Implementation of National Performance Measures and Asset Management Plan

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Presentation Outline

- Rulemaking Status
- Implementation Needs
- Capacity Building
Rulemaking Status
10 Inter-related Rulemakings

Highway Safety Grant Programs

Federal-aid Highway Programs

Public Transportation Programs

NHTSA

1 Rule

FHWA

6 Rules

FTA

3 Rules

National Pavement Preservation Conference
Implementation Status

Highway Safety Improvement Program ➔ Final Rule: Published

PM1 - Safety Performance Measures ➔ Final Rule: Published

State and Metro Planning ➔ Final Rule: Published

PM2 - Pavement/Bridge Cond. Measures ➔ Final Rule: December, 2016

Asset Management Plan ➔ Final Rule: October, 2016

PM3 - System Performance+ Measures ➔ Reviewing Comments

MPO Coordination ➔ Comments Period Closes October 24th
5 Measures*
- Fatalities
- Serious Injuries
- Non-motorized safety

Annual State and MPO targets
One common definition for serious injuries
Annual reporting on performance
Annual assessment of progress

*5 year rolling average
Measures

- Bridge condition
- Pavement condition

New pavement measure

4 year performance periods

State and MPO target setting requirements

2 year progress reviews of States

NHS Asset Management Plan
Infrastructure Comment Summary

Commenters
- 127 letters (many comments)
- 42 States and 19 local government agencies
- 27 industry/advocacy groups
- 14 planning organizations
- 16 individuals

Themes
- NHS Ownership
- Declining Conditions
- Implementation Timing
- Cost Burden
- Minimum Condition Provisions
- Pavement Measure
- Data Collection and Reporting
Pavements:

- FHWA is to set performance measure for pavements
- Comprehensive measure – indicator of condition
- State DOTs are to set targets for NHS pavements
- Need to address standardized data collection and submittal (how, when, how much, how good, outdated, etc.)
**System Performance, CMAQ, Freight Proposal**

- **Travel Time Measures**
  - Reliability
  - Peak Hour Travel Time
  - Delay

- **Emissions**
  - Reduction in CMAQ Criteria Pollutants
  - Reduction in CO2 (greenhouse gas)

- **National travel time database**

- **4 year performance periods**

- **State and MPO target setting requirements**

- **Unique requirements – large urbanized areas**

- **2 year progress reviews of States**
System Performance+ Comment Summary

Commenters
- 8,888 comments
- 43 States and 33 local government agencies
- 92 industry/advocacy groups
- 28 planning organizations
- 8 universities
- Thousands of individuals
- US Congress

Themes
- Experience of all travelers
- Multimodal system performance
- Greenhouse gas emissions
- Complexity of measures
- Data processing burden
- Freight measures
- Speed based measures
Asset Management
Commenters

- 59 individual comment letters
- 35 State DOTs, 7 trade, professional, and government associations, 2 MPO, 1 local government, 1 planning district commission, and several submissions from individuals and private industry
MAP-21 and FAST Act

- Require States to develop and implement a Risk-Based Asset Management Plan for the National Highway System to improve or preserve the condition and performance of the NHS.

- Require FHWA to establish minimum standards for States to use in developing and operating bridge and pavement management systems.
Asset management is a **strategic and systematic process** of operating, maintaining, and improving physical assets, with a focus on engineering and economic analysis based upon quality information, to identify a **structured sequence of maintenance, preservation, repair, rehabilitation, and replacement actions** that will achieve and sustain a desired state of good repair over the lifecycle of the assets at minimum practicable cost. (23 U.S.C. 101(a)(2), MAP-21 § 1103)
Benefits of Asset Management

An Asset Management Plan addresses issues and challenges to answer critical questions. Like how will we:

- ...improve investment strategies for operations and capital improvement?
- ...ensure long-term funding to sustain a state-of-good-repair?
- ...manage risks to system performance and condition of assets?
- ...choose priorities in funding?
- ...manage infrastructure performance X years from now?
- ...make sure infrastructure can endure extreme weather events?
- ...make the right decisions?
- ...prevent unwarranted debt for our children?
A State DOT is responsible to include a summary listing of the pavement and bridge assets on the NHS including condition, and for developing a process for each of the following:

1. Performance gap analysis
2. Life-cycle cost (analysis) planning
3. Risk management analysis
4. Financial plan
5. Investment strategies
States must address pavements and bridges but are encouraged to include all infrastructure assets within the highway right-of-way in their risk-based asset management plan. (Also can include roads other than on the NHS.)

