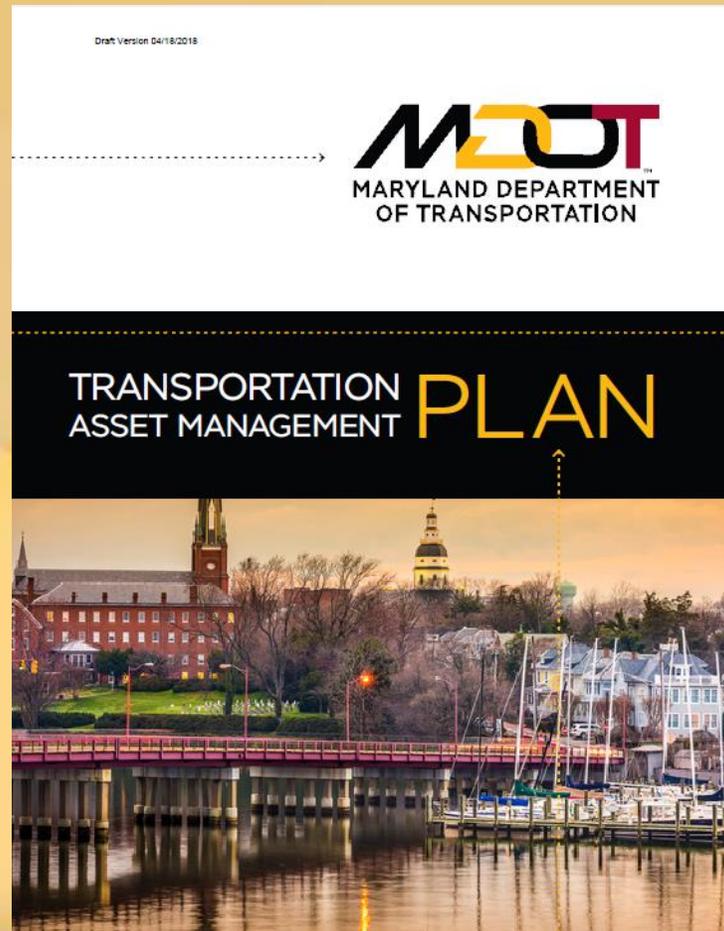




STATE HIGHWAY
ADMINISTRATION



Maryland's NHS Infrastructure Conditions

BRTB Technical Committee

June 5, 2018

Transportation Asset Management Plan
&
Transportation Performance Management

Federal Approach: MAP-21/FAST Act

- Transportation Asset Management Plan for National Highway System (NHS)
 - State DOTs must develop and implement an asset management plan to improve or preserve the condition of the assets and improve the performance of the NHS (Bridges and Pavement) – 23 U.S.C. Part 515
 - TAMPs must include
 1. Inventory and condition of system assets, regardless of ownership
 2. Objectives, measures, and targets for asset condition & performance
 - TPM 2 Infrastructure Condition targets (23 U.S.C. 490 – National Performance Management Measures)
 3. Performance gap identification
 4. Life-cycle planning
 5. Risk management analysis (including Part 667: Extreme Weather)
 6. Investment strategies and 10-year financial plan

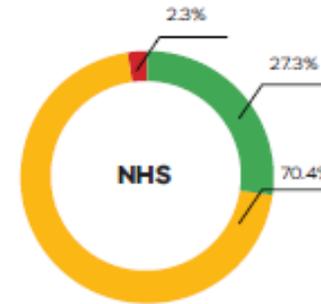
1. Inventory and Condition Bridge

- National Bridge Inventory – 2016 conditions
- Bridge elements
 - deck, superstructure, and substructure
 - >20 feet and on public road
- 3.9M Square Meters
 - 56% - MDOT SHA
 - 35% - MDTA
 - 8% - Baltimore City
 - <1% - Federal and County

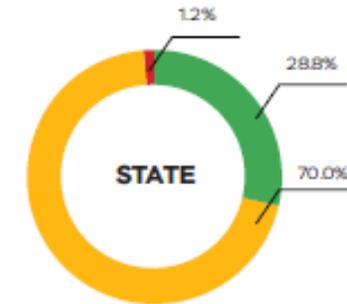
NHS Bridges (M² Deck Area)



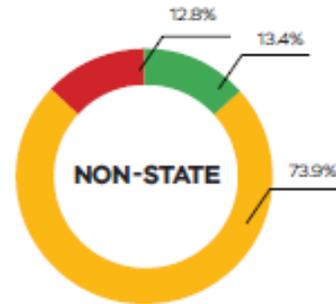
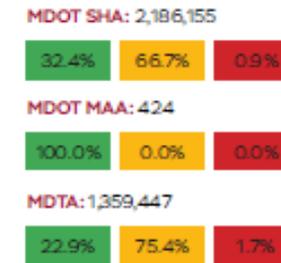
National Highway System (NHS)



