



# FFY 2019 MHSO ANNUAL REPORT

Every life counts.









Maryland

Highway

Safety

Office





# TABLE OF CONTENTS

| Maryland Highway Safety Office                             | 3  |
|--|----|
| Mission  |    |
| Vision   |    |
| Organizational Statement                                   |    |
| Our Values   |    |
| Funding  |    |
| Our Organization   | 5  |
| 2019 MHSO At A Glance                                      |    |
| Regional Law Enforcement, Outreach, and Education Grantees | 7  |
| Maryland Crash Data  |    |
| Program Areas  | 12 |
| Impaired Driving   |    |
| Occupant Protection  | 16 |
| Aggressive Driving   |    |
| Distracted Driving   | 23 |
| Pedestrian and Bicycle Safety                              | 24 |
| Motorcycle Safety  | 28 |
| Younger and Older Driver Safety                            | 30 |
| Law Enforcement Services                                   | 32 |
| Partnerships, Resources, and Outreach                      | 35 |
| Traffic Records  | 36 |
| Communications   | 40 |
| SHSP Measures  | 42 |
| Program Area Performance Measures                          | 44 |
| Aggressive Driving   | 44 |
| Distracted Driving   | 45 |
| Impaired Driving   | 46 |
| Occupant Protection  | 47 |
| Pedestrians (On Foot)                                      | 48 |
| Speed-Related  | 49 |
| Bicyclists   | 50 |
| Motorcycles  | 51 |
| Older Drivers (65-110)                                     | 52 |
| Young Drivers (16-20)                                      |    |
| NHTSA Core Performance Measures                            | 54 |
| Looking to the Future                                      | 58 |

# MARYLAND HIGHWAY SAFETY OFFICE

#### **Mission**

The Maryland Department of Transportation (MDOT) Maryland Highway Safety Office (MHSO) is dedicated to saving lives and preventing injuries by reducing motor vehicle crashes through the administration of a comprehensive network of traffic safety programs.

#### **Vision**

Moving Maryland Toward Zero Deaths since death is not an acceptable consequence of driving.

# **Organizational Statement**

The MDOT MHSO endeavors to provide expert highway safety leadership through quality programs, ethical grants management, professional and accountable staff, and exemplary customer service.

#### **Our Values**

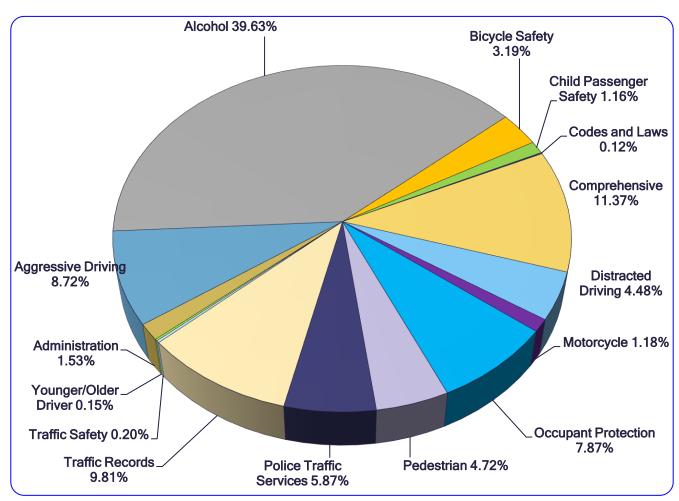
- 1. Life Even one person lost or injured on our roadways is too many.
- 2. **Professionalism** We seek to be leaders, innovators, and facilitators in the highway safety arena; the MHSO management team is committed to assisting employees to realize their full potential through training and professional development.
- 3. **Respect** People are our greatest resource. We welcome and respect the ideas and opinions of our staff, stakeholders, and the public; we respect individual differences and diversity within the State.
- Integrity We are honest and ethical in our dealings and strive to perform in a manner consistent with achieving trust among the community.
- 5. **Dedication** We are steadfastly dedicated to pursuing our vision and mission.
- 6. **Excellence** We achieve results by evaluating our efforts and continually improving the quality of our work.
- 7. **Performance Management** We are committed to analyzing available data to maximize the effectiveness of programs, personnel, and funding; and to create strategies that result in desired outcomes.
- 8. **Teamwork** We strive to function as a cohesive unit at the statewide and local levels to provide the best possible impact for programs and funding.
- 9. Customer Focus We seek to provide premier customer service.
- 10. Collaboration The MHSO's management and staff value the input of stakeholders and seek to capitalize on the knowledge and experience of partner organizations to help accomplish our mission.

## **Funding**

The MHSO receives funding from the National Highway Traffic Safety Administration (NHTSA) for use at the statewide and local levels. The Highway Safety Act of 1966 authorized the first federal highway safety program: the State and Community Highway Safety Grant Program (Section 402). Since then, Congress has revised national highway safety grant programs many times through reauthorizing legislation, creating new incentive grants, penalties, and sanctions. Maryland's highway safety program is funded through federal appropriations, and state laws can impact the amount and type of funding the state receives. The Fixing America's Surface Transportation (FAST) Act is the transportation bill that authorizes the current federal transportation programs, including Maryland's highway safety program.

The MHSO submits its plan for allocating these funds to the NHTSA Administration by way of a Highway Safety Plan (HSP). The MHSO utilizes formulas and strategic planning models to allocate these funds into the jurisdictions and grant-funded projects are evaluated as having potential at meeting the State's traffic safety goals, also outlined in the State's HSP.

The percentage of funds expended by program area is provided below:



Note: The chart above represent funds from the NHTSA. The MHSO also distributes State funds for highway safety projects.

# **Our Organization**

Serving as the Governor's Highway Safety Representative and Administrator of the MDOT Motor Vehicle Administration (MVA), Christine Nizer provides overall leadership for the State's highway safety program. The MHSO Director and Deputy Director report directly to Administrator Nizer and manage a team of nearly 30 professionals, including a Communications Manager; a Business Services Specialist; a Safety Programs Section; a Law Enforcement Services Section; a Partnership, Resources, and Outreach Section; and a Finance Section.

Safety Programs is comprised of a Section Chief and four Program Managers who specialize in Occupant Protection/Distracted Driving Prevention, Impaired Driving Prevention, Aggressive Driving Prevention/Motorcycle Safety, and Pedestrian/Bicyclist Safety. This section also includes a Traffic Records Program Manager, who oversees the State Traffic Records Coordinating Committee (TRCC).

The Law Enforcement Services Section works directly with the police community across Maryland to increase and maintain support for highway safety and to assist in managing law-enforcement related highway safety grants. Managed by a Section Chief, this section includes four Law Enforcement Liaisons (LELs) and a Law Enforcement Manager.

The Partnerships, Resources, and Outreach (PRO) Section includes a Section Chief and four Outreach Program Managers. This team has responsibility for engaging local highway safety partners, as well as for furthering the implementation of local SHSPs. The section staff manages outreach programs for large employers, military installations, schools and universities, and younger and older drivers.

Led by a Finance Chief, the Finance Section manages financial operations and grants administration at the MHSO. The section has two Finance Managers, two Grants Managers, a Grant Specialist Supervisor, and a Data Processing Quality Assurance Specialist.

The Communications Manager establishes the strategic direction for MHSO communications efforts, including education/media campaigns, correspondence, and social media platforms. Working closely with office staff, MVA Communications, and other partners, the Communications Manager provides further exposure for highway safety efforts through public relations and earned media.

The Business Services Specialist is a multi-faceted position that provides guidance, resources, and office support to the entire MHSO Team.

#### 2019 MHSO At A Glance

For the first time since 2014, Maryland experienced a decrease in the number of traffic fatalities occurring on the State's roadways. In total, 513 people were killed in 2018, compared to a 5-year high of 558 in 2017. The number of fatal crashes decreased, as did the number of injury crashes and the total number of people injured in crashes in 2018. A brief overview of Maryland's 5-year crash summary is provided in the Maryland Crash Data section of this report.

While this is good news, Maryland is committed to sustaining the progress made in 2018. Helping jurisdictions establish local SHSPs is viewed as an integral piece of the solution to eliminating statewide traffic-related deaths and injuries. In FFY 2019, the MHSO assisted jurisdictions throughout the State on completing or implementing such plans, including: Cecil County; Harford County, Montgomery County; Prince George's County; and Washington County. Several other jurisdictions are in the process of completing plans and those are expected to be in place in FFY 2020. The MHSO has continued its relationship with the Baltimore Metropolitan Council (BMC) through the funding of a position to manage the development of local plans for BMC jurisdictions. These areas contribute to approximately half of the State's crashes.

In April 2019, the MHSO hosted the annual Highway Safety Summit. More than 200 participants attended presentations and emphasis area team sessions at the day-long conference dedicated to a statewide, coordinated, traffic safety plan that provides the framework for reducing highway fatalities and serious injuries on all public streets and highways. The event featured workshops on topics including: Data and Evaluation; Safety Culture; and Local highlights. Individual presenters included high-level officials from the MDOT and the Director of Traffic Safety Advocacy and Research for AAA. A press event accompanied the event, when Maryland announced the decrease in traffic fatalities from 2017 to 2018.

In FFY 2019 the MHSO continued to be almost fully staffed throughout the entire grant year. The former Chief retired in May 2018 and his replacement brought on board by year's end. In addition, the MHSO hired a new Deputy Director in November and hired employees to complete the staffing of the PRO Section. A major goal of the MHSO will be to minimize any disruptions caused by staff turnover and to continue to train and develop current staff.

Three MHSO team members received awards for dedication and commitment to traffic safety:

- Tom Lubinski, one of the MHSO's Western Maryland LELs, was recognized with the MHSO Olympian Award. Given by peers, the Olympian Award is the culmination of Tom's commitment to helping coworkers and partners and for his vital role as an Administrator in Maryland's Traffic Safety Specialist Program.
- The MHSO Step-Up Award was presented to Doug Mowbray, the MHSO's Traffic Records Program Manager, for his dedication to his own initiative at completing valuable highway safety program improvements.
- Tim Richards, Safety Programs Section Chief, received the MHSO Chief's Award. The award was presented in recognition of Tim's diligence and dedication to the quality of service that the MHSO provides its team members and highway safety partners.

# REGIONAL LAW ENFORCEMENT, OUTREACH, AND EDUCATION GRANTEES

The following is a list of the MHSO's FFY 2019 grantees, listed by jurisdiction and by area:

|                |                        |   | Aggressive<br>Driving | Distracted<br>Driving | Impaired<br>Driving | Occupant<br>Protection | Pedestrian<br>and Bicycle<br>Safety | Special<br>Projects |
|----------------|------------------------|---|-----------------------|-----------------------|---------------------|------------------------|-------------------------------------|---------------------|
|                | Law Enforcement        | Allegany County Sheriff's Office                      | Х                     | Х                     | X                   |                        |                                     |                     |
| any            |                        | Cumberland Police Department                          |                       | Х                     | X                   |                        |                                     |                     |
| Allegany       |                        | Frostburg State University Police                     |                       | Х                     | X                   |                        |                                     |                     |
|                | Law Enforcement        | Annapolis Police Department                           | Х                     | Х                     | Х                   |                        |                                     |                     |
|                |                        | Anne Arundel County Police<br>Department              | Х                     | Х                     | Х                   | Х                      | Х                                   |                     |
|                | Education and Outreach | Maryland Judiciary - Anne Arundel<br>County DUI Court |                       |                       | Х                   |                        |                                     |                     |
| gel            |                        | Maryland MVA  |                       |                       | X                   |                        |                                     |                     |
| Anne Arundel   |                        | Maryland MVA, Motorcycle Safety<br>Program            |                       |                       |                     |                        |                                     | Х                   |
| Ann            |                        | Partners In Care                                      |                       |                       |                     |                        |                                     | Х                   |
|                | Law Enforcement        | Baltimore City Police Department                      | Х                     | X                     | Х                   | Х                      | Х                                   |                     |
| >              |                        | University of Baltimore Police<br>Department          | Х                     |                       |                     |                        | Х                                   |                     |
| Baltimore City | Education and Outreach | Baltimore Metropolitan Council                        |                       |                       |                     |                        | Х                                   | Х                   |
| more           |                        | Maryland Institute College of Art                     |                       |                       |                     |                        | Х                                   |                     |
| Balti          |                        | Morgan State University                               |                       | Х                     |                     |                        |                                     |                     |
|                | Law Enforcement        | Baltimore County Police<br>Department                 | Х                     | Х                     | Х                   | Х                      | Х                                   |                     |
|                | Education and Outreach | Baltimore County Department of<br>Health              |                       |                       |                     |                        |                                     | Х                   |
| ore            |                        | Baltimore County Police Dept -<br>Crash Recon         |                       |                       |                     |                        |                                     | Х                   |
| Baltimore      |                        | Chesapeake Region Safety Council                      |                       |                       |                     |                        |                                     | Х                   |
|                | Law Enforcement        | Calvert County Sheriff's Office                       | Х                     |                       | X                   |                        |                                     | Х                   |
| Calvert        | Education and Outreach | Calvert Alliance Against Substance<br>Abuse, Inc.     |                       |                       | X                   |                        |                                     |                     |
| ine            | Law Enforcement        | Caroline County Sheriff's Office                      | Х                     | Х                     | Х                   |                        |                                     |                     |
| Caroline       |                        | Denton Police Department                              | Х                     |                       | Х                   |                        |                                     |                     |
|                | Law Enforcement        | Carroll County Sheriff's Office                       | Х                     | Х                     | Х                   | Х                      |                                     |                     |
|                |                        | Hampstead Police Department                           | Х                     | Х                     | Х                   |                        |                                     |                     |
|                |                        | Mount Airy Police Department                          | Х                     |                       | Х                   |                        |                                     |                     |
|                |                        | Sykesville Police Department                          | Х                     | Х                     | Х                   |                        |                                     |                     |
|                |                        | Taneytown Police Department                           | Х                     | Х                     | Х                   |                        |                                     |                     |
|                |                        | Westminster Police Department                         | Х                     | Х                     | Х                   |                        |                                     |                     |
|                | Education and Outreach | Maryland Chiefs of Police                             |                       |                       | Х                   |                        |                                     | Х                   |
| =              |                        | Maryland Sheriffs' Association                        |                       |                       | X                   |                        |                                     |                     |
| Cec Carroll    |                        | Sykesville Freedom District Fire<br>Department        |                       |                       | Х                   |                        |                                     |                     |
| S =            | Law Enforcement        | Cecil County Sheriff's Office                         | Х                     | X                     | X                   | Х                      | Х                                   |                     |