Includes strategies that lead to a program of projects that would make progress toward achievement of the State targets for asset condition and performance of the NHS.

States are required to integrate their asset management plan, along with other State plans and processes, into the statewide transportation planning process.
Where does preservation tie in:

- Key element in all processes
- Preservation is a mainstream key element of asset management
- Necessary to have quality preservation activities and predictable results
An asset management plan addresses both short term and long term needs relating to the goal of improving or preserving the condition and performance of the NHS.

An asset management plan should serve as the analytical foundation for developing investment strategies that meet these needs.

The Section 150 performance measures (PM2), and the related 2-year and 4-year targets, are indicators of interim condition and performance levels. They show how a State is progressing toward its longer term goals for the condition and performance of the NHS.
Requirements related to Asset Management

- Asset Management Plan related submittal due dates addressed in Final Rule
- Asset Management Plan to be updated at minimum once every 4 years
- Annual consistency determination
Establish minimum standards for States to use in developing and operating:

- Bridge management systems
- Pavement management systems
Implementation Needs
Assessments and Reviews

Level of Readiness

- Coordinating on performance
- Telling the performance story
- Investment decision-making
- Improving data-quality
- Target setting practices

Implementation Status

Federal Assistance

Best Practices

Report to Congress
Internal Assessment Top Readiness Needs

- Assuring Data Quality
- Supporting Target Setting
- Assisting in Plan Development
- Monitoring Progress
- Facilitating Coordination
HPMS Report Cards

Timeliness

<table>
<thead>
<tr>
<th>Category</th>
<th>No. of States</th>
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<tbody>
<tr>
<td>Before 6/15</td>
<td>16</td>
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<td>On 6/15</td>
<td>14</td>
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<tr>
<td>After 6/15</td>
<td>20</td>
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<td>No submission</td>
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Completeness

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<tr>
<td>100% Submission</td>
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<tr>
<td>95% or better</td>
<td>19</td>
</tr>
<tr>
<td>Less than 95%</td>
<td>9</td>
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Quality

<table>
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<tr>
<th>Category</th>
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<tbody>
<tr>
<td>Minor issues</td>
<td>17</td>
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<tr>
<td>No fatal flaws</td>
<td>26</td>
</tr>
<tr>
<td>Fatal flaws</td>
<td>7</td>
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</table>
Improvement in Data Quality

% POOR AND MISSING SURFACE TYPE

<table>
<thead>
<tr>
<th>Year</th>
<th>% Lane Miles Expanded Sample Poor</th>
<th>% Lane Miles Expanded Sample Missing Surface Type</th>
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<tbody>
<tr>
<td>2012</td>
<td>10.53%</td>
<td>5.95%</td>
</tr>
<tr>
<td>2013</td>
<td>11.37%</td>
<td>4.78%</td>
</tr>
<tr>
<td>2014</td>
<td>4.86%</td>
<td>0.16%</td>
</tr>
<tr>
<td>2015*</td>
<td>2.40%</td>
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</table>
Finding Bridges

NBI Reported Bridges
HPMS Reported Bridge
HPMS Pavement Report Card

EXPANDED SAMPLE LANE MILES RATING (INTERSTATE)

- Lane miles expanded sample: good
- Lane miles expanded sample: fair
- Lane miles expanded sample: poor
- Lane miles expanded sample: missing surface type
- Total
- Sample size

CUMULATIVE AND FREQUENCY DISTRIBUTION - IRI (INTERSTATE)

- Frequency of missing IRI = 1.100%, missing data is included in the cumulative distribution graph.

