ITEM 11 – Information
May 15, 2019

Activities to Address Safety Challenges in the Region: MDOT

Staff Recommendation: Briefing on MDOT Safety Activities.

Issues: None

Background: In January, the board approved Resolution R11-2019 to set performance-based planning and programming (PBPP) highway safety targets for 2019. As part of the resolution, the board requested that member DOTs report quarterly on their efforts to improve safety. In this third briefing, MDOT will provide an overview of Maryland's safety program.

Moving Maryland

Toward Zero Deaths

MARYLAND DEPARTMENT OF TRANSPORTATION

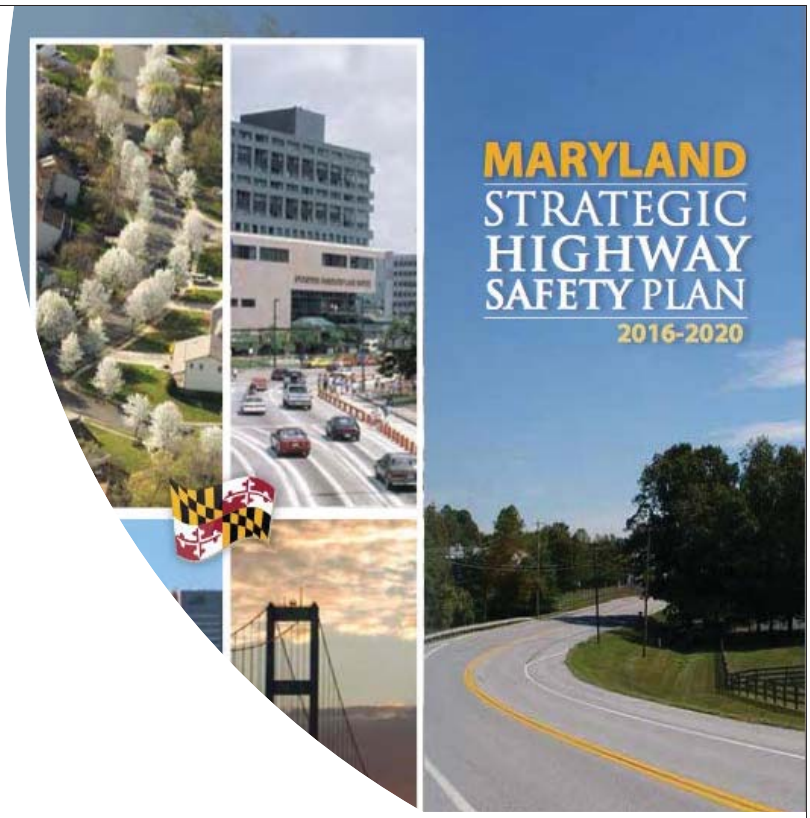
Maryland's Strategic Highway Safety Plan

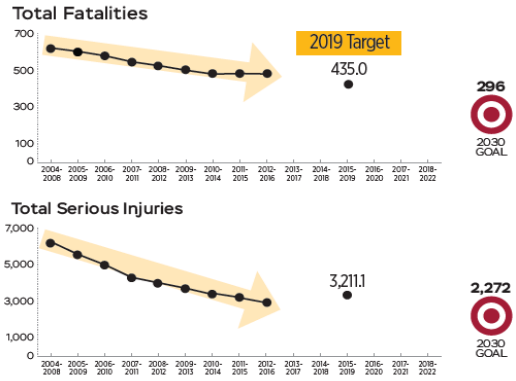
TOWARDS ZERO DEATH

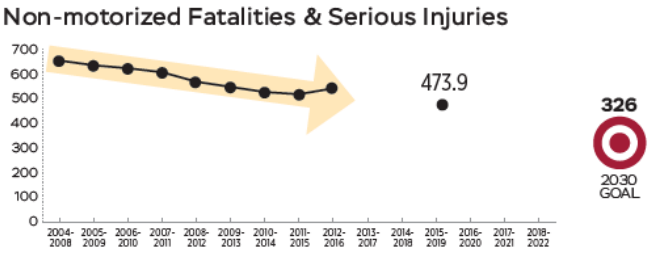
Goal: To ensure a safe, secure, and resilient transportation system for all users

