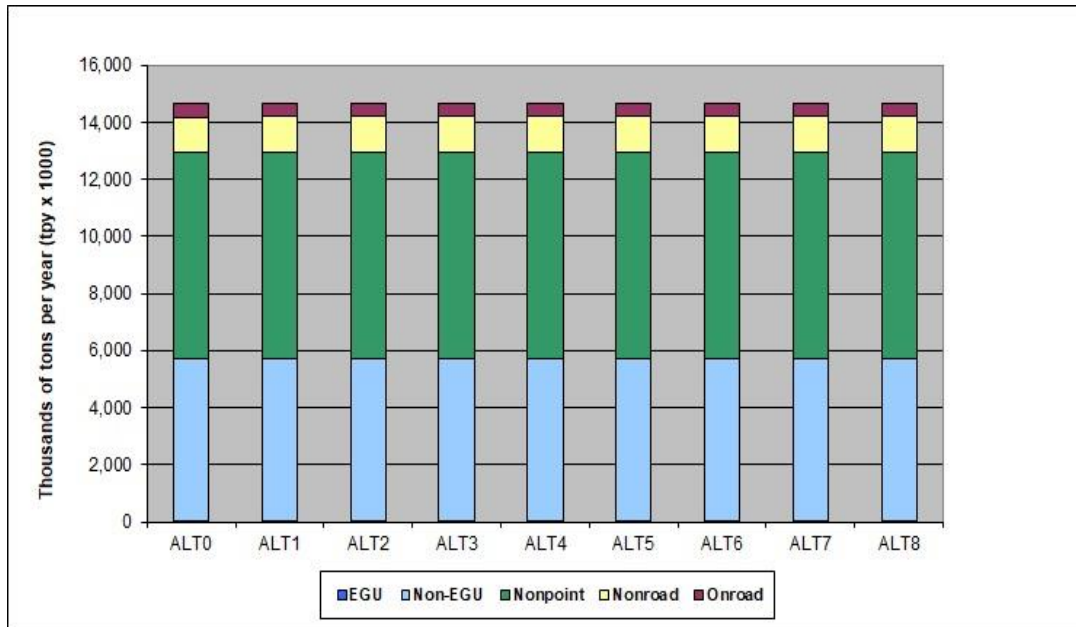


Figure E.2.3-10. National Oxides of Nitrogen Emissions by Alternative

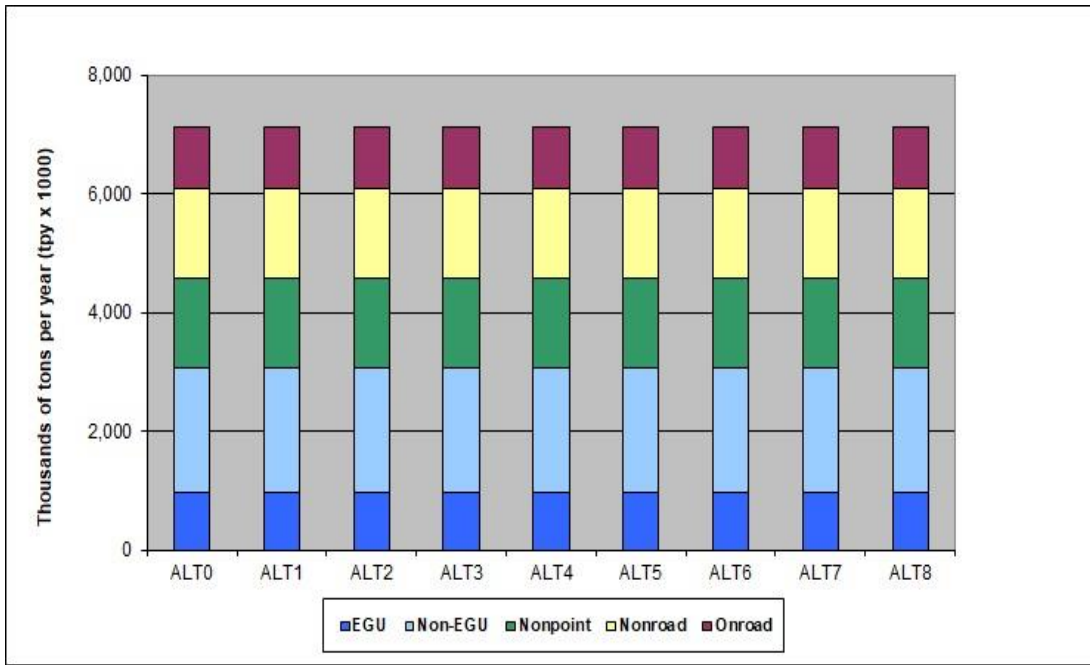


Figure E.2.3-11. National Sulfur Dioxide Emissions by Alternative

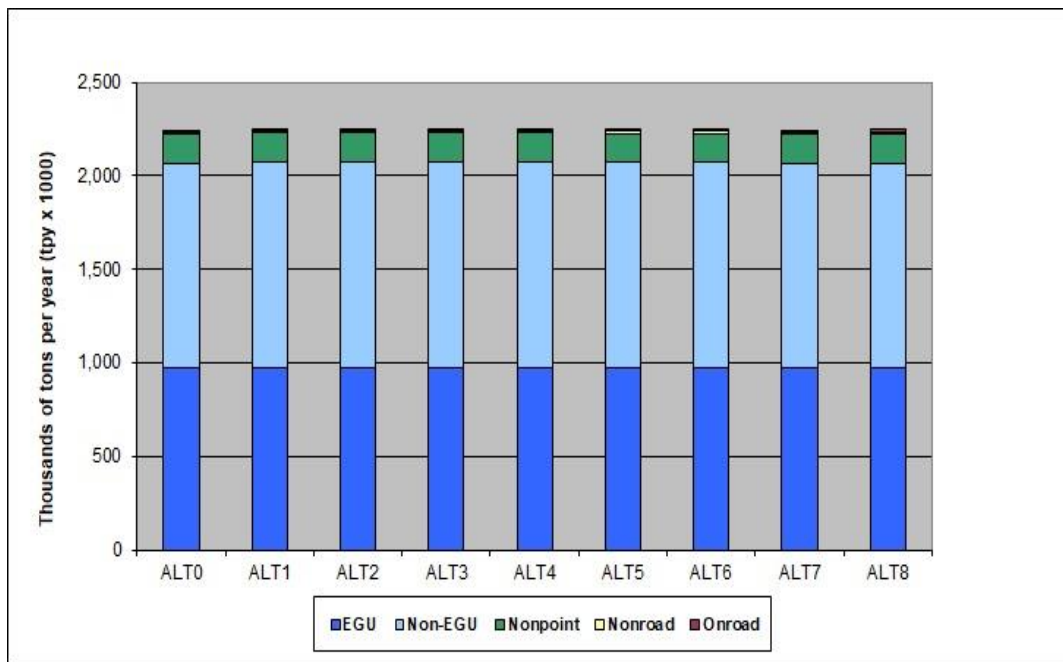
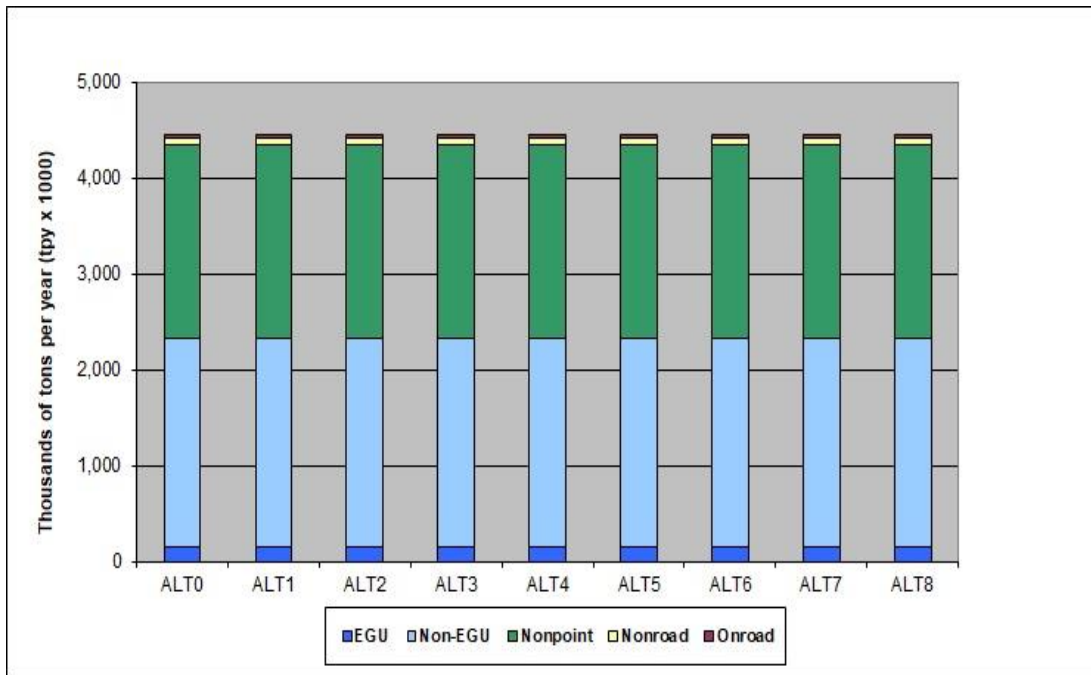


Figure E.2.3-12. National PM_{2.5} Emissions by Alternative



On a national scale, anthropogenic VOC emissions are primarily from area (nonpoint) and non-EGU sources; NO_x emissions come from all source categories; SO₂ emissions primarily derive from EGU and non-EGU industrial point sources; and PM_{2.5} emissions come primarily from area (nonpoint) and non-EGU sources. For the action alternatives, the expected changes in emissions for cars and light trucks are reflected in the on-road mobile source category, while the expected changes in upstream emissions are reflected in the nonpoint (area), non-EGU point, and non-road source categories. The estimated decreases in mobile emissions are distributed nationwide but concentrated in urban areas, while most of the increases in upstream emissions are in petroleum development and fuel production states, including Texas, Oklahoma, Louisiana, California, Colorado, and Wyoming.

A comparison of the No Action Alternative to the action alternatives indicates that national-scale on-road mobile VOC, SO₂, NO_x, and PM_{2.5} emissions for action alternatives are all expected to decrease, with the largest reduction in Alternative 1 and smallest reduction in Alternative 7. The ranges of reductions are as follows:

- VOC decreases from about 0.9 (Alternative 7) to 3.3 percent (Alternative 1).
- NO_x decreases from 0.3 (Alternative 7) to 1.3 percent (Alternative 1).
- SO₂ decreases from 0.4 (Alternative 7) to 2.1 percent (Alternative 1)
- PM_{2.5} decreases from 0.5 (Alternative 7) to 2.4 percent (Alternative 1).

The upstream VOC, SO₂, NO_x, and PM_{2.5} emissions are all expected to increase by less than 1 percent, with the largest increase in Alternative 1 and smallest increase in Alternative 7. On a national scale, combining the decreases of on-road emissions and increase of upstream emissions, very slight overall increases of VOC and SO₂ emissions and almost no changes of NO_x and PM_{2.5} emissions from all action alternatives compared to the No Action Alternative are projected. On a local scale, depending on source makeup, distribution, and population, the expected decreases and increases in emissions could be larger or smaller than these national averages.

E.3 AIR QUALITY MODELING

This section presents the air quality modeling methods and results. NHTSA used the CMAQ model to simulate the air quality impacts of the Proposed Action and alternatives. The model was applied using a 36-kilometer resolution grid at the national scale for an annual simulation period. The CMAQ model requires information on the emissions, meteorology, and land-use characteristics of the modeling domain. Information about the emission changes associated with alternatives was incorporated into the model through the emission input files for the modeled year 2035. Because air quality impacts are calculated at the grid-cell level, the CMAQ model can account for regional differences in the relative magnitudes of the changes in emissions from decreased fuel economy, decreased vehicle use, and increased fuel production and distribution potentially resulting from the Proposed Action. CMAQ modeling results provide the basis for the health effects and benefits modeling analysis.

E.3.1 CMAQ Modeling System

The CMAQ model is a state-of-the-science, regional air quality modeling system that can be used to simulate the physical and chemical processes that govern the formation, transport, and deposition of gaseous and particulate species in the atmosphere (Byun and Ching 1999). The CMAQ model was designed to improve the understanding of air quality issues (including the physical and chemical processes that influence air quality) and to support the development of effective emission control strategies at the regional and local scales. The CMAQ model was designed as a “one-atmosphere” model. This concept refers to the ability of the model to dynamically simulate ozone, particulate matter, and other species (such as mercury) in a single simulation. In addition to addressing a variety of pollutants, CMAQ can be applied to a variety of regions (with varying geographical, land-use, and emission characteristics) and for a range of space and time scales.

Numerous recent applications of the model, for both research and regulatory air quality planning purposes, have focused on the simulation of ozone and PM_{2.5}. NHTSA used the CMAQ model to support the previous analyses of the MY 2012–2016 CAFE standards (NHTSA 2010), the Phase 1 Medium- and Heavy-Duty Fuel Efficiency Improvement Program (NHTSA 2011), the MY 2017–2025 CAFE standards (NHTSA 2012) and the Phase 2 Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles (NHTSA 2016).

The CMAQ model numerically simulates the physical processes that determine the magnitude, temporal variation, and spatial distribution of the concentrations of ozone and particulate species in the atmosphere, and the amount, timing, and distribution of their deposition to Earth’s surface. The simulation processes include advection, dispersion (or turbulent mixing), chemical transformation, cloud processes, and wet and dry deposition. Byun and Ching (1999) describe the CMAQ science algorithms in detail.

This model requires several different types of input files. Gridded, hourly emissions inventories characterize the release of anthropogenic, biogenic and, in some cases, geogenic emissions from sources in the modeling domain. The emissions represent low-level and elevated sources and a variety of source categories (including, for example, point, on-road mobile, non-road mobile, area, and biogenic). The amount and spatial and temporal distribution of each emitted pollutant or precursor species are key determinants of the resulting simulated air quality values.

The CMAQ model also requires hourly, gridded input fields of several meteorological parameters, including wind, temperature, mixing ratio, pressure, solar radiation, fractional cloud cover, cloud depth,

and precipitation. Byun and Ching (1999) provide a full list of the meteorological input parameters. These parameters are typically prepared using a data-assimilating prognostic meteorological model, the output of which is processed for input to the CMAQ model using the Meteorology-Chemistry Interface Processor (MCIP). The prescribed meteorological conditions influence the transport and vertical mixing and resulting distribution of the simulated pollutant concentrations. Certain of the meteorological parameters, such as mixing ratio, can also influence the simulated chemical reaction rates. Rainfall and near-surface meteorological characteristics govern wet and dry deposition, respectively, of the simulated atmospheric constituents.

Initial- and boundary-condition files provide information on pollutant concentrations throughout the domain for the first hour of the first day of the simulation and along the lateral boundaries of the domain for each hour of the simulation. Photolysis rates and other chemistry-related input files supply information needed by the gas-phase and particulate chemistry algorithms.

NHTSA used CMAQ version 5.2.1 for this study—the latest version of the model available at the time the modeling was conducted. This version supports several options for the gas-phase chemical mechanism, particle treatment, aerosol deposition, and cloud treatment. All simulations conducted as part of this study used the Carbon Bond CB6 (r3) chemical mechanism. For particles, NHTSA applied the AERO6 particle treatment, which includes sea salt. In addition, NHTSA used the “inline” point source option, in which point source data are read directly by CMAQ and plume rise is calculated internally based on local meteorological conditions.

E.3.2 CMAQ Application Procedures for the NHTSA Modeling Analysis

This section discusses the application of CMAQ, including the modeling domain, simulation period, input files (with the exception of the emission inventories discussed in Section E.2, *Emissions Inventory Preparation*), and post-processing and quality assurance procedures.

E.3.2.1 Modeling Domain and Simulation Period

Figure E.1.2-1 shows the modeling domain used for this analysis. The 36-kilometer resolution modeling domain includes 144 × 101 horizontal grid cells and 25 vertical layers. The tick marks denote the 36-kilometer grid cells. For this domain, NHTSA ran the model for an entire calendar year. The base-year meteorological conditions are for 2011 and the emissions represent 2035. In running the model, the annual simulation period was divided into two parts (January through June and July through December). Each part of the simulation also included an additional 10 start-up simulation days, which were intended to eliminate the influence of the initial conditions on the simulation results.

E.3.2.2 Meteorological and Other Input Files

EPA provided input files for the application of the CMAQ model, except for certain components of the emission inventory. The EPA input files included the initial condition, boundary condition, and land-use input files for the selected modeling domain and simulation period. In CMAQ version 5.2.1, photolysis rates are calculated within the model. Standard processing procedures were used to convert the EPA input files to the modeling domain and grid resolution used for this study. The chemical compounds included in the boundary condition inputs were converted from the Carbon Bond 05 chemical mechanism to be compatible with the CB6r3 chemical mechanism.

EPA prepared the meteorological input files for the base year (2011) using the Weather Research and Forecasting (WRF) model version 3.4 (Skamarock et al. 2008).⁶ WRF is a state-of-the-science atmospheric modeling system designed for use in simulating meteorological fields for a broad range of scales and applications. EPA applied the WRF model at a 12-kilometer resolution. A summary of the meteorological model configuration and performance is available from EPA (EPA 2014a). NHTSA used the *iowrf* program (Skamarock et al. 2008) to convert the output to a 36-kilometer resolution and then the MCIP (version 4.2) to prepare CMAQ-ready input files. The vertical resolution, consisting of 25 vertical layers, was kept the same as in the EPA files.

E.3.2.3 Model Performance Evaluation

NHTSA conducted a limited model performance evaluation for the 36-kilometer modeling domain. NHTSA prepared base-case emission inputs for 2011, based on data provide by EPA, and applied CMAQ for the base year.

NHTSA evaluated the base-year CMAQ simulation results using graphical and statistical analysis. Specifically, NHTSA compared simulated ozone and PM_{2.5} concentrations with observed data, using a variety of graphical and statistical analysis products. The analysis was conducted using the Atmospheric Model Evaluation Tool (AMET) version 1.2 (UNC 2008). AMET generates a wide variety of statistical measures and graphical analysis products to facilitate the evaluation of CMAQ model performance. Table E.3.2.3-1 summarizes key statistical measures that were used to quantify model performance.

Table E.3.2.3-1. Metrics for CMAQ Model Performance Evaluation for the Air Quality Modeling Analysis

Metric	Definition
# of data pairs	The number of observation/simulation data pairs
Mean observation value	The average observed concentration
Mean simulation value	The average simulated concentration
Normalized bias	$\left(\frac{1}{N}\right)\sum_{l=1}^N(S_l - O_l)/O_l \cdot 100\%$ <p>where N is the number of data pairs, and S_l and O_l are the simulated and observed values at site l, respectively, over a given time interval.</p>
Median bias (MdnB)	$median(S_l - O_l)_N$
Fractional bias	$\left(\frac{1}{N}\right)\sum_{l=1}^N(S_l - O_l)/0.5(S_l + O_l) \cdot 100\%$
Normalized error	$\left(\frac{1}{N}\right)\sum_{l=1}^N S_l - O_l /O_l \cdot 100\%$
Median error (MdnE)	$median S_l - O_l _N$ <p>where the vertical bars denote the absolute value between the simulated and observed values.</p>

⁶ Note that for CMAQ versions 5.1 and above, EPA recommends that WRF version 3.7 be used when WRF is run using the Asymmetric Convective Model version 2 (ACM2); however, a WRF version 3.7 dataset for the 2011 base year with ACM2 was not available at the time this analysis was conducted.

