
2013 National Winter Maintenance Peer Exchange

“Moving from Art to Science”
September 10-11, 2013

Gabriel Guevara, P.E.
Road Weather Management Program
FHWA



Background

On July 6, 2012, President Obama signed into law P.L. 112-141, the Moving Ahead for Progress in the 21st Century Act (MAP-21); funding surface transportation programs at over \$105 billion for fiscal years (FY) 2013 and 2014

New Directions

- Stable funding (after 10 extensions) through FY 2014
- Substantial programmatic consolidation
- Focus on the NHS
- New apportionment process
- Accelerates project delivery
- Performance-based Federal program



Performance-based Federal Program...

- Performance Measures required under 23 U.S.C. 150(c) (newly-established by section 1203 of MAP-21)
- Consolidated Programs:
 - National Highway Performance Program (NHPP)
 - Surface Transportation Program (STP)
 - Congestion Mitigation and Air Quality Improvement Program (CMAQ)
 - Highway Safety Improvement Program (HSIP)
 - Railway-Highway Crossings (set-aside from HSIP)
 - Metropolitan Planning



Performance management

The cornerstone of MAP-21's highway program transformation is the transition to a performance and outcome-based program. States will invest resources in projects to achieve individual targets that collectively will make progress toward national goals.



Performance Measures - the Goals

MAP-21 establishes national performance goals for Federal highway programs:

- **Safety**—To achieve a significant reduction in traffic fatalities and serious injuries on all public roads.
- **Infrastructure condition**—To maintain the highway infrastructure asset system in a state of good repair.
- **Congestion reduction**—To achieve a significant reduction in congestion on the NHS.
- **System reliability**—To improve the efficiency of the surface transportation system.

(continue in next page...)



Performance Measures Goals (Cont.)

- **Freight movement and economic vitality**—To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.
- **Environmental sustainability**—To enhance the performance of the transportation system while protecting and enhancing the natural environment.
- **Reduced project delivery delays**—To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices.



Performance Management process

- MAP-21: Identifies national goal areas
- USDOT: establish measures, with input, within 18 months
- MAP-21 thresholds
 - Pavement condition on Interstate
 - Bridge condition on NHS
- States and MPOs:
 - States to set targets within 12 months of USDOT establishment of measures
 - MPO targets within 6 months of State establishment of targets
 - Incorporate measures and targets into planning process
- States report on progress toward targets
 - Report within 4 years of enactment; biennially thereafter
 - Insufficient progress toward NHPP/HSIP targets triggers corrective actions (not sanctions)



Performance Measures Areas

- National Highway Performance Program
 - NHS Bridge Condition
 - Interstate and NHS Pavement Condition
 - Interstate and NHS Performance
- Highway Safety Improvement Program
 - Fatalities on all Public Roads (total number and rate)
 - Serious Injuries on all Public Roads (total number and rate)
- Congestion Mitigation & Air Quality Improvement
 - Traffic Congestion
 - On-Road Mobile Source Emissions
- Freight Policy
 - Freight Movement on the Interstate



Performance Measures Rule-making

USDOT Responsibilities:

- Establishment of National Measures
 - Measure Definition
 - Data Elements
- Setting Minimum Condition for Interstate Pavements
- Outlining Target Setting Requirements
- Defining Target Achievement
- Outlining Performance Reporting Requirements



Associated Performance Management Requirements

- Planning Regulations
 - Performance-Based Approach- outline of the req's to be met
 - System Performance Report - MPO's (mandatory) & STP (opt.)
 - Target Achievement Discussion- include it in the TIP & STIP
 - Transition Period- timing for impl. into planning process
- Asset Management Plan Process
 - Asset Management Plan under the NHPP
- Highway Safety Improvement Program
 - Outline SHSP (Strat Hwy Safety Plan) update, special safety rules, and performance reporting
- CMAQ Program
 - Requirements for MPOs to develop a Performance Plan



Rule Making Process Timeline

- Required to promulgate rule making within 18 months from October 1, 2012.
- Rule making activities currently underway:
 - Consultation with stakeholders
 - Drafting of the Notice of Proposed Rulemaking (NPRM)
 - Completion of an Economic Assessment that looks at the impact of the proposed rule on States, MPOs and other stakeholders.
 - Coordination with other rulemakings, i.e. Planning, Asset Management Plan, FTA
- 90 day minimum comment period required after NPRM is published.
- Publication of final rule in Federal Register and an effective date.



Grouped Measures Based On Readiness...