|                           |                        |  | Aggressive<br>Driving | Distracted<br>Driving | Impaired<br>Driving | Occupant<br>Protection | Pedestrian<br>and Bicycle<br>Safety | Special<br>Projects |
|---------------------------|------------------------|--|-----------------------|-----------------------|---------------------|------------------------|-------------------------------------|---------------------|
|                           |                        | Elkton Police Department                           | Х                     | Х                     | Х                   | Х                      |                                     |                     |
| rles                      | Law Enforcement        | Charles County Sheriff's Office                    | Х                     |                       | Х                   |                        | Х                                   | Х                   |
| Chai                      |                        | Town of La Plata Police Department                 | Х                     | Х                     | Х                   | Х                      |                                     |                     |
| Dorchester Charles        | Law Enforcement        | Cambridge Police Department                        | Х                     |                       | ×                   |                        |                                     |                     |
|                           | Law Enforcement        | Frederick County Sheriff's Office                  |                       |                       | Х                   |                        |                                     |                     |
| erick                     |                        | Frederick Police Department                        | Х                     | Х                     | Х                   | X                      |                                     |                     |
| -rede                     | Education and Outreach | Frederick Bicycle Coalition                        |                       |                       |                     |                        | Х                                   |                     |
| Garrett Frederick         | Law Enforcement        | Garrett County Commissioners                       | Х                     | Х                     | Х                   |                        |                                     |                     |
|                           | Law Enforcement        | Aberdeen Police Department                         | Х                     | Х                     | Х                   | Х                      | Х                                   |                     |
|                           |                        | Bel Air Police Department                          | Х                     | Х                     | Х                   |                        | Х                                   |                     |
| p.c                       |                        | Harford County Sheriff's Office                    | Х                     | Х                     | Х                   | Х                      |                                     |                     |
| Harford                   |                        | Havre de Grace Police Department                   | Х                     |                       | Х                   |                        |                                     |                     |
|                           | Law Enforcement        | Howard County Department of Police                 | Х                     | X                     | X                   | X                      |                                     |                     |
|                           | Education and          | Americans For Older Driver Safety                  |                       |                       |                     |                        |                                     | Х                   |
| <del>Q</del>              | Outreach               | Crash Center for Research and Education (CORE)     |                       |                       |                     |                        |                                     | Х                   |
| Howard                    |                        | Maryland Judiciary - Howard County<br>DUI Court    |                       |                       | Х                   |                        |                                     |                     |
| Kent                      | Law Enforcement        | Kent County Sheriff's Office                       | Х                     |                       | Х                   |                        |                                     |                     |
|                           | Law Enforcement        | Gaithersburg Police Department                     | X                     | Х                     | Х                   | Х                      |                                     |                     |
| nery                      |                        | Montgomery County Police<br>Department             | Х                     | Х                     | Х                   | Х                      |                                     | Х                   |
| Montgomery                |                        | Montgomery County Sheriff's Office                 |                       |                       | Х                   |                        |                                     |                     |
| Θ                         | Law Enforcement        | Rockville Police Department                        | X                     | Х                     | Х                   | X                      |                                     |                     |
|                           | Law Enforcement        | Cheverly Police Department                         | Х                     | X                     | Х                   |                        |                                     |                     |
|                           |                        | City of Bowie                                      | X                     |                       | Х                   |                        | X                                   |                     |
|                           |                        | City of Hyattsville Police<br>Department           | X                     |                       | X                   |                        |                                     |                     |
|                           |                        | Greenbelt Police Department                        | Х                     | Х                     | Х                   | Х                      | Х                                   |                     |
|                           |                        | Laurel Police Department                           | Х                     | X                     | X                   | X                      |                                     |                     |
|                           |                        | Prince George's County Police<br>Department        | Х                     | Х                     | Х                   | Х                      | Х                                   |                     |
|                           |                        | Prince George's County Police<br>Department - BOP  |                       |                       | X                   |                        |                                     |                     |
| ge's                      |                        | Riverdale Park Police Department                   | Х                     | Х                     | Х                   |                        | Х                                   |                     |
| Prince George's           |                        | University of Maryland Department of Public Safety | Х                     | Х                     | Х                   | Х                      | Х                                   |                     |
| Princ                     | Education and Outreach | MML PEA Committee                                  |                       |                       |                     |                        |                                     | X                   |
| Some Queen<br>rset Anne's | Law Enforcement        | Queen Anne's County Sheriff's<br>Office            | Х                     | Х                     | Х                   |                        |                                     |                     |
| Some                      | Law Enforcement        | Princess Anne Police Department                    | Х                     |                       | Х                   |                        | Х                                   |                     |

|                  |                           |  | Aggressive<br>Driving | Distracted<br>Driving | Impaired<br>Driving | Occupant<br>Protection | Pedestrian<br>and Bicycle<br>Safety | Special<br>Projects |
|------------------|---------------------------|--|-----------------------|-----------------------|---------------------|------------------------|-------------------------------------|---------------------|
|                  |                           | Somerset County Sheriff's Office               |                       |                       | Х                   |                        |                                     |                     |
| ıry's            | Law Enforcement           | St. Mary's County Sheriff's Office             | Х                     |                       | Х                   |                        | Х                                   | Х                   |
| St. Mary's       | Education and<br>Outreach | St. Mary's County Circuit Court                |                       |                       | Х                   |                        |                                     |                     |
|                  | Law Enforcement           | Maryland State Police - Mobile Unit            |                       |                       | X                   |                        |                                     |                     |
|                  |                           | Maryland State Police - SPIDRE                 |                       |                       | Х                   |                        |                                     |                     |
|                  |                           | Maryland State Police - Statewide              | Х                     | Х                     | Х                   | Х                      | Х                                   | X                   |
|                  |                           | Maryland Transportation Authority<br>Police    | Х                     | Х                     | Х                   | Х                      |                                     | Х                   |
|                  | Education and Outreach    | Governors Highway Safety<br>Association        |                       |                       |                     |                        |                                     | Х                   |
|                  |                           | Maryland Department of Health                  |                       |                       |                     | Х                      |                                     |                     |
|                  |                           | Maryland Institute for EMS Systems             |                       |                       |                     | X                      | X                                   |                     |
|                  |                           | Maryland State Police - DRE                    |                       |                       | Х                   |                        |                                     |                     |
|                  |                           | Maryland State Police - Statewide              |                       |                       |                     |                        |                                     | Х                   |
|                  |                           | Maryland State's Attorneys'<br>Association     |                       |                       | Х                   |                        |                                     |                     |
|                  |                           | Metropolitan Washington Council of Governments |                       |                       |                     |                        | ×                                   |                     |
|                  |                           | University of Maryland Baltimore,<br>NSC       |                       |                       | X                   | X                      | ×                                   | Х                   |
| epi              |                           | Washington College                             |                       |                       |                     |                        |                                     |                     |
| Talbot Statewide |                           | Washington Regional Alcohol<br>Program         |                       |                       | Х                   |                        |                                     | Х                   |
| oot              | Law Enforcement           | Easton Police Department                       | Х                     | Х                     | Х                   | Х                      |                                     |                     |
| Talk             |                           | Talbot County Sheriff's Office                 |                       | Х                     | Х                   |                        |                                     |                     |
| E                | Law Enforcement           | Hagerstown Police Department                   | Х                     | Х                     | Х                   | Х                      |                                     |                     |
| ington           |                           | Hancock Police Department                      | Х                     |                       |                     |                        |                                     |                     |
| Washin           |                           | Washington County Sheriff's Office             | X                     | X                     | X                   |                        |                                     |                     |
|                  | Law Enforcement           | Fruitland Police Department                    | Х                     |                       | Х                   |                        |                                     |                     |
|                  |                           | Salisbury Police Department                    | Х                     | Х                     | Х                   |                        |                                     |                     |
| mico             |                           | Wicomico County Sheriff's Office               | Х                     | Х                     | Х                   |                        |                                     |                     |
| Wicomico         | Education and Outreach    | Wor-Wic Community College                      |                       |                       |                     |                        |                                     | Х                   |
|                  | Law Enforcement           | Berlin Police Department                       | Х                     | Х                     | Х                   |                        |                                     |                     |
|                  |                           | Ocean City Police Department                   | Х                     |                       | Х                   |                        | Х                                   |                     |
|                  |                           | Ocean Pines Police Department                  |                       | Х                     | Х                   |                        |                                     |                     |
|                  |                           | Pocomoke City Police Department                | Х                     | Х                     | Х                   |                        |                                     |                     |
| ster             |                           | Worcester County Sheriff's Office              | Х                     |                       |                     |                        |                                     |                     |
| Worcester        | Education and Outreach    | Worcester County Health<br>Department          |                       |                       | Х                   |                        |                                     |                     |

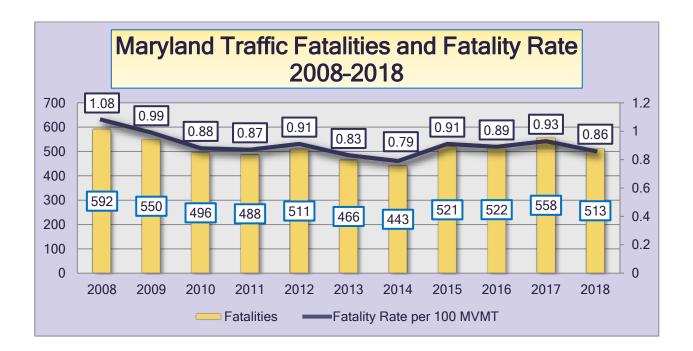
# MARYLAND CRASH DATA

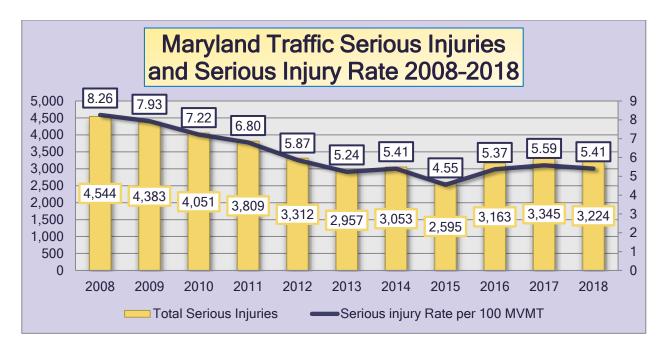
In 2018, 513 people were killed in 117,750 police-reported traffic crashes in Maryland, while 49,912 people were injured, and 83,460 crashes involved property damage only. In total, 288 drivers (234 vehicle drivers and 54 motorcycle operators), 139 non-motorists, and 86 passengers were killed on Maryland roads. On average, one person was killed every 17 hours, 137 people were injured each day (six injuries every hour), and 323 police-reported traffic crashes occurred every day.

The five-year fatality rate trend for Maryland increased from 0.89 in 2016 to 0.93 in 2017, then decreased to 0.86 in 2018. The overall fatality rate has consistently been lower than the national fatality rates every year since 1992.

|                         |        |         |         |         |         | 5 Year |
|-------------------------|--------|---------|---------|---------|---------|--------|
|                         | 2014   | 2015    | 2016    | 2017    | 2018    | AVG.   |
| Fatal Crashes           | 417    | 480     | 483     | 518     | 486     | 477    |
| Injury Crashes          | 30,369 | 30,721  | 34,720  | 34,651  | 33,885  | 32869  |
| Property Damage         | 67,171 | 76,917  | 85,075  | 80,188  | 83,460  | 78562  |
| Crashes                 | ·      |         | ·       | •       |         |        |
| Total Crashes           | 97,957 | 108,118 | 120,278 | 115,357 | 117,831 | 111908 |
|                         |        |         |         |         |         |        |
| Total of All Fatalities | 443    | 521     | 522     | 558     | 513     | 511    |
| Total Number Injured    | 44,158 | 44,929  | 50,921  | 51,371  | 49,934  | 48,263 |

Source: Crash data are obtained from the State Highway Administration which maintains a database derived from crash reports submitted to, and processed and approved by, the Maryland State Police. Data are subject to change.





Maryland maintains the TZD approach by developing interim targets to reduce fatalities by at least 50 percent in the next two decades (from 592 in 2008 to 296 in 2030).

Considering the federal guidelines detailed in Moving Ahead for Progress in the 21st Century (MAP-21) and the subsequent FAST Act, Maryland executives collaborated on revisions to the target-setting methodology. The initial TZD goal remains: 296 fatalities or fewer by 2030. The annual targets for each of the five performance measures required by the Federal Highway Administration (FHWA): fatalities, fatality rate, serious injuries, serious injury rate, and non-motorized fatalities and serious injuries, are set using an exponential trend line that connects the historical data to the 2030 goals.

Five-year averages are used to calculate projections, and the targets for each individual year are taken from the midpoint of the five-year average (e.g., 2019 annual interim target = midpoint of the 2017-2021 average). It should be noted that due to significant declines in serious injuries in recent years, the use of historical trends currently puts the State at or below current targets. Similarly, the emphasis area targets are also set using an exponential trend line that is fitted to the historical data. However, to more accurately reflect the data trends, a fixed 2030 endpoint is not used for the calculation of emphasis area targets.

All traffic safety documents in the state of Maryland conform to these methodologies, including the SHSP, the MHSO's Highway Safety Plan (HSP), the SHA's Highway Safety Improvement Plan (HSIP), and the SHA's Commercial Vehicle Safety Plan (CVSP). Additionally, all planning documents developed by the MHSO staff and all State-level reporting to the Governor use the SHSP emphasis area fatality and serious injury target-setting methodology.

### PROGRAM AREAS

### **Impaired Driving**

While only one in 50 crashes involving driver impairment resulted in a fatality in 2018, more than one-fourth (26.5 percent) of all fatal crashes involve alcohol and/or drugs. While not every impaired driving crash results in a fatality, impairment is often a factor when a fatality does occur. This relatively high rate of occurrence and correlation between impaired driving and fatal crashes and fatalities on Maryland roadways has made impaired driving a crucial focus point for traffic safety and law enforcement professionals throughout the state.

Coordinated from August through December, Checkpoint Strikeforce is the focal point of Maryland's HVE impaired driving prevention efforts. In FFY 2019 the MHSO continued its "Be Legendary" campaign which advocates for alternatives to driving impaired, such as rideshares, cabs, sober drivers, and public transportation. The campaign reached more than 11.5 million people throughout the Baltimore and Washington DC DMAs through a comprehensive campaign on digital television, internet and broadcast radio, a digital toolkit, and a partnership with the Baltimore Ravens. The MHSO received branding on two upper level corner signage boards for eight regular season games. The animated billboard is 0:15 in length and ran a minimum of 12 times per game.





The 15<sup>th</sup> annual *Maryland Remembers* ceremony was held on November 19, 2018 at the State House in Annapolis. The MHSO, the Washington Regional Alcohol Program (WRAP), and Mother Against Drunk Driving coordinate this event each year to remember the lives lost at the hands of impaired drivers. Governor Larry Hogan spoke at the event, and state officials and families packed into the State House Rotunda for the ceremony. Family members were invited to put pictures of their loves ones on display and to share personal stories of their loss.





Channel 2 News provided extensive coverage of the 2018 Maryland Remembers event.

Prior to and during St. Patrick's Day weekend, transportation and law enforcement officials in Maryland, Delaware and Virginia partnered to save lives on roadways as 36 agencies across the three states conducted high visibility enforcement along US 13 (Ocean Highway) and US 113 (Worcester Highway) on the Delmarva Peninsula. There was a 7.8 percent increase in overall citations from 639 in 2018 to 689 in 2019 and 36 impaired driving arrests were made in three Maryland counties. The MHSO provided educational outreach to bars and businesses along the corridor and used advertising on social media and billboards to help educate drivers on the dangers of driving impaired.

From August 9 through September 2, 2019, the MHSO coordinated a regional HVE campaign known as *Bay to Beach*. The initiative spanned six counties and included 4 MSP barracks, 1 MDTA detachment, and 9 police agencies and sheriff's offices. Participating agencies conducted saturation patrols and checkpoints through Labor Day and coordinated enhanced enforcement of speeding, seat belt use, and distracted driving. Bars and educational partners also participated in the effort, which coincided with Maryland's *Checkpoint Strikeforce* and *Be Legendary* initiatives and NHTSA's national impaired driving mobilization. A total of 2,030 stops was made along Route 50, a major Maryland road, which was 54 percent higher than in 2018. More than 3,000 citations were issued throughout the campaign.



In FFY 2019, the WRAP coordinated SoberRide, a safe ride service to prevent drunk driving, on St. Patrick's Day, Cinco de Mayo, Independence Day, Halloween, and during the winter holidays. This program helped remove 4,681 potential drunk drivers from Greater Washington's roadways - the second highest level of fiscal year ridership in SoberRide's 27-year history (surpassed only by last year's record-breaking ridership) and including record levels of ridership for WRAP's holiday, New Year's Eve and Independence Day campaigns. Nearly 800 of these rides either originated or ended in Maryland.

WRAP staff reached nearly 4,500 high school students with WRAP's innovative and multimedia education program, Alcohol Awareness for Students. Nearly 3,000 of these students were reached through 81 presentations in Maryland high schools.

WRAP entered its second year of its new, in-school, interactive and GEICO-resourced Youth Safety Events addressing topics including underage drinking and teen driving. WRAP staff conducted presentations in FFY 2019 in multiple high schools in the District of Columbia as well as in Montgomery and Prince George's Counties in Maryland. This program is built on the success of WRAP's previous GEICO Student Awards which honored area high school student groups promoting alcohol and drug-free lifestyles to their peers.

