

*Maryland Department of Transportation
Baltimore Regional Transportation Board
Technical Committee Meeting*



TRANSPORTATION
ASSET MANAGEMENT **PLAN**



2022 Maryland TAMP
Re-certification and
Transportation Performance
Management Program Reporting

April 05, 2022

Meeting Agenda

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TAMP Overview

TAMP requirements and context

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TAMP Schedule

Agreement on schedule and nature of document review

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Performance Approach

Decisions regarding performance targets and objective

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Partner Coordination

Plans to engage NHS partner owners to solicit TAMP input and data

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TPM Overview

TPM requirements and context

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State/MPO Target Setting Coordination

Agreement on schedule and nature of leadership input

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MPO TPM Reporting Requirements

Decisions regarding performance targets and objective

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Draft TPM Schedule

Plans to engage NHS partner owners to solicit TAMP input and data

Meeting Purpose

- Ensure MPO partners are aware of the TAMP update, the Transportation Performance Management Program (TPM) reporting due this year and requirements associated with each
- Communicate TAMP decisions to date and provide BMC the opportunity to provide input
- Work collaboratively to meet federal reporting requirements through information sharing

TAMP Overview

Requirements & Context

Transportation Asset Management Plan (TAMP)



U.S. Department
of Transportation

**Federal Highway
Administration**

From MAP-21 and FAST Act - A State shall develop a risk-based asset management plan that

- describes how the NHS will be managed to achieve system performance effectiveness and State DOT targets for asset condition,*
- while managing the risks,*
- in a financially responsible manner,*
- at a minimum practicable cost over the life cycle of its assets.*

FHWA advise, where possible consider implications of IIJA but no formal guidance or requirements are available for 2022 Updates

