



*Baltimore Region
Transportation Board (BRTB)
Metropolitan Planning Organization*

December 17, 2019

MAP-21 and FAST Act
Transportation Performance
Management (TPM)

**TPM 1:
ESTABLISHING HIGHWAY SAFETY
IMPROVEMENT PROGRAM SAFETY
TARGETS**

✓ **MAP-21/FAST Act National TPM Goals**

 **TPM 1 Safety Performance Measures**


 **MDOT Target Setting Methodology**

 **CY 2020 State Safety Target Summary**

 **MPO Adoption Process**

 **Statewide Historical Performance**

 **Statewide TPM 1 Advancement**

 **TPM 1 Resources**

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PRESENTATION OUTLINE



TPM 1. Safety (5 measures)



TPM 2. Infrastructure Condition (3 measures)



TPM 3. Congestion Mitigation (2 measures)



TPM 3: Travel Time Reliability (1 measure)



TPM 3: Air Quality (8 measures)



Environmental Sustainability



Reduced Project Delivery Delays

MAP-21/FAST ACT NATIONAL TPM GOALS

Number of Fatalities

- The total number of persons suffering fatal injuries in a motor vehicle crash during a calendar year.

Number of Serious Injuries

- The total number of persons suffering at least one serious injury in a motor vehicle crash during a calendar year.

Fatality Rate

- The ratio of total number of fatalities to the number of vehicle miles traveled (VMT, in 100 Million VMT) in a calendar year.

Serious Injury Rate

- The ratio of total number of serious injuries to the number of VMT (in 100 Million VMT) in a calendar year.

Non-Motorized Fatality & Serious Injuries

- The combined total number of non-motorized fatalities and non-motorized serious injuries involving a motor vehicle during a calendar year.



TPM 1: SAFETY PERFORMANCE MEASURES

MDOT TARGET SETTING METHODOLOGY: TOWARD ZERO DEATHS

- MDOTs Maryland Highway Safety Improvement Plan (HSIP), submitted annually to FHWA on August 31st communicates the State's quantifiable and data driven highway safety performance targets.
- MDOT maintains the Toward Zero Deaths (TZD) approach by developing interim targets to reduce overall fatalities and serious injuries by at least 50 percent by 2030.
- Starting with a baseline of 2008 to a fixed end goal in 2030, an exponential trend line is fitted between those points. Five-year rolling averages are used to calculate five-year projections. The targets for each individual year are taken from the midpoint of the five-year average, e.g., 2020 target = midpoint of the 2018 – 2022 average.
- This method is applied to 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 with the first three being identical in Maryland's HSP and HSIP.





Highway Safety Improvement Program
Data Driven Decisions

Maryland
Highway Safety Improvement Program

Measure	State Target (CY 2020)
Number of fatalities	425.7
Fatalities/100 million VMT	0.752
Number of serious injuries	3,029.4
Serious injuries/100 million VMT	5.372
Non-motorized fatalities & serious injuries	465.8

CY 2020 STATE SAFETY TARGET SUMMARY

MPO ADOPTION PROCESS

- All MPOs must set a target for each of the 5 Safety Performance Measures for their metropolitan planning area.
- MPOs may adopt and support the State's targets, develop their own targets, or use a combination of both.
- MPOs that have previously adopted to support the state's targets and intend to continue to support these targets, you may act in one of two ways:
 - 1) *the Council/Board can adopt by a new resolution, or*
 - 2) *the Executive Director may send a letter to the attention of the Director of the Office of Planning and Capital Programming at MDOT, documenting the MPO's continued support of the state's TPM 1 Safety Targets.*
- MPOs must establish targets within 180 days of the State establishing and reporting its HSIP targets = February 27th.
- MPO safety targets are reported to the State DOT.
 - *MPOs must include baseline safety performance, safety targets and progress toward achieving those targets in the system performance report in the Long-Range Transportation Plan and other planning/programming documents.*
 - *MPOs must also include a description in the TIP of the anticipated effect of the TIP toward achieving targets in the MTP, linking investment priorities in the TIP to those safety targets.*
- State safety targets are assessed by FHWA annually.



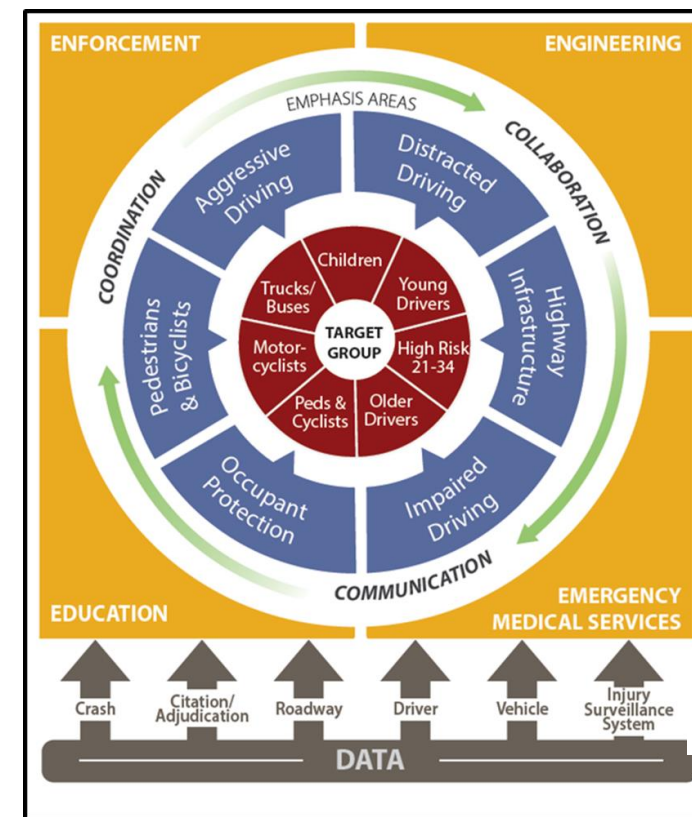
STATEWIDE HISTORICAL SAFETY DATA (2008 - 2018)											
MEASURE	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
FATALITIES	591	549	496	485	511	465	442	520	505	550	513
FATALITY RATE	1.07	0.990	0.880	0.860	0.900	0.820	0.780	0.890	0.880	0.920	0.860
SERIOUS INJURIES	4,544	4,383	4,051	3,809	3,312	2,957	3,053	2,595	3,164	3,345	3,224
SERIOUS INJURIES RATE	8.090	7.880	7.210	6.800	5.870	5.240	5.410	4.550	5.370	5.585	5.407
NON-MOTORIZED FATALITIES AND SERIOUS INJURIES	653	606	547	537	508	510	537	481	708	711	693
VEHICLE MILES TRAVELED	56,148	55,631	56,206	56,051	56,389	56,457	56,400	57,314	58,974	59,892	59,629