In December 2018, the WRAP hosted the 21st anniversary Law Enforcement Awards. At the event 14 Washington-metropolitan area police officers were recognized today for their outstanding commitment in the fight against drunk driving in Greater Washington and

presented with the area's 21st-annual Law Enforcement Awards of Excellence for Impaired Driving Prevention. Three Maryland officers received awards at this regional ceremony.

The TSRP assisted the Maryland General Assembly on several traffic related bills, including the Governor's Felony DUI Bill and Criminal Negligence Resulting in Life-Threatening injuries. The TSRP assisted the Maryland State's Attorneys' Association with coordinating a Summer Conference for 415 prosecutors, investigators, and victim-witness advocates, and provided 23 prosecutors with approximately 30 hours of training in impaired driving prosecution topics. Throughout the year, the TSRP provided or assisted in providing trainings throughout the State to roughly 1,400 safety stakeholders, including the following trainings:

- Administrative Training;
- Advanced Trial;
- Anne Arundel County Marijuana/Search and Seizure;
- Baltimore County Police Cannabis Training;
- Basics of DUI Prosecution;
- Commander's Summit Legal/Legislative Updates;
- Crash Photography;
- Digital Evidence;
- DRE Legal Updates;
- DUI Awards;
- DUI Institute for Police (3);
- Electronic Warrants;
- Ft. Meade DUI Awareness;
- Green Lab Marijuana Training in Montgomery County;
- Harford County Sheriff's Department Search and Seizure;
- Harford County Sheriff's Supervisor Training;
- Maryland Supervisor's Conference eWarrants;
- MDTA Cadet Training Basics of DUI;
- MSP Courtroom Testimony/Report Writing;
- MSP Training Courtroom Testimony:
- National Webinar Report Writing;
- Natural Resources Police Basics of DUI Stops, Searches and Seizures;
- Pedestrian Safety Enforcement:
- Prince George's County Basics of DUI Stops, Searches and Seizures;
- Trial Advocacy:
- Trial Awareness Training (2);
- UMD DUI/Search and Seizure:
- Washington Metro Police Basics of DUI Stops, Searches & Seizures;
- Washington Metro Police DUI Training; and
- Young Prosecutor Training (2).

During FFY 2019 Maryland DREs completed a total of 1,230 drug influence evaluations. During those evaluations, 509 blood specimens were obtained and 472 were sent to the MSP toxicology laboratory for analysis. During FFY 2019, 310 blood results were received from MSP FSD and distributed to the field.

Seventeen Advanced Roadside Impaired Driving Enforcement (ARIDE) classes were conducted in FFY 2019, training a total of 312 police personnel. ARIDE was created by NHTSA to address the gaps in training between the Standardized Field Sobriety Testing (SFST) and the DRE program.

Two DRE Schools were held in FFY 2019, with 46 officers/deputies/troopers were trained as DREs. A total of 39 DRE students completed their certification. One DRE Instructor Development Class was conducted training 12 DREs (6 from Virginia) as DRE Instructors. The six Maryland DREs were certified as instructors and there are currently 42 DRE instructors in Maryland. in addition to DRE

On July 2, 2019, the MHSO held a press event to kick off the seventh year of the State Police Impaired Driving Effort (SPIDRE) DUI Team. Formed in 2013, SPIDRE is a specially trained team of seven troopers who work in targeted areas where impaired driving is a leading cause of death and injury. Since its inception SPIDRE has been responsible for more than 3,000 arrests for suspected driving under the influence. Team members train other state police troopers and local law enforcement officers, and partner with local police departments and agencies to reduce alcohol related crashes throughout Maryland. MSP and MDOT provide funding for this effort.





Creative for MSP's SPIDRE team and a picture of the MSP Mobile Breath Testing Truck at the 2019 SPIDRE event in Jessup, MD.

The administration of the Ignition Interlock Program (IIP) falls under the MDOT MVA. In Fiscal Year 2019, 6,893 drivers were assigned to participate in the Ignition Interlock Program for the first time. More than 19,411 unique drivers participated in the ignition interlock program and 6,521 drivers successfully completed one or more referrals in FY19 and had no other active referrals after this completion date (as of 10/15/19). Between October 1, 2011 and September 30, 2019, 2,994 drivers re-entered the Ignition Interlock Program after having been removed from the program for noncompliance.

As part of Maryland's standardized performance and survey measures, the total number of DUI arrests that were made during the year's grant-funded enforcement activities was 1,018.

### **Occupant Protection**

In Maryland during 2018, nearly 2,300 passenger vehicle occupants were injured or killed in crashes. Despite increases in observed belt use rates in Maryland and across the nation, 20% of all Marylanders killed in motor vehicle crashes were not wearing seat belts. Research has shown that seat belts, when used properly, reduce the risk of fatal injury to front-seat passengers by 45.0% and reduce the risk of moderate to critical injury by 50.0 percent.

The overall observed seat belt usage rate for drivers and right front seat passengers in the State of Maryland in 2019, after weighting by probability of roadway selection and jurisdictional roadway-specific VMT, was 90.4 percent, representing a 0.1 percentage point increase over the previous year. The rate was based on observation of 32,433 vehicles and 40,206 occupants, representing 9.8 percent and 9.5 percent decreases, respectively, in the number of vehicles and occupants observed in the 2018 survey.

Belt use was highest among passenger cars and SUVs relative to pick-up trucks (91.3 percent vs. 83.6 percent, respectively). Seat belt usage was also highest among all front seat occupants traveling on Primary roads relative to Secondary and Local roads (91.6 percent vs. 89.6 percent and 87.8 percent). The roadway rates represented a decrease since 2018 for both Primary (-0.9 percent) and Local (-0.6 percent) roads but an increase of 1.2 percent for Secondary roads. Frederick County (95.4 percent) had the highest usage rate among Maryland's 13 NHTSA jurisdictions, followed by Baltimore (93.5 percent) and Carroll (92.9 percent) Counties. Overall, six of the 13 jurisdictions experienced an increase in combined usage rates over the past year.

In FFY 2019, the MHSO spent roughly \$192,000 for the May Click it or Ticket campaign, which ran from May 13 through June 2, 2019. The target demo for the media campaign was adults, 18 to 34 years of age with a skew toward males and target areas for media were predominantly the Baltimore and Washington DC Metropolitan areas. The primary strategy for the Spring campaign was anchored with the enforcement wave from May 21-June 2, and paid media. Marketing and enforcement campaigns were targeted to high-risk and low-use rate occupants and a secondary goal was to support and promote motor vehicle safety restraint use through social media. The media selection included outdoor, radio, television, and social and digital media. The MHSO utilized every platform available to increase the seat belt message throughout the State. Total impressions delivered throughout the campaign timeframe were nearly 22.6 million.

Examples of outdoor advertising and social media are as follows:











In FFY 2019, the MHSO started a program in southern Maryland that combined occupant protection enforcement with distracted driving enforcement. The program, called "Buckle Up, Phone Down," featured a total budget of \$4,000 and was piloted in three counties and featured five waves of targeted media and enforcement. The goal of the campaign was to activate the target audience and raise public awareness of the consequences of texting and driving through education and enforcement. The target demographic was 18-34-year-old adults with a male skew. Piloted counties included Calvert, Charles, and St. Mary's Counties and the main tagline of the campaign was "Buckle Up. Phone Down. Laws We Can Live With." The media selection included out-of-home, outdoor, radio, and social and digital media.

An average of 76,175 people was reached per flight. In addition, in-content and in-app digital ads were geofenced to area zip codes and billboard locations. As drivers drove through the southern Maryland counties, ads were served to them for the wave periods. These ads generated another 241,000 impressions, generating 592 clicks to the MHSO's website with an overall CTR of .25 percent.

Examples of out-of-home advertising supplied o area businesses included the following:









A paid social media buy with a goal of engagement was implemented. Engagement ads were geo-targeted to the three counties and featured the Sheriff from each county and officers from those respective counties. Examples of the ads include:









The MHSO participates in an annual event to kick off Click it or Ticket with a "border to border" seat belt enforcement operation. In FFY 2019, the MHSO's Occupant Protection Program Manager and the Law Enforcement Services Section coordinated a block of enforcement on Monday, May 20, 2019. The effort included a media event at the border between Baltimore County and Harford County which lasted for two hours, from 11:00 a.m. to 1:00 p.m. Representatives from the Harford County Sheriff's Office, Baltimore County Police Department and the MDOT MVA Highway Safety Office were interviewed by the media. Partnered enforcement agencies saw hundreds of vehicles pass through the channelized lanes of Route 1 and roughly 50 citations were issued to unbelted drivers and passengers. The event received substantial media coverage.

In late FFY 2019, the MHSO engaged a company to manufacture a seat belt rollover simulator. The simulator is mounted to its own trailer and features a motor than turns the standard cab-sized pickup truck body at a variable rate. The simulator has a ball hitch attached for towing to and from events and came with a set of two dummies that can be positioned inside the simulator. The rollover simulator will be used in a variety of outreach events and has already been used to display the effects of a rollover to students at a Howard County high school.



As part of Maryland's Standardized Performance and Survey Measures, the total number of seat belt citations that law enforcement issued during FFY 2019 grant-funded enforcement activities was 3,101.

#### Child Passenger Safety (CPS) - KISS & MIEMSS

Maryland's Child Passenger Safety (CPS) program largely originates from two grant-funded projects, namely Maryland Kids in Safety Seats (KISS) and the Maryland Institute for Emergency Medical Services Systems (MIEMSS). Both partners form a specialized combination of CPS education, training, and outreach on behalf of the MHSO.

During the grant year, KISS staff coordinated a total of 24 presentations and reached 307 participants with direct education. The audience for these presentations consisted mostly of family care providers, DHHS, or DSS staff, National Safety Council Risk Managers, adoptive parents, current parents or pregnant women or Judy Center/Family Support Center staff/clientele. Staff also worked with interpreters for a non-English Speaking refugee group and teachers from the Maryland School for the Deaf.

KISS staff took 1,861 Helpline calls, answered 341 dedicated KISS emails, attended three community fairs, and reached approximately 1,450 participants. Six Facetime calls were set up to assist Technicians with remote recertification observations and a total of 50,625 educational handouts were directly distributed to participants via presentations, fairs, or car seat events. Staff assisted with, or directly administered eight National Certification Courses, in Montgomery, Allegany, Howard, St Mary's, Wicomico, Harford, Queen Anne's and Carroll Counties, training 80 new Technicians statewide.

KISS staff held or directly supported 109 car seat events, held throughout the State, including Baltimore City, Baltimore, Anne Arundel, Queen Anne's, Harford, Prince George's, Queen Anne's, Talbot, St. Mary's, Montgomery, Wicomico, Worcester, Calvert, Cecil, Howard, Garrett, Allegany and Charles Counties. For events sponsored or supported by the KISS program, 1,603 seats were inspected, and summary forms show an overall statewide misuse rate of 80 percent. Misuse may include: wrong seat selection for the child, Harnessing errors, installation errors, or the car seat may be broken, recalled, crashed, or expired.

For FFY19, with all reports in, 545 seats were distributed via Car Seat Assistance Programs (CSAP) or a short-term Special Needs loaner program. With an average of one hour per appointment spent with caregivers receiving a CSAP seat, an estimated 545 hours were donated to the KISS program by CSAP volunteers. KISS direct shipped or delivered 292 car seats to CSAPs. During this year, LATCH manuals and thumb drives with manufacturer's instructions were purchased and sent to CSAPs to enable programs to provide greater technical assistance to families on a local level.

MIEMSS' CPS & OP Healthcare Project promoted proper and consistent use of car safety seats among children, seat belt use among youth and caregivers, and occupant protection measures taken by healthcare and EMS personnel to keep themselves and their patients as safe as possible. MIEMSS estimates that nearly 13,000 pieces of material were distributed this year to more than 4,000 agencies and 1,400 people. Four trainings were held, and a total of 164 people attended these trainings.

One of the trainings, April's workshop for newborn and NICU nurses, featured a neonatologist speaking on her research as well as hospital nurses who cover CPS, so the day was very applicable for attendees. The evaluations were very positive, and this type of workshop is planned to continue once every two to three years to meet demand.

Recruitment and retention of EMS and healthcare providers as CPSTs is an ongoing effort. MIEMSS worked closely with the Queen Anne's County EMS to help host a CPST class as the start to regular community involvement in CPS. Six of their staff attended and passed the class, and they have since successfully held a seat check in their community. Additionally, as part of our CPS recruitment of EMS and for National CPS Awareness Week, staff wrote and published an article in the Maryland EMS News that described some of the diverse ways in which EMS gets involved in CPS across the State.

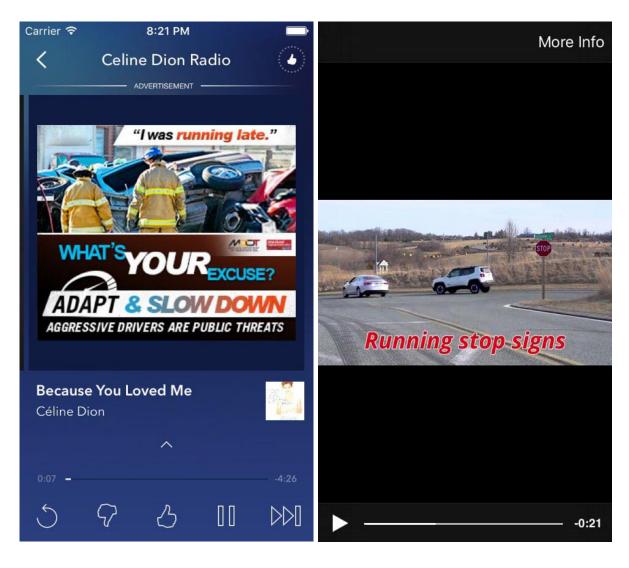
LATCH manuals were given to 7 agencies/CPSTs to use when they hold seat checks or work with families on installing their car seats (including special needs seats). Fourteen exhibits on CPS and OP were held this year with a rough estimate of 2,500 attendees. This includes exhibits at the regional and state EMS conferences, the Maryland Emergency Nurses Association conferences, the Maryland Occupational Therapy Association in-service, as well as large employer health fairs.

MIEMSS' project coordinator assisted at 16 seat checks this year (4 more than the goal), serving as a technician-checker sometimes, as a CPST-senior checker, and as an instructor/mentor/ re-certification sign-off person at times. The coordinator helped teach eight CPS Technician Certification Courses across the State, teaching approximately 80 new CPSTs. This grant continues to serve as a resource to special needs CPSTs and families across the state, creating and providing educational information, consulting on specific cases and helping with training.

### **Aggressive Driving**

During the latest five-year period, 2014 through 2018, aggressive drivers have been involved in an average of 4,251 crashes on Maryland roads each year. For the same five-year period, aggressive driving accounted for an annual average of 3.8 percent of all traffic crashes, 4.8 percent of all injury crashes, and 6.7 percent of all fatal crashes in Maryland. Aggressive driving was a factor in 5.2 percent of injuries and 6.8 percent of fatalities.

The MHSO continued its ADAPT campaign in FFY 2019 with an enforcement and education campaign geared toward stopping aggressive driving behaviors. ADAPT stands for Aggressive Drivers Are Public Threats (ADAPT) and messaging encourages drivers to avoid aggressive driving by taking steps to ADAPT their behavior. Goals this year were to: activate the target audience and raise public awareness of the consequences of aggressive driving; increase branding and recognition of ADAPT message in Maryland; increase motorists' awareness of law enforcement efforts to combat aggressive driving behaviors; and create a social climate that stigmatizes speeding and other aggressive driving behaviors as unacceptable behaviors. A total of 11.5 million impressions was made through outdoor media, digital media, internet and broadcast radio, and digital toolkits.





Law enforcement partners continued to actively enforce Maryland's aggressive driving laws during high visibility enforcement waves throughout the year. This year's ADAPT campaign was focused on four 10-day periods, one each in January, March, May and July. Enforcement efforts during the ADAPT waves culminated in more than 16,000 citations issued to drivers for aggressive behaviors behind the wheel.