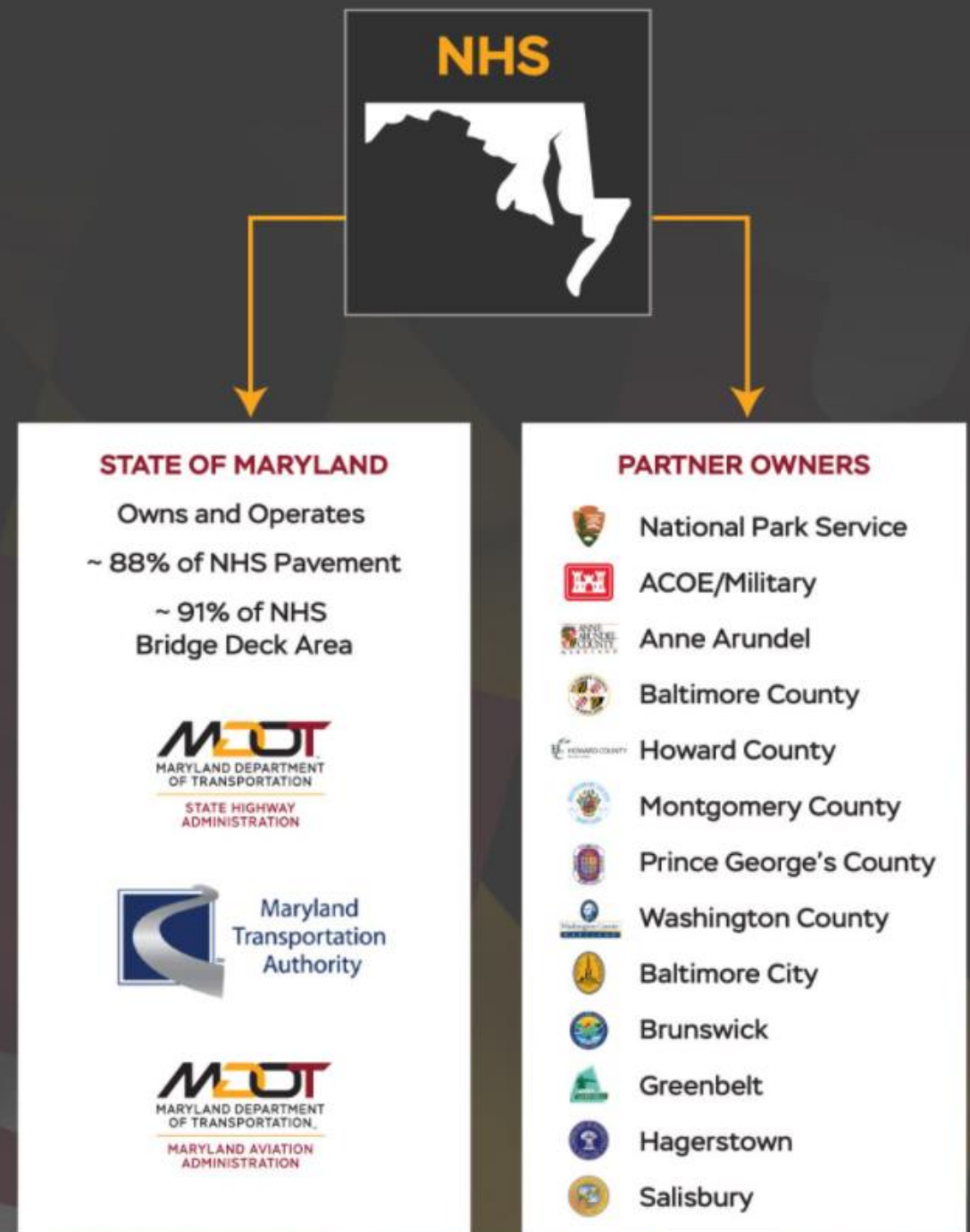


Maryland TAMP

The TAMP covers the National Highway System for Maryland

NHS Partner Owners must be involved and partner-owned portions of the NHS are included in TAMP analyses.

➔ We're working with MPO's assistance to engage **Local NHS Partner Owners** to provide input and contribute content



TAMP Requirements

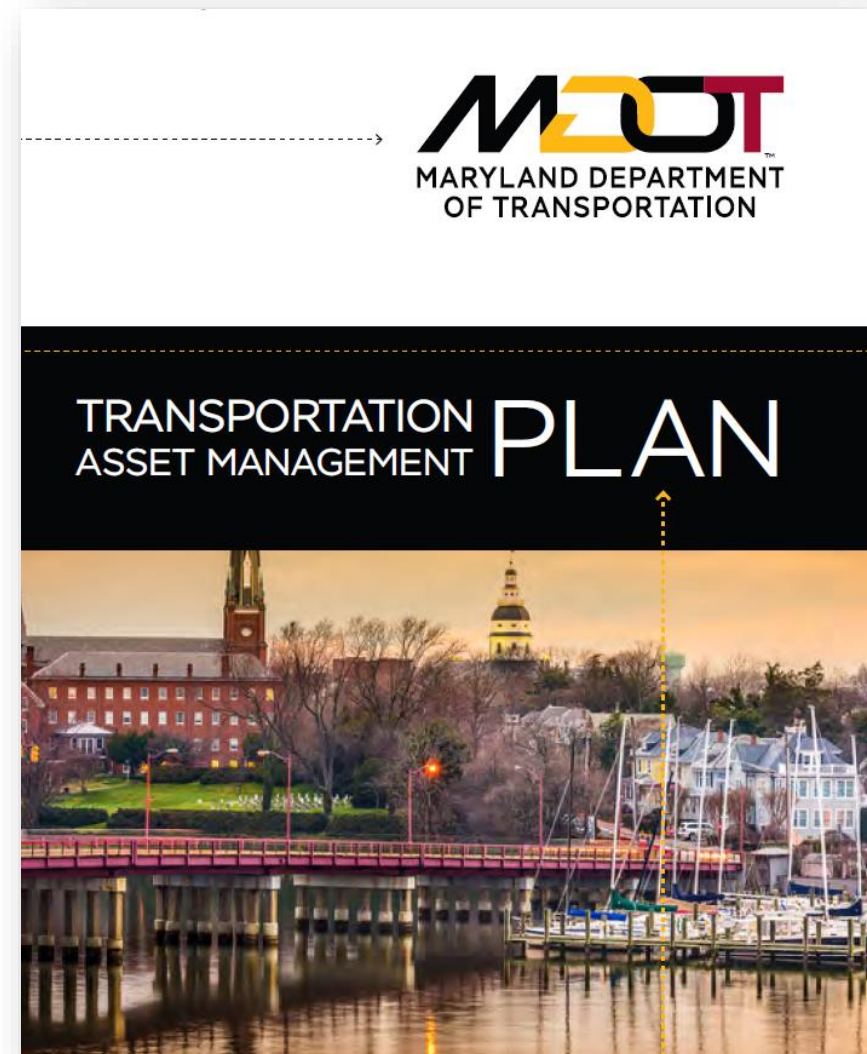
4-Year Document

(Draft 2018, Final 2019, Update Oct. 8, 2022)

- Asset Inventory
- Current Conditions
- 2-Year, 4-Year, 10-Year Targets
- Life-Cycle Analysis
- Risk Management Plan
- Financial Plan
- Investment Strategies

Annual Implementation Review

- Demonstration consistency with TAMP via
 - Fiscal year investments
 - Annual performance evaluation