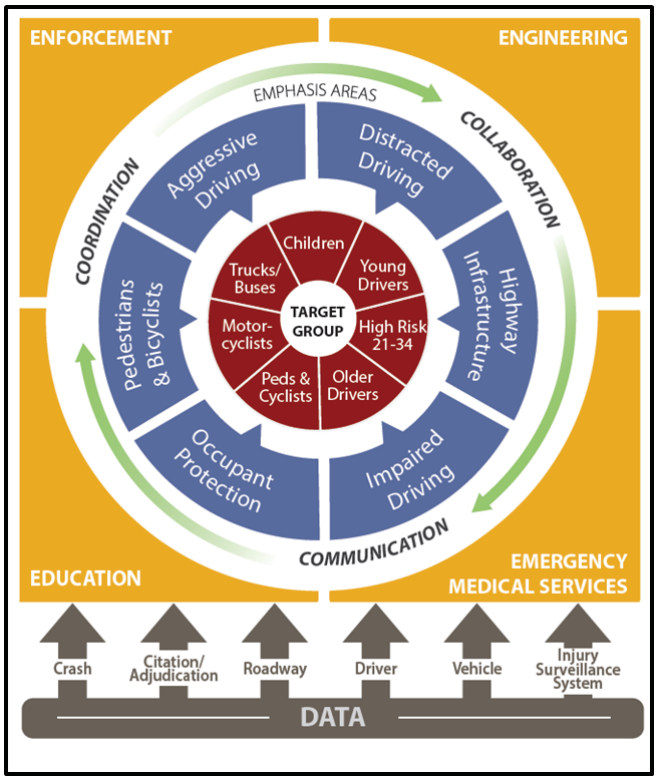
Objective: Reduce the number of lives lost and injuries sustained on Maryland roads

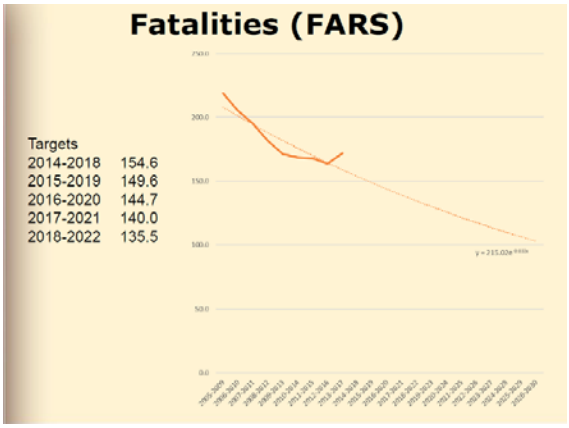
Strategy: Build partnerships to strengthen state and local efforts to improve safety