Program	Measure Category
STATUS I	• Serious Injuries per VMT
	• Fatalities per VMT
	• Number of Serious Injuries
	• Number of Fatalities
STATUS II	• Pavement Condition on the Interstates
	• Pavement Condition on the Non-Interstate NHS
	• Bridge Condition on the NHS
STATUS III	• Traffic Congestion
	• On-road Mobile Source Emissions
	• Freight Movement
	• Performance of the Interstate System
	• Performance of the Non-Interstate System



Staged Rule Schedule

Measures / Fiscal Year		Safety Measures	Pavement & Bridge Measures	CMAQ, Performance, and Freight Measures	Single Effective Date: Spring 2015
FY / QUARTER		Status I	Status II	Status III	
FY13 (Year 1 of MAP-21)	Q1	Consultation/ NPRM	Consultation/ NPRM	Consultation/ NPRM	
	Q2				
	Q3				
	Q4				
FY14 (Year 2 of MAP-21)	Q1	Comments	Comments	Final Rule	
	Q2	Final Rule			Comments
	Q3		Final Rule		Comments
	Q4	Final Rule			Final Rule
FY15	Q1				Final Rule
	Q2				



MAP-21 and the Winter Maintenance Community...the Bottom Line!

- There are no specific requirements on the legislation for winter maintenance
- The states won't meet their performance requirements w/o the contributions of this community to Safety, Reliability, Sustainability, and "state of good repair"
- Keep doing what you are doing!
 - MDSS-Performance Measures-RWxM BMP's, etc...
- For more information on MAP-21, please go to:
 - www.fhwa.dot.gov/map21
 - Website is updated as new information becomes available



INVEST - a tool for sustainability!

INVEST - Infrastructure Voluntary Evaluation Sustainability Tool

A web-based, self-evaluation tool for assessing sustainability over the life cycle of a transportation project or program – from system and project planning, through design and construction, to operations and maintenance.



Points of Interest...

- Built by FHWA for, and with input from, real-world practitioners, i.e., “Practical”
 - Totally voluntary
 - Private - Data belongs to you and it is accessed only by you!
 - Free - no Licenses / no limits
 - 60 cross-cutting criteria to evaluate your program/project
-



Why INVEST...

- Supports the “Sustainable Highways Initiative” i.e., balanced decision-making among environmental, economic, and societal values
- Connects sustainability principles with concrete actions
- Measures sustainability specifically for transportation
- Helps stakeholders in the transportation industry to go above and beyond



Holistic approach

Built around three modules that represent the three phases of the infrastructure's life-cycle



How do use the tool?

Step 1: Go to the INVEST Website

www.sustainablehighways.org

Step 2: Register (enter all necessary information)

Step 3: Log into your account (using your created information)

Step 4: Upon logging-in, you will be at "My Workspace" section of the tool. Make your selection (tutorial or start a new project or program)

Step 5: After selecting "Start a new project or program," select a Module, and start filling out the fields....



How to use the tool...

This is what you see after selecting “My Workspace”:

INVEST
ECONOMIC • SOCIAL • ENVIRONMENTAL

Version 1.0

Home Learn Browse **Score** Home > My Workspace

My Workspace

Scoring Tutorial

Start a new Project or Program

Continue Working on an Existing Project or Program:

System Planning and Processes

[Test 1](#) Edit Duplicate Print-View Score Delete Collaborate

Project Development

[Pavement Project](#) Edit Duplicate Print-View Score Delete Collaborate

[TEST 3](#) Edit Duplicate Print-View Score Delete Collaborate

Operations and Maintenance

[TEST 2](#) Edit Duplicate Print-View Score Delete Collaborate

search

- Home
- Learn
- Browse
- Score
- Glossary
- FAQ
- Provide Comments
- Register
- FHWA's Sustainable Highways Program
- Privacy

Select the **Score** tab; select the appropriate **Module** and begin building your project and selecting the criteria of interest..



Operations & Maintenance Criteria

OM-1	Internal Sustainability Plan	OM-8	Bridge Management System
OM-2	Electrical Energy Efficiency and Use	OM-9	Maintenance Management System
OM-3	Vehicle Fuel Efficiency and Use	OM-10	Highway Infrastructure Preservation and Maintenance
OM-4	Reuse and Recycle	OM-11	Traffic Control Infrastructure Maintenance
OM-5	Safety Management	OM-12	Road Weather Management Program
OM-6	Environmental Commitments Tracking System	OM-13	Transportation Management and Operations
OM-7	Pavement Management System	OM-14	Work Zone Traffic Control



What you end up with....

As you build your project and complete the O&M Module you walk away with:

1. An evaluation of how your maintenance activities/project/program contribute to the overall sustainability of your transportation infrastructure
2. A self evaluation score that will shed light on the effectiveness of your agency in adopting sustainable practices. The scores are “snapshots in time” and should improve as your sustainability efforts mature.
3. The opportunity to “collaborate” with other team members, working within and/or across modules, has been identified as one of the great benefits of using this tool.



But don't forget an "old faithful" ...

The Salt Institute Sensible Salting Program!!!

<http://www.saltinstitute.org/content/download/17075/104488>

and

<http://www.saltinstitute.org/Uses-benefits/Winter-road-safety/Sensible-Salting>



Contacts.....

Road Weather Management Program	Paul Pisano (paul.pisano@dot.gov) Roemer Alfelor (roemer.alfelor@dot.gov) Gabriel Guevara (gabriel.guevara@dot.gov)
MAP-21*	Francine Shaw-Whitson (Francine.Shaw-Whitso@dot.gov)
INVEST	Michael Culp (Michael.Culp@dot.gov)

Thanks!