Metric	Definition
Fractional error	$\left(\frac{1}{N}\right) \sum_{l=1}^N S_l - O_l / 0.5(S_l + O_l) \cdot 100\%$
Systematic root mean square error (RMSE _s)	$\sqrt{\left(\frac{1}{N}\right) \sum_{l=1}^N (C^* - O_l)^2}$ <p>where $C^* = a + bO_l$ and where a and b are the least squares regression coefficients of S_l and O_l</p>
Unsystematic root mean square error (RMSE _u)	$\sqrt{\left(\frac{1}{N}\right) \sum_{l=1}^N (C^* - S_l)^2}$
Index of agreement (IofA)	<p>A measure of how well the model represents the pattern of perturbation about the mean value; ranges from 0 to 1 where higher values indicate better agreement.</p>

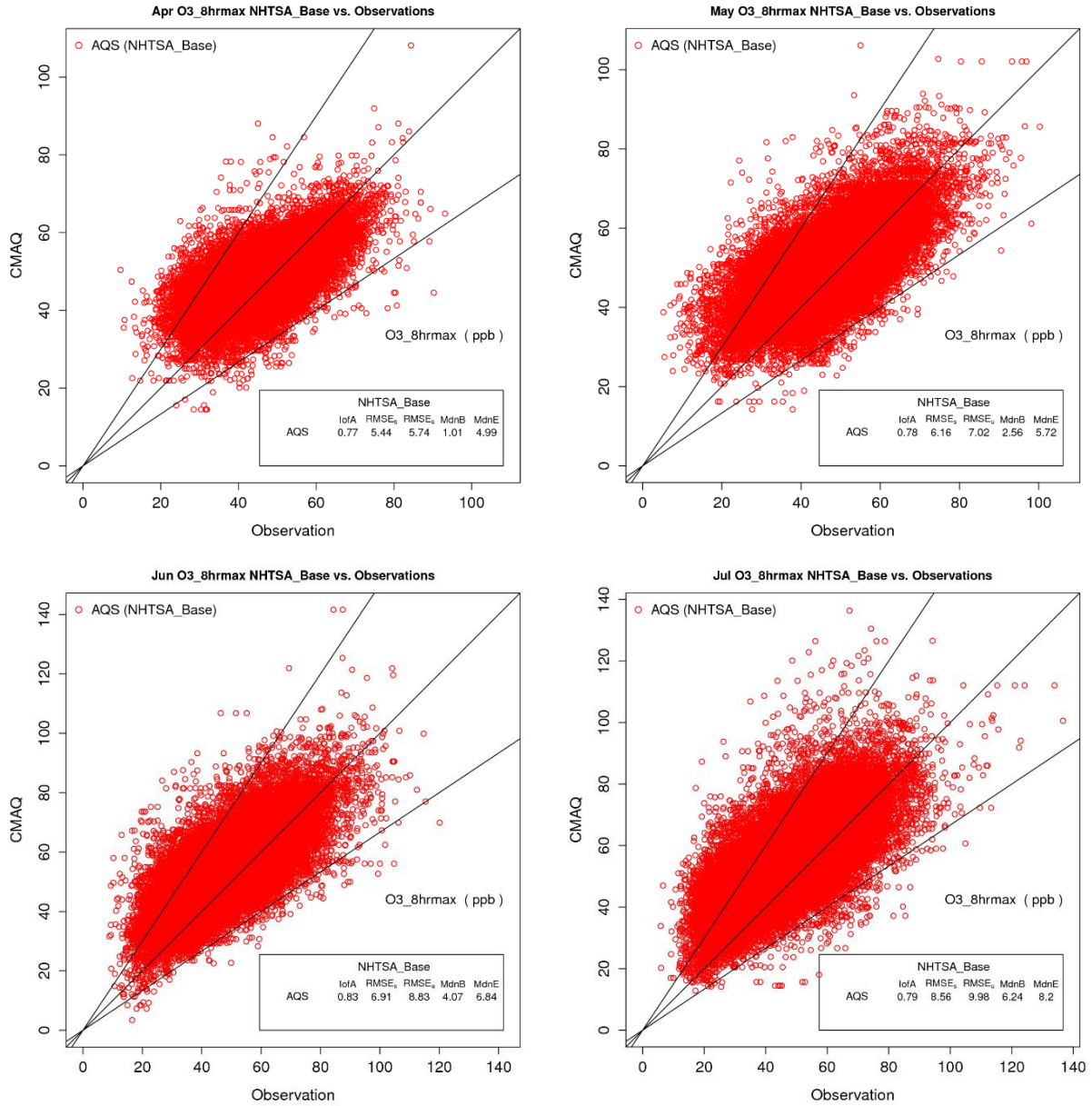
In calculating the statistical measures, AMET pairs the CMAQ model output with the observed data for the appropriate locations and time intervals. Statistical measures of certain pollutants were compared with model performance goals and criteria used for prior studies, as suggested in EPA guidance (EPA 2007, 2014b). For ozone, these include recommended ranges for the normalized bias and normalized error from prior (ca. 1990) EPA guidance (these are still widely used for urban- and regional-scale model performance evaluations). For PM_{2.5} and related species, these include criteria presented by Boylan (2005).

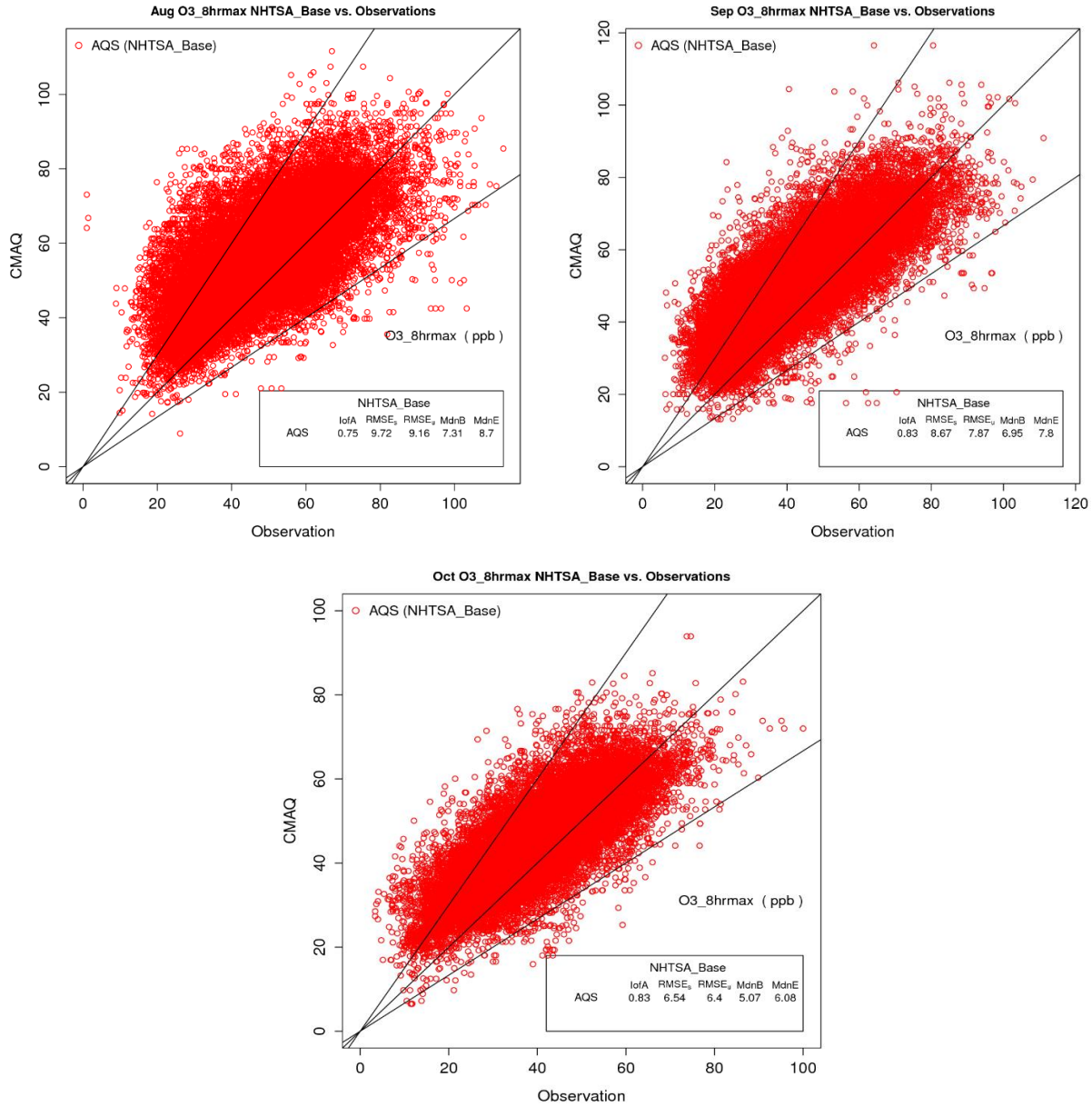
Ozone

NHTSA evaluated CMAQ base-year model performance for ozone and the results are summarized in the remainder of this section. The evaluation focused on daily maximum 8-hour average ozone concentration and the typical ozone season months of April through October. The observed values are based on EPA’s Air Quality System (AQS) monitoring data for the base year of 2011. The units are parts per billion (ppb).

Scatter plots comparing simulated and observed daily maximum 8-hour ozone concentrations for all monitoring sites in the contiguous United States for the months of April through October are presented in Figure E.3.2.3-1. The scatter plots provide a visual representation of how well the simulated values match the observations and can reveal biases toward over- or underestimation of the observed values. Also included on the scatter plot is some statistical information further summarizing model performance. Note that these statistical measures are calculated using the 8-hour average ozone concentrations. The solid lines on the plot are for visual reference and are drawn with slopes of 1:1 (center), 1.5:1 (upper), and 1:1.5 (lower).

Figure E.3.2.3-1. Simulated and Observed Daily Maximum 8-Hour Average Ozone Concentration (ppb), April through October, for the U.S. Portion of the NHTSA CMAQ Modeling Domain





The scatter plots indicate good agreement between the simulated and observed values. There is a general tendency for CMAQ to overestimate the ozone concentrations, including some of the higher concentrations (especially for June, July, and August). The good overall agreement is characterized by an index of agreement of approximately 0.8 for all months (the range is from 0.75 for August to 0.83 for June, September, and October).

Summary metrics and statistical measures calculated using daily maximum 8-hour average ozone concentrations for all sites within the 48 contiguous states are presented in Tables E.3.2.3-2 and E.3.2.3-3. Statistics were calculated for the individual months of the traditional ozone season (April through October) and the full ozone season. The recommended ranges for the normalized bias and normalized error shown in this table are no longer a part of current EPA guidance but are still widely used for urban- and regional-scale model performance evaluation (EPA 2007, 2014b). The normalized bias and error statistics were calculated using a lower bound of 40 ppb (Table E.3.2.3-2) and a lower bound of 60 ppb

(Table E.3.2.3-3). Simulation-observation pairs were not included in the calculation if the observed value is less than the lower bound.

Table E.3.2.3-2. Model Performance Statistics for Daily Maximum 8-Hour Average Ozone Concentration for the U.S. Portion of the NHTSA CMAQ Modeling Domain: 40 ppb Lower Bound

Metric	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr–Oct	Goal
Number of data pairs	25,522	27,624	26,804	27,436	26,923	19,214	14,988	168,511	
Mean observed (ppb)	50.8	52.2	56.4	56.2	55.7	54.1	49.4	53.8	
Mean simulated (ppb)	49.8	52.8	58.6	60.6	60.6	58.1	51.5	56.3	
Normalized bias (%)	-2.1	1.1	4.1	7.9	8.7	7.4	4.1	4.5	± 15
Fractional bias (%)	-2.1	0.96	3.8	7.3	8.5	7.3	3.9	4.2	
Normalized error (%)	9.8	11.1	12.9	15.5	15.7	13.6	11.5	13.1	≤ 35
Fractional error (%)	10.0	11.1	12.7	14.9	15.1	13.2	11.2	12.7	

Notes:

CMAQ = Community Multiscale Air Quality; ppb = parts per billion

Table E.3.2.3-3. Model Performance Statistics for Daily Maximum 8-Hour Average Ozone Concentration for the U.S. Portion of the NHTSA CMAQ Modeling Domain: 60 ppb Lower Bound

Metric	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr–Oct	Goal
Number of data pairs	2,950	4,419	8,908	8,757	8,052	4,739	1,456	39,281	
Mean observed (ppb)	64.9	66.1	68.3	68.5	68.3	69.2	65.8	67.9	
Mean simulated (ppb)	58.5	61.6	66.8	68.5	67.3	68.0	60.4	66.0	
Normalized bias (%)	-9.9	-6.8	-2.2	-0.1	-1.4	-1.8	-8.2	-2.8	± 15
Fractional bias (%)	-10.7	-7.6	-2.8	-0.9	-2.0	-2.2	-8.9	-3.5	
Normalized error (%)	11.2	11.0	10.4	12.0	11.6	10.4	10.8	11.1	≤ 35
Fractional error (%)	11.9	11.6	10.5	12.0	11.8	10.5	11.5	11.4	

Notes:

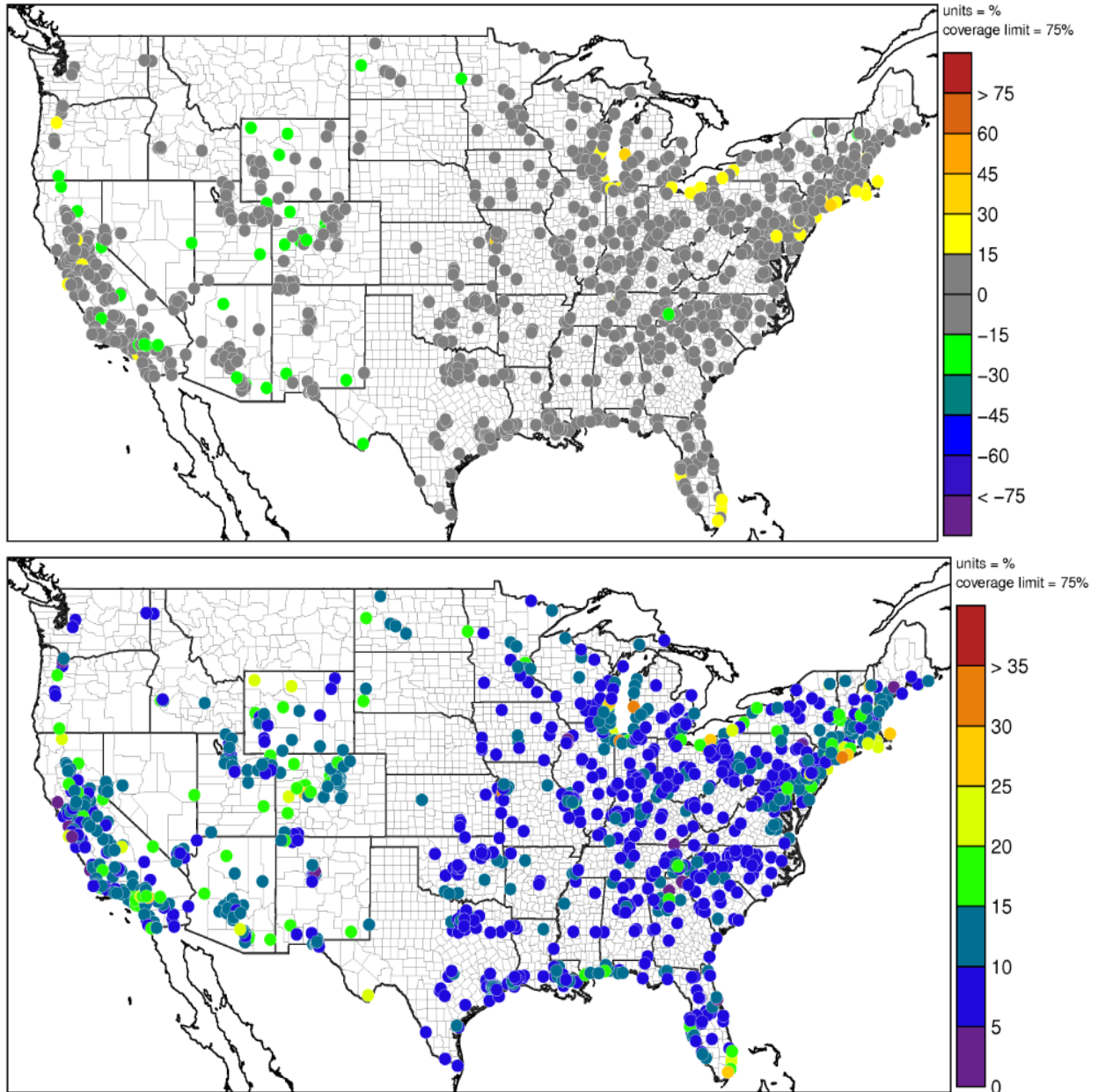
CMAQ = Community Multiscale Air Quality; ppb = parts per billion

Using daily maximum 8-hour average ozone concentrations and a lower bound of 40 ppb (Table E.3.2.3-2), the normalized bias is within ±15 percent, and the normalized error is well within 35 percent for all periods. Ozone is underestimated for April and slightly overestimated for the remaining ozone season months. Only about 15 percent of the observed concentrations are larger than 60 ppb. The statistics calculated using a lower bound of 60 ppb (Table E.3.2.3-3) indicate that the larger ozone concentrations are slightly underestimated, especially for April, May, and October, but overall very well simulated for all months. The normalized bias is within ±15 percent and the normalized error is well within 35 percent for all periods. Overall, model performance is generally consistent and reasonable for all ozone season months.

The statistical measures were calculated for the entire United States portion of the modeling domain, but it is expected that these will vary from region to region. To illustrate the spatial variation in the agreement between the simulated and observed values, Figure E.3.2.3-2 depicts the average bias and error for all sites in the United States portion of the modeling domain, based on daily maximum 8-hour ozone concentrations. Each monitoring site is represented by a circle and the shading of the circle

provides information about how well the hourly observed ozone concentrations are represented by the simulation results, on average. A lower bound of 60 ppb is used in calculating the normalized bias and error statistics. For the normalized bias, gray shaded circles indicate that the bias is within ± 15 percent and this corresponds to good model performance. Blue and green shading indicates underestimation of the observed concentrations and yellow, orange, and red shading indicates overestimation. For the normalized mean error, blue and green shading represent the smaller errors, while red indicates an error larger than 35 percent.

Figure E.3.2.3-2. Site-Specific Normalized Bias (%; Top) and Normalized Mean Error (%; Bottom) Based on Daily Maximum 8-Hour Average Simulated and Observed Ozone Concentrations (April through October Combined)



These plots indicate that overall model performance is consistently good throughout the United States. For most monitoring sites, the normalized bias is within ± 15 percent (as indicated by the gray shading). Ozone is overestimated in south Florida, around Lake Erie and Lake Michigan, and along the coast of New England, and both over- and underestimated at a few isolated monitoring sites throughout the United States. The normalized mean error is less than 35 percent for nearly all monitoring sites. The error is larger than 35 percent at only one site in Southern California, which is not visible on Figure E.3.2.3-2 because of the density of monitoring sites in this area.

PM2.5

NHTSA evaluated CMAQ base-year model performance for total PM2.5 and the results are summarized in the remainder of this section. The evaluation focused on 24-hour average PM2.5 concentration. The observed values for the base year of 2011 are based on monitoring data from multiple air quality networks, including EPA's AQS database, the Chemical Speciation Network (CSN) network, the Interagency Monitoring of Protected Visual Environments (IMPROVE) network, and the SouthEastern Aerosol Research and Characterization (SEARCH) network. SEARCH and SLAMS networks use FRM (federal reference method) or FEM (federal equivalent method). IMPROVE monitors are capable of supplementing FRM data in association with new fine particulate standards. Speciation samplers do not measure PM2.5 the same way as FRM monitors (Frank 2006) and thus without adjustment, CSN and FRM PM2.5 measurements will differ. However, the CSN monitoring data were not adjusted but were just reported separately in the model performance evaluation.

