

Developing an Asset Management Plan in Washington State: *Including Locally Owned Roads*

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12th National Conference on Transportation Asset Management
July 17, 2018

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Overview:

- WSDOT's Approach to Asset Management
- Washington State's National Highway System (NHS)
- Integrating MPOs, Cities and Counties
- What has been done
- What are we planning to do



Washington State's National Highway System

Washington State's NHS Pavement

- 14,789 lane miles of NHS pavement
- 77 percent are managed by WSDOT
- 23 percent (3,337 lane miles) are managed by local agencies
- 4,026 lane miles of Interstate NHS pavements are managed by WSDOT

Washington State's NHS Bridges

- 2,476 NHS bridges
- 91 percent are managed by WSDOT
- 9 percent (204 bridges) are owned and managed by local agencies



WSDOT establishes MAP-21 pavement performance targets

The Federal Highway Administration (FHWA), published in the Federal Register (82 FR 5886) a final rule establishing performance measures for State Departments of Transportation (DOTs) to use in managing pavement and bridge performance on the National Highway System (NHS). The National Performance Management Measures: Assessing Pavement Condition for the National Highway Performance Program and Bridge Condition for the National Highway Performance Program Final Rule addresses requirements established by the Moving Ahead for Progress in the 21st Century Act (MAP-21) and reflects passage of the Fixing America's Surface Transportation (FAST) Act. The rule was effective May 20, 2017.

Targets established May 20, 2018

WSDOT has been proactive in working with MPOs and local agencies with regard to the implementation of federal pavement performance measures for the NHS. Collaborative efforts to establish targets by May 20, 2018, included meetings with all MPO directors and WSDOT representatives, responsible for helping make policy, process, data and advisory target setting decisions as well as in-depth discussions between subject matter experts, responsible for better understanding their federal rule requirements and their implications.

The latest data available for interstate pavement in Washington is from the 2015 and 2016 data collection period. In Washington, 32.5% of interstate pavement is in good condition and 3.0% is in poor condition (using FHWA criteria). Non-interstate NHS pavement is 18% in good condition and 5% in poor condition. This condition data addresses motor vehicle travel lanes only, not shoulders that serve as elements of the active transportation network.

FHWA has confirmed pavement targets should be based on expected performance with available funding. The targets are not meant to be aspirational values or goals related to desired funding. An evaluation of

pavement data collected from the NHS resulted in the targets for pavement performance (see below). WSDOT's experience has proven that pavement condition indexes calculated over an entire network do not change rapidly, especially in the short-term. The 2- and 4-year targets are based on current conditions. As stated within the final rule, the 2-year (2020) target is expressed using International Roughness Index (IRI) only. The 4-year (2022) target is expressed using all criteria (see page 2 for details).

Meeting the additional requirement

A separate requirement determined by FHWA is that the percent of interstate pavement in poor condition cannot exceed 5%. This performance criterion is a special requirement mandated by Congress, and is the only pavement performance measure that results in a funding penalty if it is not met. The penalty requires the State to obligate a specified percentage of its National Highway Performance Program (NHPP) and Surface Transportation Program (STP) funds to correct the interstate pavement conditions until the minimum threshold is met (see p. 4 for more details). In the short term, an investigation of currently programmed projects shows that projects in the transportation plan for 2017-2020 will increase the condition of interstate pavement in poor condition. This pavement in poor or poor pavement at status of aging conc. percentage of IRI

The contribution of IRI to the overall pavement condition is a reasonable and



WSDOT establishes MAP-21 bridge performance targets

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FHWA has set the upper limit for the percentage of all NHS bridges classified in poor condition at 10%. Based on analysis and past trends, 10% is the recommended target. The FHWA did not set a limit for the percentage of NHS bridges classified as being in good condition. It is recommended to adopt a target of 20% based on a thorough review of current bridge conditions (see chart below).

The condition of individual bridge elements (deck, superstructure, substructure, and culvert (which are measured separately)), are rated using a classification method from the National Bridge Inventory (NBI) and the Highway Bridge Program. The classification method assigns the elements and culverts condition ratings ranging from 1 to 9 where 7 or greater = good; 5-6 = fair; and 4 or less = poor.

For MAP-21 and continued in the FAST Act, bridges in good condition have all three elements (deck, superstructure, substructure) rated as 7 or higher; bridges in fair condition meet the minimum threshold of 5 or higher; and poor bridges have any of the elements rated as 4 or lower (see p. 2).

The percentage of the total NHS bridge deck area for each classification (good, fair, poor) is calculated as the ratio of the total deck area of NHS bridges in a classification to the total deck area of NHS bridges in the state. The bridge deck condition of a shoulder on a bridge is included in the overall condition rating. It is not tracked or rated for active transportation use separate from the overall bridge deck condition. Shoulder elements are defined and condition rated but these data are not reported here.