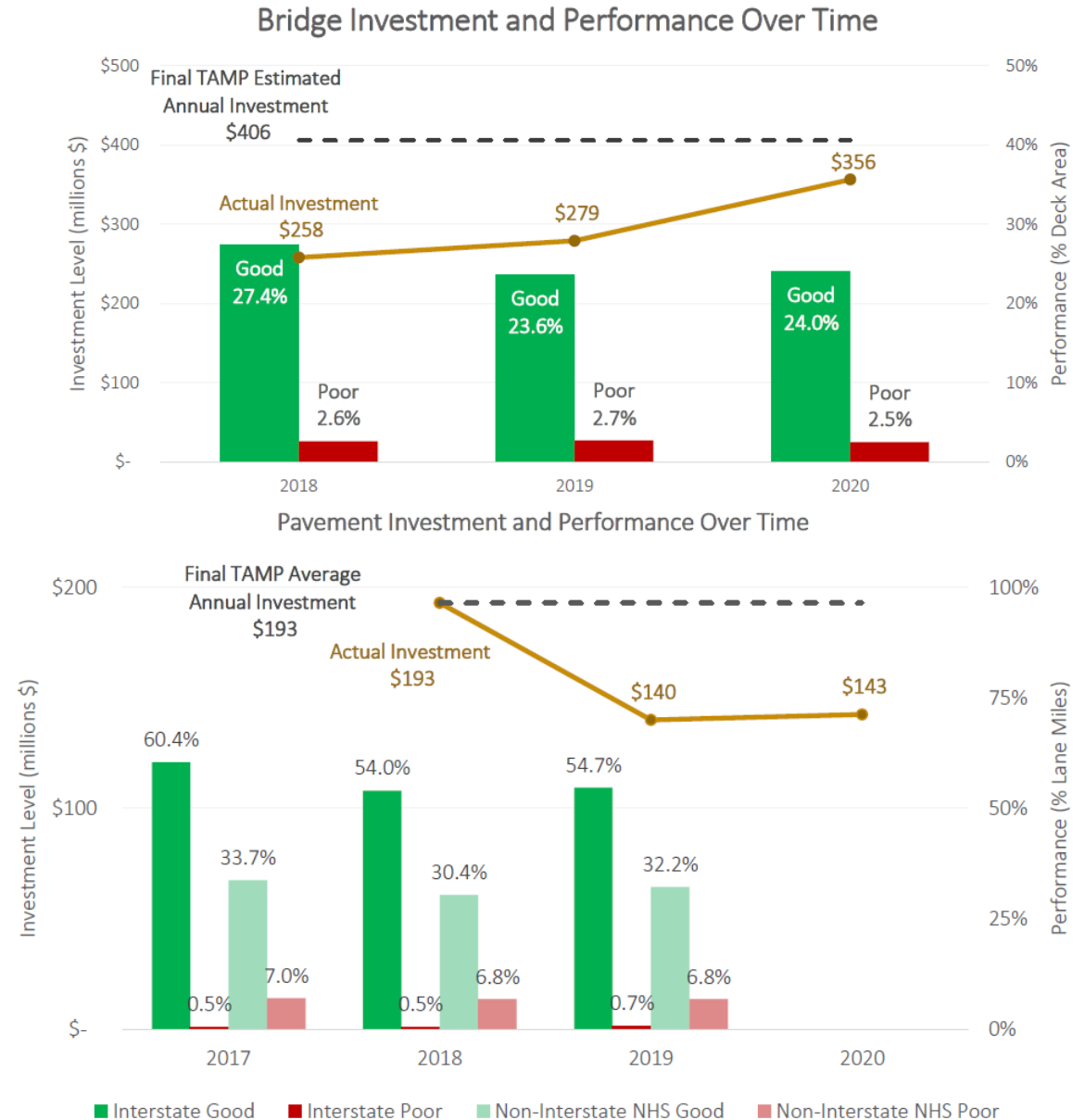


Consistency Determination

MDOT must demonstrate alignment between annual NHS investment and the TAMP financial plan, along with resulting performance

Takeaway:

Decisions on TAMP performance targets and financial plan scenarios will have to be justified each year.



TAMP Update

This effort updates a base TAMP document that was:

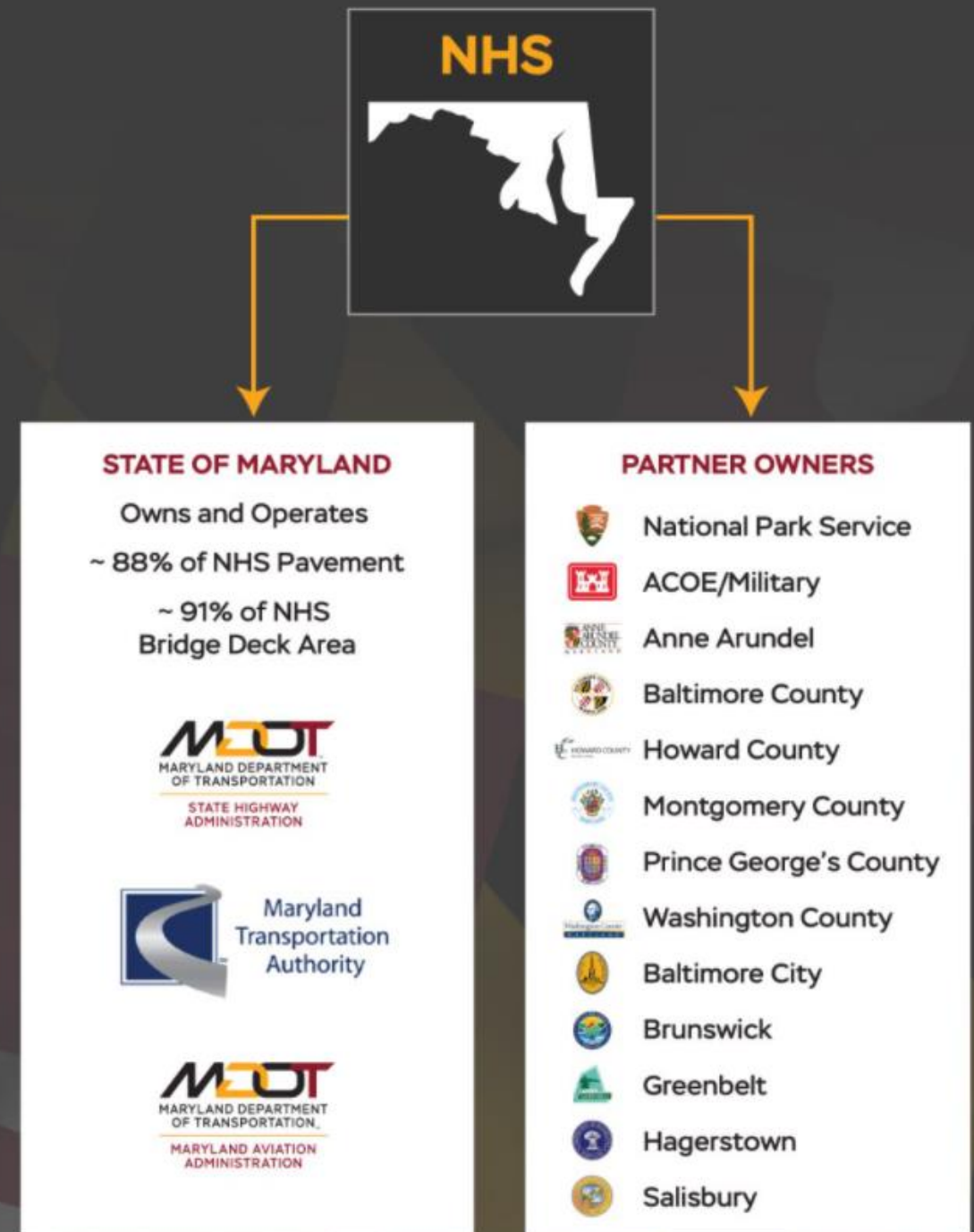
- Certified by FHWA in 2019
- Certified for implementation each year since

Updates are obligated every 4 years

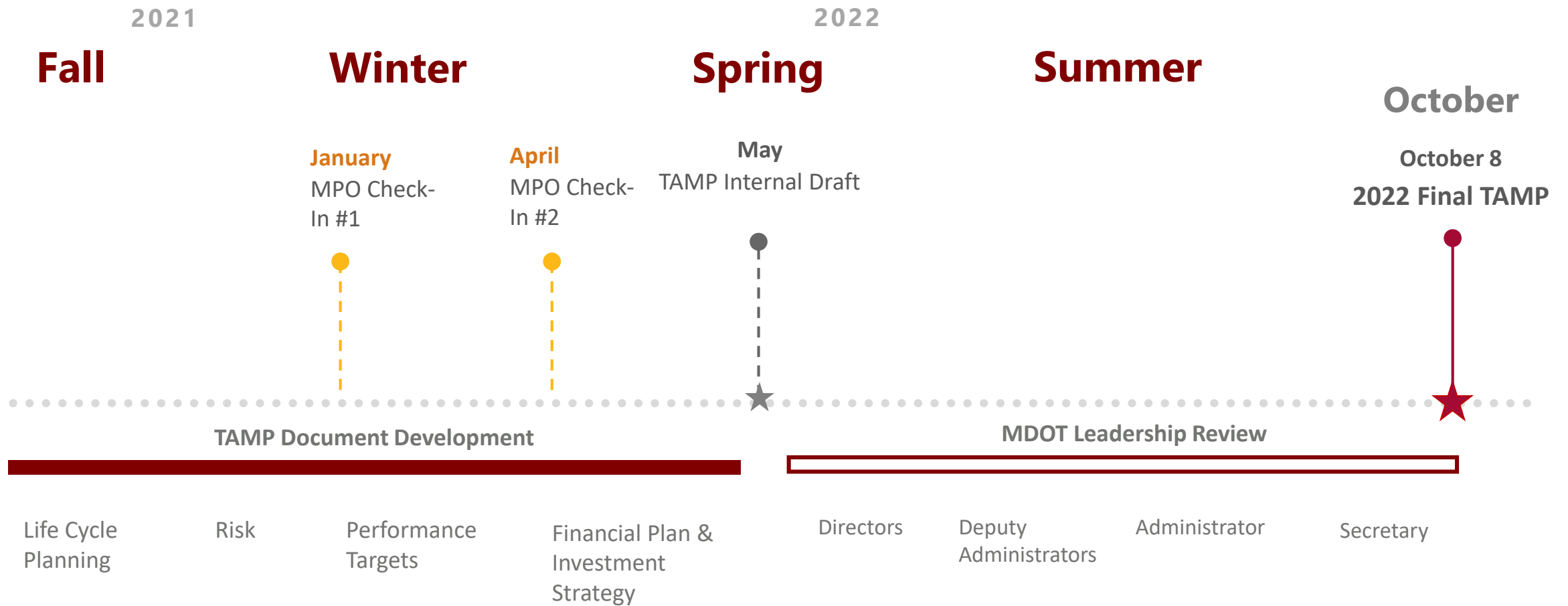
- (Draft 2018, Final 2019, Update Oct. 8, 2022)