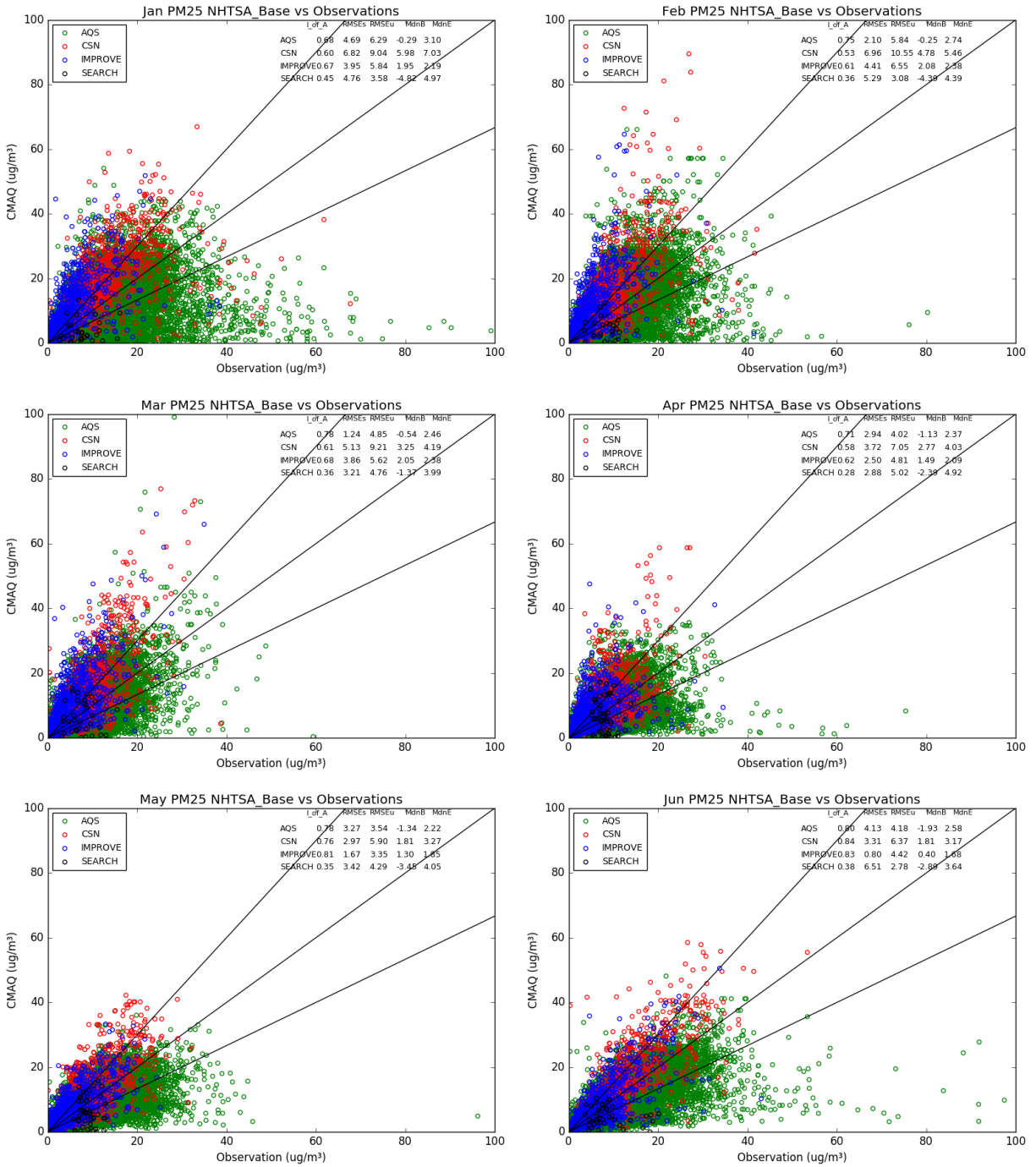
For the AQS database, monitoring sites that are sited to capture near-source impacts were excluded from the model performance evaluation as these sites are not representative of air quality impacts predicted by gridded regional models such as CMAQ. Specifically, sites classified as source-oriented, industrial, and in the near-roadway vicinity were not included in the model evaluation database. The units are micrograms per cubic meter ($\mu\text{g}/\text{m}^3$).

Scatter plots comparing simulated and observed 24-hour ozone concentrations for all monitoring sites located within the 48 contiguous states for each month of the annual simulation period are presented in Figure E.3.2.3-3.

The scatter plots indicate a mix of under- and over-estimation of total PM2.5 concentration for most months. There is a general tendency for CMAQ to underestimate the higher concentrations, especially during January, June, and December. Overall performance when compared with observations from the AQS network is characterized by an index of agreement that ranges from 0.67 for December to 0.81 for September. The index of agreement is generally consistent among the AQS, CSN, and IMPROVE networks, although it is somewhat lower for the SEARCH network.

Summary metrics and statistical measures calculated using daily 24-hour average PM2.5 concentrations for all sites within the 48 contiguous states are presented in Table E.3.2.3-4 through Table E.3.2.3-7. Statistics for each month and the full annual simulation period were calculated separately for each air quality network. Because the observed concentrations can be quite small and there is no accepted minimum threshold, normalized bias and error are not well suited to characterizing model performance for PM2.5; thus, only fractional bias and error are presented. The recommended ranges for the fractional bias and fractional error are based on Boylan (2005) and are widely used for regional-scale model performance evaluation for PM2.5. No lower bound was applied in calculating the statistics. Note that while statistics are presented for multiple air quality networks, the model performance evaluation focused on the AQS database due to the large number of data pairs and wide spatial distribution of sites within the 48 contiguous states.

Figure E.3.2.3-3. Comparison of Simulated and Observed 24-Hour Average PM_{2.5} Concentration ($\mu\text{g}/\text{m}^3$) by Month for the U.S. Portion of the NHTSA CMAQ Modeling Domain



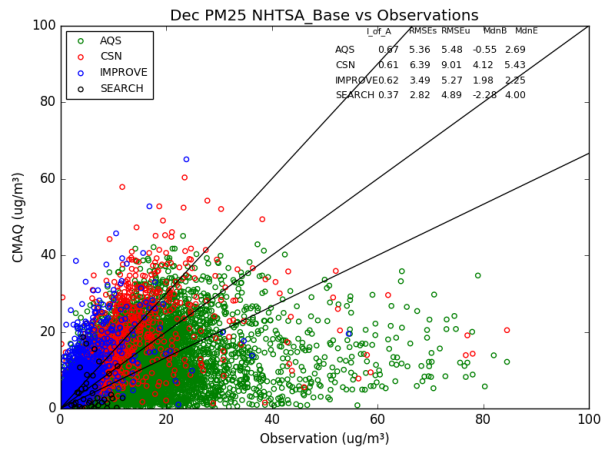
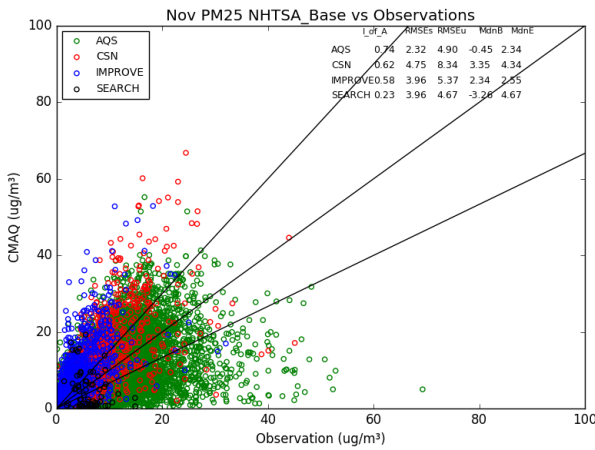
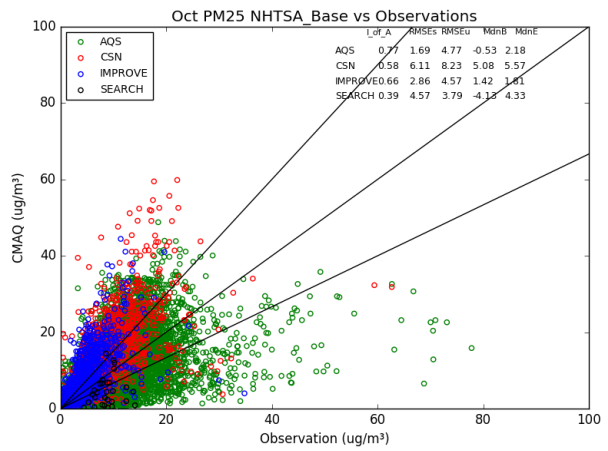
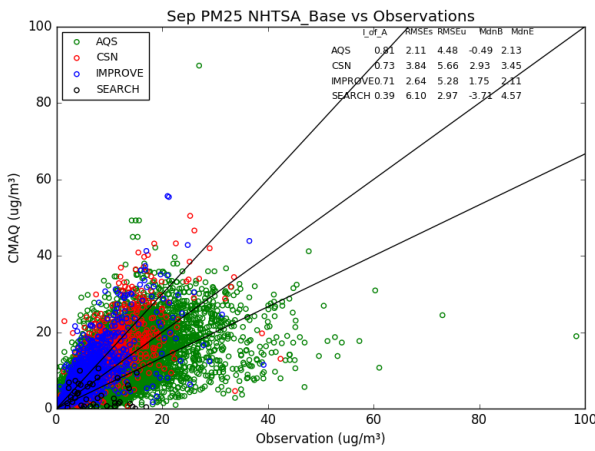
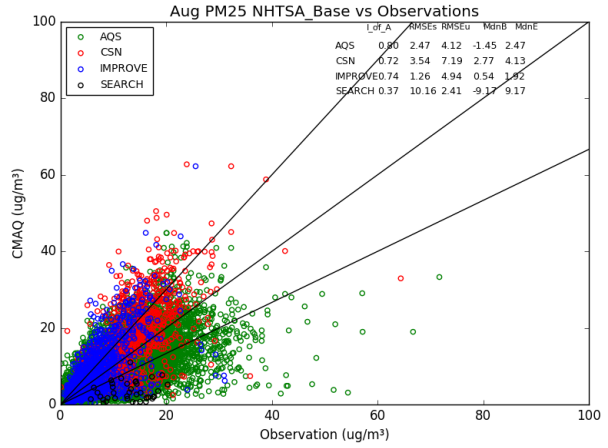
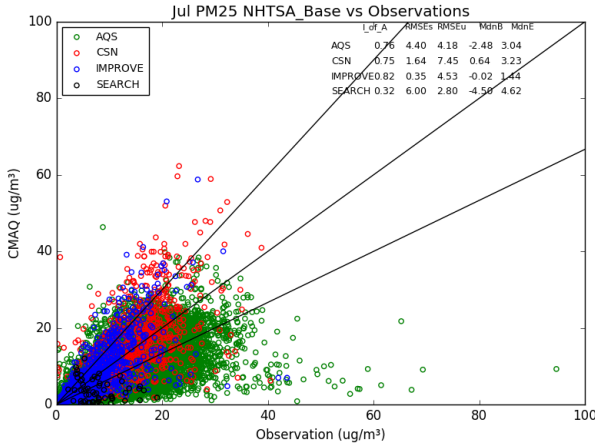


Table E.3.2.3-4. Model Performance Statistics for Daily 24-Hour Average PM2.5 Concentration for the U.S. Portion of the NHTSA CMAQ Modeling Domain, AQS database

Metric	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	Criteria
Number of data pairs	18,102	16,474	18,716	17,972	18,455	17,684	17,976	18,293	17,527	18,059	17,570	17,755	214,583	
Mean observed ($\mu\text{g}/\text{m}^3$)	10.9	9.3	8.2	8.0	8.7	10.3	10.7	9.6	8.7	8.1	8.3	10.1	9.2	
Mean simulated ($\mu\text{g}/\text{m}^3$)	9.6	9.0	7.7	6.5	6.7	7.6	7.5	8.0	8.2	7.7	7.7	8.5	7.9	
Fractional bias (%)	-13.3	-10.3	-15.1	-22.9	-26.3	-32.8	-40.2	-24.7	-11.2	-14.9	-12.6	-14.7	-20.0	± 60
Fractional error (%)	50.9	48.2	47.7	48.2	46.4	47.5	51.2	43.7	41.0	45.5	46.5	48.9	47.1	≤ 75

Notes:

CMAQ = Community Multiscale Air Quality; $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter; PM2.5 = particulate matter with diameter equal to or less than 2.5 microns

Table E.3.2.3-5. Model Performance Statistics for Daily 24-Hour Average PM2.5 Concentration for the U.S. Portion of the NHTSA CMAQ Modeling Domain, CSN Network

Metric	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	Criteria
Number of data pairs	977	941	1,063	1,003	1,006	1,023	964	1,139	987	999	1,002	993	12,097	
Mean observed ($\mu\text{g}/\text{m}^3$)	13.3	10.4	9.7	8.8	9.3	12.0	13.5	12.5	8.9	9.7	8.5	11.6	10.7	
Mean simulated ($\mu\text{g}/\text{m}^3$)	19.5	16.6	14.8	12.4	12.3	15.0	15.1	16.0	12.7	15.8	13.2	16.0	14.9	
Fractional bias (%)	37.2	39.4	29.6	27.6	20.3	15.1	3.8	14.9	26.4	40.4	33.5	31.4	26.5	± 60
Fractional error (%)	52.6	54.5	50.0	49.6	43.4	36.2	35.8	40.0	45.1	55.7	53.5	51.4	47.2	≤ 75

Notes:

CMAQ = Community Multiscale Air Quality; $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter; PM2.5 = particulate matter with diameter equal to or less than 2.5 microns

Table E.3.2.3-6. Model Performance Statistics for Daily 24-Hour Average PM2.5 Concentration for the U.S. Portion of the NHTSA CMAQ Modeling Domain, IMPROVE Network

Metric	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	Criteria
Number of data pairs	1,373	1,225	1,493	1,342	1,387	1,351	1,358	1,485	1,377	1,389	1,350	1,387	16,517	
Mean observed ($\mu\text{g}/\text{m}^3$)	3.9	4.0	4.4	4.5	4.8	6.3	6.6	6.1	5.6	4.1	3.6	3.5	4.8	
Mean simulated ($\mu\text{g}/\text{m}^3$)	7.7	8.1	7.9	6.8	6.5	7.0	7.0	7.4	8.1	6.8	7.4	6.9	7.3	
Fractional bias (%)	64.6	61.6	53.1	39.2	30.0	7.0	-4.6	5.0	29.5	35.4	60.2	61.9	36.7	± 60
Fractional error (%)	75.3	72.1	67.2	57.6	50.7	43.1	36.8	45.5	47.3	55.2	71.8	72.5	57.8	≤ 75

Notes:

CMAQ = Community Multiscale Air Quality; $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter; PM2.5 = particulate matter with diameter equal to or less than 2.5 microns

Table E.3.2.3-7. Model Performance Statistics for Daily 24-Hour Average PM2.5 Concentration for the U.S. Portion of the NHTSA CMAQ Modeling Domain, SEARCH Network

Metric	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	Criteria
Number of data pairs	33	27	34	54	47	40	61	38	44	29	72	40	519	
Mean observed ($\mu\text{g}/\text{m}^3$)	7.8	8.5	7.6	8.1	9.1	9.0	7.9	12.9	7.6	8.8	6.1	6.0	8.1	
Mean simulated ($\mu\text{g}/\text{m}^3$)	3.8	4.3	6.5	6.3	6.1	4.8	3.6	3.4	3.6	4.6	4.6	4.4	4.7	
Fractional bias (%)	-85.2	-75.5	-36.8	-49.5	-58.1	-61.0	-79.2	-120.0	-72.5	-80.7	-61.3	-65.3	-69.2	± 60
Fractional error (%)	98.2	88.2	77.1	81.6	74.6	75.1	99.6	120.0	93.7	87.1	104.0	98.3	92.3	≤ 75

Notes:

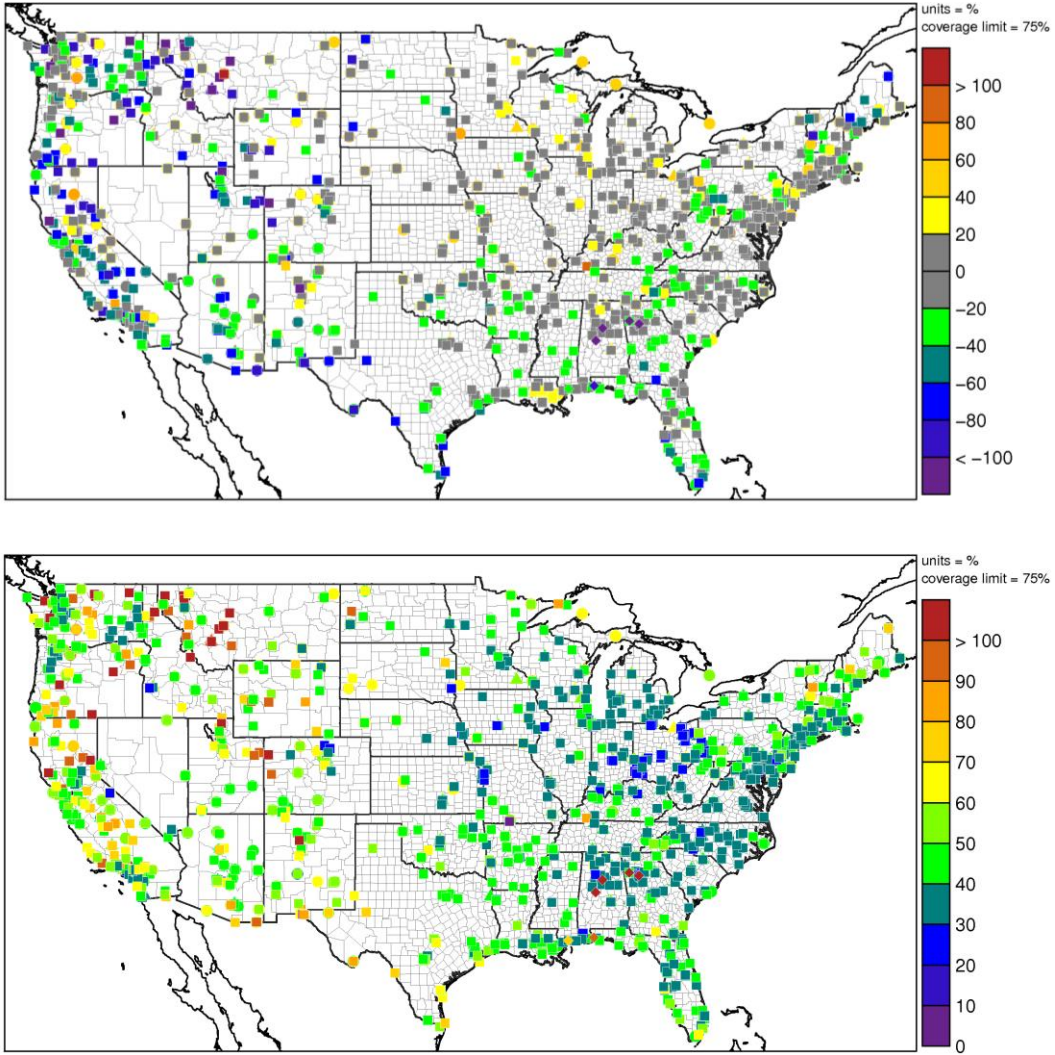
CMAQ = Community Multiscale Air Quality; $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter; PM2.5 = particulate matter with diameter equal to or less than 2.5 microns

The statistical measures based on the AQS network indicate that model performance is reasonable. The fractional bias is within the criteria of ± 60 percent and the fractional error well within the criteria of 75 percent for all months and the full period. There is a general tendency for CMAQ to underestimate PM_{2.5} concentrations throughout the year. The bias is largest during the summer months (May, June, July, and August) and lowest during the fall and winter months. Fractional bias values based on the CSN and IMPROVE networks indicate that the model tends to overestimate PM_{2.5} concentrations at these sites. When compared with observational data from the SEARCH network, the model tends to significantly underestimate PM_{2.5} concentrations, resulting in fractional bias and fractional error outside the model performance criteria. However, there is an insufficient number of data pairs to draw statistically significant conclusions from the SEARCH dataset. Despite the month-to-month differences, model performance is generally consistent and reasonable for all months.

To illustrate the agreement between the simulated and observed values, Figure E.3.2.3-4 depicts the fractional bias and fractional error statistics for the AQS, SEARCH, IMPROVE, and CSN sites within the U.S. portion of the modeling domain. The statistics were calculated using 24-hour average PM_{2.5} concentrations and are for the annual simulation period. The monitoring sites from each network are represented by different symbols and the shading of each symbol provides information about how well the 24-hour observed PM_{2.5} concentrations are represented by the simulation results, on average. For the fractional bias, gray shaded circles indicate that the fractional bias is within ± 20 percent and, in general, values within ± 60 percent (lighter colors) correspond to acceptable model performance. Blue and green shading indicates underestimation of the observed concentrations and yellow, orange, and red shading indicates overestimation. For the fractional error, blue and green shading represent the smaller errors, while red indicates an error larger than 100 percent. Values less than 75 percent are considered to represent reasonable model performance for PM_{2.5}.

