

# Handout: Proposed Measures and Reporting Requirements for Bridge and Pavement Draft NPRMs (Released January 5, 2014)

DRAFT - Office of Strategic Assessment and Performance Analysis, WSDOT

|                                       | Baseline Performance Report  | Mid Performance Report   | Full Performance Report  |
|---------------------------------------|--|--|--|
| Collection and Reporting Requirements | <p><b>WSDOT's Current Data Collection</b></p> <p><i>Interstate System</i></p> <ul style="list-style-type: none"> <li>WSDOT collects IRI, Cracking, Rutting, and Faulting data for the full extent of the mainline highway in one lane, both directions of travel, annually. If there are more than three roadway lanes in a direction, WSDOT uses lane two. If not, data is recorded in the rightmost lane. WSDOT reports this data in section lengths of 0.1 mile.</li> </ul> <p><i>Non-Interstate NHS</i></p> <p>State Routes:</p> <ul style="list-style-type: none"> <li>WSDOT collects IRI, Cracking, Rutting, and Faulting data for the full extent of the mainline highway, annually. If three or less lanes, WSDOT collects data in one direction only, from right-most lane. If divided state route or has more than four total lanes in both directions, WSDOT collects the data from right-most lane in each direction. WSDOT reports this data in section lengths of 0.1 mile.</li> </ul> <p>Local Roads:</p> <ul style="list-style-type: none"> <li>WSDOT collects IRI data for the full extent on locally owned roads, biennially.</li> <li>WSDOT collects cracking, rutting and faulting data by samples on locally owned roads, biennially.</li> </ul> <p><b>MAP-21 Pavement Reporting Requirements</b></p> <ul style="list-style-type: none"> <li>Set 4-year pavement condition Performance Targets for the Interstate System.</li> <li>Set 2-year and 4-year pavement condition Performance Targets for the non-Interstate NHS.</li> <li>Report Baseline condition derived from the latest data collected through December 31, 2015.</li> <li>Describe how the established targets support expectations documented in longer range plans (Transportation Plan, Asset Management Plan).</li> <li>Describe the NHS limits within the State Boundary based on HPMS data.</li> <li>Describe the urbanized area boundaries within the State boundary based on decennial census data.</li> <li>Establish additional targets for urbanized and non-urbanized areas, if desired.</li> <li>MPOs will report established 4-year targets to DOT in a manner that is agreed upon by both parties and documented in the Metropolitan Planning Agreement.</li> </ul> <p><b>WSDOT's Current Bridge Data Collection</b></p> <p><i>NHS Bridges</i></p> <ul style="list-style-type: none"> <li>WSDOT collects and submits NBI data, including deck, superstructure, substructure, and culverts, twice per year for all federally reportable state and local agency bridges, including NHS bridges. WSDOT does not submit data for bridges owned by federal or tribal agencies.</li> </ul> <p><b>MAP-21 Bridge Reporting Requirements</b></p> <ul style="list-style-type: none"> <li>Set 2-year and 4-year bridge Performance Targets for NHS Bridges.</li> <li>Discuss how targets support longer term performance expectations in other performance related plans.</li> <li>MPOs will report established 4-year targets to DOT in a manner that is agreed upon by both parties and documented in the Metropolitan Planning Agreement.</li> </ul> | <p><b>MAP-21 Pavement Data Collection Requirements</b></p> <p><i>Interstate System</i></p> <ul style="list-style-type: none"> <li>Collect IRI, Cracking, Rutting, and Faulting data for the full extent of the mainline highway, in the rightmost travel lane or one consistent lane, both directions of travel, annually. Data must be reported in section lengths of 0.1 mile.</li> </ul> <p><i>Non-Interstate NHS</i></p> <ul style="list-style-type: none"> <li>Collect IRI data for the full extent of the mainline highway, in the rightmost travel lane or one consistent lane, one direction of travel, biennially. Data must be reported in section lengths of 0.1 mile.</li> <li>Collect cracking, rutting, and faulting data for the mainline highway by sampling methods outlined in HPMS Field Manual, biennially.</li> </ul> <p><b>MAP-21 Pavement Reporting Requirements</b></p> <ul style="list-style-type: none"> <li>Report 2-year pavement condition of the Interstate System for January 1, 2016 through December 31, 2017.</li> <li>Report 2-year pavement condition of the non-Interstate NHS for January 1, 2016 through December 31, 2017.</li> <li>Use 2-year Interstate System and non-Interstate NHS pavement condition to update baseline condition.</li> <li>Discuss progress made toward the achievement of 2-year targets.