Approach:

- We were successful in 2019 and will leverage most decisions already made for that document, with strategic enhancements on partner coordination processes and risk analysis



TAMP Development Schedule



TAMP Schedule



Performance Approach

Request #1

TAMP Performance Targets

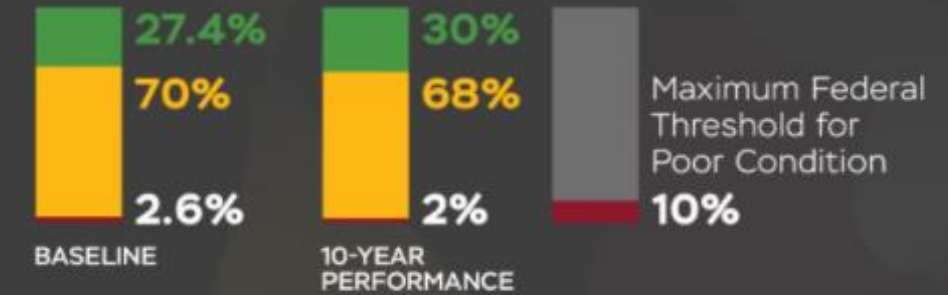
The TAMP is required to include the following targets for infrastructure condition:

- 2-Year
- 4-Year
- 10-Year

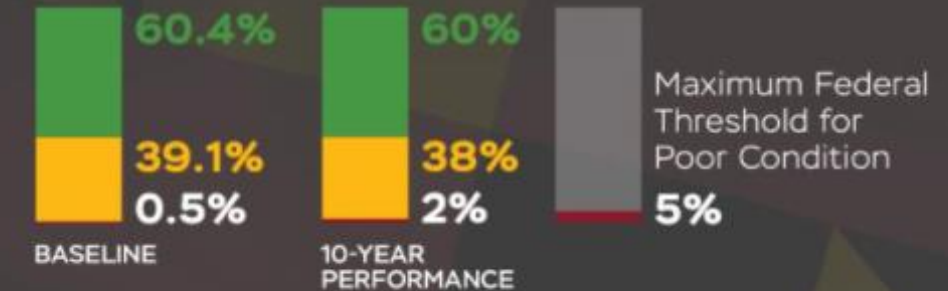
2-year and 4-year targets align with federal TPM2 Infrastructure Condition performance reporting requirements

For Maryland, the 10-year target is Maryland's "performance objective" based on the philosophy of maintaining current condition levels

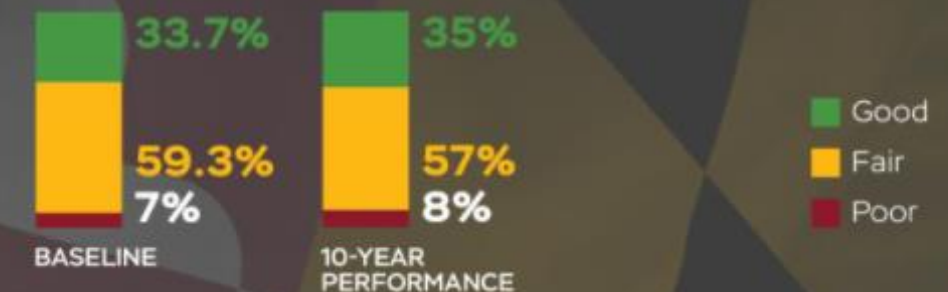
NHS BRIDGES



NHS PAVEMENT Interstate System



NHS PAVEMENT Non- Interstate System



Good
Fair
Poor

Performance Approach

Performance Targets & Objective

- Data-driven targets for short term (2- and 4-year)
- Long-term (10-year) performance objective to maintain current condition

Incorporating Agency Performance Definitions

- MDOT will also loosely incorporate elements of how MDOT considers “state of good repair” that does not always align with federal Good-Fair-Poor definitions
- MPOs and partner owners are welcome to contribute similar elements around how they think of performance



STATE OF MARYLAND

Owens and Operates
~ 88% of NHS Pavement
~ 91% of NHS
Bridge Deck Area



PARTNER OWNERS

-  National Park Service
-  ACOE/Military
-  Anne Arundel
-  Baltimore County
-  Howard County
-  Montgomery County
-  Prince George's County
-  Washington County
-  Baltimore City
-  Brunswick
-  Greenbelt
-  Hagerstown
-  Salisbury

Partner Coordination

Request #2

NHS Partner Owners

Maryland's NHS partner owners should contribute input to the TAMP as it relates to their NHS sections.