These plots indicate that overall model performance is good to very good for most of the eastern United States and characterized by underestimation of PM_{2.5} concentrations for the western United States. This could be due to the influence of regional wildfires in the western United States, which contributed to observed concentrations in the western states but are difficult to capture in the emission inventory and the modeling. While wildfires can be excluded from the observational dataset as exceptional events, because of the effort to identify and obtain approval for excluding exceptional events, measurements affected by wildfire impacts typically are included in the observational dataset. For most monitoring sites, however, the fractional bias is within ± 60 percent (as indicated by the gray, yellow, light orange, and green shading). The fractional error is less than 75 percent for a majority of the monitoring sites, with some exceptions throughout California, along the southwestern United States border, and in the mountain west states.

Figure E.3.2.3-4. Site-Specific Fractional Bias (%; Top) and Fractional Error (%; Bottom) Based on Daily 24-Hour Average Simulated and Observed PM_{2.5} Concentrations (Annual). Sites shown are from the following networks: AQS (squares), CSN (triangles), IMPROVE (circles), and SEARCH (diamonds).



E.3.2.4 Post-Processing and Quality Assurance Procedures

Quality assurance of the CMAQ runs included the following steps. NHTSA routinely checked scripts to ensure that the correct input files and output file names were used. NHTSA checked and reconciled any error messages CMAQ generated. NHTSA prepared plots of ozone, PM_{2.5}, and selected particulate species for the No Action Alternative as well as the differences in concentration for these species between each alternative and the No Action Alternative. For example, these included daily maximum 8-hour average ozone concentration and 24-hour average PM_{2.5} concentration on July 15 and annual average PM_{2.5} concentrations. To be consistent with the National Ambient Air Quality Standards (NAAQS), NHTSA also plotted the fourth-highest daily maximum 8-hour concentration and the 98th percentile 24-hour average PM_{2.5} concentration in 2035 for the No Action Alternative. Additionally, NHTSA plotted the maximum changes in 24-hour average PM_{2.5} concentrations and daily maximum 8-hour ozone concentrations between each action alternative and the No Action Alternative. These difference plots were examined and compared with the results for other runs. Because of differences in the form of the NAAQS, maximum changes in daily maximum 8-hour average ozone concentrations were paired in space and time, while maximum changes in 24-hour average PM_{2.5} concentrations were paired in space but not in time. NHTSA checked the concentration patterns and values for reasonableness and compared the results for each alternative to ensure that differences in the CMAQ results were consistent with the emissions changes.

Following these actions to ensure the quality of the modeling results, NHTSA post-processed the CMAQ results for input to the health impacts and benefits modeling, as discussed in Section E.4, *Health Effects and Benefits Modeling*.

E.3.3 CMAQ Modeling Results

This section presents the CMAQ modeling results for the No Action Alternative. The modeling results for ozone and PM_{2.5} were used to calculate health effects and monetized health-related benefits provided in Section E.4, *Health Effects and Benefits Modeling*.

E.3.3.1 No Action Alternative

This section compares CMAQ results for the No Action Alternative. The results for ozone are presented first, followed by the results for PM_{2.5}.

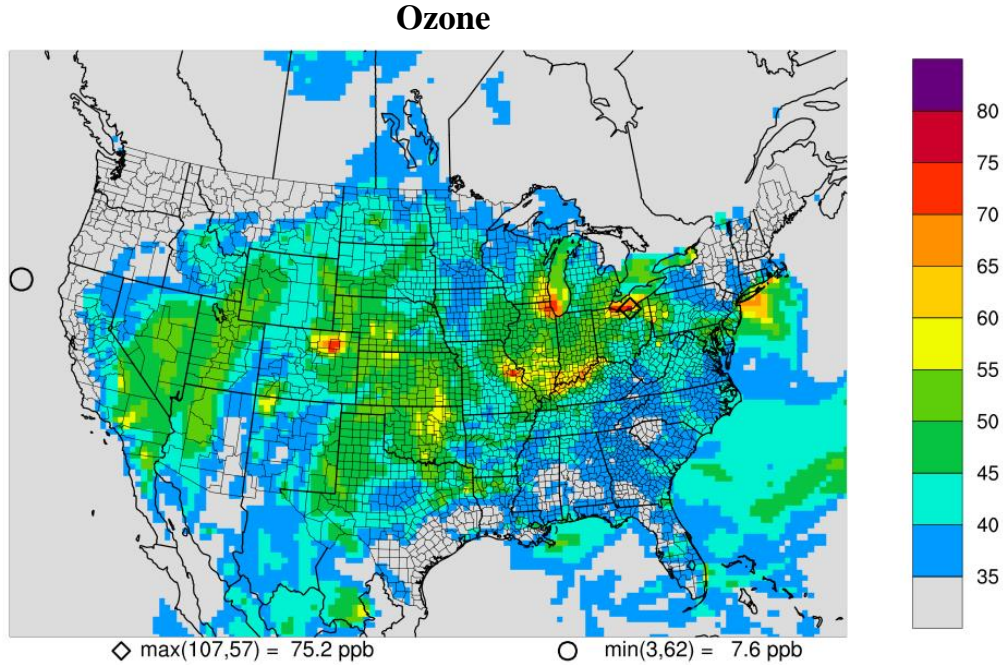
Ozone

Figure E.3.3.1-1 shows future-year simulated daily maximum 8-hour ozone concentrations (ppb) on July 15 for the No Action Alternative. NHTSA selected this day as an example ozone-season day to display ozone concentrations (for all simulations), primarily because generally clear summertime conditions prevail across the United States, and the relatively high ozone observed is typical of the ozone season. The minimum and maximum values for any location in the domain are also provided, along with their grid cell location (x,y coordinates are provided relative to the modeling domain shown in Figure E.1.2-1).

Figure E.3.3.1-1 indicates that daily maximum 8-hour ozone concentrations for this day are generally less than 70 ppb (the current 8-hour ozone NAAQS). There are a few areas with higher ozone concentrations, especially over Denver, Chicago, Cleveland, and St. Louis. Note that a single day is not fully representative of modeled ozone-season concentrations and results for this day do not necessarily

represent the fourth highest daily maximum 8-hour average value, and thus are not directly comparable to the standard.

Figure E.3.3.1-1. Simulated Daily Maximum 8-Hour Ozone Concentration (ppb) for July 15, 2035: No Action Alternative, Direct and Indirect Impacts

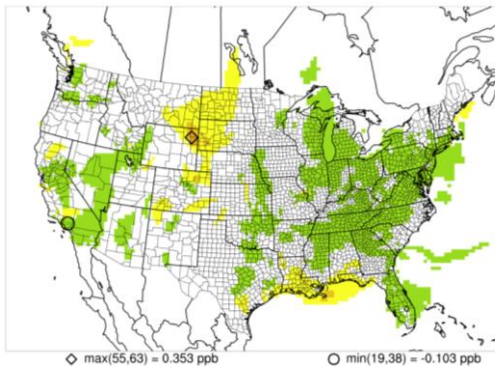


From a meteorological perspective, the observed ozone concentration patterns on July 15, 2011, were affected by typical midsummer, large-scale weather features situated over the contiguous United States, with a strong upper-level ridge centered over the Texas-Oklahoma area that influenced weather from the southwestern states through the upper Midwest to the southeastern United States. Upper-level troughs were situated off the west coast of California and offshore of Nova Scotia. The dominant upper-level ridge and resulting surface high-pressure features over the central and eastern states resulted in relatively clear skies, light winds, and normal to above-normal temperatures, especially in the central portion of the country, with temperatures from Texas to South Dakota reaching the upper 90s to over 100 degrees Fahrenheit. Other surface features included a weak cold front along the Gulf Coast and a stationary front in the mountain west states stretching from Idaho to Minnesota that resulted in some light precipitation in these areas. The winds aloft over much of the central United States affected by the ridge were light and variable, while the winds over the west coast and offshore of the northeastern United States, influenced by the upper level troughs in these areas, were moderate.

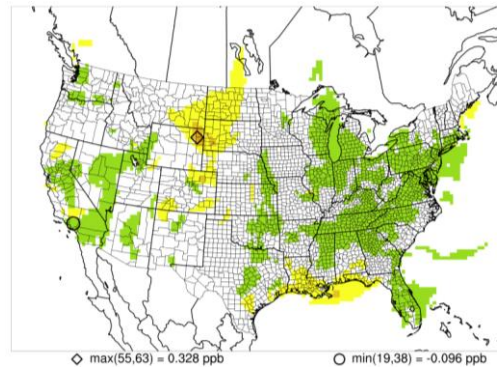
Figure E.3.3.1-2 illustrates the simulated differences in daily maximum 8-hour ozone between each action alternative and the No Action Alternative (Alternative 1 minus No Action, Alternative 2 minus No Action, Alternative 3 minus No Action, and so on, through Alternative 8 minus No Action). Again, the results for July 15 are displayed. In general, ozone concentrations tend to decrease in southern California and increase in southern Louisiana and northeastern Wyoming. In some action alternatives (e.g., Alternatives 1 through 6), ozone concentrations also decrease slightly in some areas of central California, Nevada, and the eastern half of the United States.

Figure E.3.3.1-2. Difference in Simulated Daily Maximum 8-hour Ozone Concentration (ppb) for July 15, 2035: Direct and Indirect Impacts under the Action Alternatives Compared to the No Action Alternative

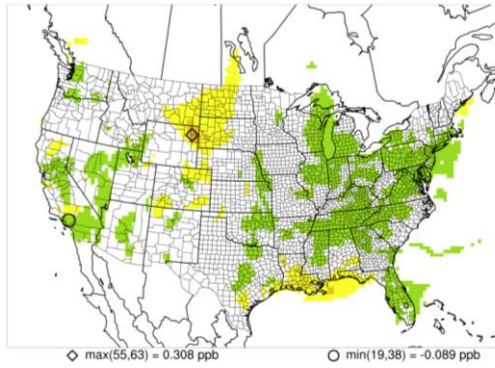
(a) Alternative 1



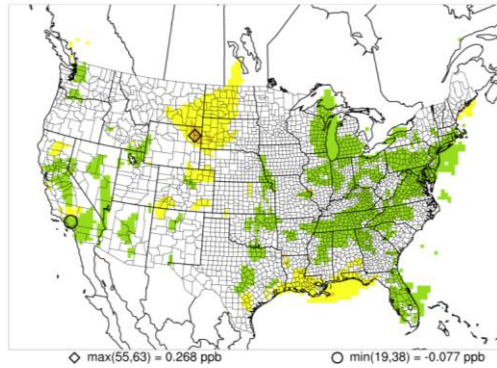
(b) Alternative 2



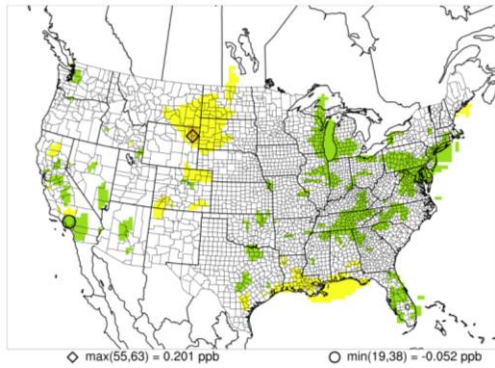
(c) Alternative 3



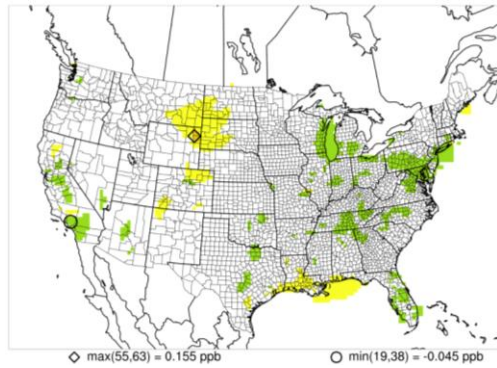
(d) Alternative 4



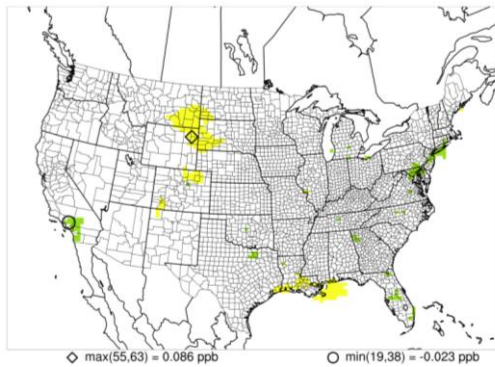
(e) Alternative 5



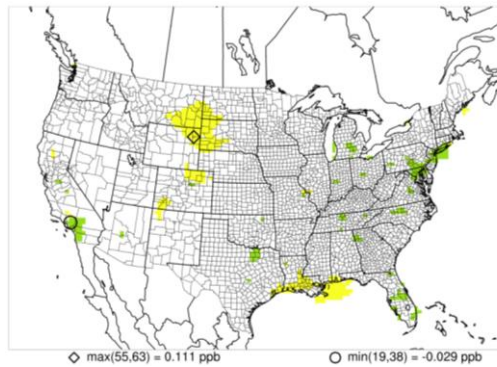
(f) Alternative 6



(g) Alternative 7



(h) Alternative 8



The location, extent, and magnitude of the impact on ozone concentrations are consistent with the emission changes. The key precursor pollutants for ozone are VOC and NO_x. The largest reduction in NO_x emissions occurs in Southern California, where the largest decrease in ozone concentration is observed (Figure E.2.3-2a). Similarly, the largest increases in NO_x emissions occur in northeastern Wyoming and southeastern Louisiana where ozone concentrations tend to increase in all action alternatives. The differences in ozone concentration between each action alternative and the No Action Alternative are smallest under Alternatives 7 and 8 and largest under Alternative 1. In general, the magnitude and spatial extent of the differences in ozone concentration between each action alternative and the No Action Alternative tend to decrease from Alternative 1 to Alternative 8. The largest decrease in ozone concentration for any given grid cell on July 15 ranges from approximately 0.10 ppb under Alternative 1 to 0.02 ppb under Alternative 7. The largest increase in ozone concentration ranges from approximately 0.09 ppb under Alternative 7 to 0.35 ppb under Alternative 1. In all action alternatives, the largest decrease in ozone concentrations is located near Los Angeles while the largest increase in ozone concentrations is located in northeastern Wyoming.

The response of the model to changes in emissions is influenced by the complex photochemistry represented by the model. For example, under certain conditions (usually characterized by relatively low VOC-to-NO_x ratio), decreases in VOC emissions lead to decreases in ozone. This likely accounts for the decrease in ozone in the Los Angeles area. Similarly, regions with a high VOC-to-NO_x ratio experience increases in ozone concentrations in response to increases in NO_x emissions, consistent with the increases in ozone observed in Louisiana and Wyoming.

The response of the model to the changes in emissions varies from region to region and is influenced by the amount and spatial distribution of the emission changes and the relative changes in emissions for the different pollutant species (VOC versus NO_x).

Ozone Maximum Impacts

Figure E.3.3.1-3 shows future-year simulated fourth-highest daily maximum 8-hour ozone concentrations (ppb) for 2035 for the No Action Alternative. The annual fourth-highest daily maximum 8-hour ozone concentration is calculated for 1 year but in a manner consistent with the form of the current NAAQS. The minimum and maximum values for any location in the domain are also provided, along with their grid cell locations (x,y coordinates are provided relative to the modeling domain shown in Figure E.1.2-1).

Figure E.3.3.1-3 indicates that 8-hour ozone concentrations in 2035 exceed 70 ppb in various areas throughout the United States, as shown by the red and purple colors on the figure. The highest ozone concentrations are predicted to occur in Southern California, Kansas, over the Great Lakes Region, and along the Atlantic Coast. In contrast, ozone concentrations in most of the southeastern and northwestern United States are well below the 70 ppb standard. As shown in Figure E.3.3.1-3, while most areas of the country are predicted to be in attainment of the 8-hour ozone standard by 2035, ozone concentrations exceeding the NAAQS would still occur.

Figure E.3.3.1-3. Simulated Fourth-Highest Daily Maximum 8-hour Ozone Concentration (ppb) for 2035: No Action Alternative, Direct and Indirect Impacts

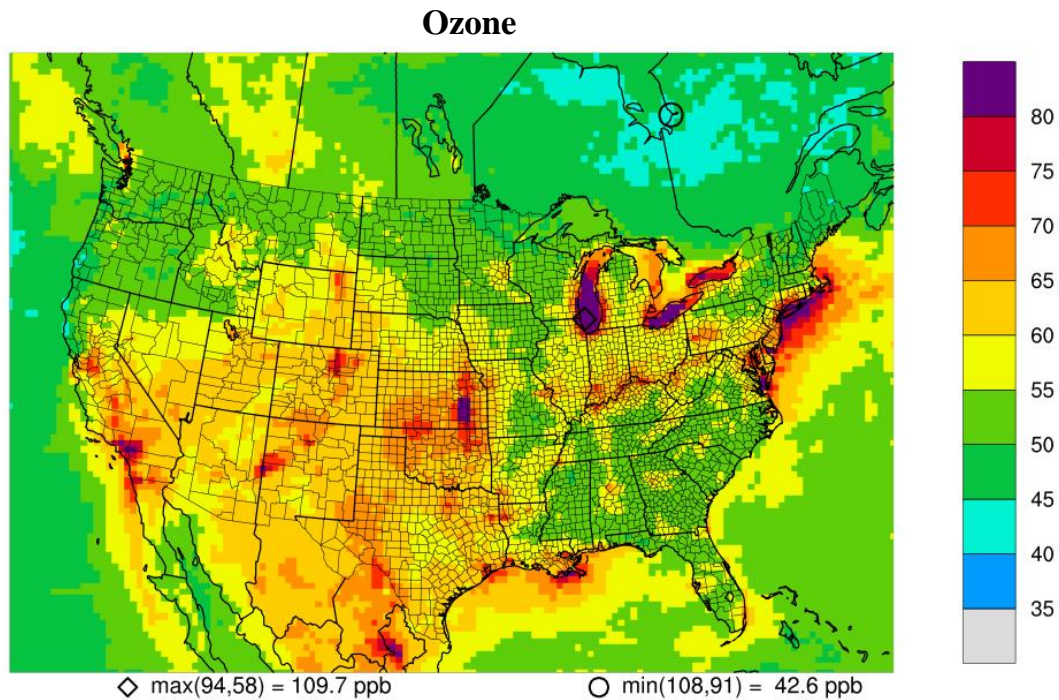
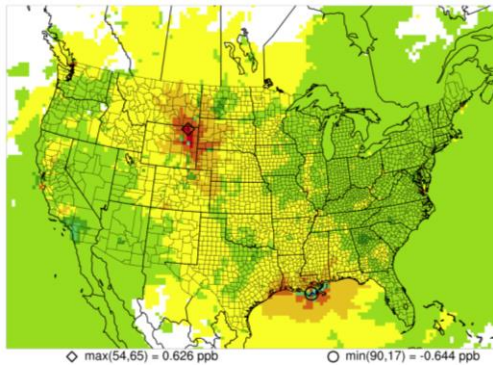


Figure E.3.3.1-4 illustrates the maximum differences in simulated daily maximum 8-hour ozone between each action alternative and the No Action Alternative (e.g., Alternative 1 minus No Action, Alternative 2 minus No Action, Alternative 3 minus No Action, and so on, through Alternative 8 minus No Action). In general, ozone concentrations tend to increase in the central portion of the United States and decrease elsewhere. Compared with results for July 15, the spatial distribution of impacts on ozone remains similar: the largest increases in ozone tend to occur in northeastern Wyoming and Louisiana because of increases in upstream emissions, while the largest decrease generally occur in California. Isolated grid cells near strong emissions sources (e.g., in southern Louisiana) show decreases in ozone concentrations, likely due to titration of ozone close to sources. Maximum impacts on daily maximum 8-hour ozone are a factor of two to six times larger than impacts on July 15. Thus, while 8-hour ozone concentrations on July 15 may be representative of the ozone season on average, acute changes in ozone are larger than those experienced on July 15.