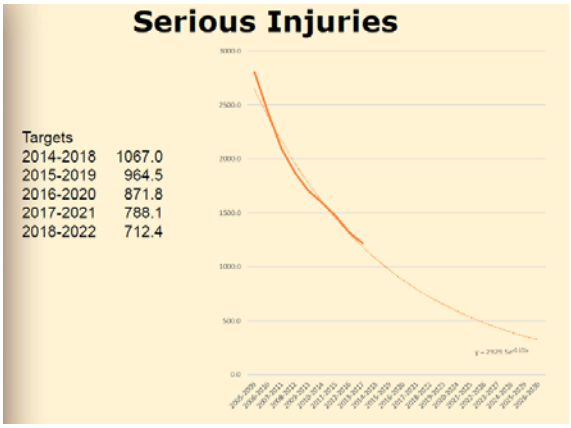






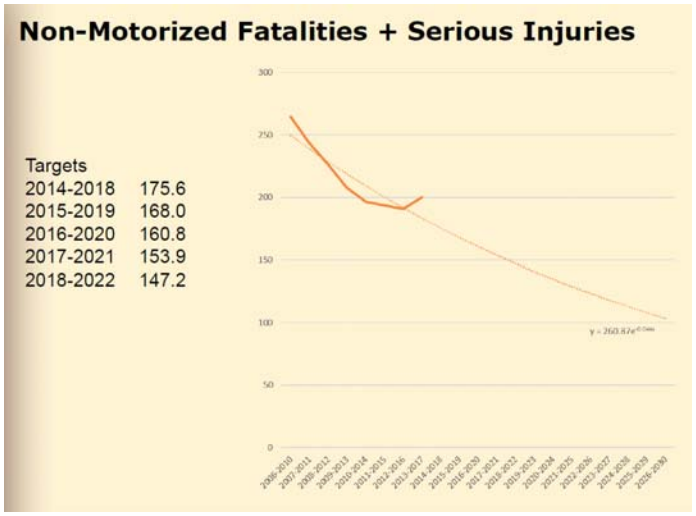






National Capital Region Summary

National Capital Region Summary



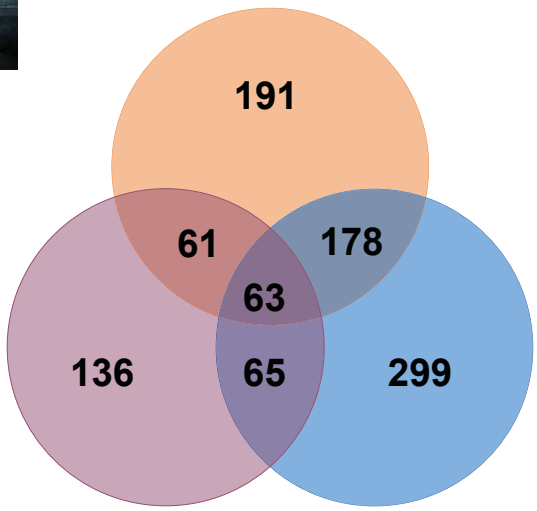
Maryland Motor Vehicle Occupant Fatality Contributing Factors

Unbelted = 493
(32% of all fatalities)

1,563 motor vehicle occupant deaths for the period **2013-2017**.

Sixty-four percent (n=993) involved speeding, impairment, or lack of belt use.

Maryland's 2018 Observed Seat Belt Rate is **90.3%**



Speed = 325
(21% of all)

Impaired = 605
39% of all)

Behavioral Emphasis Area Spending

Overall grant funds obligated

- Statewide - $12.6 million
- National Capital Region - $1.7 million

Funds used to support media, enforcement, education, and other programs

Engineering Emphasis Areas

Highway Infrastructure

An average of **276** fatalities and **2,169** serious injuries occurred in crashes involving infrastructure-related issues.

Intersection-related and run-off-the-road crashes are the prime indicators of roadway infrastructure opportunities for improvement.

Work zone crashes are also included in this emphasis area.

Pedestrian and Bicyclist

An average of **105** fatalities and **362** serious injuries occurred in crashes involving pedestrians.

An average of **7** fatalities and **68** serious injuries occurred in crashes involving bicyclists.

Non-motorized road users tend to be the most vulnerable, and the proportion of fatalities and serious injuries including pedestrians and bicyclists has increased over time.

Highway Infrastructure Crash Mitigation

Spot Improvements

Identify intersections where the Crash Severity Index is high and implement safety improvements

Identify corridors where the Crash Severity Index is high and address roadway elements that contribute to crashes

Systemwide Improvements

Develop and implement system-wide improvements to reduce the number and severity of infrastructure-related crashes

Identify, develop, and implement system-wide improvements that address the safety of vulnerable user groups

Commercial Vehicle Improvements

Identify and implement recommended safety initiatives for commercial motor carriers

Spot Improvements

An annual list of Candidate Safety Improvement Locations is prepared by the Office of Traffic and Safety identifying intersections and sections of roadway based on crash numbers, rates, and severity

Road Safety Audits are conducted by independent teams along roadways where safety concerns or patterns of crashes have been identified

Fatal crash locations are reviewed by District Traffic office soon after the crash to determine if all traffic control devices are up to current standards

District Traffic office responds to customer concerns about traffic safety and conduct studies as requested