MDOT SHA will work with MPO liaisons and local agency contacts to obtain required data and optional content.

	Bridge	Pavement Lane Miles	
Agencies who own and maintain the NHS in Maryland	Deck Area (M ²) 3,869,740	Interstate 2,650.3	Non-Interstate 6,384.7
State Total	90.76%	99.08%	83.82%
MDOT SHA	55.81%	82.93%	81.49%
MDTA	34.93%	16.15%	2.33%
MDOT MAA	0.01%		
Partner Owners Total	9.24%	0.92%	16.18%
Federal - National Park Service	0.72%		1.89%
Federal - ACOE/Military			0.05%
County - Anne Arundel			0.18%
County - Baltimore	0.06%		1.39%
County - Howard			0.10%
County - Montgomery			2.00%
County - Prince George's			0.21%
County - Washington	0.05%		
Municipal - Baltimore City	8.09%	0.92%	10.17%
Municipal - Brunswick			0.02%
Municipal - Greenbelt			0.02%
Municipal - Hagerstown			0.13%
Municipal - Salisbury			0.03%



Request #2

Partner Owner TAMP Inputs

Optional/
Recommended

Owner-Specific Performance Targets

- MDOT will provide current condition data soon

Optional

Life Cycle Planning Processes

- MDOT can share chapter topics

Optional

Investment Strategies

- Bulleted strategies can be integrated to overall content

Required

Financial Plan

- Expected annual NHS spending by work types for 2022-2031
- 2021 actual NHS spending by work types

Optional

Updated Risk Management Strategies

- MDOT hopes to hold a risk webinar with all NHS owners in early 2022

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Bridge Deck Area



PARTNER OWNERS



Looking Ahead

Anticipated Outreach

2022 TAMP Deadlines

- Content inputs in February and March
- Gather Financial Plan & 2021 spending data by April
- Confirm bridge and pavement targets in April
- Review Draft TAMP in April/ May



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PARTNER OWNERS



TPM Overview

Requirements & Context

Federal Transportation Performance Management Program

TPM performance management outcomes are grouped into six elements to more effectively communicate the efforts under way to implement the statutory requirements:



National Goals: set to focus the Federal-aid highway program into specific areas of performance.



Measures: established to assess performance/condition in carrying out performance-based Federal-aid highway programs.



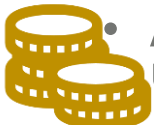
Targets: established by State DOTs and MPOs for the measures to document future performance expectations



Plans: strategic and/or tactical plans developed by State DOTs and MPOs to identify strategies and investments that address performance needs.



Reports: reports developed by State DOTs and MPOs that document progress toward target achievement, including the effectiveness of Federal-aid highway investments.



Accountability and Transparency: FHWA-developed requirements for State DOTs and MPOs to use to achieve or make significant progress toward targets.

Performance Period Progress Reporting: Federal Requirement

- **Under 23 USC 150(e), Starting October 1, 2018, State DOTs were required to submit to FHWA, a Biennial Report that includes at a minimum:**
 - NHS condition and performance for required measures
 - Progress in achieving performance targets
 - Effectiveness of the investment strategies in the State's NHS asset management plan
 - How freight bottleneck congestion is being addressed
- **Reports:**
 - First Performance Period Baseline Report by Oct. 1 of the first performance year (2018)
 - Reported Baseline performance, 2-year Targets, 4-year Targets
 - Mid Period Progress Report by Oct. 1 of the third performance year (2020)
 - **Full Period Progress Report by Oct. 1 of the fifth year following the performance period (2022)**
 - **Second Performance Period Baseline Report by Oct. 1 of the second performance year (2022)**

Performance Period Progress Report: Components

- **Full Performance Period Report**

- 4-year condition/performance from baseline
- 4-year progress in achieving performance targets from baseline
- 4-year significant progress discussion for the National Highway Performance Program (NHPP) targets and the National Highway Freight Program (NHFP) target
- Extenuating circumstances discussion on meeting 4-year Targets
- Congestion at truck freight bottlenecks
- MPO CMAQ Performance Plan

- **Baseline Performance Period Report**

- Baseline year condition/performance
- 2-year and 4-year performance targets
- Discussion of the basis for the establishment of selected targets
- Congestion at truck freight bottlenecks
- MPO CMAQ Performance Plan

Performance Period Progress Report Measures



TPM 2. Pavement Condition (4 measures)



TPM 2. Bridge Condition (2 measures)