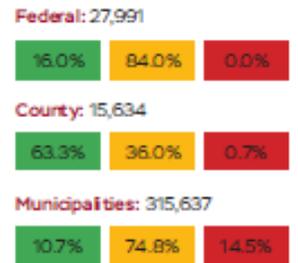
Deck Area (M²)
NHS Total: 3,905,288



Deck Area (M²)
State Total: 3,546,026



Deck Area (M²)
Non-State Total: 359,262



Source: MDOT, National Bridge Inventory (2017)

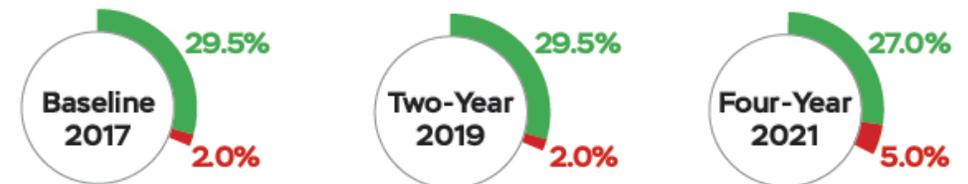
2. Performance Measures Bridges

- Pre-certified National Bridge Inventory
 - 5.3 million square meters (partial data)
- Federal Performance Measures
 - Percentage of NHS bridges classified as in:
 - Good condition
 - Poor condition
(federal threshold – no more than 10% poor)
- Projections for the state and local portion of the NHS were developed by OOS
- 10-year projected conditions for the system are based on reasonably available funding estimates for state-owned facilities

2017 conditions and including box culverts



NHS BRIDGE CONDITION*



*Baselines were generated using conditions as reported in 2018 with best information available on federally-owned bridges.