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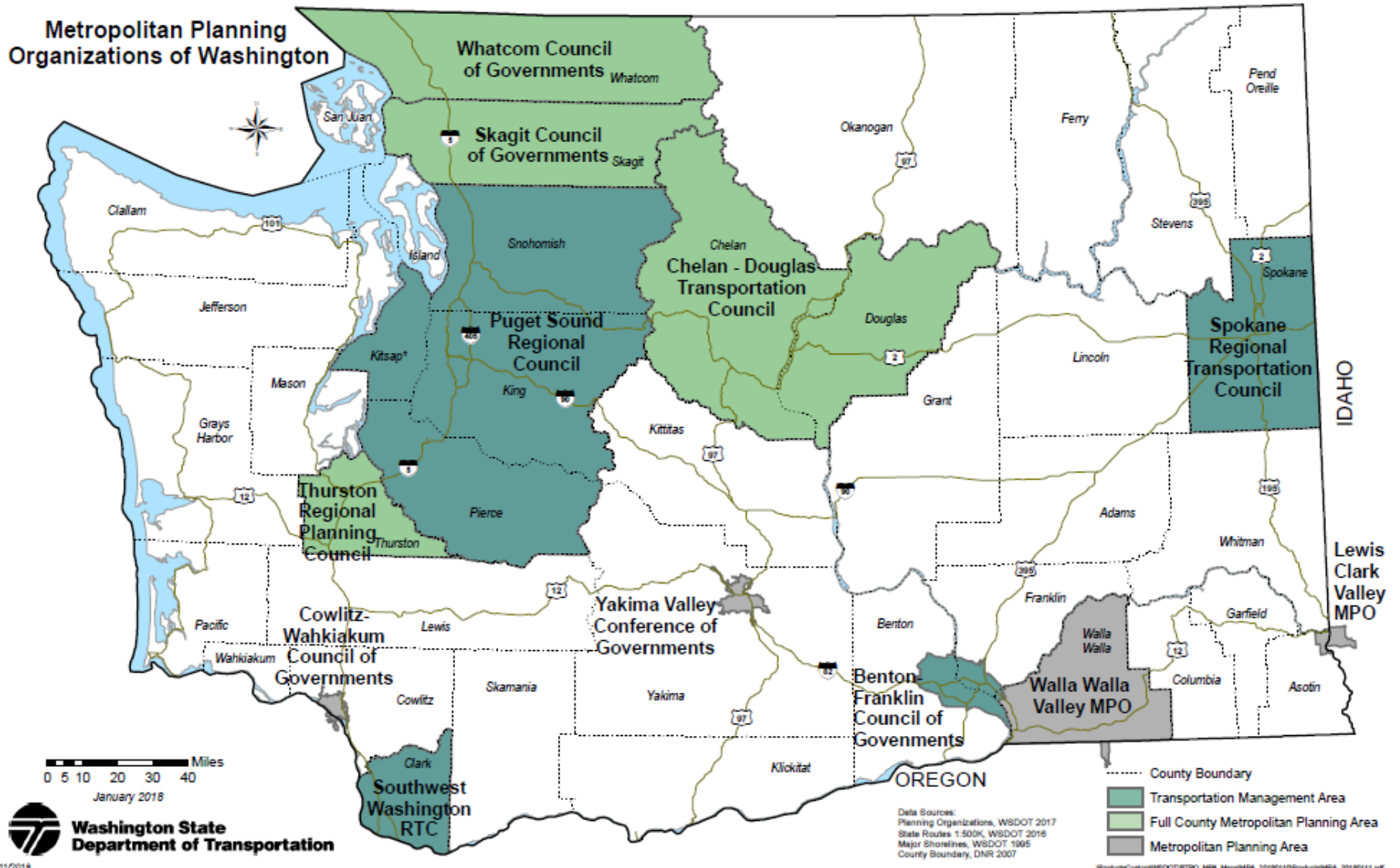
MAP-21 performance measures by program area	
Pavement (PA2)	BRIDGE PERFORMANCE (B10-AS)
Percent of interstate pavement on the NHS in good condition	Percent of non-interstate pavement on the NHS in good condition
Percent of non-interstate pavement on the NHS in poor condition	Percent of NHS bridges classified in poor condition (weighted by deck area)

Note: During the phase in of MAP-21 requirements, only the first two-year target may vary. MPOs do not report two- and four-year target periods for PA2 and B10-AS until October 1, 2020, and October 1, 2022.

MAP-21 performance measures by program area		Current data	2-year target	4-year target	Penalty
Bridges (B10)	21 CFR Part 469 D No. 2105-4F53				
Percent of NHS bridges classified in good condition (weighted by deck area)		18%	20%	20%	Yes
Percent of NHS bridges classified in poor condition (weighted by deck area)		3%	10%	10%	No

Note: Federal rule sets state and MPOs to adjust two-year targets during the mid-performance progress report. 1 Year goal and four year targets for PA2 are due October 1, 2020, and October 1, 2022.