Candidate Safety Improvement Locations

Data Driven Approach to Target Specific Crash Trends

- Geometric Modifications – ADA, Curb Radii, Turn Lanes, Roundabouts
- Traffic Signal Modifications – No Turn on Red, Leading Pedestrian Intervals, APS/CPS
- LED Lighting
- Rumble Strips
- Raised Pavement Markers
- Road Diet, Lane Width Reductions
- Bike lanes
- Sidewalks, Shared use paths

Systemwide Improvements

- High Friction Surface Treatment
- Low Cost Improvements at Ramp Termini to target Wrong Way Driving Crashes
- Guardrail Upgrades
- Pedestrian Roadway Safety Audit (PRSA) program
- Pedestrian Best Practices Guidelines
  - Pedestrian Hybrid Beacon or HAWK
  - Rectangular Rapid Flashing Beacon (RRFB)

Wrong Way Driving Crashes

Wrong way crashes are approximately 0.4% of crashes Statewide (compared to 2.8% nationally)

High percentage of crashes involve alcohol use

Most crashes happened at night and involved younger drivers

Low cost, innovative improvements identified – signing, pavement marking, signal modifications

Commercial Vehicle Safety Improvements

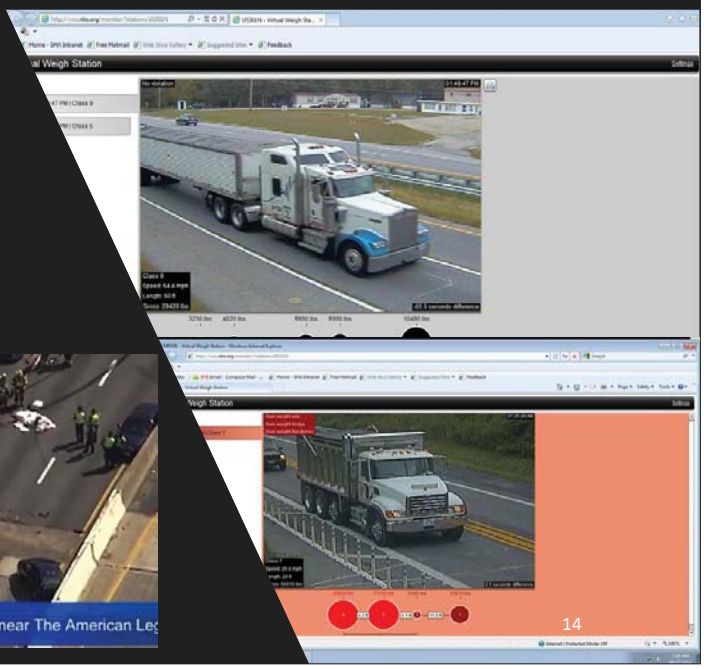
Over 100,000 Inspections conducted yearly.

Maryland Virtual Weigh Station (VWS) Program

- 20 VWS deployed statewide since December 2017

Maryland State Police Inspection of Trucks

- Out of Service rate at 40 % for certain categories



Pedestrian and Bicyclist Safety

Pedestrian Roadway Safety Audits
- 17 PRSA's conducted
- 7 in Montgomery County and 10 in Prince George's County
- More than 750 recommendations generated
- Recommendations used to initiate short term, mid term, and long term projects

Sidewalk programs

Safe Routes to School Programs

Urban Mobility Program

Urban Mobility Program

In urban areas:
- Lower speed limits
- Install continental crosswalks
- Install No Turn on Red
- Install Leading Pedestrian Interval

Lower speed limit implemented along:
- MD 97 (Georgia Avenue) in Wheaton
- MD 410 (East West Highway) in Bethesda
- MD 188 (Wilson Lane) in Bethesda

Several more corridors planned….

Maryland Highway Safety Infrastructure Spending

Fiscal Year	Statewide*	National Capital Region*
2018	53.5	20.7
2019	49	9.4
2020	64	14.5

*All dollar figures in millions

For Further Information

Maryland Strategic Highway Safety Plan

Maryland Highway Safety Improvement Program

Maryland Highway Safety Plan

MDOT SHA Transportation Performance Management Dashboard

Maryland Highway Safety Office

MARYLAND DEPARTMENT OF TRANSPORTATION

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