In September 2019, the MHSO hosted the third annual ADAPT Aggressive Driving Prevention Awards ceremony. Approximately 85 law enforcement officers from across Maryland were recognized for their commitment to enforcing the state's aggressive driving laws. The officers represented 26 state, county and local police agencies.

As part of Maryland's Standardized Performance and Survey Measures, the total number of speeding citations that law enforcement issued during FFY 2019 grant-funded enforcement activities was 16,392.

### **Distracted Driving**

More than 54,000 distracted driving crashes occurred on Maryland roads each year between 2014 and 2018. For this latest five-year period, distracted driving was a factor in an annual average of one-half of all traffic crashes (48 percent), more than half of all injury crashes (54.4 percent), and about one third of all fatal crashes (33.3 percent). Distracted driving was a factor in 53.9 percent of injuries and 33.1 percent of fatalities. Thus, distracted driving is significantly over-represented in all crashes, and even more so in injury crashes. However, the difficulty in accurately capturing distracted driving in its various forms, especially cell phone use, as a cause on crash reports would indicate that distracted driving is, potentially, still under-reported. Hence, distracted driving is a major focus for traffic safety professionals in Maryland and across the nation.

Throughout the year, law enforcement agencies issued more than 5,100 citations for cell phone use and texting on MHSO grant-funded overtime. Typically, agencies participate in HVE waves during the months of October and April, with the bulk of the citations issued occurring on paid MHSO distracted driving prevention details.

A paid media period accompanied the April and October enforcement waves and messaging was centered around the message of "*Park the Phone, Before You Drive.*" Throughout the campaigns, 18 million impressions were achieved using billboards, radio, and digital media.





Morgan State University used a driving simulator to examine the driving behavior of young participants while engaged in various distractions. Some 92 participants drove a simulated network in Baltimore Metropolitan Area with seven scenarios (one base scenario without any distraction and six different types of distraction). Participants also completed questionnaires documenting demographics and driving behavior before and after the driving simulator experience. The descriptive and statistical analysis revealed the negative impact of distraction on safety, such that participants exhibited greater fluctuations in speed, changed lanes significantly more times, and deviated from the center of the road when they were distracted while driving.

The results showed that participants decreased their speed in the presence of all cell phonerelated distractions on all roads. Furthermore, speed reduction was the highest when distracted by taking on/off clothing and eating/drinking. The results suggest that a full ban on cell phone usage, not just hand-held devices, could be beneficial to highway safety.

### Pedestrian and Bicycle Safety

The incidence of pedestrian-involved crashes in Maryland have declined since 2014 (not accounting for population changes in the state), but the fatalities have increased by 25.9 percent. Approximately 3,300 pedestrian-involved crashes occurred on Maryland roads in 2018. An average of 3,200 such crashes occurred per year between 2014 and 2018. For the same five-year period, pedestrians were involved in an annual average of 2.9 percent of all traffic crashes, 8.7 percent of injury crashes, and more than one in five (23.0 percent) of fatal crashes. Pedestrians involved in crashes accounted for 6.7 percent of injuries and 21.7 percent of all fatalities.

The 2018 incidence of bicycle-involved crashes in Maryland decreased by over seven percent when compared to 2014. Over 820 bicycle-involved crashes occur on Maryland roadways each year. From 2014 through 2018, bicycles were involved in an annual average of fewer than one in 100 (0.7 percent) of all statewide traffic crashes, 2.0 percent of statewide injury crashes, and 2.0 percent of statewide fatal crashes. Bicycle-involved crashes accounted for just over 1.4 percent of injuries and two percent of fatalities.

Bicycle crashes are more likely to involve younger than older riders. Over one-fifth (22.6 percent) of crashes in 2018 involved children of age 17 or under. By contrast, bicycle riders ages 20 to 24 accounted for 11.7 percent of all crashes. Riders aged 40 to 54 accounted for 16.5 percent of all crashes.

The MHSO continued its partnership with the Metropolitan Washington Council of Governments (WASHCOG) on the Shattered Lives campaign. Originally launched in the fall of 2017, this year's extension of the campaign featured messages that emphasized the fragility of pedestrians and bicyclists as vulnerable road users. Press events kicked off the campaign waves. Total campaign value, based on a budget of \$692,000, was more than four million dollars. News coverage was estimated at more than two million dollars and the campaign received more than a million dollars in added value and donated media.







On November 8, 2018, *Street Smart* launched the fall campaign at Veterans Plaza in Silver Spring, Maryland. The event also launched the new *Street Smart* Virtual Reality Challenge, raising awareness among drivers, pedestrians, and bicyclists by familiarizing them with three "close call" traffic scenarios often associated with crashes. The event occurred just after the Daylight Savings Time change. The Montgomery County Police Department also conducted enforcement nearby after the event.



In late 2018, the *Street Smart* partnership embarked on a new initiative by way of an eye-catching and interactive educational exhibit known as the Virtual Reality Challenge. Using a modified convertible, participants utilize this 360-degree virtual reality simulator to witness high-risk traffic scenarios. The driver's ability to spot pedestrian and bicyclists in these situations is scored and the Challenge reinforced the need for drivers to always be alert. The simulator was used twice in Maryland on behalf of the *Street Smart* campaign and several more times as part of the MHSOs outreach to local communities.





In FFY 2019, Maryland started work on a Baltimore metropolitan area pedestrian and bicyclist safety campaign called *Look Up, Look Out*. Over the course of several months, the BMC worked with the MHSO and other partners on creative that was focus group tested and presented to the partners for review and approval. The campaign was launched in Baltimore County on June 3 and widely disseminated across the region via multiple outlets and channels. In total, more than 70 million impressions were delivered through a mix of media, including television spots, outdoor advertising, transit advertising, gas station pump toppers, digital and social media, and a partnership with the Baltimore Orioles. About one in ten residents in the Baltimore region recalled seeing "LOOK ALIVE" advertisements in the past three months (aided without images). Image-aided recall of the "Look Alive" campaign was highest among Baltimore City residents, and among those who primarily do not use a car.









Street Smart's spring 2019 campaign was launched in Fairfax County, VA at the intersection of Richmond Highway and Lockheed Boulevard. The MDOT MVA Administrator spoke at this event, highlighting Maryland's commitment to pedestrian and bicyclist safety. Heightened enforcement of pedestrian and bicycle safety laws was called to attention by officials speaking at the event.



Public awareness efforts in relation to Street Smart are enhanced by law enforcement activations in which police increase enforcement of pedestrian and bicyclist safety laws. Fall 2018 enforcement dates were set as November 5 to December 2, and spring 2019 enforcement dates were set as April 16 to May 10. Throughout both campaigns, more than 35,000 citations and 15,000 warnings were issued to motorists, pedestrians, and bicyclists. The Montgomery County and the Prince George's County Police Departments were prominent partners in this effort, as were agencies in Washington DC and Virginia.

Respondents to a survey regarding the effectiveness of the *Street Smart* campaign reviewed a list of behaviors and attitudes surrounding pedestrian and bicycle safety. For self-reported behaviors (one or more times in the last week) 23 percent of drivers reported failure to stop for a pedestrian and 60 percent admitted speeding in a 30 MPH zone. More than 40 percent of people reported having crossed illegally midblock and 48 percent said they did not wait for the signal before crossing. Seven in every ten of the respondents felt the streets in their area

were relatively safe for drivers. At the same time, only 53 percent felt the streets were as safe for pedestrians and bicyclists. More than three of four respondents (77 percent) are willing to support additional funding to make it easier to walk and bike in their community.

The Pedestrian-Bicycle Emphasis Area Team (P-BEAT) met roughly bi-monthly to continue implementing actions under the emphasis area's six SHSP strategies. The P-BEAT is comprised of educators, engineers, planners, and enforcement representatives, and works to ensure that everyone in the State is provided with safe walking and bicycling environments. The group has roughly 50 active members and provided a comprehensive perspective on safety issues faced by vulnerable users.

Responding to a perceived need to enhance pedestrian safety in a dense, urban part of Baltimore City, the Maryland Institute College of Art (MICA) Center for Social Design started a project to better understand the barriers to pedestrian and bicyclist safety in that area. From the knowledge gained in the project, the goal is to develop designs that will create a safer environment for pedestrians and bicyclists. In Phase I of the project (July 2018-June 2019), the team identified the need to address the visibility of pedestrian zones and to encourage safe behavior by both drivers and pedestrians. They also learned that many community members care about safety but do not feel empowered to help find a solution to the problem.

These findings prompted the MICA team to develop and test four concepts to improve pedestrian and bicyclist safety:

- Bright Lanes uses creative crosswalks and lighted infrastructure elements to increase the visibility of pedestrians and to encourage safe driving and walking behavior;
- Reflective StreetWear experimented with high visibility, fashionable clothing, using
  reflective materials that can enhance pedestrian and bike visibility on the road that can
  increase a driver's awareness of other road users;
- A DIY Toolkit containing a series of detailed instructions and materials for communities looking to implement their own Bright Lanes or Reflective StreetWear was created to enable Baltimore communities to increase pedestrian and bike safety in their neighborhoods; and
- The Safety Cityhack was created as a series of community outreach events intended to start conversations about pedestrian and bike safety concerns. This prototype is also a vehicle for community engagement and education efforts.

In FFY 2019, the MHSO and the National Study Center (NSC) established a Pedestrian Fatality Review Team to support the Pedestrian and Bicycle Emphasis Area Team (PBEAT) as part of the State's SHSP. A team of reviewers was contacted for each meeting with a few members rotating in and out as needed. The team members generally consisted of the MHSO's Pedestrian and Bicyclist Safety Program Manager, NSC staff, P-BEAT members, law enforcement, community health personnel, researchers, EMS personnel, engineers, and physicians. The NSC was responsible for working with the host agency in establishing location and time for the meetings and managed the database of participants as well as the invitations and responses. Monthly meetings (January - May) were held to review 27 cases to determine contributing factors and potential counter measures (i.e., systems improvements, implementable prevention recommendations). Findings are being analyzed and will be distributed to the team members and the MHSO.

### **Motorcycle Safety**

For 2018, motorcycle-involved crashes decreased by nearly 14.0 percent compared to the 5-year average of 2014-2018. Currently, a little more than 1,400 motorcycle-involved crashes occur on Maryland roads each year. From 2014 through 2018 in Maryland, motorcycle-involved crashes accounted for 3.2 percent of injuries and 14.5 percent of fatalities. Thus, motorcycles are significantly over-represented in fatal crashes.

In FFY 2019, the MHSO and the MSP collaborated to bring a program called BikeSafe to Maryland. BikeSafe uses professional instructors, all of whom are police personnel trained as mentors and educators. The instructors then spend the day with program participants, both in the classroom and on the road, teaching professional riding techniques, motorcycle control and collision avoidance. A certified BikeSafe Instructor was brought to Maryland to teach MSP personnel regarding the class and those MSP instructors were then able to train personnel from five allied agencies as Assessors. Throughout the first year, a pre-class survey and a post-class survey were provided and showed an 18 percent increase in knowledge. More than 100 people were trained in BikeSafe in FFY 2019.

In FFY 2019, the Maryland MVA Motorcycle Safety Program continued its annual mission to promote motorcycle safety through education, training and awareness efforts. Program staff attended the 2018 Motorcycle Safety Foundation International Rider Education Training Systems (IRETS) conference and participated in safety workshops and continuing education.

On May 1, 2019, MDOT MVA joined with ABATE of Maryland Inc. and other community partners to kick off Motorcycle Safety Awareness Month, a focused effort to eliminate motorcycle crashes and educate all travelers about motorcycle safety. Through the campaign, MDOT MVA and its partners encourage riders and drivers to "share the road" by remaining alert and driving responsibly. Motorcycle Safety Awareness Month also seeks to boost the number of licensed motorcyclists through FAST TRACK, an expedient process for motorcycle licensing in Maryland. FAST TRACK allows customers to take both the knowledge test for the Class M learner's permit and the riding test on the same day. Dynamic message signs on highways across the State were used to broadcast the message "Share the road with motorcycles - look twice for bikes" to hundreds of thousands of Maryland drivers.

The MHSO implemented an impaired riding prevention campaign in FFY 2019. The campaign included 9 weeks of advertising during peak summer riding times and featured sponsorship of events by a local radio station, 987 Rock. A significant portion of the radio sponsorship included appearances and an endorsement by on-air personality, Amelia. Radio, digital, and social media was used to garner a total of more than seven million impressions over the course of the campaign.

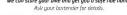
The MHSO continued its motorcycle PODS program in FFY 2019. These modified shipping containers were placed at two locations, one in Baltimore County and one in Howard County. The containers were used a total of seven times which was a substantial increase from the previous year. The MHSO anticipates that it will take some time to change the culture among motorcyclists to use these PODS and the increase was viewed as modest, yet substantial progress. The "Free to Ride, Free to Choose" educational campaign supported this program. Each location used signage for doors and windows, posters, brochures and drink coasters to inform patrons about the program. The program uses a Stop Light guide as its focus. Patrons who have been drinking are given a "red light" on the guide. Bar staff encourages those patrons to lock their motorcycles in the POD for the evening and offer help to get a safe, sober ride home.























Delmarva BikeWeek was held in Ocean City, MD in September 2019. Staff from the MHSO attended the event and staffed a motorcycle safety display. More than 200 motorcyclists visited the MHSO display and were given information on the State's safety programs, motorcycle training, and safety gear.

### **Younger and Older Driver Safety**

Younger and older drivers often have very different needs but often represent two groups that require specialized attention. Younger drivers are less experienced than other groups and older drivers face physical limitations as well as complications from medication. The MHSO does not have a formalized program for either subset of drivers but its staff works to fulfill the needs of these two groups.



Parental involvement and peer-led programs to increase younger driver safety received MHSO support throughout the grant year. Driving schools proved to be effective resources for distributing information and the MHSO also participates in the Maryland Teen Safe Driving Coalition, a group of traffic safety professionals and advocates that strives to increase the safety of young drivers. In addition, the MHSO's PRO Section is regularly active with schools throughout the State with presentations and activities targeted toward younger drivers.

High-risk driving behaviors among young drivers were highlighted at high schools and at college campuses. Specifically, the MHSO supported young driver safety activities that were conducted in preparation for proms and after-prom parties.

In FFY 2019, the MHSO once again sponsored the *Making It Click* Maryland Seat Belt Challenge. *Making It Click* is a peer-led effort to increase awareness and usage of seat belts among younger drivers and passengers. At the start of the program, student groups at each participating school conducted pre-campaign seat belt observational surveys. MHSO staff then collected and analyzed the surveys to determine each school's starting seat belt use rate. Throughout the campaign, students created posters, videos and flyers, and provided tips during morning announcements to help get peers to buckle up. At the end, another survey was taken and the schools with the highest overall seat belt use rate, as well as the school with the largest increase, were recognized.

This year, Chopticon High School in St. Mary's County was recognized for the highest overall seat belt usage rate at 97.9 percent and Sparrows Point High School in Baltimore County was recognized for the largest increase in seat belt usage among students. Usage at the school improved 14.5 percent by the end of the program. The MDOT MVA Administrator and the MHSO's Director visited the schools to present principals, faculty, and student leaders with plaques. Eighteen high schools in St. Mary's, Baltimore, Howard, Calvert and Harford counties, as well as Allegany College of Maryland, participated in *Making It Click* this year.