Integrating MPOs, Cities and Counties



Integrating MPOs, Cities and Counties

What has been done:

- MAP-21 Target Setting Collaboration
 - Internal WSDOT Technical Group
 - Target Setting Technical Team
 - Target Setting Working Group
 - Target Setting Framework Group
- Implemented a Planning Alignment Working Group (PAWG)
 - PAWG 2018 work plan includes
 - Ensure a common language
 - Sharing information
 - Identify concurrent planning efforts



Target setting collaborative framework for the Moving Ahead for Progress in the 21st Century Act (MAP-21)

Target Setting Framework Group responsible for process, data and target decisions

The Target Setting Framework Group includes WSDOT representatives and Metropolitan Planning Organization (MPO) directors. This group meets quarterly following the WSDOT/MPO/Regional Transportation Planning Organization (RTPO) Coordinating Committee meeting. The Target Setting Framework Group will address issues organized into three types of decision points: process, data and target setting.

For process decisions, the group will decide how early and often WSDOT and MPOs will engage each other, and the types of engagement are best for each.

The group has decided to resolve differences by:

- acknowledging the difference in viewpoints;
- discussing the impact of having the difference;
- participating in open discussions with the full group;
- clarifying positions from all sides;
- listing facts, assumptions and beliefs for each position;
- aiming for consensus;
- inviting minority reports, and
- voting on targets and other key decisions.

For data decisions, the group will address the types of data to be used; the roles and responsibilities for data collection and analysis; and the process by which MPOs will report their established targets, performance progress, and achievements.

The group will also make advisory target setting decisions. Their final recommendations will be forwarded to the responsible agencies—individual MPOs as well as WSDOT's Executive Leadership Team and Secretary of Transportation Lynn Peterson. Responsible agencies may adopt or modify the proposed targets. Prior to adoption of the final targets, the Secretary may consult with the Governor's office to ensure alignment with the Governor's strategic directions.

Purpose of collaboration

In July 2012, the Moving Ahead for Progress in the 21st Century Act (MAP-21) became law. MAP-21 requires both states and Metropolitan Planning Organizations (MPOs) to set performance targets and requires collaboration among these responsible agencies. While WSDOT and Washington state MPOs each have individual responsibilities to take action to set targets, the agencies have been in the process of developing roles and responsibilities since mid-2014 to establish a framework for collaboration in the target setting process.

This folio describes the organizational structure to facilitate the collaborative process that will include the Target Setting Framework Group, Target Setting Working Group and Target Setting Technical Teams.

Target Setting Working Group discusses policy and process issues, prepares recommendations

The Target Setting Working Group is a small group of WSDOT staff and MPO representatives. The group meets monthly (typically via conference call). In addition to discussing policy and process issues in-depth and preparing recommendations for the Target Setting Framework Group, the Working Group collaborates on clarification and fact-finding activities to support the operation of the Target Setting Framework Group.

Target Setting Technical Teams lend expertise to methodology and data requirements

The Target Setting Technical Teams dig deep into Notices of Proposed Rule Making (NPRMs) methodology and data requirements in order to ensure all pertinent MAP-21 facts are understood by target setting participants, making a smoother process for transitioning into MAP-21 performance requirements.

Separate Target Setting Technical Teams will be formed around each of the MAP-21 performance target areas. Outcomes from Target Setting

Continued on p. 2



Integrating MPOs, Cities and Counties

WSDOT/MPO: Mapping the MAP-21 target setting process

Target setting framework group

group: This group includes WSDOT and MPO directors and is responsible for making final determinations.

Internal WSDOT

technical group: This group includes WSDOT technical team members and is responsible for MAP-21 implementation from technical standpoint such as

1. Defining reporting segments
2. Conflation
3. Metric calculation
4. Measure calculation
5. Target development
6. Develop report to meet federal requirement...
7. ... and other detailed work



Target setting working group

group: This group includes all the MPO personnel with technical expertise along with WSDOT technical experts and is responsible for developing and agreeing on various attributes related to PM3 MAP-21 performance reporting. MPO delegates of the group will decide to adopt WSDOT developed targets or if they are going to set their own targets.

Target setting technical team

team: This group includes technical staff from WSDOT and MPOs and are responsible for agreeing on targets and to develop consensus.

Integrating MPOs, Cities and Counties

What are we planning to do...

- Continue Coordinating Committees and Meetings
- Coordinate with MPOs on the Planning Alignment Working Group (PAWG) to complete the 2018 work plan
- FHWA Asset Management Workshop for MPOs, Cities and Counties
- Provide Pavement and Bridge Condition Information to Locals

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Questions?

WSDOT Asset Management: *Applying the right treatment, to the right asset, at the right time...* **Practical Solutions**