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Performance Reporting

State DOT Progress Reporting Portal

Performance Storytelling

System Performance
Put the Pieces Together

Cast a Wide Net but Draw Audiences to a Central Location

Website

Elements of report, blog, clearinghouse, data tool

Topical Infographics

“One page, one issue”, stand-alone, widely shareable

Message-Oriented Infographics

Educational, shareable, ties transportation to performance

Performance Measure Reports

Aimed at transportation pros, simple but data-driven

Data Tool

For those interested in playing with data and researching comparisons

Related Content

Build on the performance work of others, make site a "one-stop shopping" experience

www.fhwa.dot.gov/tpm/engage/reporting
FHWA is developing guidance on the following:

- Life Cycle Planning
- Risk Management
- Financial plan

FHWA had developed guidance on

- Certification/recertification of State’s asset management processes; and
- Annual consistency determination
TPM Capacity Building Program
Toolbox Homepage

TPM Toolbox
Development site. Demo only.

This is a draft web site for the FHWA Transportation Performance Management (TPM) Technical Assistance Program.

Learn more about the TPM tools

TPM Guidebook
The TPM Implementation Guidebook provides clear practical actionable steps that state DOT leadership, management, and staff can implement to enhance performance management practices.

Self-Assessment
The TPM self-assessment helps to determine your organization's level of performance management maturity. You can customize the self-assessment using the tools on this site.

TPM Resources
The TPM Resources Library contains best practices, precedents, and other helpful resources. Browse the library or quickly navigate to a specific document using our search tools.

About the site
This is a preliminary draft of the web resource for the FHWA Transportation Performance Management (TPM) Technical Assistance Program. It contains the first pieces of the proposed outline and content of the TPM Implementation Guidebook. This document is intended to provide clear practical actionable steps that state DOT leadership, management, and staff can implement to enhance performance-management practices. The Guidebook will use case studies and illustrative examples to demonstrate how performance management results in improved decision-making through better-informed planning, programming, monitoring and reporting.
8 Training Courses

MAP-21 TPM 101 Course

 MAP-21 TPM 201 Courses

Target Setting

Data Quality

Safety
Pavement
Bridge
Planning
Congestion/Air Quality/Freight

Delivery Models
Pooled Fund Coordination
Other Training Needs

Available Now

Rules

National Pavement Preservation Conference
Capacity Building Assistance Requests

The overarching goal of the Federal Highway Administration (FHWA) Transportation Performance Management (TPM) Professional Capacity Building Program (PCB) is to ensure that federal, state departments of transportation (SDOT), metropolitan planning organizations (MPO), transit, and local partners are prepared to carry out performance-based transportation decision-making. Training and programmatic assistance is primarily provided through:

- Training opportunities (pdf, 0.2 mb)
- TPM Workshops and Peer-to-Peer assistance (pdf, 0.2 mb)
- Direct programmatic assistance from FHWA, other partner agencies, and other organizations via phone calls, web conferences, emails, general instruction, or site visits.

Eligibility

Any public authority or transportation entity may apply for programmatic assistance for the TPM PCB assistance.

TPM Request Form

Please complete the form below to request TPM programmatic assistance. FHWA will respond to all requests with recommendations on options for support and assistance.

* Required Fields

First Name: 

Last Name: 

Organization: 

City: 

Email Notification

Sign up to receive general notices on TPM

Enter your E-mail  Submit

Events

- Safety Performance Measures and the Serious Injury Reporting Requirement
  - Webinar
  - November 2, 2016
- View all Upcoming Events

Related Links

- FHWA/DOT TPM-related Links
- TPM External links

Contacts

- Susanna Hughes-Reck
  - Office of Transportation Performance Management
  - 202-366-1548
  - E-mail Susanna
For More Information

- FHWA Office of Asset Management
  http://www.fhwa.dot.gov/asset/index.cfm
  - Examples of asset management plans and templates
  - Generic work plan for developing an asset management plan.
  - Publications relative to risk management and financial planning.
  - Gap Analysis Implementation Reports
For More Information

- NHI Transportation Asset Management Training Courses
  - Introduction to Asset Management
  - Developing an Asset Management Plan
  - Financial Planning for Asset Management
  - Risk


- AASHTO Asset Management Portal
  http://www.tam-portal.com/

- Asset Management Expert Task Group
Thank You

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http://www.fhwa.dot.gov/tpm/

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