The MDOT MVA and MHSO worked to address older driver issues in FFY 2019, specifically through sharing resources from AARP, the National Safety Council, the Maryland Department

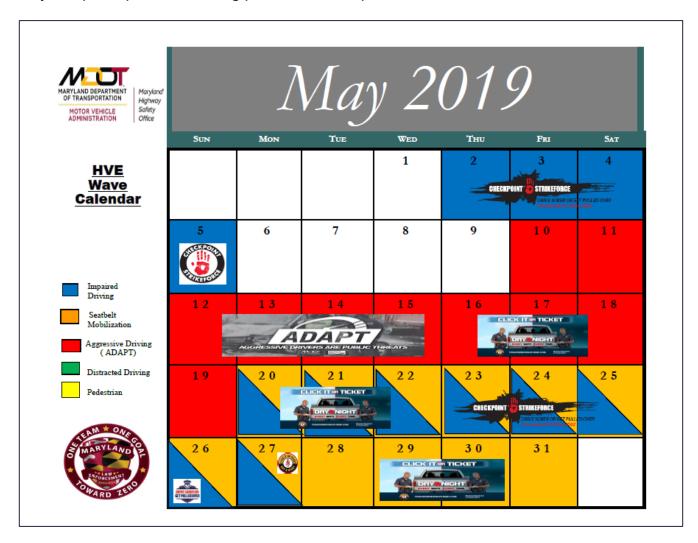
of Aging. MHSO staff coordinated presentations to numerous senior care partners and assisted living centers. Trained MDOT MHSO staff members engaged 72 aging drivers during CarFit events with the AAA Mid-Atlantic Foundation for Safety and Education, AARP, and other partners. The CarFit program provides information on community-specific resources to enhance older driver safety, screen their driving ability, and increase overall mobility.

The MDOT MHSO worked with a grantee, Partners in Care (PIC), to increase older driver education in Maryland. PIC operates in four counties in Maryland and provided older driver safety education to older adults, families, caregivers and community influencers /advocates. PIC staff attended 51 community events/health fairs and civic meetings reaching 12,937 people with safety messages.

#### Law Enforcement Services

Enforcement of Maryland's traffic laws is coupled very closely with media and education and is crucial as the State pursues its goal of zero deaths on its roadways. The MHSO's Law Enforcement Services staff is tasked with working very closely with police agencies with the goal of maximizing the impact of traffic safety enforcement programs.

The concept of High Visibility Enforcement (HVE) fuels funding toward program areas that are predicted by data analysis to have the greatest impact in reducing fatalities and serious injuries resulting from crashes. The MHSO provides a calendar to enforcement agencies so they can plan operations during prescribed HVE periods.



Explanations of enforcement activities are provided in each program area section, as are relevant stats for citations, warnings, and arrests made during law enforcement operations.

The MHSO employs four LELs who are tasked with implementing solutions to meet the needs of Maryland police agencies with respect to traffic enforcement. The LELs communicate with these agencies regarding training, and organize enforcement efforts among Maryland law enforcement, as well as efforts with major partners such as the Maryland Chiefs of Police Association (MCPA), the Maryland Sheriff's Association (MSA), and the Maryland Crash Reconstruction Committee (MCRC).

In March 2019, the MHSO conducted another Leading Effective Traffic Enforcement Programs (LETEP) workshop. LETEP provides law enforcement supervisors with advanced

training regarding the use of data and countermeasures from multiple disciplines of highway safety. This approach allows those supervisors to provide law enforcement officers with the tools necessary to make quality traffic stops and to address Maryland's areas of greatest need. A total of 30 law enforcement supervisors attended and graduated from the LETEP courses held in March.

In May 2019, the MHSO funded a Field Operation Bureau (FOB) Commander's Summit for the MSP. More than 45 MSP Barrack Commanders, Assistant Barrack Commanders, and members of the MSP Field Operations Bureau attended the Summit. The MHSO was allocated a two-hour block for training the attendees on highway safety issues.

In June 2019, 30 officers from 20 law enforcement agencies across Maryland graduated from the University of Maryland's DUI Institute, a rigorous 40-hour program that trains officers in alcohol-impaired driving laws and enforcement. In its 16th year, the DUI Institute was developed by the MDOT MVA Highway Safety Office, the University of Maryland (UMD) Department of Behavioral and Community Health, police officers and national experts. The training gives officers the opportunity to improve their skills, from writing reports to providing courtroom testimony, and aims to make graduates of the DUI Institute more effective in making arrests that lead to convictions of impaired drivers. The course is paid for through grants and since its inception, more than 450 officers have graduated from the program.



The MHSO's Law Enforcement Services Section Chief attended the 2019 Maryland Municipal League (MML) Summer Conference in June 2019. This conference offers workshops in conjunction with its Police Executives Association that are designed to strengthen a law enforcement agency's ability to serve their communities.

The MCPA and the MSA hosted the Annual Professional Development Training Seminar from September 13-16, 2019. The three-day conference brought together more than 300 leaders in

law enforcement with industry partners for educational sessions and networking sessions, as well as the opportunity to recognize high performing officers for highway safety activities. The MHSO's LELs and Law Enforcement Services Section staff attend the event as a valuable opportunity to network with command staff from agencies throughout Maryland.

In FFY 2019, the MHSO continued making improvements to its Traffic Safety Specialist (TSS) Program to meet increased demands made of law enforcement. The key feature of the program, the Traffic Safety Specialist (TSS) Designation, is a statewide, uniform and consistent recognition of police officers who have attained notable levels of experience in highway safety and traffic enforcement methods and procedures. The TSS Designation is awarded by the MHSO, and the program is open to all certified police officers, deputy sheriffs, and state troopers from Maryland law enforcement agencies, and Federal law enforcement agencies that have jurisdiction in Maryland. There are three designations within the TSS Program, and each successive designation requires increasing levels of experience, training, job performance, and skills proficiency as a traffic enforcement officer. To be eligible for a TSS Designation, officers must enroll in the program and submit all required documentation for the specific designation they are seeking. The program currently has hundreds of officers representing various law enforcement agencies in Maryland including Federal agencies operating in the State.

The MHSO's LELs were instrumental in coordinating law enforcement presence during the "13 on 13" and "Bay to Beach" initiatives. Both operations occurred on Maryland's eastern shore, with the first one being focused on the Route 13 corridor over the St. Patrick's Day weekend, and the second taking place during the national impaired driving mobilization along Maryland's entire US 50 corridor for the month of August. Results of these initiatives are provided in the Impaired Driving section.

### Partnerships, Resources, and Outreach

The MHSO has a team of four PRO Managers, supervises by a PRO Section Chief, that are responsible for coordinating a wide range of events and outreach. This section is integral to interacting with people around the State to change behavior. The PRO Section coordinates efforts with schools, employers, community groups, and other partners to augment and support the MHSO's mission to reduce crashes and the resulting fatalities and injuries.

In FFY 2019, the PRO Section exhibited at nine highway safety events/fairs throughout the State to more than 500 attendees. These events focused on outreach to military, employer, and local SHSP workshops.

Prevention and health services are becoming an increasingly important part of the MHSO's programming. In February 2019, PRO Section staff presented an overview of the MHSO's outreach and safety programs at the Maryland Association of Prevention Professionals and Advocates (MAPPA). Staff also presented to the Anne Arundel County Department of Health Prevention and Education Services, reaching a total of 35 prevention specialists.

In April 2019, the MHSO's Outreach Section presented to numerous schools and student groups. Several hundred students were reached through a variety of presentations and events with messaging that included impaired driving prevention and distracted driving prevention, as well as seat belt use.

The PRO Section planned and coordinated a local SHSP Workshop in October 2019. There are currently five counties with completed SHSPs, two counties with drafted plans ready to finalize, and several jurisdictions in varying degrees of developing a plan. Attendees learned about available data resources, experience and lessons learned from a county that already developed an SHSP, as well as explored strategies and action items related to impaired driving safety. There were approximately 12 attendees at the workshop.

#### **Traffic Records**

Maryland employs a two-tiered TRCC, with both Technical and Executive councils comprised of data owners, data managers, and data users with oversight and interest in these datasets. MHSO staff serves on the TRCC Technical Council and subcommittees and advises the TRCC Executive Council.



The MHSO's Traffic Records Program Manager coordinates updates to Maryland's Traffic Records Strategic Plan (TRSP) and leads the implementation of recommendations provided in the 2014 NHTSA Traffic Records Assessment, including the development of performance measures for all six systems in the traffic records system. The current TRSP (2016-2020) is aligned with the 2016-2020 SHSP, and members from both the Executive and Technical Councils frequently discuss related topics and meet twice a year in back-to-back meetings.

In 2019, Maryland worked with the NHTSA and participated in the required Assessment for traffic records systems. The Assessment was completed in September and work began on an update of the TRSP for 2021-2025. Sixteen members of the Maryland TRCC participated in the Assessment, led by the MHSO Traffic Records Program Manager with assistance from the data experts at the NSC, and provided over 400 detailed responses.

The TRCC Assessment findings included the following: Out of 328 assessment questions, Maryland met the Advisory ideal for 190 questions (58 percent), partially met the Advisory ideal for 67 questions (20 percent) and did not meet the Advisory ideal for 71 questions (22 percent). Within each assessment module, Maryland met the criteria outlined in the Traffic Records Program Assessment Advisory 88 percent of the time for TRCC Management, 27 percent of the time for Strategic Planning, 60 percent of the time for Crash, 56 percent of the time for Vehicle, 71 percent of the time for Driver, 50 percent of the time for Roadway, 34 percent of the time for Citation and Adjudication, 61 percent of the time for EMS / Injury Surveillance, and 100 percent of the time for Data Use and Integration.

Maryland was cited for its strengths in having a team of dedicated professionals who have demonstrated progress in improving their respective traffic records systems, and future planned improvements were noted as impressive and full of great potential, such as the MVA's Customer Connect and the Maryland Electronic Courts.

Maryland scored high in its Data Use and Integration, owed largely to the grant-funded partnerships with the University of Maryland, Baltimore's NSC and Washington College's GIS Program, which have enabled the MHSO to provide data support to a great number of state and local partners. The assessment specifically noted that "Maryland is an undisputed leader in data integration. It is not just the integration and analyses of data that makes Maryland a leader, it is the support (and funding) from federal and State agencies, governance boards and councils, the cooperation and collaboration among the data owners, the ability to integrate data beyond the six traffic records component data sets, and the innovation and outside-the-box thinking of the stakeholders, epidemiologists, statisticians, data analysts, and others working with the data. Other States lagging in data integration and use should look to Maryland to learn how to increase and improve the integration and use of their own data."

The TRCC will be working on incorporating the recommendations and consideration from the Assessment into an updated Traffic Records Strategic Plan, which will be reviewed and approved by the Technical and Executive Councils in time for submission to the NHTSA on July 1, 2020.

Sponsored by the Association of Transportation Safety Information Professionals (ATSIP), the 45th Annual International Traffic Records Forum in August 2019 brought together around 300 U.S. traffic safety professionals to focus on traffic records data. Maryland was well-represented, with presentations from current TRCC members and from several MHSO grant recipients.



The University of Maryland, Baltimore's NSC provides analytical support to the MHSO and its partners and serves as a data resource for all traffic safety professionals. Through the integration of multiple traffic records data systems, the NSC continued the Maryland Crash Outcome Data Evaluation System (CODES) project and provided unmatched data support to the traffic safety community through data products including maps, tables, summary reports, presentations, instruction, and consultation.

The NSC also provides analysis to the MHSO to support funding-allocation decisions. By applying a specific weighting regimen, the formula provides a guide for highway safety funding that applies the most money to areas with the most problems and are most capable of reducing the State's serious injury and fatal crashes. This funding methodology ensures that the MHSO's funding decisions are data-driven.

In FFY 2019, NSC staff continued a project to develop of a predictive modeling framework for the MHSO to understand the causes of traffic crashes in Maryland and prioritize safety interventions to most effectively save lives and reduce casualties. The application includes maps, tables, and charts for exploration of data, in addition to an interactive tool for evaluating the effects of changes in different factors in the numbers and monetary costs of crashes, injuries, and deaths.



The NSC's Maryland Center for Traffic Safety Analysis (MCTSA) continues to be responsive to the data analysis needs of MHSO and SHSP partners around the State and the country using a variety of traffic records data systems.

Throughout the FFY 2019 grant period, NSC staff members utilized data resources and staff personnel to respond to data requests made by both the MHSO and its partners. Since January 2019, when a data request tracking system was implemented, NSC staff provided data analyses, maps, and interpretative documents, using crash files, citation files, licensing and registration information, and seat belt data, in response to over 75 data requests.

In May, traffic records were used to update portions of the Highway Safety Plan, which was ultimately provided to NHTSA, including an update of safety performance measures and updated targets as required by federal law. Statewide performance measures related to fatalities and serious injuries were computed, based on the interim goal to reduce motor vehicle-related fatalities by 50% by 2030. Jurisdictional performance measures were updated periodically as well as NSC supports local planners and MPOs with developing traffic safety targets modeled after the state's SHSP targets.

During the late spring and summer months, NSC staff members helped organize the activities associated with the Traffic Records Assessment for the State of Maryland and assisted the TRCC, serving as a facilitator to the administration of the program. NSC staff members also attended each of the six SHSP emphasis area team meetings, assisting with the facilitation of these meetings when requested.

The NSC analyzed the annual occupant protection survey and compiled Maryland's final report. NSC staff conducted backseat observations (not required by NHTSA, but useful for state planning purposes as the usage rate for backseat passengers is lower than front seat occupants), data that will always be critical to strengthening seat belt laws and achieving full seat belt use in all seats. In addition, NSC staff analyzed and reported on the results of a law enforcement survey regarding the enforcement of existing seat belt laws.

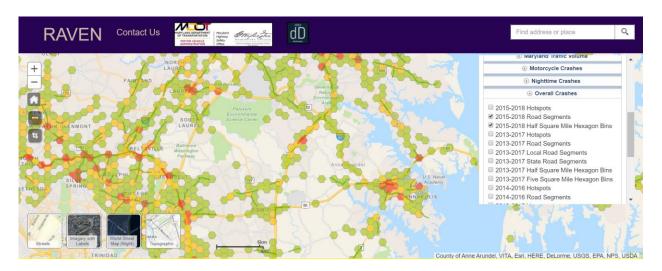
The Washington College GIS Program provides support staff to the MHSO to improve accessibility to traffic safety data and to improve the completeness and accuracy of these data. The program focuses on providing the MHSO and its partners with maps of crash, citation and related data for program planning and evaluation, providing

WASHINGTON COLLEGE

GEOGRAPHIC INFORMATION SYSTEMS

training to traffic safety professionals on the use of GIS analytical tools, and increasing the completeness and accuracy of crash and citation data.

Washington College GIS Program's web application RAVEN, or Risk Analysis of Vehicle Environmental Network, has been used in advertisements, newsletters, presentations, and training sessions throughout the state. Washington College provides training and demonstrations for RAVEN to a wide range of vital traffic safety partners.

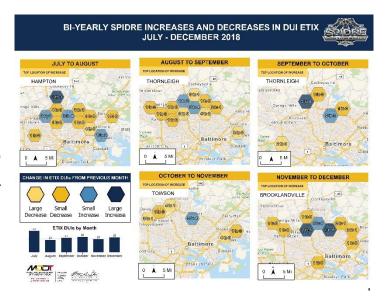


Over the past year, the Washington College GIS Program was able to serve MHSO staff and its partners throughout the twenty-four jurisdictions by providing over 116 products, 36 RAVEN layers and 792 data features (over 700 users to RAVEN), four full-day and one-half day training sessions, and achieved a 94.68% overall satisfaction rate (Customer Satisfaction Survey 2019). The support stemmed from past connections and attending events/trainings/conference such as: local SHSP, TRCC, and EA Team meetings.

While attending the Traffic Records Forum this year, Washington College GIS Program was informed that they were a finalist for Data Visualization Award of the year for the RAVEN Web Application competing against LSU and Texas A&M. A presentation was given to roughly 30

people about the full scope of the application and the direction of the application.

The GIS Program team collaborates with the MHSO to improve accessibility to traffic safety data through quality control and assurance processes, to collect and understand the data needed for analysis, and to support the MSP SPIDRE team. The team also provided density maps for aggressive driving-related crashes in all jurisdictions to help with HVE deployments and conducted analysis of E-TIX data to support the SHSP Aggressive Driving EAT.





In FFY 2019, Washington College held a four-day workshop for MHSO safety partners to promote GIS for studying traffic safety; hosted a Data Visualization workshop for traffic safety analysts; and staff and students attended DUI Checkpoints and pedestrian law enforcement initiatives to better understand the data that is being collected and shared with those studying traffic safety.