TPM 3: Travel Time Reliability (2 measures)



TPM 3: Freight Movement (1 measure)



TPM 3. CMAQ Congestion (2 measures)



TPM 3: CMAQ Air Quality (2 measures)

Performance Period Progress Report Measures

- Percentage of pavements of the Interstate System in Good condition
- Percentage of pavements of the Interstate System in Poor condition
- Percentage of pavements of the non-Interstate NHS in Good condition
- Percentage of pavements of the non-Interstate NHS in Poor condition
- Percentage of NHS bridges classified as in Good condition
- Percentage of NHS bridges classified as in Poor condition
- Percentage of person-miles traveled on the Interstate that are reliable
- Percentage of person-miles traveled on the non-Interstate NHS that are reliable
- Truck Travel Time Reliability (TTTR) Index
- Annual Hours of Peak-Hour Excessive Delay Per Capita
- Percent of non-Single Occupancy Vehicle Travel
- Total Emission Reductions for applicable criteria pollutants and for those MPOs that do not meet the criteria under 23 CFR 490.105(f)(6)(iii).

State/MPO TPM Target Setting Coordination

Requirements & Context



TPM 2 – Infrastructure Condition Measures and TPM 3 – Reliability Measures

- The MPO may adopt and support the State's Infrastructure Condition targets or develop their own targets, 180-days after the establishment of the State's on October 1, 2022.
(March 30, 2023)
- MPO targets are reported to the State DOT.
 - *MPOs must include/document baseline performance and progress toward achieving those targets in the Metropolitan Transportation Plan (MTP).*
 - MPOs must describe in the TIP how the program of projects contributes to achieving the MPO's performance targets in the MTP, linking investment priorities to those targets. This assessment should be a written narrative included in the document

TPM 3 – CMAQ Traffic Congestion Measures

- BMC and MDOT must work together to establish a single unified 2-year target and a single 4-year target for the entire applicable urbanized area. We must both report identical targets for each applicable urbanized area. In the future, any adjustments made to 4-year targets by the MPO or State DOT must be collectively developed and agreed upon by all State DOTs and MPOs that include any portion of the NHS in the respective urbanized area applicable to the measure. Must be reported October 1, 2022.

TPM 3 – Total Emissions Reduction Measures

- The MPOs may adopt and support the State's Infrastructure Condition targets or develop their own targets, 180-days after the establishment of the State's on April 1, 2022.*
(October 1, 2022)
- MPO targets are reported to the State DOT.
 - *MPOs must include/document baseline performance and progress toward achieving those targets in the Metropolitan Transportation Plan (MTP).*
 - MPOs must describe in the TIP how the program of projects contributes to achieving the MPO's performance targets in the MTP, linking investment priorities to those targets. This assessment should be a written narrative included in the document.

MPO TPM Reporting Requirements

Requirements & Context

MPOs must develop and submit CMAQ Performance Plans addressing the following, to be appended the State DOT Full Performance Period and Baseline Performance Reports due to FHWA October 1, 2022:

- 1. **Condition/Performance:** a baseline level of condition/performance at the beginning of the performance period for each of the CMAQ measures. Throughout the performance period, the CMAQ Performance Plan reports on the actual 2-year and 4-year condition/performance for each of the applicable CMAQ measures
- 2. **Targets:** the targets that the MPOs establish for each of the applicable CMAQ performance measures, including any updates at the midpoint of the performance period, if applicable. For the CMAQ Performance Plan submitted with the State DOT Full Performance Period Progress Report, targets are not required. However, the Full Performance Period Report is due at the same time as the State DOT Baseline Performance Report for the next performance period, and the CMAQ Performance Plan attached to that report requires applicable 2- and 4-year targets for the next performance period.
- 3. **Description of projects:** a description of projects scheduled for CMAQ funding that will contribute toward achieving their targets. It is important to note, that the CMAQ Performance Plan associated with the Full Performance Period Report does not include a description of CMAQ projects. However, a description of projects is required in the CMAQ Performance Plan submitted with the State DOT Baseline Performance Report.
- 4. **Assessment of progress:** for the mid and full performance period report, updates to the CMAQ Performance Plan include an assessment of how the listed projects contribute toward achieving the targets.

Key Component	State DOT Baseline Performance Period Report	State DOT Mid Performance Period Progress Report	State DOT Full Performance Period Progress Report
<i>Condition/performance</i>	Baseline condition/performance	2-year condition/performance	4-year condition/performance
<i>Targets</i>	Applicable 2-year and 4-year targets, if available	Adjusted 4-year target (optional)	n/a
<i>Description of projects</i>	Description of projects	Updated descriptions of projects	n/a
<i>Assessment of progress</i>	n/a	Assessment of projects' contribution to achieving 2-year target	Assessment of projects' contribution to achieving 4-year target
Due Dates for 1st Performance Period	October 1, 2018	October 1, 2020	October 1, 2022
Due Dates for 2nd Performance Period			