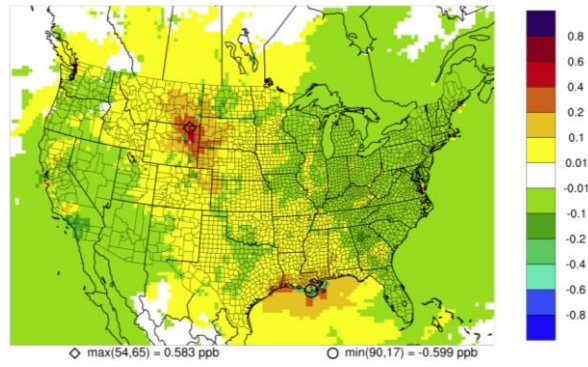
Similar to July 15, the differences in ozone concentration between each action alternative and the No Action Alternative are smallest under Alternative 7 and largest under Alternative 1. In general, the magnitude and spatial extent of the differences in ozone concentration between each action alternative and the No Action Alternative tend to decrease from Alternative 1 to Alternative 8. The largest decrease in ozone concentration for any given grid cell ranges from approximately 0.64 ppb under Alternative 1 to 0.15 ppb under Alternative 7. The largest increase in ozone concentration ranges from approximately 0.15 ppb under Alternative 7 to 0.63 ppb under Alternative 1. In all action alternatives, the largest increase in ozone concentrations is located in northeastern Wyoming.

Figure E.3.3.1-4. Maximum Difference in Simulated Daily Maximum 8-hour Ozone Concentration (ppb) for 2035: Direct and Indirect Impacts under Action Alternatives minus the No Action Alternative

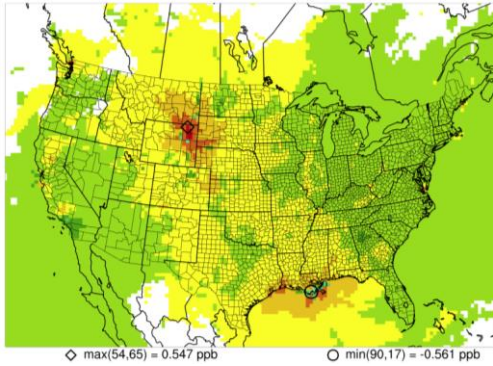
(a) Alternative 1



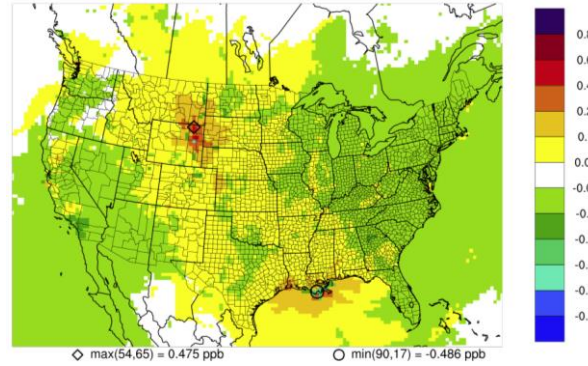
(b) Alternative 2



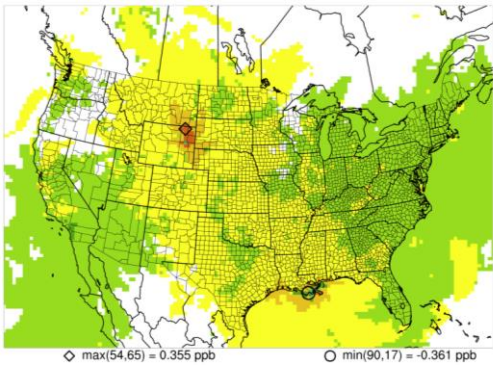
(c) Alternative 3



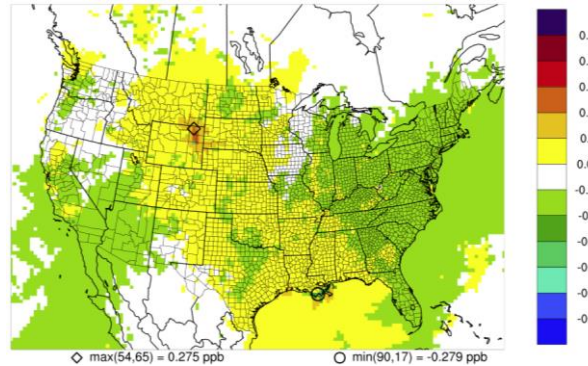
(d) Alternative 4



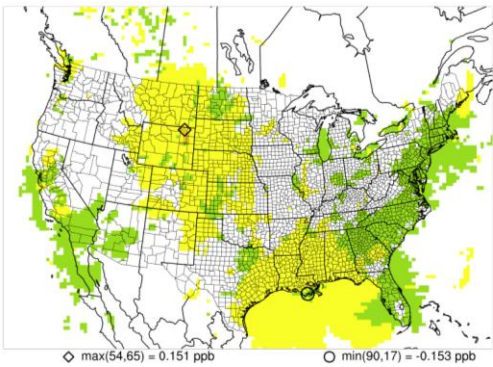
(e) Alternative 5



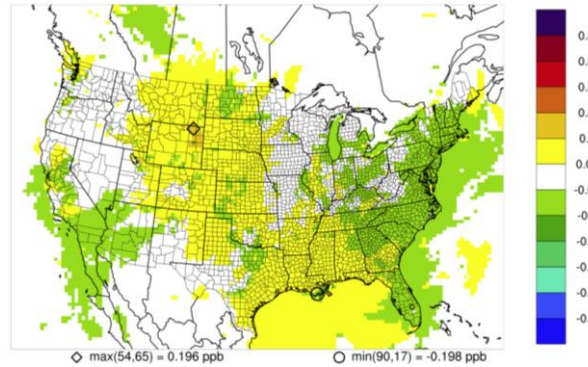
(f) Alternative 6



(g) Alternative 7



(h) Alternative 8



Annual Average PM2.5

Figure E.3.3.1-5 displays future-year simulated annual average PM2.5 concentrations ($\mu\text{g}/\text{m}^3$) under the No Action Alternative. This plot indicates areas of higher PM2.5 in the eastern half of the United States, California, and a few isolated areas in the western states. Except for a few isolated grid cells, the annual average concentration throughout the United States is less than the current annual NAAQS of $12 \mu\text{g}/\text{m}^3$. The minimum and maximum values for any location in the domain are provided on each figure, along with their grid cell locations (x,y coordinates are provided relative to the modeling domain shown in Figure E.1.2-1).

Figure E.3.3.1-5. Simulated Annual Average PM2.5 Concentration ($\mu\text{g}/\text{m}^3$) for 2035: No Action Alternative, Direct and Indirect Impacts

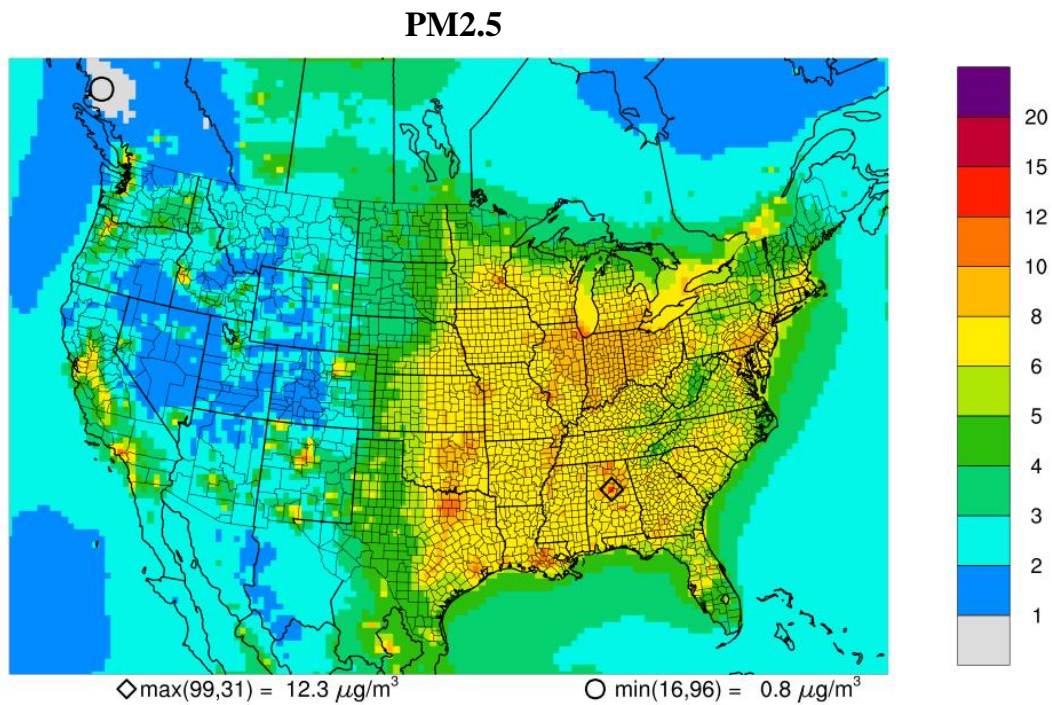
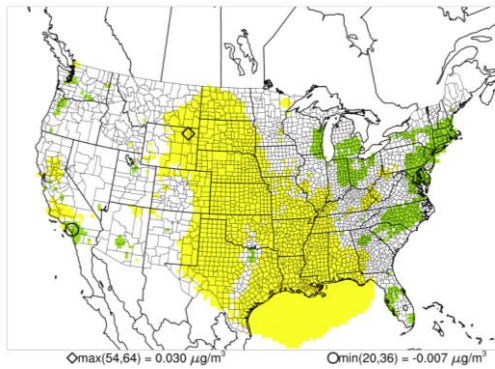


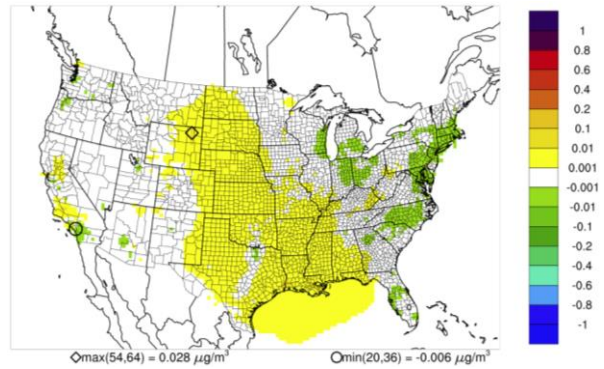
Figure E.3.3.1-6 displays the difference in simulated annual average PM2.5 concentration ($\mu\text{g}/\text{m}^3$) for each action alternative compared to the No Action Alternative (e.g., Alternative 1 minus No Action, Alternative 2 minus No Action, Alternative 3 minus No Action, and so on, through Alternative 8 minus No Action). In most action alternatives, the differences are characterized by small increases in PM2.5 concentration in the central portion of the United States and small decreases in concentration in southern California and mid-Atlantic coastal states. Similar to the case of ozone, the largest increases in PM2.5 concentrations occur in Louisiana and northeastern Wyoming, while the largest decreases occur in Southern California.

Figure E.3.3.1-6. Difference in Simulated Annual Average PM_{2.5} Concentration ($\mu\text{g}/\text{m}^3$) for 2035: Direct and Indirect Impacts under Action Alternatives minus the No Action Alternative

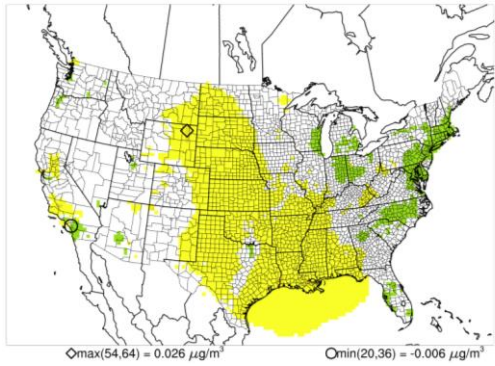
(a) Alternative 1



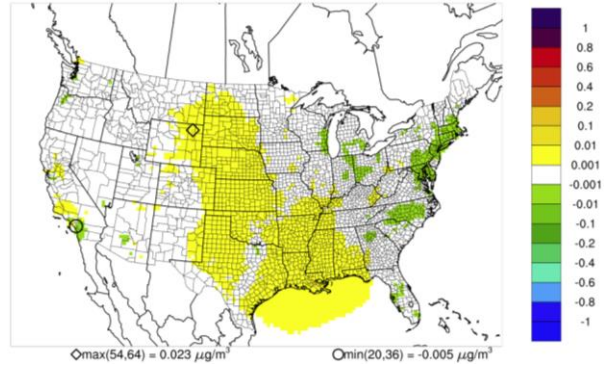
(b) Alternative 2



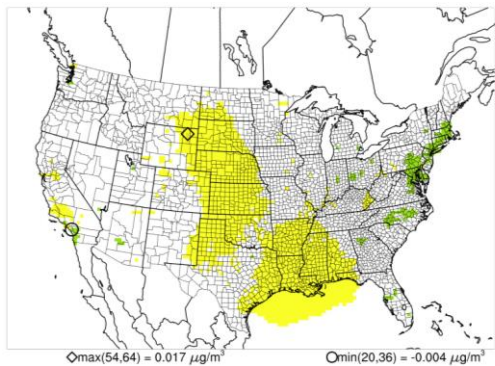
(c) Alternative 3



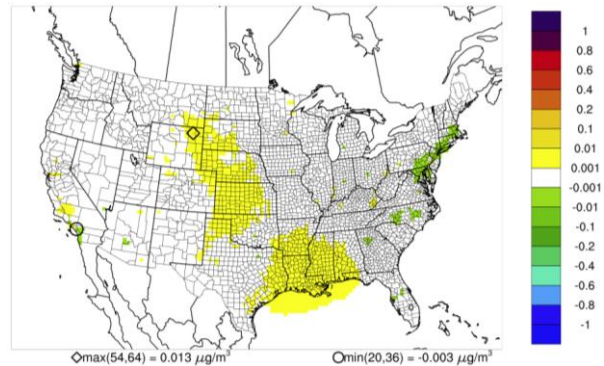
(d) Alternative 4



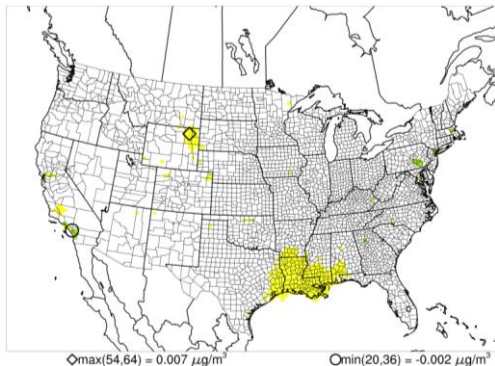
(e) Alternative 5



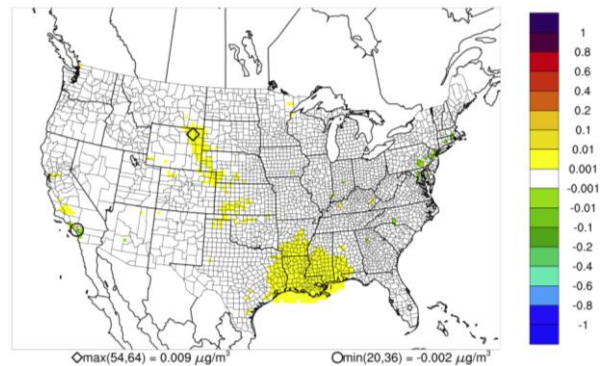
(f) Alternative 6



(g) Alternative 7



(h) Alternative 8



Total PM_{2.5} consists of primary PM_{2.5} released directly into the atmosphere and secondary PM_{2.5} formed in the atmosphere through a series of complex reactions involving precursor species. In most areas of the United States, secondary PM_{2.5} is a much larger component of total PM_{2.5} than primary PM_{2.5}. The key precursor pollutants for secondary PM_{2.5} are SO₂, NO_x, and VOCs. While modeled tailpipe emissions for these species are lower under all action alternatives compared to the No Action Alternative, upstream emissions are higher under all action alternatives because of the production of more fuel. As indicated in Section E.2, *Emissions Inventory Preparation*, total emissions of primary PM_{2.5} from all sectors increase slightly for the action alternatives, compared to the No Action Alternative. However, tailpipe emissions of primary PM_{2.5} are lower under all action alternatives compared to the No Action Alternative. Thus, increases in total primary PM_{2.5} emissions are due to increases in primary PM_{2.5} emissions from non-mobile (i.e., upstream) sources such as the oil and gas sector.

Impacts on total PM_{2.5} concentrations are governed by the magnitude and spatial distribution of primary PM_{2.5} emissions and the emissions of secondary PM_{2.5} precursors. The lower total tailpipe emissions of PM_{2.5} and its precursors are reflected in the modeling results as a decrease in PM_{2.5} concentrations in areas such as Southern California and the eastern United States. On the other hand, the impact of higher upstream emissions of PM and its precursors can be seen in the modeling results as an increase in PM_{2.5} concentration in areas of the central United States such as Louisiana and Wyoming.

The differences in PM_{2.5} concentration between each action alternative and the No Action Alternative are smallest under Alternative 7 and largest under Alternatives 1. In general, magnitude and spatial extent of the differences in PM_{2.5} concentration between each action alternative and the No Action Alternative tend to decrease from Alternative 1 to Alternative 8. The largest decrease in PM_{2.5} concentration for any given grid cell in any of the action alternatives compared with the No Action Alternative is 0.007 µg/m³ under Alternative 1. Similarly, the largest increase of 0.030 µg/m³ also occurs under Alternative 1.

Although small reductions in PM_{2.5} concentrations occur in some areas that exhibited high concentrations in the No Action Alternative (e.g., Southern California and the tristate area of New York, New Jersey, and Connecticut), other areas with high concentrations in the No Action Alternative show increases in PM_{2.5} concentrations (e.g., around Louisiana). The response of the model to the changes in emissions varies from region to region and is influenced by the amount and spatial distribution of the emission changes and the relative changes in emissions for the different pollutant species.

PM_{2.5} Maximum Impacts

Figure E.3.3.1-7 displays the future-year simulated 98th percentile (i.e., eighth highest) 24-hour average PM_{2.5} concentrations (µg/m³) for 2035 under the No Action Alternative. While annual average PM_{2.5} concentrations indicate levels of PM_{2.5} relevant to assess chronic exposure, 98th percentile PM_{2.5} concentrations, calculated according to the current 24-hour average NAAQS, are important to assess acute exposure to fine particulate matter. The spatial pattern of 98th percentile 24-hour average PM_{2.5} concentrations is similar to that observed for annual average PM_{2.5} in Figure E.3.3.1-5, which indicates areas of higher PM_{2.5} in the eastern half of the United States and a few isolated areas in the western states. Only a few isolated locations show 98th percentile PM_{2.5} concentrations above the current 24-hour average NAAQS of 35 µg/m³. The minimum and maximum values for any location in the domain are provided on each figure, along with their grid cell locations (x,y coordinates are provided relative to the modeling domain shown in Figure E.1.2-1).