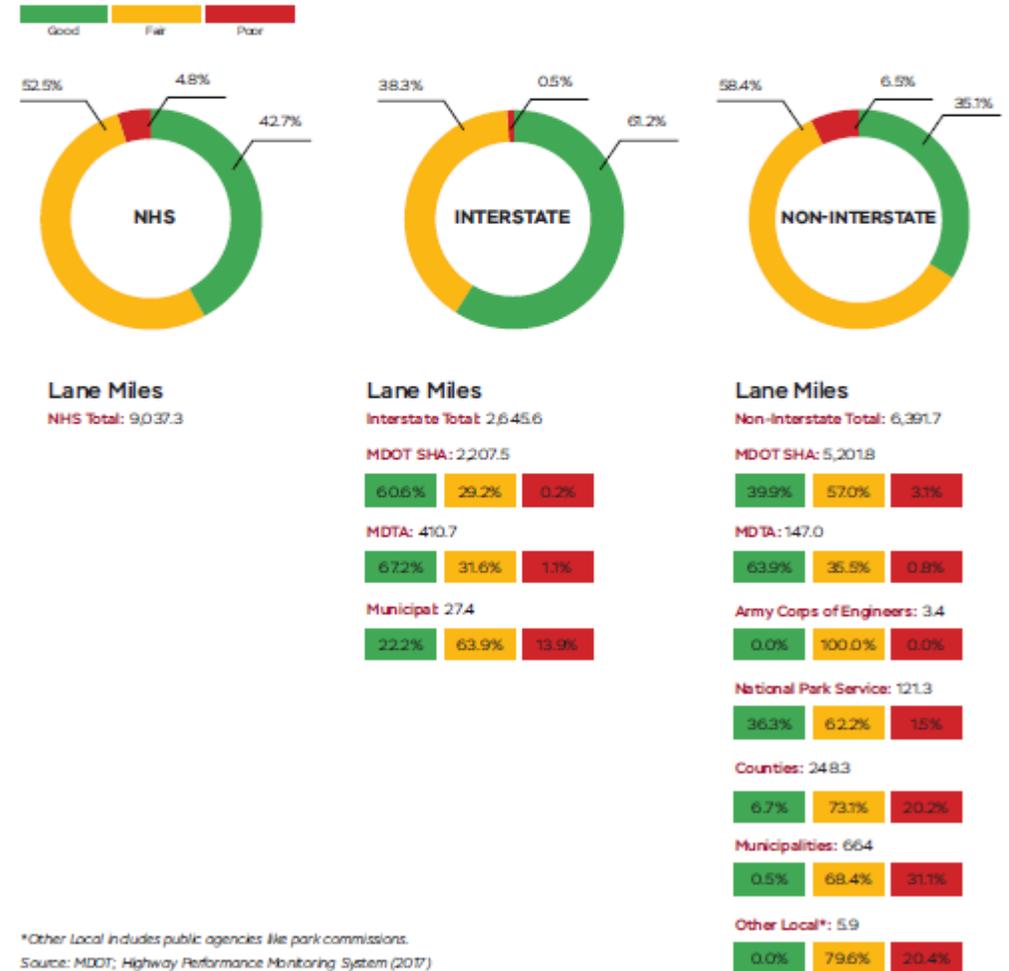
1. Inventory and Condition Pavement

- HPMS – 2016 Conditions
- Pavement elements
 - Directional lane miles
 - IRI, percent cracking, faulting & rutting
- 9,037 lane miles
 - Interstate (29%)
 - 83% - MDOT SHA
 - 5% - MDTA
 - 0.3% - Baltimore City
 - Non-Interstate (71%)
 - 58% - MDOT SHA
 - 2% - MDTA
 - 2% - Baltimore City

NHS Pavement (Lane Miles)



National Highway System (NHS)



*Other Local includes public agencies like park commissions.
Source: MDOT, Highway Performance Monitoring System (2017)

2. Performance Measures

Pavement

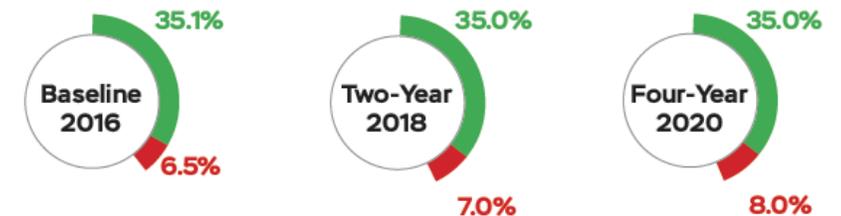
- Federal Performance Measures
 - Percentage of NHS pavements on the:
 - Interstate
 - Good condition
 - Poor condition
(Federal threshold – no more than 5% poor)
 - Non-Interstate
 - Good condition
 - Poor condition
- Projections for the system were developed by OMT for the NHS system, regardless of ownership
 - Conservative assumptions based on programmed and planned projects for corridors or segments
- 10-year projected conditions for the system are based on reasonably available funding estimates as reflected in the CTP and S/TIPs



INTERSTATE PAVEMENT CONDITION



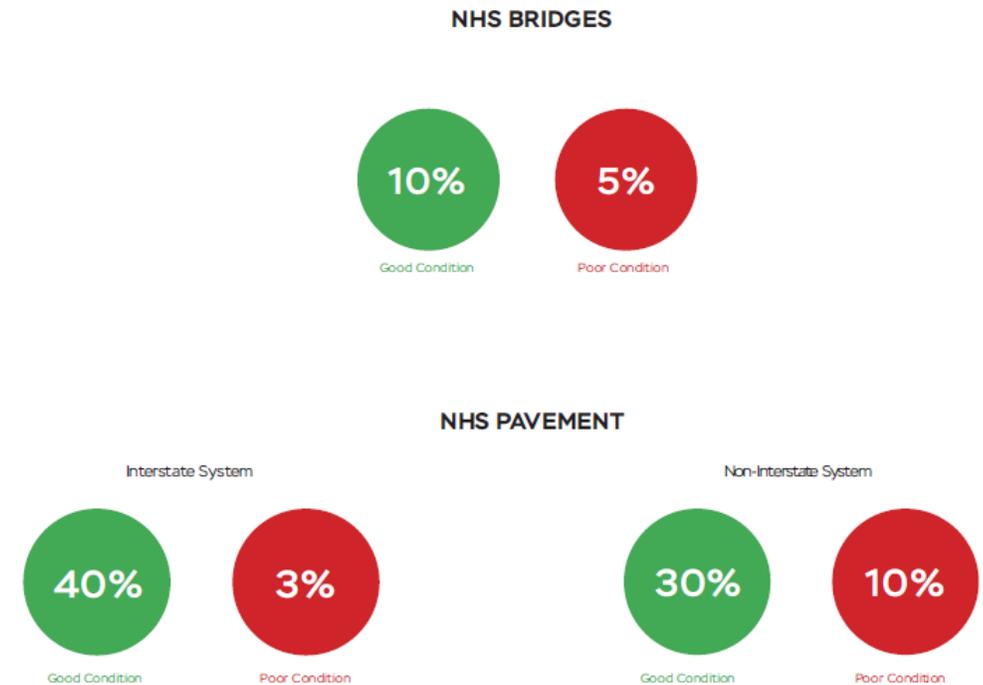
NON-INTERSTATE NHS PAVEMENT CONDITION



TAMP 10-Year Projections

- Asset management investment strategies are guidance for resource allocation to deliver the best asset performance given available funds
 - What is the cost effective program to achieve and sustain a state of good repair?