</li> <li>Discuss the effectiveness of the investment strategy documented in the State asset management plan.</li> <li>Discuss two-year significant progress toward NHPP targets and summary of accomplishments. If no significant progress for two consecutive years, include actions toward achieving NHPP targets.</li> <li>Adjust 4-year targets, as appropriate and include discussion.</li> </ul> <p><b>MAP-21 Bridge Data Collection Requirements</b></p> <p><i>NHS Bridges</i></p> <ul style="list-style-type: none"> <li>Submit NBI data items: 58- Deck, 59- Superstructure, 60- Substructure, and 62- Culverts, annually. NBI items apply to NHS bridges and ramp bridges connecting to the NHS, and bridges on the NHS that cross a State border, regardless of ownership.</li> </ul> <p><b>MAP-21 Bridge Reporting Requirements</b></p> <ul style="list-style-type: none"> <li>Report 2-year condition of NHS Bridges for January 1, 2016 through December 31, 2017.</li> <li>Use 2-year condition to update baseline condition of NHS Bridges.</li> <li>Discuss progress made toward the achievement of 2-year targets.</li> <li>Discuss progress, achievements, planned activities, and circumstances that led to actual performance.</li> <li>Adjust 4-year targets, as appropriate, and include discussion.</li> </ul> | <p><b>MAP-21 Pavement Data Collection Requirements</b></p> <p><i>Interstate System</i></p> <ul style="list-style-type: none"> <li>Collect IRI, Cracking, Rutting, and Faulting data for the full extent of the mainline highway, in the rightmost travel lane or one consistent lane, both directions of travel, annually. Data must be reported in section lengths of 0.1 mile.</li> </ul> <p><i>Non-Interstate NHS</i></p> <ul style="list-style-type: none"> <li>Collect IRI data for the full extent of the mainline highway, in the rightmost travel lane or one consistent lane, one direction of travel, biennially. Data must be reported in section lengths of 0.1 mile.</li> <li>Collect cracking, rutting, and faulting data for the full extent of the mainline highway, in the rightmost travel lane or one consistent lane, one direction of travel, biennially. Data must be reported in section lengths of 0.1 mile.</li> </ul> <p><b>MAP-21 Pavement Reporting Requirements</b></p> <ul style="list-style-type: none"> <li>Report 4-year pavement condition of the Interstate System for January 1, 2016 through December 31, 2019.</li> <li>Report 4-year pavement condition of the non-Interstate NHS for January 1, 2016 through December 31, 2019.</li> <li>Use 4-year Interstate System and non-Interstate NHS pavement condition to update baseline condition.</li> <li>Discuss progress made toward the achievement of 4-year targets.</li> <li>Discuss the effectiveness of the investment strategy documented in the State asset management plan.</li> <li>Discuss 4-year significant progress toward NHPP targets and summary of accomplishments. If no significant progress for two consecutive years, include actions toward achieving NHPP targets.</li> <li>MPOs will report progress toward the achievement of 4-year targets to DOT in a manner that is agreed upon by both parties and documented in the Metropolitan Planning Agreement.</li> </ul> <p><b>MAP-21 Bridge Data Collection Requirements</b></p> <p><i>NHS Bridges</i></p> <ul style="list-style-type: none"> <li>Submit NBI data items: 58- Deck, 59- Superstructure, 60- Substructure, and 62- Culverts, annually. 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|                                       | Timeline   | <p>Due October 1, 2016</p> <p>HPMS Report (Interstate System &amp; non-Interstate NHS) April 15</p> <p>NBI Report March 15</p> <p>2014</p>   | <p>Due October 1, 2018</p> <p>HPMS Report (Interstate System) April 15</p> <p>HPMS Report (non-Interstate NHS) June 15</p> <p>NBI Report March 15</p> <p>2016</p>  |
|                                       | <p><b>Data Collection Cycle*</b></p> <p>Pavement: January 1, 2014 - December 31, 2015</p> <p>*Bridge: January 1, 2013 - December 31, 2015</p>  | <p><b>Data Collection Cycle*</b></p> <p>Pavement: January 1, 2016 - December 31, 2017</p> <p>*Bridge: January 1, 2015 - December 31, 2017</p> <p>1st Bridge Penalty Assessment</p>   | <p><b>Data Collection Cycle*</b></p> <p>Pavement: January 1, 2018 - December 31, 2019</p> <p>*Bridge: January 1, 2017 - December 31, 2019</p> <p>1st Pavement Penalty Assessment</p>   |
|                                       | <p>1st 4-Year Performance Period<br/>January 1, 2016 - December 31, 2019</p>   |  |  |
|                                       | <p>HPMS Highway Performance Monitoring System</p> <p>IRI International Roughness Index</p> <p>NBI National Bridge Inventory</p> <p>NHS National Highway System</p>   |  |  |