#### **Communications**

The MHSO utilizes media to augment ongoing enforcement efforts and to promote positive behavior change among road users in Maryland. Between all internal grants for the MHSO's program areas, nearly 1.9 million dollars was allocated to media expenditures. As seen in the table below, the MHSO achieved a combined ratio of approximately 90 percent from allotted budget to total spent in FFY 2019:

| Program Area                  | Allotted Budget | Total Spent    | Percentage Spent |
|-------------------------------|-----------------|----------------|------------------|
| Aggressive Driving            | \$220,000.00    | \$194,674.84   | 88.49%           |
| Distracted Driving            | \$172,000.00    | \$108,234.14   | 62.93%           |
| Impaired Driving              | \$525,372.00    | \$525,372.00   | 100.00%          |
| Motorcyclist Awareness        | \$75,000.00     | \$74,889.49    | 99.85%           |
| Motorcyclist - Impaired       | \$140,000.00    | \$88,031.02    | 62.88%           |
| Occupant Protection           | \$305,000.00    | \$261,381.75   | 85.70%           |
| Pedestrian & Bicyclist Safety | \$457,630.00    | \$457,559.44   | 99.98%           |
| Total                         | \$1,895,002.00  | \$1,710,142.68 | 90.24%           |

Several noteworthy considerations on this table include a dramatic decrease in the cost of Click it or Ticket media due to the MHSO's contractor receiving compensation from a previous buy and the fact that the MHSO's impaired motorcyclist campaign was scaled down since not as many locations received PODS containers.

Facebook, Twitter, and Instagram continued to be the MHSO's main social media platforms, with limited postings also occurring to YouTube. While the MHSO retains a modest budget to boost posts via paid media, most of the content is organic postings. The MHSO uses social media to promote behavioral change, to recognize individuals or agencies, and to bring awareness to upcoming events. The MHSO continued to see substantial audiences on social media during FFY 2019 and a selection of some of the MHSO's postings is provided below:







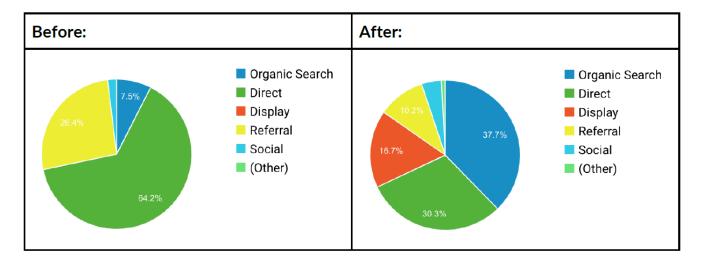


In September 2019, a final analytics report was submitted to the MHSO for its Toward Zero Deaths website. The report examined traffic to Toward Zero Deaths Maryland before and after undertaking search engine optimization and content marketing efforts. Optimization of existing content began in October 2018 and blog posts were added twice weekly beginning in November 2018. By the conclusion of the project in September 2019, almost 100 pages of new content had been added and the site saw a 658 percent increase in traffic.

Between November 2018 and the end of September 2019, 95 new blog posts were added to the MHSO's website. Each was optimized for the appropriate keywords and written to excellent readability standards. There was an increase in the number of daily visitors over the project. Here, is a comparison of the visitors just before the campaign and in the final months:

|                       | September 2018 | August 2019 | Change   |
|-----------------------|----------------|-------------|----------|
| <b>Total Visitors</b> | 778            | 5900        | +658.35% |
| First Time Visitors   | 754            | 5851        | +675.99% |
| <b>Total Sessions</b> | 871            | 6906        | +692.88% |
| Bounce Rate           | 76.23%         | 87.42%      | +14.67%  |

The average daily visitors increased from about 26 per day to about 190 per day over the course of the project. Here is the traffic breakdown for three months preceding the project and the last three months to give a sense of visitor patterns before and after optimization:



TZD Maryland is now at or near the top for some search words, such "Maryland car seat laws," "Maryland pedestrian safety," and "highway safety resources." TZD Maryland is also topping the rankings for many Maryland-specific searches. This means that content was well-optimized, gaining traction once it was cached by Google, and ranks well in comparison to other websites that are considered authorities on traffic safety.

## SHSP MEASURES

In FFY 2019, Maryland maintained the TZD approach which included developing interim targets to reduce fatalities by at least 50 percent in the next two decades (from 592 in 2008 to 296 in 2030). During the 2019 Maryland legislative session, a bill was introduced that would move Maryland to be a Vision Zero state, requiring substantial revision to the State's goals. That bill was passed, and Maryland officially became a Vision Zero state on October 1, 2019. As this report predates the enactment of Vision Zero, all reporting is provided based on the stated goals in the FFY 2019 HSP Report as submitted by the MHSO.

Unless otherwise noted, all data are derived from the MDOT SHA's Safety Information Databases (SHA-SID) and Traffic Analysis Network Garage (TANG) based on crash reports submitted to, and processed by, the Maryland State Police Central Records Division (MSP-CRD) utilizing the Enhanced Maryland Automated Accident Reporting System (eMAARS) and the Automated Crash Reporting System (ACRS). Data are subject to change. Effective January 2015,



all law enforcement agencies were mandated by the MSP to submit crash reports via ACRS.

Below are the five federally mandated performance measures to be included in the state's SHSP and HSIP. The common measures between the HSIP, SHSP, and HSP are included.

#### Overall Statewide Targets<sup>1</sup>

**Fatality Target**: Reduce the number of traffic-related fatalities on all roads in Maryland from 507.0 (2014-2018 average, FARS ARF) to 420.6 (2017-2021 average) or fewer by December 31, 2020. Maryland's FFY 2019 HSP fatalities target was 432.5 (2016-2020 average).

• The actual number of fatalities was 507.0 (2014-2018 average), which is higher than the target; therefore, Maryland is not progressing towards its target.

**Fatality Rate Target:** Reduce the number of traffic-related fatality rate on all roads in Maryland from 0.856 (2012-2016 average, FARS ARF) to 0.750 (2016-2020 average) or lower by December 31, 2020. Maryland's FFY 2019 HSP fatality rate target was 0.773 (2015-2019 average).

NHTSA has not yet released the 2017 rate information in order to determine progress.

**Serious Injury Target:** Reduce the number of traffic-related serious injuries on all roads in Maryland from 3,075.0 (2014-2018 average) to 2,905.8 (2017-2021 average) or fewer by December 31, 2020. Maryland's FFY 2019 HSP serious injuries target was 3,024.4 (2016-2020 average).

• The actual number of serious injuries was 3,075 (2014-2018 average), which is higher than the target; therefore, Maryland is not progressing towards its target.

**Serious Injury Rate Target:** Reduce the traffic-related serious injury rate on all roads in Maryland from 5.260 (2014-2018 average) to 5.077 (2017-2021 average) or lower by December 31, 2020. Maryland's FFY 2019 HSP serious injury rate target was 5.289 (2016-2020 average).

 $<sup>^{\</sup>rm 1}$  Goals are established for the aim of a reduction in half from 2008 to 2030. Targets are annual milestones.

• The actual serious injury rate was 5.260 (2014-2018 average), which is lower than the target; therefore, Maryland has met its target.

| ACTUAL                           | 2007-<br>2011 | 2008-<br>2012 | 2009-<br>2013 | 2010-<br>2014 | 2011-<br>2015 | 2012-<br>2016 | 2013-<br>2017 | 2014-<br>2018 |
|----------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Fatalities                       | 547           | 526           | 501           | 480           | 485           | 492           | 502           | 507           |
| Fatality Rate per 100 MVMT       | 0.97          | 0.94          | 0.89          | 0.85          | 0.86          | 0.86          | 0.87          | N/A           |
| Total Serious Injuries           | 4,436         | 4,020         | 3,702         | 3,436         | 3,147         | 3,017         | 3,022         | 3,075         |
| Serious injury Rate per 100 MVMT | 7.90          | 7.17          | 6.60          | 6.10          | 5.57          | 5.29          | 5.23          | 5.26          |

| ACTUAL                                   | 2010  | 2011  | 2012  | 2013  | 2014  | 2015  | 2016  | 2017  | 2018  |
|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Fatalities (FARS)                        | 496   | 485   | 511   | 465   | 442   | 520   | 522   | 558   | 501   |
| Fatality Rate per 100 MVMT (FARS)        | 0.88  | 0.86  | 0.90  | 0.82  | 0.78  | 0.90  | 0.89  | 0.93  | N/A   |
| Total Serious Injuries (State)           | 4,051 | 3,809 | 3,312 | 2,957 | 3,050 | 2,605 | 3,163 | 3,336 | 3,224 |
| Serious injury Rate per 100 MVMT (State) | 7.22  | 6.80  | 5.87  | 5.24  | 5.41  | 4.55  | 5.36  | 5.57  | 5.41  |

| TARGET (Single Year)        | 2018    | 2019    |
|-----------------------------|---------|---------|
| Fatalities                  | 432.5   | 420.6   |
| Fatality Rate per 100 MVMT  | N/A     | N/A     |
| Total Serious Injuries      | 3,024.4 | 2,905.8 |
| Serious injury Rate per 100 |         |         |
| MVMT                        | 5.289   | 5.077   |

| Non-Motorized Fatalities Plus Serious Injuries |               |               |               |               |               |               |               |               |  |  |
|--|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|--|--|
| ACTUAL   | 2007-<br>2011 | 2008-<br>2012 | 2009-<br>2013 | 2010-<br>2014 | 2011-<br>2015 | 2012-<br>2016 | 2013-<br>2017 | 2014-<br>2018 |  |  |
| Fatality + SI<br>Average                       | 603           | 570           | 542           | 528           | 516           | 529           | 564           | 610           |  |  |
| Interim Targets                                | 2014-<br>2018 | 2015-<br>2019 | 2016-<br>2020 | 2017-<br>2021 |               |               |               |               |  |  |
|  | 495.7         | 481.5         | 467.8         | 454.4         |               |               |               |               |  |  |

| TARGET (Single Year)                           | 2018  | 2019  |
|--|-------|-------|
| Non-Motorized Fatalities Plus Serious Injuries | 480.5 | 467.7 |

**Target**: Reduce the number of traffic-related non-motorized fatalities and serious injuries on all roads in Maryland from 610.4 (2014-2018 average) to 467.7 (2017-2021 average) or fewer by December 31, 2020. Maryland's FFY 2019 HSP non-motorized fatalities and serious injuries target was 480.5 (2016-2020 average).

• The actual number of traffic-related non-motorized fatalities and serious injuries was 610.40 (2014-2018 average), which is higher than the target; therefore, Maryland is not progressing towards its target.

# PROGRAM AREA PERFORMANCE MEASURES

The following program area targets are based on a five-year rolling average using an exponential trend to set future interim targets. Unless otherwise noted, all data are derived from the State Highway Administration which maintains a database derived from crash reports submitted to, and processed and approved by, the Maryland State Police. Data are subject to change.

## **Aggressive Driving**

**Fatality Target:** Reduce the number of aggressive-driving-related fatalities on all roads in Maryland to 38.0 (2017-2021 average) or fewer by December 31, 2020. Maryland's FFY 2019 HSP aggressive-driving-related fatalities target was 39.5 (2016-2020 average).

• The actual number of aggressive-driving-related fatalities was 35.4 (2014-2018 average), which is lower than the target; therefore, Maryland has met its target.

**Serious Injury Target**: Reduce the number of aggressive-driving-related serious injuries on all roads in Maryland to 243.5 (2017-2021 average) or fewer by December 31, 2020. Maryland's FFY 2019 HSP aggressive-driving-related serious injuries target was 253.9 (2016-2020 average).

• The actual number of aggressive-driving-related serious injuries was 186.8 (2014-2018 average), which is lower than the target; therefore, Maryland has met its target.

| Aggressive Driving Fatalities and Serious Injuries (Five-Year Average) |       |       |       |       |       |       |       |       |  |
|--|-------|-------|-------|-------|-------|-------|-------|-------|--|
| ACTUAL   | 2007- | 2008- | 2009- | 2010- | 2011- | 2012- | 2013- | 2014- |  |
| ACTUAL   | 2011  | 2012  | 2013  | 2014  | 2015  | 2016  | 2017  | 2018  |  |
| Fatality Average   | 57    | 52    | 51    | 45    | 41    | 41    | 41    | 35    |  |
| Serious Injury<br>Average  | 407   | 367   | 336   | 288   | 251   | 233   | 209   | 187   |  |

| Aggressive Driving Fatalities and Serious Injuries (Five-Year Average) |       |       |       |  |  |  |  |
|--|-------|-------|-------|--|--|--|--|
| TARGET   | 2015- | 2016- | 2017- |  |  |  |  |
| TARGET   | 2019  | 2020  | 2021  |  |  |  |  |
| Fatality Average   | 41.0  | 39.5  | 38.0  |  |  |  |  |
| Serious Injury Average   | 264.8 | 253.9 | 243.5 |  |  |  |  |

| Aggressive Driving Fatalities and Serious Injuries (Single Year) |       |       |  |  |  |  |  |  |
|--|-------|-------|--|--|--|--|--|--|
| TARGET 2018 2019   |       |       |  |  |  |  |  |  |
| Fatalities 39.5 38.0   |       |       |  |  |  |  |  |  |
| Serious Injuries   | 253.9 | 243.5 |  |  |  |  |  |  |

## **Distracted Driving**

**Fatality Target:** Reduce the number of distracted-driving-related fatalities on all roads in Maryland to 168.7 (2017-2021 average) or fewer by December 31, 2020. Maryland's FFY 2019 HSP distracted-driving-related fatalities target was 175.4 (2016-2020 average).

• The actual number of distracted-driving-related fatalities was 169.4 (2014-2018 average), which is lower than the target; therefore, Maryland has met its target.

**Serious Injury Target**: Reduce the number of distracted-driving-related serious injuries on all roads in Maryland to 1,578.1 (2017-2021 average) or fewer by December 31, 2020. Maryland's FFY 2019 HSP distracted-driving-related serious injuries target was 1,657.3 (2016-2020 average).

• The actual number of distracted-driving-related serious injuries was 1,265.6 (2014-2018 average), which is lower than the target; therefore, Maryland has met its target.

| Distracted Driving Fatalities and Serious Injuries (Five-Year Average) |       |       |       |       |       |       |       |       |  |
|--|-------|-------|-------|-------|-------|-------|-------|-------|--|
| ACTUAL   | 2007- | 2008- | 2009- | 2010- | 2011- | 2012- | 2013- | 2014- |  |
|  | 2011  | 2012  | 2013  | 2014  | 2015  | 2016  | 2017  | 2018  |  |
| Fatality Average   | 260   | 250   | 232   | 211   | 185   | 168   | 154   | 169   |  |
| Serious Injury Average   | 2,826 | 2,545 | 2,348 | 2,097 | 1,770 | 1,518 | 1,318 | 1,266 |  |

| Distracted Driving Fatalities and Serious Injuries (Five-Year Average) |         |         |         |  |  |  |  |  |
|--|---------|---------|---------|--|--|--|--|--|
| TARGET   | 2015-   | 2016-   | 2017-   |  |  |  |  |  |
| TARGET   | 2019    | 2020    | 2021    |  |  |  |  |  |
| Fatality Average   | 182.3   | 175.4   | 168.7   |  |  |  |  |  |
| Serious Injury Average   | 1,740.6 | 1,657.3 | 1,578.1 |  |  |  |  |  |

| Distracted Driving Fatalities and Serious Injuries (Single Year) |         |         |  |  |  |  |
|--|---------|---------|--|--|--|--|
| TARGET   | 2018    | 2019    |  |  |  |  |
| Fatalities   | 175.4   | 168.7   |  |  |  |  |
| Serious Injuries   | 1,657.3 | 1,587.1 |  |  |  |  |

## **Impaired Driving**

**Fatality Targets:** (Federal) **Alcohol** .08+ (FARS): Reduce the number of alcohol-impaired driving fatalities (BAC = .08+) on all roads in Maryland from 147.8 (2014-2018 average, FARS ARF) to 117.6 (2017-2021 average) or fewer by December 31, 2020. Maryland's FFY 2019 HSP alcohol-impaired driving fatality target was 122.1 (2016-2020 average).