Draft TAMP/TPM Schedule

Requirements & Context

TAMP & TPM Timeline

2022 TAMP Update and Second TPM
Performance Period

TPM

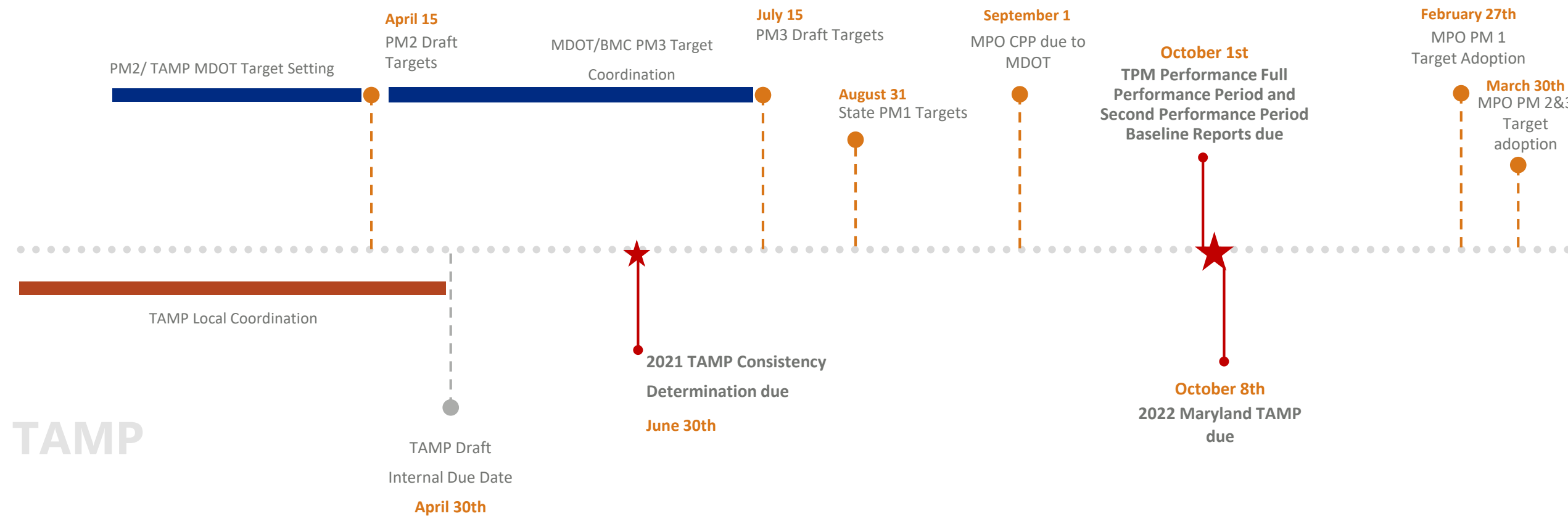
January

Spring

Summer

October

Late Winter

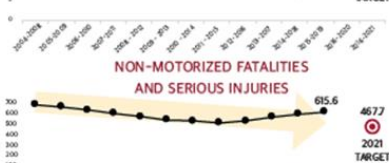
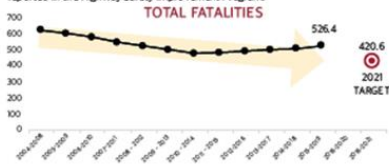


TRANSPORTATION PERFORMANCE MANAGEMENT (TPM) ESTABLISHED TARGETS FOR MARYLAND

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

TPM 1: SAFETY

In support of Maryland's "Toward Zero Deaths" goal to halve fatalities and serious injuries by 2020, MDOT applies an exponential trend analysis to the five-year rolling averages to establish safety targets, as documented in the Maryland Strategic Highway Safety Plan 2016-2020. Targets are updated annually and reported in the Highway Safety Improvement Program.

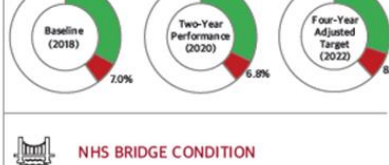
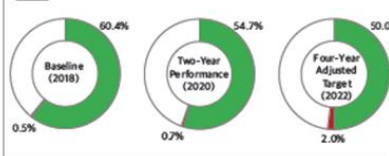


October 2020

MDOT MARYLAND DEPARTMENT OF TRANSPORTATION

TPM 2: INFRASTRUCTURE CONDITION

Infrastructure condition targets for the National Highway System (NHS) in Maryland were developed through an iterative, collaborative process which included monitoring performance trends, analyzing life cycle plans, and reevaluating future performance projections in partnership with other owners, including Maryland's seven Metropolitan Planning Organizations.



Baseline performance is derived from the latest data available for each measure as of 2018. Baseline data is from 2016 for pavement measures and 2017 for bridge measures.

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.

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.

- 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 SHA Transportation Performance Management Website: <http://arcg.is/1r04uH>

TPM RESOURCES

MDOT CONTACTS

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