**Targeted Performance Measures, Minimum Condition and Penalties for Bridge and Pavement Draft NPRMs (Released January 5, 2014)**

DRAFT - Office of Strategic Assessment and Performance Analysis, WSDOT March 25, 2015

**PAVEMENT**

**Targeted Performance Measures (see definitions below)**

- Interstate - Percentage of pavement in good condition
- Interstate - Percentage of pavement in poor condition
- Non-Interstate (NHS) - Percentage of pavement in good condition
- Non-Interstate (NHS) - Percentage of pavement in poor condition

**Minimum Condition - Interstate only**

Interstate not to exceed 5% in poor condition (see metrics/ definition below)

**Minimum Condition Penalty - Interstate Only**

*1st penalty assessed by October 1, 2018 based on two years (2016,2017) condition data, and assessed each fiscal year thereafter*

- **Compliance:** Penalty applied if out of compliance for the most recent two calendar years. First penalty assessment in 2018 (Federal FY2019), results delivered to DOT by FHWA before October 1. (Example below)
- **Penalty:** Obligate certain NHPP funds for the purposes described in 23 USC 119 and increased by an amount each year after Fiscal Year 2013; Transfer certain apportioned Surface Transportation Program for the purposes described in 23 USC 119. Penalty stays in effect until the Interstate pavement condition exceeds the minimum condition level established by the NPRM. WSDOT currently meets the threshold with 3.8% in poor condition.

**Condition Metrics (WSDOT criteria is less conservative)**

- IRI (inches/mile): Good <95, Fair 95-170 (95-220\*), Poor >170 (>220\*)
- Cracking (%): Good <5, Fair 5-10, Poor >10
- Rutting(inches): Good <0.20, Fair 0.20-0.40, Poor >0.40
- Faulting (inches): Good <0.05, Fair 0.05-0.15, Poor >0.15

\*Population >1M

**Minimum Condition for Interstate pavement**

Interstate not to exceed 5% in poor condition

*Two consecutive years not compliant = penalty*

2013      2014      2015      2016      2017      2018      2019      2020

Years prior to 2016 not used for determining penalty

|  |               |               |                               |            |            |  |  |
|--|---------------|---------------|-------------------------------|------------|------------|--|--|
|  | not compliant | not compliant | Penalty Assessed October 2018 |            |            |  |  |
|  |               | not compliant | compliant                     | No penalty |            |  |  |
|  |               |               | compliant                     | compliant  | No penalty |  |  |

**EXAMPLE**

**BRIDGE**

**Targeted Performance Measures**

- NHS Bridges - Percentage of Bridges in good condition
- NHS Bridges - Percentage of Bridges in poor condition

**Minimum Condition - NHS Bridges**

NHS Bridges not to exceed 10% structurally deficient, by bridge deck area (see metrics/definition below) (WSDOT currently meets the minimum condition; 9.1% structurally deficient.)

**Minimum Condition Penalty - NHS Bridges**

*1st penalty assessed by October 1, 2016 based on three years (2013-2015) condition data, and assessed each fiscal year thereafter*

- **Compliance:** Penalty applied if out of compliance for the most recent three calendar years. First penalty assessment in 2016 (Federal FY2017), results delivered to DOT by FHWA before October 1. (Example below)
- **Penalty:** Obligate a set aside amount equal to 50 percent of the funds apportioned to the State for fiscal year 2009 to carry out the Highway Bridge Program. Obligate a set-aside amount of certain NHPP funds during the fiscal year following the determination. Penalty stays in effect until the NHS bridge condition exceeds the minimum condition level established by the NPRM.

**Condition Metrics**

- Deck: Good ≥7, Fair 5 or 6, Poor ≤4
- Superstructure: Good ≥7, Fair 5 or 6, Poor ≤4
- Substructure: Good ≥7, Fair 5 or 6, Poor ≤4
- Culvert: Good ≥7, Fair 5 or 6, Poor ≤4

**Minimum Condition for NHS bridges**

NHS Bridges not to exceed 10% structurally deficient, by bridge deck area

*Three consecutive years not compliant = penalty*

2013      2014      2015      2016      2017      2018      2019      2020

|  |               |               |               |                               |            |            |  |
|--|---------------|---------------|---------------|-------------------------------|------------|------------|--|
|  | not compliant | not compliant | not compliant | Penalty Assessed October 2016 |            |            |  |
|  |               | not compliant | not compliant | compliant                     | No Penalty |            |  |
|  |               |               | not compliant | compliant                     | compliant  | No Penalty |  |

**EXAMPLE**