 The actual number of alcohol-impaired driving fatalities was 147.8 (2014-2018 average), which is higher than the target; therefore, Maryland is not progressing towards its target.

\*\*\*(State) Impaired (alcohol/drugs): Reduce the number of impaired-driving-related (State definition) fatalities on all roads in Maryland from 160.4 (2014-2018 average) to 132.8 (2017-2021 average) or fewer by December 31, 2020. Maryland's FFY 2019 HSP impaired-driving-related fatalities target was 137.5 (2016-2020 average).

 The actual number of distracted-driving-related fatalities was 160.4 (2014-2018 average), which is higher than the target; therefore, Maryland is not progressing towards its target.

\*\*\*Serious Injury Target: Impaired (alcohol/drugs): Reduce the number of impaired-driving-related (State definition) serious injuries on all roads in Maryland from 429.4 (2014-2018 average) to 403.6 (2017-2021 average) or fewer by December 31, 2020. Maryland's FFY 2019 HSP impaired-driving-related serious injuries target was 421.3 (2016-2020 average).

 The actual number of impaired-driving related serious injuries was 429.4 (2014-2018 average), which is higher than the target; therefore, Maryland is not progressing towards its target.

| Impaired Driving Fatalities and Serious Injuries (Five-Year Average) |               |               |               |               |               |               |               |               |
|--|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| ACTUAL   | 2007-<br>2011 | 2008-<br>2012 | 2009-<br>2013 | 2010-<br>2014 | 2011-<br>2015 | 2012-<br>2016 | 2013-<br>2017 | 2014-<br>2018 |
| Fatality Average (alcohol, .08+) (FARS)                              | 161           | 158           | 156           | 149           | 150           | 146           | 151           | 148           |
| Fatality Average (alcohol/drugs)**                                   | 185           | 175           | 170           | 162           | 162           | 163           | 166           | 160           |
| Serious Injury Average**   | 644           | 589           | 544           | 499           | 455           | 424           | 497           | 429           |

| Impaired Driving Fatalities and Serious Injuries (Five-Year Average) |               |               |               |  |  |  |  |
|--|---------------|---------------|---------------|--|--|--|--|
| TARGET   | 2015-<br>2019 | 2016-<br>2020 | 2017-<br>2021 |  |  |  |  |
| Fatality Average (alcohol, .08+) (FARS)                              | 126.7         | 122.1         | 117.6         |  |  |  |  |
| Fatality Average (alcohol/drugs)**                                   | 142.4         | 137.5         | 132.8         |  |  |  |  |
| Serious Injury Average**   | 439.8         | 421.3         | 403.6         |  |  |  |  |

<sup>\*\*</sup> Alcohol and/or drug impaired. Data Source: Maryland crash data.

| Impaired Driving Fatalities and |       |       |  |  |  |  |
|---------------------------------|-------|-------|--|--|--|--|
| Serious Injuries (Single Year)  |       |       |  |  |  |  |
| TARGET                          | 2018  | 2019  |  |  |  |  |
| Fatalities (NHTSA)              | 122.1 | 117.6 |  |  |  |  |
| Fatalities (State)              | 137.5 | 132.8 |  |  |  |  |
| Serious Injuries                | 421.3 | 403.6 |  |  |  |  |

## **Occupant Protection**

**Fatality Target:** Reduce the number of unrestrained fatalities on all roads in Maryland from 98.4 (2014-2018 average) to 93.1 (2017-2021 average) or fewer by December 31, 2020. Maryland's FFY 2019 HSP unrestrained fatalities target was 96.4 (2016-2020 average).

• The actual number of unrestrained fatalities was 98.4 (2014-2018 average), which is higher than the target; therefore, Maryland is not progressing towards its target.

**Serious Injury Target:** Reduce the number of unrestrained serious injuries on all roads in Maryland from 324.0 (2014-2018 average) to 274.9 (2017-2021 average) or fewer by December 31, 2020. Maryland's FFY 2019 HSP unrestrained fatalities target was 285.5 (2016-2020 average).

• The actual number of unrestrained fatalities was 324.0 (2014-2018 average), which is higher than the target; therefore, Maryland is not progressing towards its target.

| Unrestrained Traffic Fatalities and Serious Injuries (Five-Year Average) |       |       |       |       |       |       |       |       |
|--|-------|-------|-------|-------|-------|-------|-------|-------|
| ACTUAL   | 2007- | 2008- | 2009- | 2010- | 2011- | 2012- | 2013- | 2014- |
|  | 2011  | 2012  | 2013  | 2014  | 2015  | 2016  | 2017  | 2018  |
| Fatality Average   | 137   | 130   | 123   | 117   | 109   | 107   | 108   | 98    |
| Serious Injury<br>Average  | 398   | 361   | 315   | 295   | 282   | 294   | 322   | 324   |

| Unrestrained Traffic Fatalities and Serious Injuries (Five-Year Average) |               |               |               |  |  |  |
|--|---------------|---------------|---------------|--|--|--|
| TARGET   | 2015-<br>2019 | 2016-<br>2020 | 2017-<br>2021 |  |  |  |
| Fatality Average   | 99.8          | 96.4          | 93.1          |  |  |  |
| Serious Injury Average   | 296.6         | 285.5         | 274.9         |  |  |  |

| Unrestrained Fatalities and Serious Injuries (Single Year) |       |       |  |  |  |  |
|--|-------|-------|--|--|--|--|
| TARGET   | 2018  | 2019  |  |  |  |  |
| Fatalities   | 96.4  | 93.1  |  |  |  |  |
| Serious Injuries   | 285.5 | 274.9 |  |  |  |  |

## **Pedestrians (On Foot)**

**Fatality Target**: Reduce the number of pedestrian (on foot) fatalities on all roads in Maryland from 111.0 (2014-2018 average) to 86.9 (2017-2021 average) or fewer by December 31, 2020. Maryland's FFY 2019 HSP pedestrian (on foot) fatalities target was 89.0 (2016-2020 average).

 Reduce the number of pedestrian (on foot) fatalities on all roads in Maryland from 111.0 (2014-2018 average) to 86.9 (2017-2021 average) or fewer by December 31, 2020. Maryland's FFY 2019 HSP pedestrian (on foot) fatalities target was 89.0 (2016-2020 average).

NOTE: The trend of pedestrian fatalities has been shown to be increasing over during the previous years. Future targets have been set at 101 to illustrate a 2% reduction from the baseline measure.

**Serious Injury Target:** Reduce the number of pedestrian (on foot) serious injuries on all roads in Maryland from 423.6 (2014-2018 average) to 320.9 (2017-2021 average) or fewer by December 31, 2020. Maryland's FFY 2019 HSP pedestrian (on foot) serious injuries target was 330.0 (2016-2020 average).

 The actual number of pedestrian (on foot) serious injuries was 423.6 (2014-2018 average), which is higher than the target; therefore, Maryland is not progressing towards its target.

| Pedestrian (On Foot) Fatalities and Serious Injuries (Five-Year Average) |       |       |       |       |       |       |       |       |
|--|-------|-------|-------|-------|-------|-------|-------|-------|
| ACTUAL   | 2007- | 2008- | 2009- | 2010- | 2011- | 2012- | 2013- | 2014- |
| ACTUAL   | 2011  | 2012  | 2013  | 2014  | 2015  | 2016  | 2017  | 2018  |
| Fatality Average   | 108   | 106   | 105   | 102   | 102   | 102   | 106   | 110   |
| Serious Injury<br>Average  | 412   | 384   | 362   | 351   | 343   | 357   | 384   | 424   |

| Pedestrian (On Foot) Fatalities and Serious Injuries (Five-Year Average) |               |               |               |  |  |
|--|---------------|---------------|---------------|--|--|
| TARGET   | 2015-<br>2019 | 2016-<br>2020 | 2017-<br>2021 |  |  |
| Fatality Average   | 91.0          | 89.0          | 86.9          |  |  |
| Serious Injury Average   | 339.4         | 330.0         | 320.9         |  |  |

| Pedestrian (On Foot) Fatalities and Serious Injuries (Single Year) |       |       |  |  |  |
|--|-------|-------|--|--|--|
| TARGET   | 2018  | 2019  |  |  |  |
| Fatalities   | 89.0  | 86.9  |  |  |  |
| Serious  |       |       |  |  |  |
| Injuries   | 330.0 | 320.9 |  |  |  |

In addition to the targets set forth in the Maryland SHSP, the MHSO used the same methodology to create targets and interim performance statements for each of the following areas:

## **Speed-Related**

**Fatality Target:** Reduce the number of speed-related fatalities on all roads in Maryland to 97.5 (2017-2021 average) or fewer by December 31, 2020. Maryland's FFY 2019 HSP speed-related fatalities target was 101.2 (2016-2020 average).

• The actual number of speed-related fatalities was 84.4 (2014-2018 average), which is lower than the target; therefore, Maryland has met its target.

**Serious Injury Target:** Reduce the number of speed-related serious injuries on all roads in Maryland to 513.4 (2017-2021 average) or fewer by December 31, 2020. Maryland's FFY 2019 HSP speed-related serious injuries target was 538.1 (2016-2020 average).

• The actual number of speed-related serious injuries was 373.4 (2014-2018 average), which is lower than the target; therefore, Maryland has met its target.

| Speed-Related Fatalities and Serious Injuries (Five-Year Average) |       |       |       |       |       |       |       |       |
|---|-------|-------|-------|-------|-------|-------|-------|-------|
| ACTUAL  | 2007- | 2008- | 2009- | 2010- | 2011- | 2012- | 2013- | 2014- |
|   | 2011  | 2012  | 2013  | 2014  | 2015  | 2016  | 2017  | 2018  |
| Fatality Average  | 149   | 144   | 134   | 121   | 110   | 100   | 90    | 84    |
| Serious Injury<br>Average   | 943   | 820   | 728   | 628   | 538   | 463   | 410   | 373   |

| Speed-Related Fatalities and Serious Injuries (Five-Year Average) |       |       |       |  |  |
|---|-------|-------|-------|--|--|
| TARGET  | 2015- | 2016- | 2017- |  |  |
| TARGET  | 2019  | 2020  | 2021  |  |  |
| Fatality Average  | 105.0 | 101.2 | 97.5  |  |  |
| Serious Injury Average  | 564.0 | 538.1 | 513.4 |  |  |

| Speed-Related Fatalities and Serious Injuries (Single Year) |       |       |  |  |  |  |
|---|-------|-------|--|--|--|--|
| TARGET  | 2018  | 2019  |  |  |  |  |
| Fatalities  | 101.2 | 97.5  |  |  |  |  |
| Serious Injuries  | 538.1 | 513.4 |  |  |  |  |

## **Bicyclists**

**Fatality Target:** Reduce the number of bicyclist fatalities on all roads in Maryland from 9.8 (2014-2018 average) to 6.1 (2017-2021 average) or fewer by December 31, 2020. Maryland's FFY 2019 HSP bicyclist fatalities target was 6.3 (2016-2020 average).

• The actual number of bicyclist fatalities was 9.8 (2014-2018 average), which is higher than the target; therefore, Maryland has not met its target.

NOTE: The trend of bicycle fatalities has been shown to be increasing over during the previous years. Future targets have been set at 7.0 to illustrate a 2% reduction from the baseline measure.

**Serious Injury Target:** Reduce the number of bicyclist serious injuries on all roads in Maryland from 67.8 (2014-2018 average) to 56.0 (2017-2021 average) or fewer by December 31, 2020. Maryland's FFY 2019 HSP bicyclist serious injuries target was 57.6 (2016-2020 average).

• The actual number of bicyclist serious injuries was 67.8 (2014-2018 average), which is higher than the target; therefore, Maryland has not met its target.

| Bicycle Fatalities and Serious Injuries (Five-Year Average) |       |       |       |       |       |       |       |       |
|---|-------|-------|-------|-------|-------|-------|-------|-------|
| ACTUAL  | 2007- | 2008- | 2009- | 2010- | 2011- | 2012- | 2013- | 2014- |
| ACTUAL  | 2011  | 2012  | 2013  | 2014  | 2015  | 2016  | 2017  | 2018  |
| Fatality Average  | 7     | 7     | 7     | 6     | 7     | 9     | 10    | 10    |
| Serious Injury<br>Average                                   | 74    | 73    | 68    | 69    | 64    | 61    | 65    | 68    |

| Bicycle Fatalities and Serious Injuries (Five-Year Average) |      |      |      |  |  |  |
|---|------|------|------|--|--|--|
| TARGET 2015- 2016- 2017- 2019 2020 2021                     |      |      |      |  |  |  |
| Fatality Average  | 6.4  | 6.3  | 6.1  |  |  |  |
| Serious Injury Average                                      | 59.3 | 57.6 | 56.0 |  |  |  |

| Bicycle Fatalities and Serious Injuries (Single Year) |      |      |  |  |  |  |
|---|------|------|--|--|--|--|
| TARGET 2018 2019                                      |      |      |  |  |  |  |
| Fatalities  | 6.3  | 6.1  |  |  |  |  |
| Serious   |      |      |  |  |  |  |
| Injuries  | 57.6 | 56.0 |  |  |  |  |

## **Motorcycles**

**Fatality Target:** Reduce the number of motorcyclist fatalities on all roads in Maryland from 71.0 (2014-2018 average) to 59.5 (2017-2021 average) or fewer by December 31, 2020. Maryland's FFY 2019 HSP motorcyclist fatalities target was 61.2 (2016-2020 average).

• The actual number of motorcyclist fatalities was 71.0 (2014-2018 average), which is higher than the target; therefore, Maryland has not met its target.

**Serious Injury Target:** Reduce the number of motorcyclist serious injuries on all roads in Maryland from 294.4 (2014-2018 average) to 243.8 (2017-2021 average) or fewer by December 31, 2020. Maryland's FFY 2019 HSP motorcyclist serious injuries target was 252.7 (2016-2020 average).

• The actual number of motorcyclist serious injuries was 294.4 (2014-2018 average), which is higher than the target; therefore, Maryland has not met its target.

| Motorcycle-Involved Fatalities and Serious Injuries (Five-Year Average) |       |       |       |       |       |       |       |       |
|---|-------|-------|-------|-------|-------|-------|-------|-------|
| ACTUAL  | 2007- | 2008- | 2009- | 2010- | 2011- | 2012- | 2013- | 2014- |
| ACTUAL  | 2011  | 2012  | 2013  | 2014  | 2015  | 2016  | 2017  | 2018  |
| Fatality Average  | 78    | 74    | 70    | 70    | 69    | 70    | 72    | 71    |
| Serious Injury<br>Average   | 348   | 323   | 306   | 294   | 280   | 276   | 284   | 294   |

| Motorcycle-Involved Fatalities and Serious Injuries (Five-Year Average) |           |           |           |  |  |  |
|---|-----------|-----------|-----------|--|--|--|
| TARGET  | 2015-2019 | 2016-2020 | 2017-2021 |  |  |  |
| Fatality Average  | 62.9      | 61.2      | 59.5      |  |  |  |
| Serious Injury Average  | 262.0     | 252.7     | 243.8     |  |  |  |

| Motorcycle-Involved Fatalities and Serious Injuries (Single Year) |       |       |  |  |  |  |
|---|-------|-------|--|--|--|--|
| TARGET  | 2018  | 2019  |  |  |  |  |
| Fatalities  | 61.2  | 59.5  |  |  |  |  |
| Serious Injuries  | 252.7 | 243.8 |  |  |  |  |

## Older Drivers (65-110)

**Fatality Target**: Reduce the number of older-driver-involved fatalities on all roads in Maryland from 94.2 (2014-2018 average) to 68.2 (2017-2021 average) or fewer by December 31, 2020. Maryland's FFY 2019 HSP older-driver-involved fatalities target was 70.3 (2016-2020 average).

• The actual number of older-driver-involved fatalities was 94.2 (2014-2018 average), which is higher than the target; therefore, Maryland has not met its target.