Maryland's 10-Year Performance Projections for NHS Assets



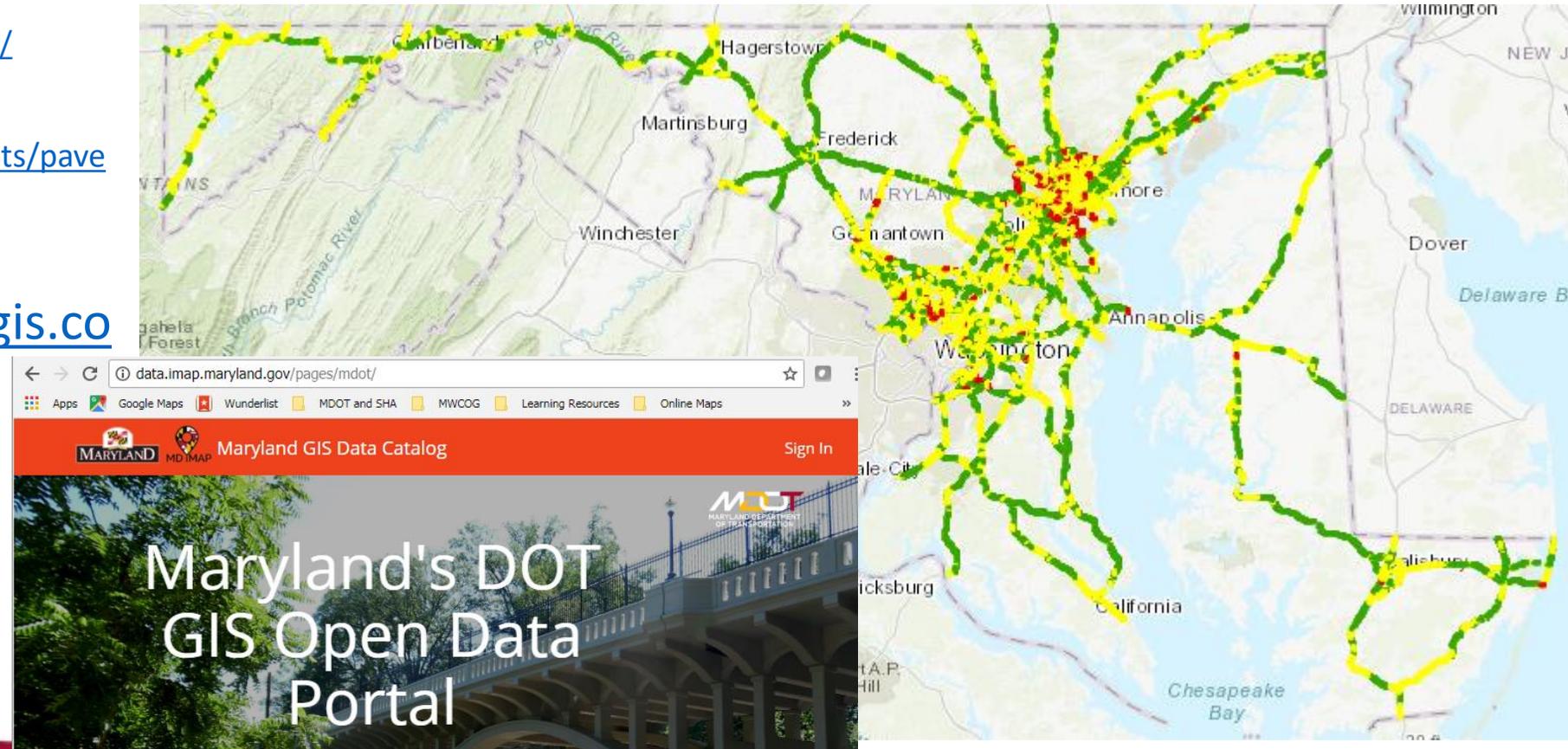
Source: MDOT SHA, National Bridge Inventory and Highway Performance Monitoring System

Maryland Open Data

Layers Available -

<http://data.imap.maryland.gov/pages/mdot/>

- Pavement Condition NHS 2016
<https://data-maryland.opendata.arcgis.com/datasets/pavement-condition-nhs-2016>
- Bridge Condition NHS 2016
<http://data-maryland.opendata.arcgis.com/datasets/bridge-condition-nhs-2016>



Next Steps

- **TPM**

- Continue collaboration with MPOs to share information and develop targets
- All conditions will be reported in the State's baseline performance period report due by October 1, 2018 to FHWA
- MPOs must either support the State's targets or establish their own quantifiable four-year targets by Board resolution before November 16, 2018

- **Final TAMP (due June 2019)**

- Certification by FHWA of Initial TAMP
- Convene an after action meeting with all owners of NHS assets to
 - Review the Initial TAMP
 - Discuss opportunities for a more comprehensive financial plan

More Information or Questions

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<http://arcg.is/1r04uH>