STATEWIDE HISTORICAL PERFORMANCE

Regional Partnerships, Resources & Outreach Programs

- Participation in Pedestrian Roadway Safety Audits
- Local representation/participation in the Strategic Highway Safety Plan
- Commercial vehicle safety partnerships
- Automated Speed Enforcement
- Signal System Retiming
- Application of High Friction Surface Treatment
- Pedestrian Safety Guidelines Development

- Overall safety grant funds obligated (FY 2019)
 - Statewide - \$12.6 million
 - Baltimore Metropolitan Region ≈ \$1 mil
- Overall grant funds used to support media, enforcement, education, and other programs.

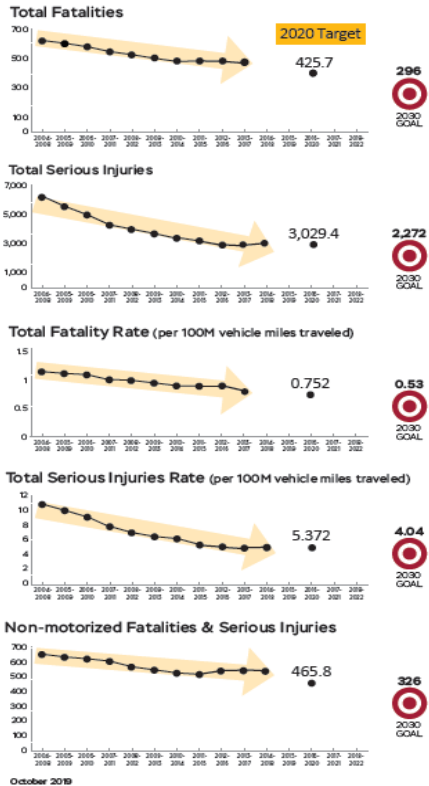


STATEWIDE TPM 1 ADVANCEMENT

The Maryland Department of Transportation (MDOT) established performance targets for Safety, Infrastructure Condition, System Performance, and Congestion Mitigation and Air Quality (CMAQ), as specified under 23 U.S.C. 490 - National Performance Management Measures.

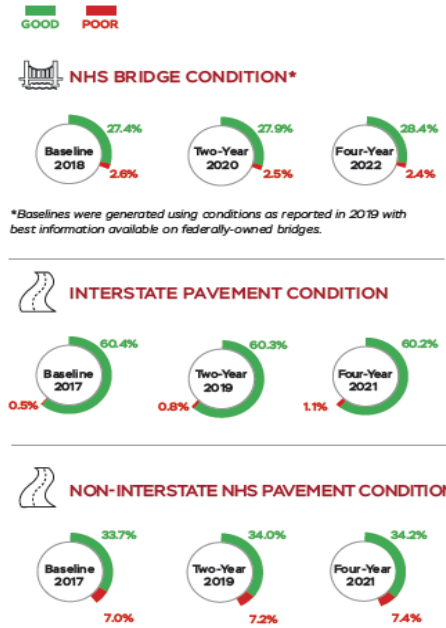
TPM 1: SAFETY

Maryland has set highway safety performance targets, maintaining the Toward Zero Deaths (TZD) approach by developing interim targets to reduce overall fatalities and serious injuries by at least 50 percent in the next two decades, starting with a baseline of 2008 to an end goal in 2030. Five-year rolling averages are used to calculate five-year-average targets for each of the safety measures.



TPM 2: INFRASTRUCTURE CONDITION

Infrastructure condition targets for the National Highway System (NHS) in Maryland were developed through the Transportation Asset Management Plan (TAMP) process for the entire system, regardless of ownership. The NHS in Maryland is owned and maintained by federal, state, and local agencies.



*Baselines were generated using conditions as reported in 2019 with best information available on federally-owned bridges.

The MDOT managed development of TPM 1: Safety targets through the MDOT Motor Vehicle Administration (MDOT MVA) Maryland Highway Safety Office and MDOT State Highway Administration (MDOT SHA) Office of Traffic and Safety.
The MDOT SHA managed development of NHS Bridge condition targets through the Office of Structures and NHS Pavement condition targets through the Office of Materials Technology.

- USDOT Planning Website: www.planning.dot.gov
- FHWA Transportation Performance Management Website: www.fhwa.dot.gov/tpm
- FHWA Transportation Performance Management Safety Target Setting Website: https://safety.fhwa.dot.gov/hsip/spm/state_safety_targets/
- MDOT Maryland Highway Safety Office: <http://www.mva.maryland.gov/safety/mhso/index.htm>

TPM RESOURCES

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