**Serious Injury Target:** Reduce the number of older-driver-involved serious injuries on all roads in Maryland from 484.6 (2014-2018 average) to 426.2 (2017-2021 average) or fewer by December 31, 2020. Maryland's FFY 2019 HSP older-driver-involved serious injuries target was 442.2 (2016-2020 average).

• The actual number of older-driver-involved serious injuries was 484.6 (2014-2018 average), which is higher than the target; therefore, Maryland has not met its target.

| Older Driver-Related Fatalities and Serious Injuries (Five-Year Average) |       |       |       |       |       |       |       |       |
|--|-------|-------|-------|-------|-------|-------|-------|-------|
| ACTUAL   | 2007- | 2008- | 2009- | 2010- | 2011- | 2012- | 2013- | 2014- |
| ACTUAL   | 2011  | 2012  | 2013  | 2014  | 2015  | 2016  | 2017  | 2018  |
| Fatality Average   | 85    | 85    | 82    | 79    | 84    | 89    | 91    | 94    |
| Serious Injury<br>Average  | 617   | 576   | 545   | 529   | 487   | 476   | 474   | 485   |

| Older Driver-Related Fatalities and Serious Injuries (Five-Year Average) |       |       |       |  |  |  |
|--|-------|-------|-------|--|--|--|
| TARGET 2015-2019 2016-2020 2017-2021                                     |       |       |       |  |  |  |
| Fatality Average   | 72.4  | 70.3  | 68.2  |  |  |  |
| Serious Injury Average   | 458.9 | 442.2 | 426.2 |  |  |  |

| Older Driver-Related Fatalities and Serious Injuries (Single Year) |       |       |  |  |  |  |
|--|-------|-------|--|--|--|--|
| TARGET   | 2018  | 2019  |  |  |  |  |
| Fatalities   | 70.3  | 68.2  |  |  |  |  |
| Serious Injuries   | 442.2 | 426.2 |  |  |  |  |

## Young Drivers (16-20)

**Fatality Target**: Reduce the number of young-driver-involved fatalities on all roads in Maryland to 54.9 (2017-2021 average) or fewer by December 31, 2020. Maryland's FFY 2019 HSP young-driver-involved fatalities target was 56.9 (2016-2020 average).

• The actual number of young-driver-involved fatalities was 51.0 (2014-2018 average), which is lower than the target; therefore, Maryland has met its target.

**Serious Injury Target:** Reduce the number of young-driver-involved serious injuries on all roads in Maryland to 486.0 (2017-2021 average) or fewer by December 31, 2020. Maryland's FFY 2019 HSP young-driver-involved serious injuries target was 510.4 (2016-2020 average).

• The actual number of young-driver-involved serious injuries was 415.4 (2014-2018 average), which is lower than the target; therefore, Maryland has met its target.

| Young Driver-Involved Fatalities and Serious Injuries (Five-Year Average) |       |       |       |       |       |       |       |       |
|---|-------|-------|-------|-------|-------|-------|-------|-------|
| ACTUAL  | 2007- | 2008- | 2009- | 2010- | 2011- | 2012- | 2013- | 2014- |
| ACTUAL  | 2011  | 2012  | 2013  | 2014  | 2015  | 2016  | 2017  | 2018  |
| Fatality Average  | 87    | 77    | 65    | 55    | 52    | 51    | 49    | 51    |
| Serious Injury<br>Average   | 874   | 745   | 641   | 551   | 480   | 444   | 428   | 415   |

| Young Driver-Involved Fatalities and Serious Injuries (Five-Year Average) |       |       |       |  |  |  |  |
|---|-------|-------|-------|--|--|--|--|
| TARGET 2015-2019 2016-2020 2017-2021                                      |       |       |       |  |  |  |  |
| Fatality Average  | 58.9  | 56.9  | 54.9  |  |  |  |  |
| Serious Injury Average  | 536.0 | 510.4 | 486.0 |  |  |  |  |

| Young Driver-Involved Fatalities and Serious Injuries (Single Year) |       |       |  |  |  |  |  |  |
|---|-------|-------|--|--|--|--|--|--|
| TARGET 2018 2019  |       |       |  |  |  |  |  |  |
| Fatalities  | 56.9  | 54.9  |  |  |  |  |  |  |
| Serious   |       |       |  |  |  |  |  |  |
| Injuries  | 510.4 | 486.0 |  |  |  |  |  |  |

## NHTSA CORE PERFORMANCE MEASURES

To meet federal requirements as expressed in the FAST Act, the required minimum set of core performance measures are included below. The source for all fatality baseline data is NHTSA's FARS most recently available data. Please note that base year numbers and targets will NOT match the base year number and targets stated above due to differences in data definitions between the NHTSA FARS system and the State crash data system.

All targets below are set using a five-year average and the exponential trend method described earlier. Additional sources include serious injury crash data derived from the SHA, based on reports submitted and processed by the Maryland State Police Central Records Division (MSP CRD) and through the ACRS; seat belt use rate obtained from the annual Maryland Observational Surveys of Safety Belt Use; and seat belt citations, DUI arrests, and speeding citations obtained through MHSO's grant management reporting system.

As with the SHSP, the end-year targets (by December 31, 2020) and single year targets are derived from the midpoint of the 5-year average for the years 2017-2021.

#### **Standardized Performance and Survey Measures**

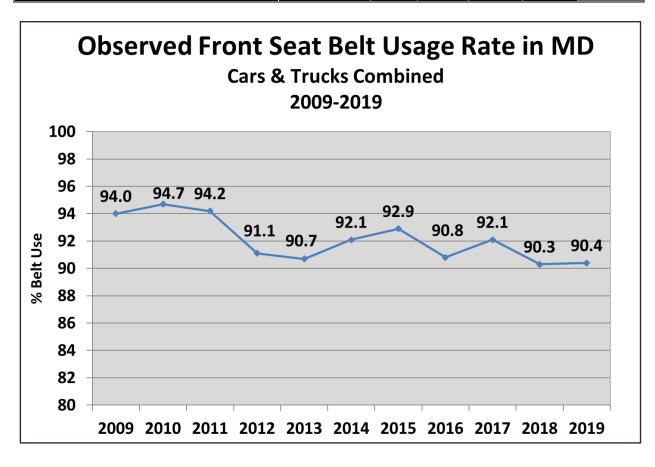
- Reduce the five-year average number of fatalities on all roads in Maryland from 623 in 2004-2008 (NHTSA FARS ARF) to 420.6 (2017-2021 average) or fewer by December 31, 2020. (C-1)
- Reduce the five-year average number of serious injuries on all roads in Maryland from 6,171 in 2004-2008 to 2,905.8 (2017-2021 average) or fewer by December 31, 2020. (C-2)
- Reduce the number of traffic-related fatality rate on all roads in Maryland from 0.856 (2012-2016 average, FARS ARF) to 0.750 (2016-2020 average) or lower by December 31, 2020. Maryland's FFY 2019 HSP fatality rate target was 0.773 (2015-2019 average). NHTSA has not yet released the 2017 rate information in order to determine progress. (C-3)
- Reduce the five-year average number of unrestrained passenger vehicle occupant fatalities (all seat positions) on all roads in Maryland from 167 in 2004-2008 to 105.5 (2017-2021 average) or fewer by December 31, 2020. (C-4)
- Reduce the five-year average number of alcohol-related fatalities (BAC 0.08+) on all roads in Maryland from 178 in 2004-2008 to 117.6 (2017-2021 average) or fewer by December 31, 2020. (C-5)
- Reduce the five-year average number of speeding-related fatalities on all roads in Maryland from 222 in 2004-2008 to 128.9 (2017-2021 average) or fewer by December 31, 2020. (C-6)
- Reduce the five-year average number of motorcyclist fatalities on all roads in Maryland from 85 in 2004-2008 to 62.6 (2017-2021 average) or fewer by December 31, 2020. (C-7)
- Reduce the five-year average number of unhelmeted motorcyclist fatalities on all roads in Maryland from 11 in 2004-2008 to 7.5 (2017-2021 average) or fewer by December 31, 2020. (C-8)
- Reduce the five-year average number of drivers aged 20 or under involved in fatal crashes on all roads in Maryland from 103 in 2004-2008 to 49.4 (2017-2021 average) or fewer by December 31, 2020. (C-9)
- Reduce the five-year average number of pedestrian fatalities on all roads in Maryland from 105 in 2004-2008 to 85.7 (2017-2021 average) or fewer by December 31, 2020. (C-10)
- Reduce the five-year average number of bicyclist and other cyclist fatalities on all roads in Maryland from 8 in 2004-2008 to 5.7 (2017-2021 average) or fewer by December 31, 2020. (C-11)
- To increase statewide observed belt use rate of front seat outboard occupants in passenger vehicles and light trucks from the 2012 calendar base year of 91.1 percent to 96.2 percent by December 31, 2020. (B-1)
- To report the number of seat belt citations issued during grant-funded enforcement activities. (A-1)
- To report the number of impaired driving arrests made during grant-funded enforcement activities. (A-2)
- To report the number of speeding citations issued during grant-funded enforcement activities. (A-3)

|  |               | Year (Actual) |               |               |               |               |               |               |               |               |                         |
|--|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-------------------------|
| Core Outcome<br>Measures (FARS)                                      | 2005-<br>2009 | 2006-<br>2010 | 2007-<br>2011 | 2008-<br>2012 | 2009-<br>2013 | 2010-<br>2014 | 2011-<br>2015 | 2012-<br>2016 | 2013-<br>2017 | 2014-<br>2018 | 2017-<br>2021<br>target |
| Traffic Fatalities   | 604           | 580           | 547           | 526           | 501           | 480           | 485           | 492           | 501           | 509           | 420.6                   |
| Fatalities Per 100 Million<br>Vehicle Miles Driven                   | 1.08          | 1.04          | 0.98          | 0.94          | 0.89          | 0.85          | 0.86          | 0.86          | N/A           | N/A           | N/A                     |
| Unrestrained Passenger<br>Vehicle Fatalities<br>(all seat positions) | 389           | 369           | 336           | 323           | 306           | 388           | 291           | 292           | 104           | 103           | 105.5                   |
| Alcohol-Impaired Driving Fatalities (BAC=.08+)                       | 168           | 166           | 161           | 158           | 156           | 149           | 150           | 146           | 150           | 147           | 117.6                   |
| Speeding-Related<br>Fatalities                                       | 210           | 199           | 180           | 177           | 168           | 158           | 150           | 148           | 140           | 135           | 128.9                   |
| Motorcyclist Fatalities  | 85            | 84            | 83            | 79            | 73            | 73            | 72            | 72            | 74            | 74            | 62.6                    |
| Unhelmeted Motorcyclist<br>Fatalities                                | 11            | 11            | 11            | 10            | 9             | 9             | 8             | 8             | 9             | 10            | 7.5                     |
| Drivers Aged 20 or<br>Under Involved in Fatal<br>Crashes             | 100           | 90            | 81            | 73            | 62            | 51            | 48            | 46            | 44            | 46            | 49.4                    |
| Pedestrian Fatalities  | 109           | 109           | 110           | 106           | 105           | 102           | 101           | 102           | 106           | 110           | 85.7                    |
| Bicyclist and Other<br>Cyclist Fatalities                            | 7             | 8             | 7             | 7             | 7             | 6             | 6             | 9             | 10            | 10            | 5.7                     |

| Core Outcome Measures - Single Year Targets                    |       |       |
|--|-------|-------|
|  | 2018  | 2019  |
| Traffic Fatalities   | 432.5 | 420.6 |
| Fatalities Per 100 Million Vehicle Miles Driven                | N/A   | N/A   |
| Unrestrained Passenger Vehicle Fatalities (all seat positions) | 107.9 | 105.5 |
| Alcohol-Impaired Driving Fatalities (BAC=.08+)                 | 122.1 | 117.6 |
| Speeding-Related Fatalities                                    | 133.5 | 128.9 |
| Motorcyclist Fatalities  | 64.2  | 62.6  |
| Unhelmeted Motorcyclist Fatalities                             | 7.7   | 7.5   |
| Drivers Aged 20 or Under Involved in Fatal Crashes             | 51.3  | 49.4  |
| Pedestrian Fatalities  | 87.4  | 85.7  |
| Bicyclist and Other Cyclist Fatalities                         | 5.9   | 5.7   |
| Serious Injuries   | 107.9 | 105.5 |

|                                      | Year (Actual) |               |               |               |               |               |               |               |               |               |                         |
|--------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-------------------------|
| Core Outcome Measure<br>(State Data) | 2005-<br>2009 | 2006-<br>2010 | 2007-<br>2011 | 2008-<br>2012 | 2009-<br>2013 | 2010-<br>2014 | 2011-<br>2015 | 2012-<br>2016 | 2013-<br>2017 | 2014-<br>2018 | 2016-<br>2020<br>target |
| Serious Injuries                     | 5,571         | 4,923         | 4,436         | 4,020         | 3,702         | 3,436         | 3,147         | 3,017         | 3,023         | 3,075         | 3,088                   |

|   | Year (Actual) |      |      |      |      |      |                               |  |  |
|---|---------------|------|------|------|------|------|-------------------------------|--|--|
| Core Behavior Measure (State Data)  | 2014          | 2015 | 2016 | 2017 | 2018 | 2019 | 2020<br>(Target) <sup>2</sup> |  |  |
| Observed seat belt use for passenger vehicles, front seat outboard occupants (Survey) | 92.1          | 92.9 | 90.8 | 92.1 | 90.3 | 90.4 | 96.2                          |  |  |



<sup>&</sup>lt;sup>2</sup> The proposed seat belt use rate targets estimate a reduction in the number of observed unbelted motor vehicle occupants by at least 25 in each of the observation counties for each successive year. Targets were set based on the 92.1% belt used rate in 2014.

| ***Activity Measures   | Federal Fiscal Year (FFY) |         |         |         |         |         |         |         |  |  |  |
|--|---------------------------|---------|---------|---------|---------|---------|---------|---------|--|--|--|
| (State Data: Grant-<br>funded Only)  | FFY2012                   | FFY2013 | FFY2014 | FFY2015 | FFY2016 | FFY2017 | FFY2018 | FFY2019 |  |  |  |
| Number of seat belt citations issued during grant-funded enforcement activities    | 13,506                    | 7,455   | 7,815   | 4,434   | 4,900   | 2,580   | 2,489   | 3,101   |  |  |  |
| Number of impaired driving arrests made during grant-funded enforcement activities | 2,088                     | 1,510   | 2,096   | 1,620   | 1,894   | 1,097   | 1,217   | 1,018   |  |  |  |
| Number of speeding citations issued during grant-funded enforcement activities     | 40,772                    | 21,542  | 26,669  | 20,752  | 24,542  | 18,529  | 22,575  | 16,392  |  |  |  |

<sup>\*\*\*</sup>Targets are not created for activity measures. Cannot compare year-to-year due to inconsistencies in how the data are pulled and the change in grant activity tracking systems. For Annual Reporting purposes, use only the most recent year.

## LOOKING TO THE FUTURE

More than 500 people lost their lives on Maryland's roads this year. While the drop in overall deaths from 2017 to 2018 is seen as a positive indicator for the future, the loss of these lives cannot be easily put aside. The people killed in crashes were family members and friends, and valued members of Maryland's communities. Some of those who survived serious crashes are still struggling with the lasting impact of injuries, and families deal with the trauma of a loved one that was either killed or seriously injured.

While it can be easy to reduce crashes to numbers, the MHSO strives to drive home the message that these numbers represent real people. The numbers also represent lives cut short, most often from poor choices made by drivers and passengers - choices like driving impaired, being distracted by a cell phone, or not wearing a seat belt.

The only acceptable number for Maryland is zero. Zero crashes. Zero injuries. Zero lives lost. Ultimately, change will occur on Maryland roads when individuals make the right choices while driving, riding, and walking. Personal responsibility and good decision making are key components of Maryland's media and enforcement safety campaigns, and our mission is to create an environment where every person is empowered to make responsible decisions. We intend to continue raising awareness of positive decision making, with the goal of eliminating crashes and their resulting injuries and fatalities.

For us, every crash matters and every life counts.