Figure E.3.3.1-7. Simulated 98th Percentile 24-hour average PM_{2.5} Concentration ($\mu\text{g}/\text{m}^3$) for 2035: No Action Alternative, Direct and Indirect Impacts

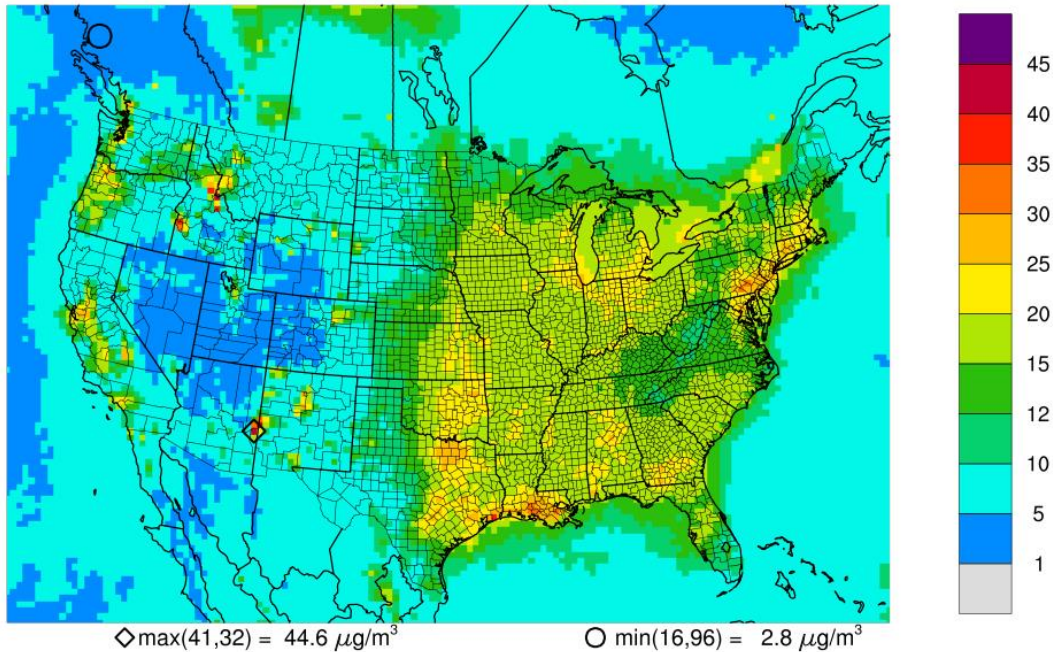
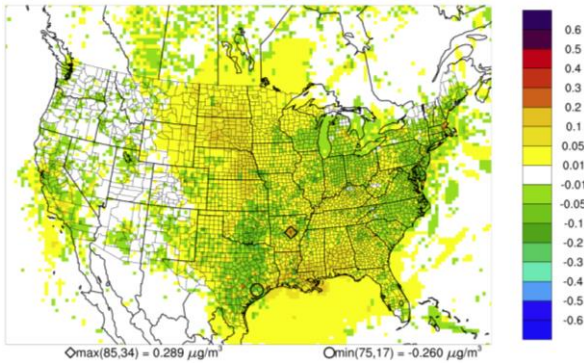


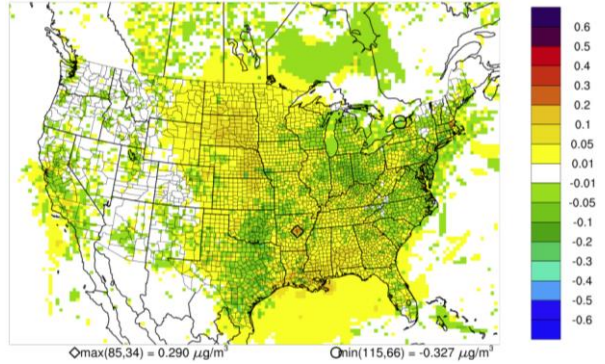
Figure E.3.3.1-8 displays the maximum difference in simulated 24-hour average PM_{2.5} concentration ($\mu\text{g}/\text{m}^3$) for each action alternative compared to the No Action Alternative (e.g., Alternative 1 minus No Action, Alternative 2 minus No Action, Alternative 3 minus No Action, and so on, through Alternative 8 minus No Action). These figures reveal that 24-hour average PM_{2.5} concentrations may decrease in some areas that experience overall increases in PM_{2.5} concentrations on an annual average basis (e.g., parts of the central United States). Additionally, impacts on 24-hour average PM_{2.5} concentrations can vary by season, such that PM_{2.5} concentrations may increase during certain times of the year for areas showing decreases in PM_{2.5} concentrations on Figure E.3.3.1-8, and vice versa. Furthermore, maximum changes in 24-hour average PM_{2.5} concentrations are significantly greater in magnitude than changes in annual average PM_{2.5} concentrations, although maximum 24-hour average impacts remain below $0.4 \mu\text{g}/\text{m}^3$ in all alternatives. For example, the largest decrease in 24-hour average PM_{2.5} concentration in any given grid cell for any of the action alternatives compared with the No Action Alternative is $0.3 \mu\text{g}/\text{m}^3$, whereas the maximum decrease in annual average PM_{2.5} concentrations is only $0.007 \mu\text{g}/\text{m}^3$. As observed previously for annual average PM_{2.5}, the magnitude and spatial extent of the maximum differences in 24-hour average PM_{2.5} concentrations between each action alternative and the No Action Alternative tend to decrease from Alternative 1 to Alternative 8, although Alternative 7 shows the smallest maximum increase in PM_{2.5} concentrations of any action alternative. The largest maximum increase in PM_{2.5} concentrations occurs in Arkansas in all action alternatives (except Alternative 7) while the largest maximum decrease typically occurs in either Texas or Nebraska.

Figure E.3.3.1-8. Maximum Difference in Simulated 24-hour Average PM_{2.5} Concentration ($\mu\text{g}/\text{m}^3$) for 2035: Direct and Indirect Impacts under Action Alternatives minus the No Action Alternative

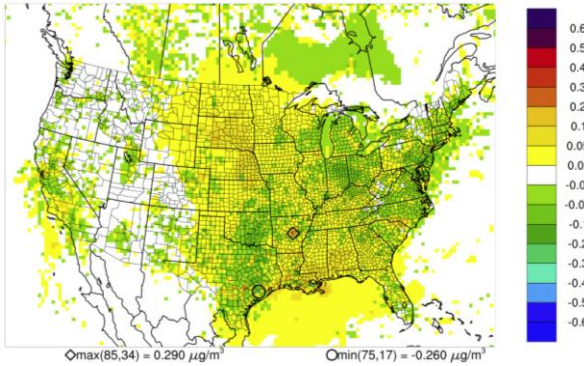
(a) Alternative 1



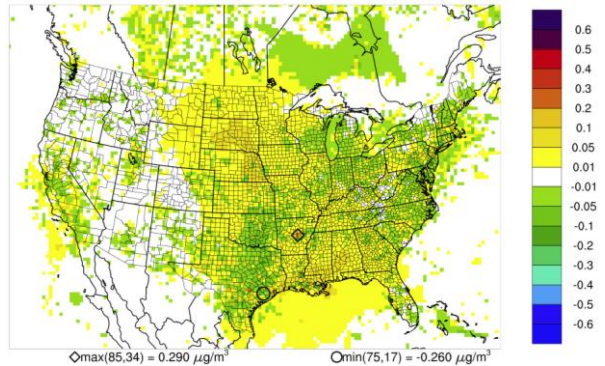
(b) Alternative 2



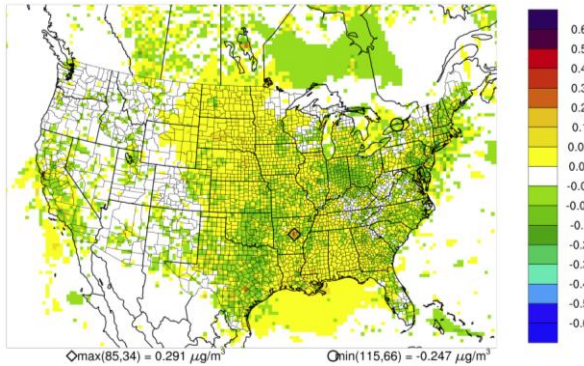
(c) Alternative 3



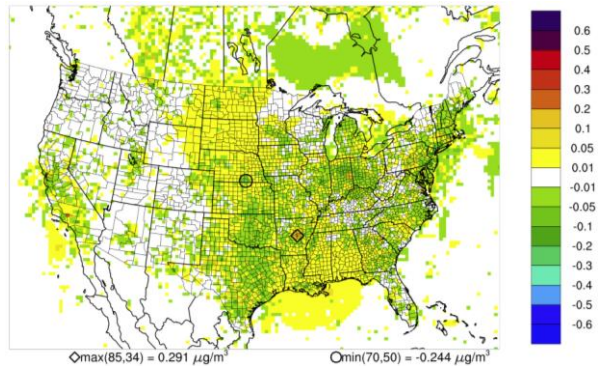
(d) Alternative 4



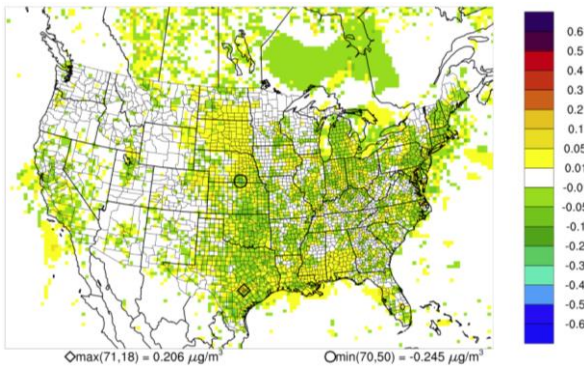
(e) Alternative 5



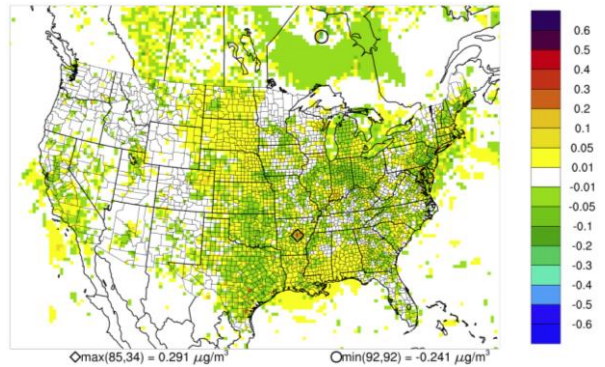
(f) Alternative 6



(g) Alternative 7



(h) Alternative 8



E.3.3.2 Attributes, Limitations, and Uncertainties

The CMAQ air quality modeling system provides a reliable platform for evaluating the expected responses to changes in precursor emissions at the national and regional scales. The detailed, quantitative modeling results provide an excellent basis for comparing the effects of the action alternatives and provide the requisite input for the health effects modeling.

CMAQ can account for differences in emissions and other factors that affect air quality and the resulting health impacts at any given location, such as meteorology, topography, land-use, and atmospheric chemistry processes. Accordingly, CMAQ can simulate regional differences in the response of the model to the emission changes. This is important because different regions could experience either a net increase or a net decrease in emissions, depending on the relative magnitudes of the changes in emissions from decreased fuel economy, decreased vehicle use, and increased fuel production and distribution. Regional differences in the response of the model to changes in emissions are also important in the calculation of health effects, because the air quality changes are matched to gridded population estimates.

All air quality modeling exercises are affected by inherent uncertainties that derive from model formulation (including numerical approximations and the parameterization of physical and chemical processes) and inaccuracies in the input fields (including the meteorological inputs and emission inventory estimates). The following paragraphs discuss a number of key limitations and uncertainties, both general and specific to this analysis.

- **Grid resolution.** CMAQ uses a 36-kilometer horizontal grid resolution. This grid resolution is coarser than what is now more typically used for ozone and PM_{2.5}. This grid resolution might not be sufficiently detailed to resolve certain processes (e.g., emissions, meteorology, and atmospheric chemistry) in portions of the modeling domain, and this could introduce biases or uncertainties into the simulated concentration fields. Use of the 36-kilometer grid resolution limits the response of the model to small changes in precursor emissions and spatial variability at a smaller scale cannot be characterized. Thus, the coarse grid correspondingly introduces uncertainty in health effect predictions.
- **Reaction pathways.** Pollutants such as ozone and PM_{2.5} are secondary pollutants formed through atmospheric chemical processes. There are many different reaction pathways and there are uncertainties associated with each pathway as represented in the CMAQ model.
- **Emission rates.** The emission estimates for on-road motor vehicles and the affected upstream emission sources used in this analysis are total emissions for all states and Washington, D.C. These were spatially allocated to each state and county using VMT and other activity information. These emissions assume that emission rates for vehicles are the same across the United States. As a result, the modeling does not account for factors that affect emission rates regionally, such as ambient temperature, localized differences in vehicle fleet age, and differences in fuels (especially regarding ethanol fraction).
- **Model biases.** Many of the national-scale databases used for this application, including the meteorological and other input databases (for 2011) and the projected baseline criteria pollutant emissions data (for 2030 and 2040), were originally prepared by EPA for use in modeling exercises to support national rulemaking. However, as for any modeling database, it is expected that there are errors and uncertainties in the inputs that contribute to potential biases in the CMAQ results. This is especially true for the future-year modeling. For example, the meteorological conditions for 2011 might be representative of current conditions but would not reflect any effects of potential climate

change in 2035. Similarly, the future-year emissions are based on future estimates of population and economic and industrial activity and growth, and contain uncertainties due to potential unknown social, political, and/or economic factors that could affect growth and activity and resulting future emissions.

E.4 HEALTH EFFECTS AND BENEFITS MODELING

This section presents the methods and results of the health effects and benefits modeling. Following the application of CMAQ for each action alternative, NHTSA processed the CMAQ-derived air quality estimates for input to the BenMAP-CE health effects analysis tool. NHTSA then used BenMAP-CE to estimate the health impacts and monetized health-related benefits associated with the changes in air pollution simulated by CMAQ for each action alternative. The BenMAP-CE tool includes health impact functions, which relate a change in the concentration of a pollutant with a change in the incidence of a health endpoint (health effect). BenMAP-CE also calculates the monetized value of health impacts, which is presented in Section VII of the FRIA. BenMAP-CE can be used to calculate health impacts and monetized health-related benefits related to ozone and PM_{2.5} and NHTSA considered both of these pollutants in this study.

E.4.1 Overview of the BenMAP-CE Modeling System

BenMAP-CE is an EPA-developed computer program that uses interpolation functions, population projections, health impact functions, and valuation functions to translate simulated changes in air pollution concentration into changes in health-related incidences and monetized health-related benefits. BenMAP-CE is primarily intended as a tool for estimating the human health effects and economic benefits associated with changes in ambient air pollution. EPA originally developed this tool to analyze national-scale air quality regulations. The health benefits and monetary values derived using BenMAP-CE are intended to inform policymakers by enabling the comparison of the benefits and costs of various regulatory measures (EPA 2018a).

BenMAP-CE relies on the input of air quality information that can be used to calculate the change in ambient air pollution associated with a change in emissions. Typically, the results from two air quality modeling simulations (with different emission inputs) are used. In some cases, measured ambient air quality data can also be used.

BenMAP-CE calculates health effects based on expected relationships between the change in concentration and certain health effects (also known as health endpoints) using concentration-response functions from epidemiology studies (EPA 2018a). The response functions are used together with population data to estimate health effects. For a model-based application, health effects are calculated grid cell by grid cell and then summed to obtain regional- and national-scale estimates. In its most basic form, the health effect for a given health endpoint is a function of the change in air concentration, concentration-response estimates, and population. Primary health endpoints include premature mortality, heart attacks, and chronic respiratory illnesses.

After estimating the change in adverse health effects associated with a given change in air quality, BenMAP-CE calculates the monetary benefits associated with those changes (EPA 2018a). Put simply, the economic value is based on the change in the incidence of a certain adverse health effect multiplied by the value of the health effect (on a per-incident or per-case basis). For example, the value associated with avoided premature mortality is typically calculated using the Value of Statistical Life (VSL), which is the monetary amount people are willing to pay to slightly reduce the risk of premature death. For other health effects, the medical costs of the illness are typically used to estimate value. The BenMAP-CE database includes several different valuation functions for the health endpoints.

NHTSA used the most current version available at the beginning of the analysis, BenMAP-CE version 1.4. EPA released a newer version BenMAP-CE, version 1.5, in March 2019. The user's manual for this version

of the program was prepared by EPA (2018a). Configuration files specifying the health impact functions, valuation, and population databases are available as part of the BenMAP-CE (EPA 2018a) modeling system.

E.4.2 BenMAP-CE Application Procedures

NHTSA reformatted the CMAQ model output files for input to the BenMAP-CE tool and applied BenMAP-CE separately for ozone and PM2.5. For ozone, BenMAP-CE was run for the traditional ozone season (April through October) and, for PM2.5, it was run for the full annual period. The area covered by the BenMAP-CE analysis is the contiguous United States. BenMAP-CE includes population data at the census-tract level and algorithms for characterizing demographic changes (age distribution) over time. For this study, NHTSA used population estimates for 2035. This is consistent with the light-duty vehicle emissions data projections. Health impacts from changes in emissions of air toxics are not estimated by BenMAP-CE.

BenMAP-CE calculates the changes in health effects and monetized health-related benefits by comparing the results of two simulations. For this study, NHTSA used BenMAP-CE to calculate the change in health effects and monetized health-related benefits for each action alternative compared to the No Action Alternative. This resulted in eight BenMAP-CE applications using the CMAQ results for each pair of action alternative and No Action Alternative:

- Alternative 1 and the No Action Alternative
- Alternative 2 and the No Action Alternative
- Alternative 3 and the No Action Alternative
- Alternative 4 and the No Action Alternative
- Alternative 5 and the No Action Alternative
- Alternative 6 and the No Action Alternative
- Alternative 7 and the No Action Alternative
- Alternative 8 and the No Action Alternative

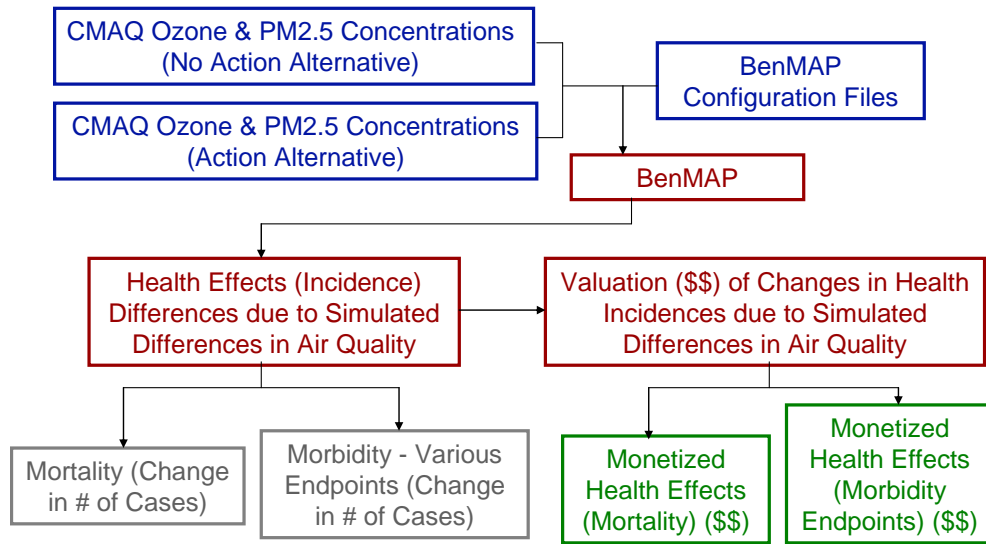
Figures E.3.3.1-2, E.3.3.1-4, E.3.3.1-6, and E.3.3.1-8 show difference plots of the CMAQ-derived ozone and PM2.5 concentrations for each of these pairs of simulations, and the corresponding BenMAP-CE results reflect those differences.

For each pollutant and simulation pair, the application of BenMAP-CE involved four steps:

1. Incorporate the CMAQ modeling results into the air quality grid files required by BenMAP-CE (air quality grid creation). In this step, NHTSA used the CMAQ model results directly.
2. Calculate the change in the incidence of adverse health effects based on the differences in the CMAQ-derived ozone and PM2.5 concentrations between the two simulations.
3. Aggregate the incidence results and calculate the economic value of the aggregated incidences.
4. Prepare tabular and graphical summaries; ensure the quality of and analyze the results.

Figure E.4.2-1 presents a diagram of the BenMAP-CE health effects analysis procedure using the CMAQ results.

Figure E.4.2-1. Diagram Illustrating Use of BenMAP-CE for Health Effects and Benefits Analysis for Final MY 2021–2026 CAFE Standards



E.4.2.1 Health Impact Functions

NHTSA used BenMAP-CE to calculate reductions in both mortality and a range of non-fatal health effects (morbidity) based on epidemiological studies of a number of United States and Canadian populations.

BenMAP-CE can estimate changes in a wide range of health impact “endpoints” associated with changes in ozone and PM2.5 exposure. The endpoints are grouped broadly as “mortality” and “morbidity.” Mortality endpoints include changes in “all-cause” mortality, and mortality due to specific causes, such as cardiopulmonary disease. Morbidity endpoints include specific illnesses and symptoms (for example, asthma exacerbations), events requiring medical care (emergency room visits and hospital admissions), and adverse effects that involve lost work or restricted-activity days.

EPA has evaluated the literature related to the adverse effects of ozone and particulate matter exposures and identified a set of endpoints for which the associations are considered to be well established and for which reliable exposure-response relationships have been developed (EPA 2018a). Tables E.4.2.1-1 and E.4.2.1-2 list the health endpoints used in this analysis for ozone and PM2.5, respectively. The endpoints include changes in mortality (for both adults and infants) and a range of morbidity endpoints related to respiratory and cardiovascular diseases and symptoms, hospital admissions, and lost work or restricted-activity days. The tables provide the age range for each endpoint. The results options for this study include the mean value, incremental percentile values, and standard deviation.

Pooled estimates for PM2.5 include acute myocardial infarction (heart attack) and asthma exacerbation. In the health incidence calculation step, no threshold value was specified, consistent with EPA guidance. The optional use of a threshold value can be to examine the sensitivity of particulate matter-related health impact estimates to different assumed thresholds. The results options for this study include the mean value, incremental percentile values, and standard deviation.

Table E.4.2.1-1. Health Impact Functions Used to Estimate Ozone-Related Health Effects

Endpoint	Author/Study/Location (If Applicable)	Age Range	Notes
Mortality, nonaccidental	Bell et al. (2004); 95 U.S. cities	0–99	a,b
Mortality, non-accidental	Ito et al. (2005)	0–99	a, b
Mortality, non-accidental	Schwartz (2005); 14 U.S. cities	0–99	a,d
Mortality, non-accidental	Smith et al. (2009); 98 U.S. cities	0–99	a,c
Mortality, all cause	Bell et al. (2005); U.S. and non-U.S.	0–99	a,b
Mortality, all cause	Levy et al. (2005); U.S. and non-U.S.	0–99	a,d
Mortality, all cause	Zanobetti and Schwartz (b) (2008); 48 cities	0–99	a,e
Mortality, cardiopulmonary	Huang et al. (2005); 19 U.S. cities	0–99	a,b
Emergency room visits, asthma	Mar and Koenig (2009); Seattle, WA	0–17	a,f
Hospital admissions, all respiratory	Katsouyanni et. al. (2009); 14 U.S. cities	65–99	a,k,l
Asthma exacerbation, one or more symptoms	Schildcrout et al. (2006); 8 U.S. cities	6–18	a,o
School loss days, all	Gilliland et al. (2001); Southern CA	5–17	a,m
Minor restricted activity days	Ostro and Rothschild (1989); Nationwide	18–64	a,n

Notes:

- a. Metric is daily maximum 8-hour ozone.
- b. Metric is daily maximum 8-hour ozone; warm season (8-hour max from 24-hour mean)
- c. Metric is daily maximum 8-hour ozone; ozone season
- d. Metric is daily maximum 8-hour ozone; warm season (8-hour max from 1-hour mean)
- e. Metric is daily maximum 8-hour ozone; 0–3 day lag; June–August, 1989–2000
- f. Child model; metric is daily maximum 8-hour ozone; 3-day lag; May–September
- g. Adult model; metric is daily maximum 8-hour ozone; 4 day lag; May–September
- h. Metric is daily maximum 8-hour ozone; warm season; April–August, 1999–2002
- i. Metric is daily maximum 8-hour ozone; 2-day lag (largest)
- j. Metric is daily maximum 8-hour ozone; all air exchange rates; all poverty levels
- k. Metric is daily maximum 8-hour ozone; Summer, 1985–1994 (penalized splines)
- l. Metric is daily maximum 8-hour ozone; Summer, 1985–1994 (natural splines)
- m. Metric is daily maximum 8-hour ozone; all year (8-hour max from 8-hour mean)
- n. Metric is daily maximum 8-hour ozone; all year (8-hour max from 1-hour max)
- o. Metric is daily maximum 8-hour ozone; 0-day lag; warm season; May–September

Table E.4.2.1-2. Health Impact Functions Used to Estimate PM2.5-Related Health Effects

Endpoint	Author/Study/Location (If Applicable)	Age Range	Notes
Mortality, all cause	Krewski et al. (2009); 116 U.S. cities	30–99	a
Mortality, all cause	Lepeule et al. (2012); 6 eastern cities	25–99	a
Mortality, all cause	Woodruff et al. (1997); 86 cities	0–0	a
Mortality, all cause	Expert Elicitation A (2006)	30–99	a
Mortality, all cause	Expert Elicitation B (2006)	30–99	a,b
Mortality, all cause	Expert Elicitation C (2006)	30–99	a,c
Mortality, all cause	Expert Elicitation D (2006)	30–99	a,d
Mortality, all cause	Expert Elicitation E (2006)	30–99	a,e
Mortality, all cause	Expert Elicitation F (2006)	30–99	a,f,g
Mortality, all cause	Expert Elicitation G (2006)	30–99	a,h,i
Mortality, all cause	Expert Elicitation H (2006)	30–99	a,j
Mortality, all cause	Expert Elicitation I (2006)	30–99	a,k,l
Mortality, all cause	Expert Elicitation J (2006)	30–99	a,m,n,o,p
Acute bronchitis	Dockery et al. (1996); 24 communities	8–12	a
Acute myocardial infarction, non-fatal	Zanobetti and Schwartz (2009); 26 U.S. communities	18–99	q
Asthma exacerbation, cough	Ostro et al. (2001); Los Angeles, CA	6–18	q
Asthma exacerbation, shortness of breath	Ostro et al. (2001); (Los Angeles, CA	6–18	q
Asthma exacerbation, wheeze	Ostro et al. (2001); Los Angeles, CA	6–18	q
Emergency room visits, asthma	Mar et al. (2010); Greater Tacoma, WA	0–99	q
Hospital admissions, less myocardial infarctions	Zanobetti et al. (2009); 26 U.S. communities	65–99	q,t
Hospital admissions, asthma	Babin et al. (2007); Washington D.C.	1–17	q
Hospital admissions, all respiratory	Zanobetti et al. (2009); 26 U.S. communities	65–99	q,r
Hospital admissions, chronic lung disease	Moolgavkar (2000); Los Angeles, CA	18–64	q
Lower respiratory symptoms	Schwartz and Neas (2000); 6 U.S. cities	7–14	q
Upper respiratory symptoms	Pope et al. (1991); Utah Valley; UT	9–11	q
Minor restricted activity days	Ostro and Rothschild (1989); Nationwide	18–64	q
Work loss days	Ostro (1987); Nationwide	18–64	q

Notes:

- | | |
|---|---|
| <ul style="list-style-type: none"> a. 24-hour mean/quarterly mean b. Unconditional distribution; 1% no causality included c. Unconditional distribution; 5% no causality included d. Unconditional distribution; 30% no causality included e. Range from 4 to 7 µg f. Range from > 10 to 30 µg; unconditional distribution; 1% no causality included g. Range from > 10 to 30 µg; unconditional distribution; 2% no causality included h. Range from > 16 to 30 µg; no threshold; conditional distribution i. Range from > 16 to 30 µg; no causality j. Range from >7 to 30 µg | <ul style="list-style-type: none"> k. Range from 4 to 10 µg; unconditional distribution; 2% no causality included l. Range from 4 to 10 µg; unconditional distribution; 25% no causality included m. Range from 4 to 16 µg; threshold 0 to 5 µg; conditional distribution n. Range from 4 to 16 µg; threshold 5 to 10 µg; conditional distribution o. Range from 4 to 16 µg; no threshold p. Range from 4 to 16 µg; no causality q. 24-hour mean r. All seasons |
|---|---|

E.4.2.2 Valuation Metrics

NHTSA also used BenMAP-CE to estimate monetized health-related benefits (based on VSL studies, lost wages, health care expenses, and “willingness-to-pay”) associated with the health impacts. These estimates are derived using a set of monetary surrogates for the various health effects developed by EPA and public health researchers. BenMAP-CE also tracks changes over time in willingness to pay for reductions in health risks and includes adjustment factors that incorporate the effect of inflation on health-care costs.

The assessment of monetized health-related benefits involves assigning monetary values to each health endpoint and totaling all benefits associated with changes in pollutant exposures. Different valuation methods are used for the various health endpoints. The monetary surrogate value for mortality is derived using a VSL approach; that is, the additional cost that individuals would be willing to bear for reductions in risks that, in the aggregate, reduce the expected number of fatalities by one (EPA 2018a). The VSL used for this analysis is identified in BenMAP-CE as \$8.7 million (in 2015-equivalent dollars).

Valuation methods for morbidity endpoints (non-fatal health effects) include approaches referred to as cost of illness (COI), willingness to pay (WTP), and lost wages or productivity (EPA 2018a). COI estimates comprise a range of approaches that account for the costs of medical care and in some cases lost wages. WTP approaches refer to methods in which voluntary payments to avoid disease are directly or indirectly estimated and used to estimate monetized health-related benefits. Finally, lost-productivity methods value the time lost to illness using wage rates or the estimated value of leisure or school time (EPA 2018a). For all endpoints, the total monetized health-related benefit for a given endpoint is estimated by multiplying the monetary values for that endpoint by the estimated change in the number of “cases” of the endpoint. For most studies, morbidity values are small compared to the mortality values. Therefore, the specific valuation methods used for morbidity have only a small effect on the overall monetized health-related benefits estimates.

Tables E.4.2.2-1 and E.4.2.2-2 list the endpoints and methods used for the valuation portion of the analysis for ozone and PM_{2.5}, respectively. The endpoints include monetized health-related benefits associated with changes in mortality, and a range of morbidity endpoints. All monetized health-related benefits results for this analysis are presented in 2010-equivalent dollars.

In the aggregation and valuation step, the results were aggregated for the national scale. Default options were applied in the aggregation and pooling of the results. Similarly, EPA standard health care inflation values (defaults) were used for the valuation. The results are given in 2010-equivalent dollars. As stated above, NHTSA presents the results of the BenMAP-CE analysis estimating monetized health-related benefits in Section VII of the FRIA.

Table E.4.2.2-1. Valuation Functions Used to Estimate Ozone-Related Monetized Health-Related Benefits

Endpoint	Author/Study/(If Applicable)	Valuation Method	Notes
Mortality, all cause	Bell et al. (2004); 95 U.S. cities	VSL	a,b
Mortality, all cause	Bell et al. (2005); U.S. and non-U.S.	VSL	a,b
Mortality, all cause	Huang et al. (2005); 19 U.S. cities	VSL	a,b
Mortality, all cause	Ito et al. (2005)	VSL	a,b
Mortality, all cause	Levy et al. (2005); U.S. and non-U.S.	VSL	a,b
Mortality, all cause	Schwartz (2005); 14 U.S. cities	VSL	a,b
Mortality, all cause	Smith et al. (2009); 98 U.S. cities	VSL	a,b
Mortality, all cause	Zanobetti and Schwartz (b) (2008); 48 cities	VSL	a,b
Emergency room visits, asthma	Mar and Koenig (2009)		a
Minor restricted activity days	Ostro and Rothschild (1989); Nationwide	WTP	c,d
Asthma exacerbation, one or more symptoms	Schildcrout et al. (2006)	WTP	e,f
School loss days	Gilliland et al. (2001)		g

Notes:

- a. Age: 0–99
- b. Based on 26 VSL studies
- c. Age: 18–64
- d. 1 day; CV studies
- e. Age: 6–18
- f. Bad asthma day; Rowe and Chestnut (1986)
- g. Age: 5–17

VSL = value of statistical life; WTP = willingness to pay; CV = contingent valuation

Table E.4.2.2-2. Valuation Functions Used to Estimate PM2.5-Related Monetized Health-Related Benefits

Endpoint	Author/Study	Valuation Method	Notes
Mortality, all cause	Lepeule et al. (2012); 6 eastern U.S. cities	VSL	a,b,d
Mortality, all cause	Krewski et al. (2009); 116 U.S. cities	VSL	a,b,c
Mortality, all cause	Woodruff et al. (1997); 86 Cities	VSL	a,b
Mortality, all cause	Expert Elicitation A (2006)	VSL	a,b,c
Mortality, all cause	Expert Elicitation B (2006)	VSL	a,b,c
Mortality, all cause	Expert Elicitation C (2006)	VSL	a,b,c
Mortality, all cause	Expert Elicitation D (2006)	VSL	a,b,c
Mortality, all cause	Expert Elicitation E (2006)	VSL	a,b,c
Mortality, all cause	Expert Elicitation F (2006)	VSL	a,b,c
Mortality, all cause	Expert Elicitation G (2006)	VSL	a,b,c
Mortality, all cause	Expert Elicitation H (2006)	VSL	a,b,c
Mortality, all cause	Expert Elicitation I (2006)	VSL	a,b,c
Mortality, all cause	Expert Elicitation J (2006)	VSL	a,b,c
Hospital admissions, all respiratory	Zanobetti et al. (2009)	COI	e,f
Hospital admissions, asthma	Babin et al. (2007)	COI	f,g
Hospital admissions, chronic lung disease	Moolgavkar (2000); Los Angeles, CA	COI	f,h,i

Endpoint	Author/Study	Valuation Method	Notes
Hospital admissions, all cardiovascular	Zanobetti et al. (2009); Bell et al.(2008); Peng et al. (2008 and 2009)	COI	e,f
Hospital admissions, all cardiovascular	Moolgavkar (2000); Los Angeles, CA	COI	f,h,i
Lower respiratory symptoms	Schwartz and Neas (2000); 6 U.S. cities	WTP	h,j,k
Upper respiratory symptoms	Pope et al. (1991); Utah Valley, UT	WTP	h,j,l
Asthma exacerbation	Ostro et al. (2001)	WTP	m,n
Emergency room visits, asthma	Glad et al.; Mar et al. (2004 and 2010); Slaughter et al.(2005)		o
Acute bronchitis	Dockery et al. (1996); 24 communities	WTP	a,p,q
Acute myocardial infraction	Zanobetti et al. (2009)		r
Minor restricted activity	Ostro and Rothschild (1989); Nationwide	WTP	h,i,j
Work loss days	Ostro (1987); Nationwide	Median daily wage	h,i,s

Notes:

- a. 24-hour mean/quarterly mean
- b. Based on 26 value-of-statistical-life (VSL) studies
- c. Age: 30–99
- d. Age: 25–99
- e. Age: 65–99
- f. Medical costs + wage loss
- g. Age: 0–17
- h. 24-hour mean
- i. Age: 18–64
- j. 1 day, CV studies
- k. Age: 7–14
- l. Age: 9–11
- m. Bad asthma day, Rowe and Chestnut (1986)
- n. Age: 6–18
- o. Age: 0–99
- p. 6-day illness, CV studies
- q. Age: 8–12
- r. Age: 18–99
- s. County-specific

VSL = value-of-statistical life; COI = cost of illness; WTP = willingness to pay; CV = contingent valuation

E.4.2.3 Post-Processing and Quality Assurance Procedures

As a first step in the quality assurance process for the BenMAP-CE application procedures and results, NHTSA prepared a protocol document outlining each application step. NHTSA then used the protocol document to check each application and to ensure quality. Following the application of BenMAP-CE, NHTSA duplicated a subset of the BenMAP-CE runs using another computer and confirmed the results to be the same. Finally, NHTSA checked the results for each simulation pair for consistency with emissions and the CMAQ modeling results.

NHTSA then prepared tabular and graphical summaries of the results, as presented in the following sections, and systematically checked the contents of the tables and charts by comparing the values with the raw BenMAP-CE report files.

E.4.3 BenMAP-CE Results

As noted earlier, NHTSA used BenMAP-CE to estimate the reduction in the incidence of various health-related endpoints and to develop a monetized estimate of the health-related benefits for each action alternative. The remainder of this section provides the BenMAP-derived mean values for health incidence results. The valuation estimates are presented in Section VII of the FRIA alongside the health valuation estimates from the CAFE model, which are calculated based on EPA estimates of health damage costs developed for use in air quality planning and regulatory analysis. All of the health incidence results are rounded to two significant figures.

E.4.3.1 Direct and Indirect Impacts

Tables E.2.3-1 and E.2.3-2 list the emissions associated with the action alternatives for the direct and indirect impact analysis. This section presents the health impacts and monetized-health impacts for the emission changes associated with the alternatives.

Ozone

Table E.4.3.1-1 lists BenMAP-CE results for ozone mortality (reduction in number of cases) for the eight action alternatives for the direct and indirect impact analysis. The reductions in premature mortality incidence are for the entire contiguous United States. There are no results for the No Action Alternative because this is the baseline to which the CMAQ results under the action alternatives were compared within the BenMAP-CE tool (see the list of simulation pairs in Section E.4.2, *BenMAP-CE Application Procedures*).

Table E.4.3.1-1. BenMAP-CE Aggregated Incidence Results for Ozone-Related Mortality: Estimated Nationwide Reduction in Premature Mortality, Direct and Indirect Impacts

Epidemiology Study	Reduction in Number of Cases							
	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Mortality, non-accidental (Bell et al.)	4	4	4	3	3	1	1	1
Mortality, non-accidental (Ito et al.)	10	8	8	7	4	4	3	3
Mortality, non-accidental (Schwartz)	7	7	6	6	3	3	1	1
Mortality, non-accidental (Smith et al.)	4	4	4	3	3	1	1	1
Mortality, all cause (Bell et al.)	21	19	19	17	10	10	4	6
Mortality, all cause (Levy et al.)	29	27	25	23	15	12	6	8
Mortality, all cause (Zanobetti and Schwartz)	12	12	10	10	6	6	4	4
Mortality, cardiopulmonary (Huang)	6	5	5	5	3	3	1	2

The results vary by epidemiology study and by alternative. Overall, these reductions are small. Nationwide, some locations experience increases in premature mortality, and some locations have reductions but with a slight net overall reduction nationwide. Alternative 1 is associated with most reductions in mortality incidence, and Alternative 7 is associated with fewest reductions. The results for Alternatives 2 and 3 are very similar.

Table E.4.3.1-2 lists the BenMAP-CE results for other ozone-related health effects (reduction in number of cases) and associated endpoints (morbidity) analysis. In some cases, the studies cover different age groups, as indicated. The reductions in incidence for all endpoints are for the entire contiguous United States. For all endpoints considered here, the fewest reductions are associated with Alternative 7 and the most reductions are associated with Alternative 1.

Table E.4.3.1-2. BenMAP-CE Aggregated Incidence Results for Ozone-related Morbidity: Estimated Nationwide Reduction in Various Morbidity Endpoints, Direct and Indirect Impacts

Epidemiology Study	Reduction in Number of Cases							
	Alt1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Emergency room visits, asthma	110	98	91	80	51	47	25	29
Hospital admissions, all respiratory	9	8	8	7	5	3	2	2
Asthma exacerbation, one or more symptoms	8,800	8,800	8,100	6,800	4,700	4,100	2,000	2,700
School loss days (age 5–17)	17,000	16,000	15,000	13,000	8,500	7,800	4,200	4,930
Minor restricted-activity days (age 18–65)	24,000	23,000	21,000	18,000	12,000	11,000	5,700	7,100

PM2.5

Table E.4.3.1-3 lists BenMAP-CE results for PM2.5 mortality (reduction in number of cases) under the action alternatives for the direct and indirect impacts analysis. The mortality estimates are based on both epidemiology literature and expert elicitation in which experts were asked to develop estimates of the increment in mortality that would be associated with increments of PM2.5 exposures, based on their understanding of the epidemiological literature taken as a whole (EPA 2018a).

The results vary by study, due to the use of different study populations and exposure-response relationships, and by alternative. Overall, these reductions are small as some locations experience increases in premature mortality and some locations have reductions, but with a slight net overall reduction nationwide. Alternative 7 is associated with the fewest net reductions in mortality incidence and Alternative 1 is associated with the most net reductions. The results for Alternatives 2 and 3 are very similar.

Table E.4.3.1-3. BenMAP-CE Aggregated/Pooled Incidence Results for PM2.5-related Mortality: Estimated Nationwide Reduction in Premature Mortality, Direct and Indirect Impacts

	Reduction in Number of Cases							
	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Epidemiology Literature								
Mortality, All Cause (Krewski et al.)	13	12	11	11	7	9	3	6
Mortality, All Cause (Lepule et al.)	29	26	25	24	16	21	7	14
Infant Mortality (Woodruff et al.)	0	0	0	0	0	0	0	0
Expert Elicitation								
Expert A	49	44	44	39	29	39	10	24
Expert B	39	39	34	29	24	29	10	19
Expert C	39	34	34	34	19	29	10	19
Expert D	29	24	24	24	15	19	5	15
Expert E	63	58	53	53	34	49	15	29
Expert F	39	34	34	29	19	39	5	15
Expert G	24	19	19	19	15	15	5	10
Expert H	29	24	24	24	15	19	5	15
Expert I	39	34	34	34	19	29	10	19
Expert J	29	29	29	24	19	24	5	15

Table E.4.3.1-4 lists BenMAP-CE results for other PM2.5-related health effects (reduction in number of cases) and associated endpoints (morbidity) for the direct and indirect analysis.

Table E.4.3.1-4. BenMAP-CE Aggregated/Pooled Incidence Results for PM2.5-related Morbidity: Estimated Nationwide Reduction in Various Morbidity Endpoints, Direct and Indirect Impacts

Epidemiology Study	Reduction in Number of Cases							
	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6	Alt 7	Alt 8
Acute bronchitis (age 8–12)	16	14	13	13	10	12	3.8	8.6
Acute myocardial infarction, non-fatal (age 18–99)	1.5	0.86	0.86	0.86	0.86	0.86	0	0.86
Asthma exacerbation (age 6–18)	1,400	770	770	770	770	770	0	770
Emergency room visits, asthma (all ages)	11	11	11	11	6.7	6.7	2.2	4.5
Hospital admissions, less myocardial infarctions (age 65–99)	3.2	3.2	3.2	3.2	3.2	3.2	0	3.2
Hospital admissions, asthma (age 1–17)	2.8	2.8	2.8	2.8	2.8	2.8	0	2.8
Hospital admissions, all respiratory (age 65–99)	0.26	0.26	0.26	0.26	0.13	0.13	0	0
Hospital admissions, chronic lung disease (age 18–64)	0.82	0.82	0.41	0.41	0.41	0.41	0	0
Lower respiratory symptoms (age 7–14)	200	180	180	180	120	170	50	120
Upper respiratory symptoms (age 9–11)	10,000	8,400	8,400	8,400	5,100	6,700	1,700	5,100
Minor restricted-activity days (age 18–64)	380	190	190	190	190	190	0	190
Work loss days (age 18–64)	1,400	1,400	1,400	1,400	920	1,400	460	920

Notes:

PM2.5 = particulate matter with diameter equal to or less than 2.5 microns

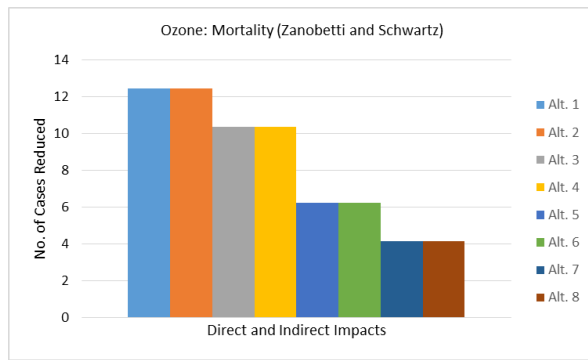
For all endpoints considered here, the fewest reductions are associated with Alternative 7 and the most reductions are associated with Alternative 1.

E.4.3.2 Summary of BenMAP-CE Results

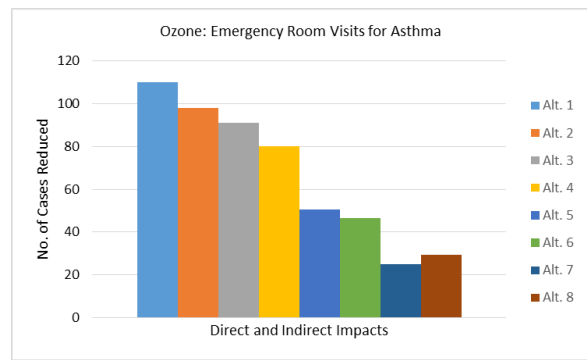
One of the goals of this application was to compare the health effects across the range of alternatives. Figures E.4.3.2-1 and E.4.3.2-2 graphically display the nationwide reduction in the number of cases associated with selected health endpoints for ozone and PM2.5. For ozone (Figure E.4.3.2-1), the endpoints are mortality (Zanobetti and Schwartz 2008), emergency room visits for asthma hospital admissions for respiratory symptoms, and minor restricted-activity days. For PM2.5 (Figure E.4.3.2-2), the endpoints are mortality (Krewski et al. 2009), emergency room visits for asthma hospital admissions for respiratory symptoms, and minor restricted-activity days. Note that the scales are different for each plot.

Figure E.4.3.2-1. BenMAP-Derived Changes in Selected Health Outcomes for the Direct and Indirect Impacts Analyses: Ozone (Reduction in the Number of Cases)

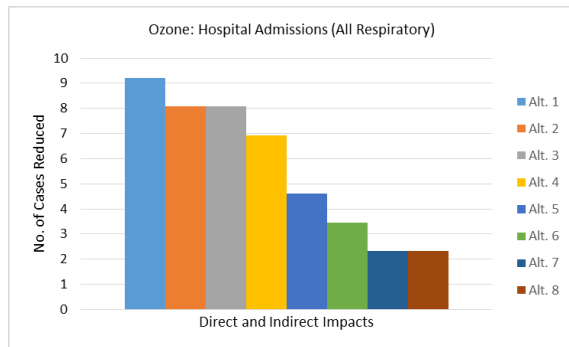
(a) Mortality



(b) Emergency Room Visits for Asthma



(c) Hospital Admissions for Respiratory Symptoms



(d) Minor Restricted-Activity Days

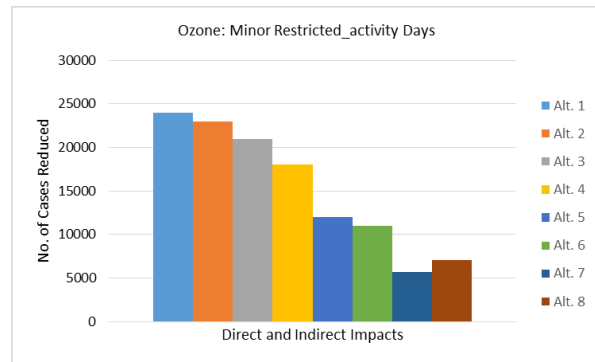
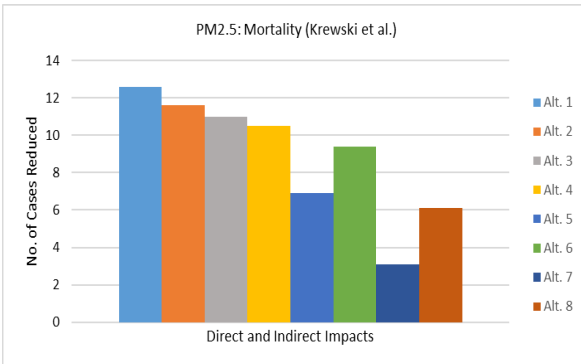
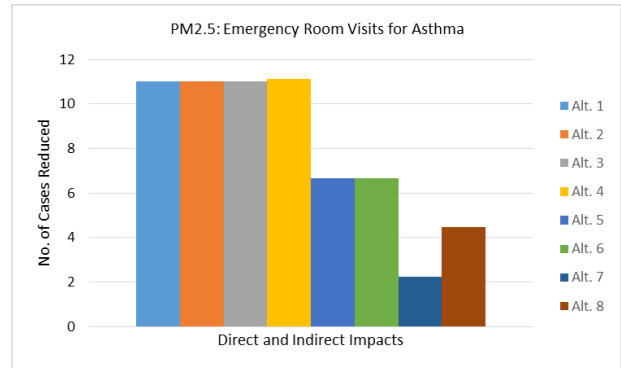


Figure E.4.3.2-2. BenMAP-Derived Changes in Selected Health Outcomes for the Direct and Indirect Impacts Analyses: PM2.5 (Reduction in the Number of Cases)

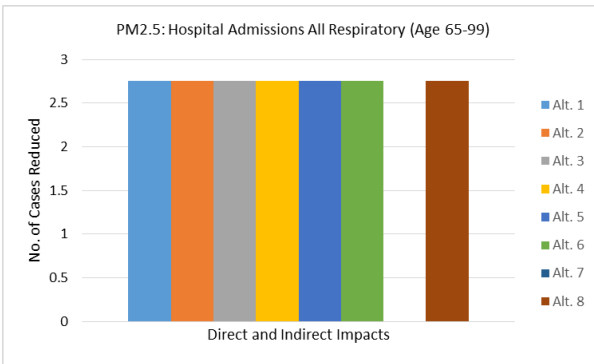
(a) Mortality



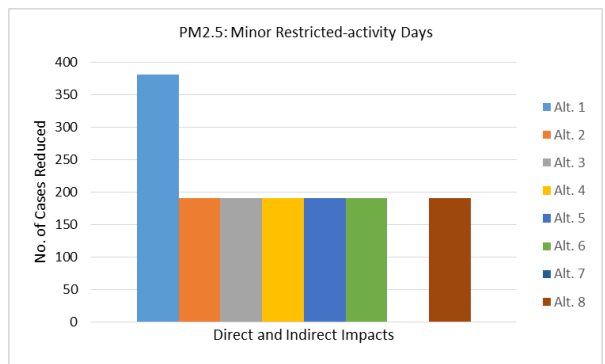
(b) Emergency Room Visits for Asthma



(c) Hospital Admissions for Respiratory Symptoms



(d) Minor Restricted-Activity Days



In summary:

- The relative changes in health effects incidences are consistent with the changes in emissions for the action alternatives. Because they are driven by the CMAQ modeling results, the BenMAP-CE results are also affected by the emission changes, their spatial distributions in relation to population, and the complex (and often non-linear) chemical reactions in the atmosphere throughout each of the different regions during the course of the annual simulation period.
- Alternative 7 is associated with the fewest reductions in cases of health effects. Alternative 1 is associated with the most reductions in the number of cases of health effects. Alternatives 2 through 6 and Alternative 8 fall between the least and most stringent.

The estimated health-related benefits associated with mortality are much greater than those associated with the morbidity endpoints, and the health-related benefits associated with PM2.5 are slightly greater than those associated with ozone.

E.4.3.3 Attributes, Limitations, and Uncertainties

The BenMAP-CE tool incorporates a wide variety of studies that can be used to quantify and monetize health effects resulting from reductions in air pollutant concentrations. The epidemiological studies address a variety of different health endpoints and, in some cases, multiple studies (involving different populations or concentration-response functions) allow for some comparison. BenMAP-CE includes up-to-date valuation methods and data for the monetization of health impacts. BenMAP-CE also incorporates advanced statistical methods for aggregating and weighting the results to obtain both mean values and information about the likelihood (probability) that the value will be within a given range. A primary advantage of BenMAP-CE is that it can incorporate the change in air quality directly from air quality model output files. Therefore, BenMAP-CE accounts for spatial and temporal differences in the changes in air quality and relates these to population. For this analysis, selection of the health effects studies and valuation methods were based on the BenMAP-CE (configuration and aggregation, pooling and valuation) input files (which reference the studies and methods EPA considers the most relevant and applicable to the United States population as a whole).

Nevertheless, there are uncertainties associated with the estimation of changes in health effects and monetized health-related benefits associated with changes in ozone and PM_{2.5} air quality. For the health incidence calculations, BenMAP-CE includes an option to generate an average incidence estimate and range of results that assume variability in the inputs to the health impact functions. Variability is incorporated into most of the BenMAP-CE exposure-response algorithms by prescribing a dose-response parameter that assumes a Gaussian (bell-shaped) distribution about the mean value. In calculating the health effects, BenMAP-CE samples this distribution to develop a probability distribution of effect. The result is expressed as the mean value of the distribution. For the PM_{2.5} mortality expert elicitation functions, variability is accounted for in a variety of ways.

As discussed further in FRIA Section VII, NHTSA presents BenMAP-generated overall distributions in monetized health-related benefits (represented by 5th and 95th-percentile intervals) for mortality for ozone and PM_{2.5}, accounting for different methods of estimating health costs and WTP. Mortality is used to illustrate the uncertainty because most monetized health-related benefits are associated with mortality. In addition, FRIA Section VII presents the estimated dollar values for changes in PM_{2.5}-related premature deaths reported by alternative PM concentration cutpoints. This analysis helps to understand the dollar value fraction of PM_{2.5}-related premature deaths occurring at lower ambient concentration levels. Regarding the uncertainty with mortality risks, higher confidence is found for the magnitude of the risks for simulated PM_{2.5} concentrations that coincide with the bulk of the observed PM_{2.5} concentrations in epidemiological studies that are used to estimate the benefits. Less confidence is found in the risk for simulated PM_{2.5} concentrations that fall below the bulk of the observed PM_{2.5} concentration data used in these studies. There are uncertainties inherent in identifying any point at which the confidence in reported associations decreases appreciably, and the scientific evidence provides no clear dividing line.

One approach that has been used to illustrate the relative confidence is the concentration benchmark approach (also referred to as the Lowest Measured Level [LML] analysis), which has been used in several EPA regulatory impact analyses (EPA 2019, 2018b) and EPA's Policy Assessment for Particulate Matter (EPA 2011) by reporting the estimated PM_{2.5}-related premature deaths according to alternative concentration cutpoints.

LML analysis allows a reader to determine the portion of population exposed to annual mean PM_{2.5} levels at or above different concentrations, which provides insight into the level of uncertainty in the

estimated PM2.5 mortality benefits. These concentration benchmarks should not be viewed as concentration thresholds below which NHTSA and EPA would not quantify health benefits of air quality improvements.⁷ Rather, the benefit estimates are appropriate estimates because they reflect the full range of air quality concentrations associated with the emissions changes being evaluated. The Integrated Science Assessment for Particulate Matter (EPA 2009b) concluded that the scientific evidence is sufficient to determine that there is a causal relationship between long-term PM2.5 exposures and mortality, and that overall, the studies support the use of a no-threshold log-linear model to estimate mortality attributed to long-term PM2.5 exposure.

Modeling results from each scenario are stratified by estimated PM2.5 premature deaths according to the concentration at which they occurred: below the LML, between the LML and the NAAQS, and above the NAAQS for each of the eight alternatives (Table E.4.3.3-1). The estimated number of deaths above and below the LML varies considerably according to the epidemiology study used to estimate risk. Table E.4.3.3-1 identifies the LML for the two cohort studies used in this analysis. For Krewski et al. (2009), the LML is 5.8 µg/m³ and for Lepeule et al. (2012), the LML is 8 µg/m³. For Krewski, most of the mortalities are above the LML, while the majority of the Lepeule mortality is below the LML. Table E.4.3.3-1 also shows that a very small percentage of PM2.5-related premature deaths occurs above the NAAQS using either of these two studies. These results are sensitive to the annual mean PM2.5 concentration predicted by the air quality model in each 36-by-36-kilometer grid cell. The results should be viewed in the context of the air quality modeling technique used to estimate PM2.5 concentrations. In general, higher confidence is placed in the ability of CMAQ to estimate changes in annual mean PM2.5 concentrations than in the ability to estimate absolute PM2.5 concentrations.

Table E.4.3.3-1 Estimated Percent of Changes in PM2.5-related Premature Deaths above and below PM2.5 Concentration Cutpoints

Alternative	Epidemiological Study	Change in PM2.5-Related Premature Deaths Compared to No Action Alternative, Reported by Cutpoint			
		Total Mortality	Above NAAQS	Below NAAQS and Above LML ^a	Below LML ^a
Alt 1	Krewski	12.6	0.5	11.4	0.7
			4%	90%	6%
	Lepeule	28.5	1.1	5.4	22.0
			4%	19%	77%
Alt 2	Krewski	11.6	0.3	10.7	0.7
			2%	92%	6%
	Lepeule	26.2	0.6	4.2	21.4
			2%	16%	82%
Alt 3	Krewski	11.0	0.3	10.1	0.6
			2%	92%	5%
	Lepeule	24.8	0.6	3.4	20.8
			2%	14%	84%

⁷ For a summary of the scientific review statements regarding the lack of a threshold in the PM2.5-mortality relationship, see the technical support document *Summary of Expert Opinions on the Existence of a Threshold in the Concentration-Response Function for PM2.5-related Mortality* (EPA 2010).

Appendix E Air Quality Modeling and Health Impacts Assessment

Alternative	Epidemiological Study	Change in PM2.5-Related Premature Deaths Compared to No Action Alternative, Reported by Cutpoint			
		Total Mortality	Above NAAQS	Below NAAQS and Above LML ^a	Below LML ^a
Alt 4	Krewski	10.5	0.3	9.4	0.8
			2%	90%	8%
	Lepeule	23.6	0.6	1.4	21.6
			3%	6%	92%
Alt 5	Krewski	6.9	0.3	5.8	0.8
			4%	84%	12%
	Lepeule	15.5	0.6	2.9	12.0
			4%	19%	77%
Alt 6	Krewski	9.4	0.3	7.9	1.2
			3%	84%	13%
	Lepeule	21.3	0.8	6.2	12.0
			4%	29%	56%
Alt 7	Krewski	3.1	0.0	2.3	0.7
			0%	75%	24%
	Lepeule	6.9	0.0	0.2	6.7
			0%	3%	97%
Alt 8	Krewski	6.1	0.0	5.5	0.6
			0%	90%	10%
	Lepeule	13.7	0.0	2.9	10.9
			0%	21%	79%

Notes:

^a The LML of the Krewski study is 5.8 µg/m³ and 8 µg/m³ for Lepeule study.

Values less than 0.05 have been rounded to zero.

Sum of individual values may not equal total due to rounding.

LML = Lowest Measured Level

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E.6 PREPARERS

Josephine Bates, Senior Consultant, Ramboll

Ph.D., Environmental Engineering, Georgia Institute of Technology, Atlanta, 2018

M.S., Environmental Engineering, Georgia Institute of Technology, Atlanta, 2015

B.S., Environmental Engineering, Cornell University, Ithaca, NY, 2013

Edward L. Carr, Technical Director Air Quality and Health Risk, ICF

M.S., Atmospheric Science, University of Washington, 1983

B.S., Meteorology, San Jose State University, CA, 1979

Chao-Jung Chien, Senior Consultant, Ramboll

Ph.D., Atmospheric Chemistry and Organic Analytical Chemistry, University of North Carolina, Chapel Hill, 2001

B.A., Chemistry, National Cheng Kung University, Taiwan, 1989

Jeremy R. Horne, Senior Consultant, Ramboll

Ph.D., Mechanical and Aerospace Engineering, University of California, Irvine, 2018

M.S., Mechanical and Aerospace Engineering, University of California, Irvine, 2015

B.S., Mechanical Engineering, University of California, Irvine, 2012

Belle Hudischewskyj Guelden, Senior Air Quality and Health Risk Specialist, ICF

B.S., Meteorology, California State University, San Jose, 1980

A.S., Mathematics, Sierra Junior College, 1977

Courtney Taylor, Managing Consultant, Ramboll

M.S., Atmospheric Science, Colorado State University, Fort Collins, 2003

B.A., Environment, Economics, Politics, Claremont McKenna College, Claremont, 2000

Pradeepa Vennam, Consultant 3, Ramboll

Ph.D., Environmental Engineering, University of North Carolina at Chapel Hill, 2016.

M.S., Chemical Engineering, New Mexico State University, Las Cruces, 2010.

B.S., Chemical Engineering, GVPCOE, JNTU, Hyderabad, AP, India, 2008.

Yihua Wei, Senior Air Quality and Health Risk Specialist, ICF

M.S., Atmospheric Science, State University of New York at Albany, 1988

M.S., Physics, Indiana State University, 1986

B.S., Physics, Nanjing University, China, 1982