

# Road Weather Management Performance Measures

## Update to Stakeholder Meeting Attendees

Madison, WI  
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# Content

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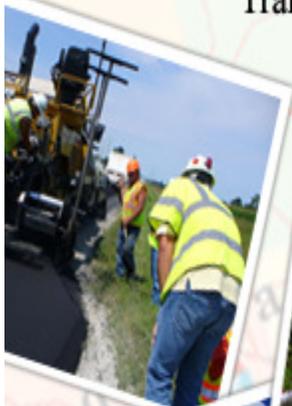
- Why Should We Care?
- Where Have We Been?
- Where Are Heading?



# MAP-21

## MOVING AHEAD FOR PROGRESS IN THE 21st CENTURY

Transforming the way we build, maintain, and manage our Nation's highways





# REFORMS PROGRAMS

Reforms and Focuses the Federal Program



# PROMOTES INNOVATION

Accelerates Project Delivery and Promotes Innovation





# PERFORMANCE-BASED

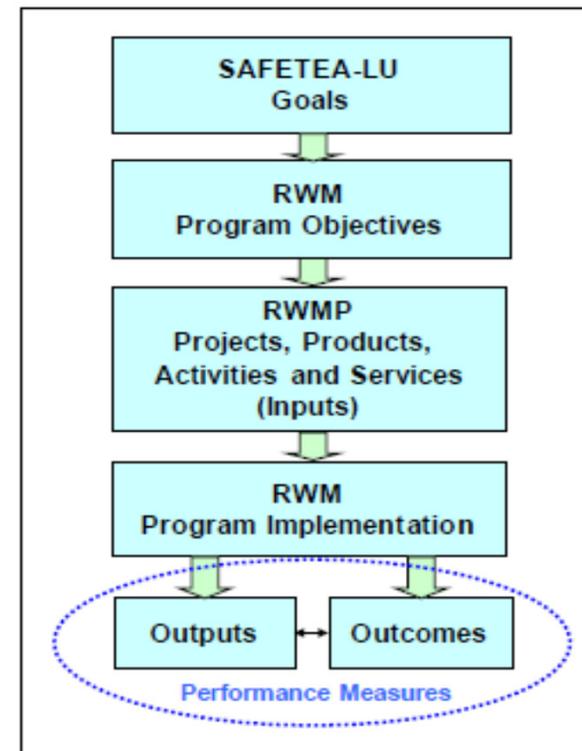
Establishes A Performance-Based Federal Program



# RWMP Performance Measurement

**Original Objective: Develop performance measures for evaluating the success of the RWMP in achieving the following Section 5308 goals:**

1. Maximize use of available road weather information and technologies;
2. Expand Road Weather R&D efforts to enhance roadway safety, capacity, and efficiency while minimizing environmental impacts; and
3. Promote technology transfer of effective road weather scientific and technological advances.



# Project History

## **Phase 1 – Identify measures (11/2006 – 1/2008)**

- Literature Review and Synthesis (135+ documents)
- Preliminary Measures (Stakeholder Workshop -- 4/24/07)
- Feedback from practitioners (240 requests, 70 respondents)
- Narrowed down to 11 output and outcome measures
- Published final report, flyer



# Selected RWM Performance Measures

PROGRAM GOALS	PERFORMANCE MEASURES
<p>Goal 1:</p> <p>Maximize use of available road weather information and technologies.</p>	<p>Number or percentage of transportation agencies that use road weather information and decision support systems for making advisory, control, and treatment decisions.</p> <p>Number or percentage of travelers who use road weather information for making travel decisions (both pre-trip and en-route).</p> <p>Number of weather/environmental sensor stations (ESS) deployed and used by transportation agencies to support decision-making (normalized by total road mileage).</p>
<p>Goal 2:</p> <p>Expand road weather R&amp;D efforts to enhance roadway safety, capacity, and efficiency while minimizing environmental impacts</p>	<p>Number of agencies participating in and benefiting from road weather R&amp;D projects.</p> <p>Percentage of time roadway meets safety and capacity level of service (LOS) standards (i.e. V/C ratio, etc.) during and after weather events.</p> <p>Reduction in agency costs (i.e. labor, equipment, materials) due to adoption of maintenance and operations decision-support systems for road weather management.</p> <p>Reduction in user costs (i.e. delay, crashes, vehicle operating costs, emissions, salt damage) due to improved road weather advisory, control, and treatment strategies.</p>
<p>Goal 3:</p> <p>Promote technology transfers of effective road weather scientific and technological advances.</p>	<p>Number of agencies/individuals visited or contacted through technology transfer, training, and outreach efforts.</p> <p>Rate of adoption of RWM technologies (e.g., decision-support systems) by agencies that participated in workshop or training activities.</p> <p>Number of RWM technology development, testing and deployment activities initiated through public or private sector based on identified operational needs.</p> <p>Number of road weather technologies developed through public-private and/or public-public partnerships reaching operational deployment.</p>





# Current Status

## Phase 3 – 2012 Performance Update

- Ongoing
- Transition from SAFETEA-LU goals to new RWMP Objectives set out in new roadmap

Focus Areas		Activities	Objectives
Stakeholder Coordination		<i>Lots of interesting projects</i>	Build partnerships
Program & Performance Management			Ensure investments pay off
R&D	RdWx Data Capture & Mgmt		Transportation & weather communities use fixed and mobile observations
	RdWx Dynamic Applications		Integrate RdWx observations into advanced decision support tools
	Weather-responsive Traffic Mgmt		Advance the state-of-the-practice through tailored management strategies
Tech Transfer, Training, Education			Raise road weather capabilities across the industry
Operations & Climate Change			Operations is engaged with climate change community



# Current Status

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## 2012 Update Features

- Review existing measures for their continued suitability, strengths, and weaknesses for determination of performance.
- Determine changes to the baseline conditions for existing measures using updated or new data sources
- Incorporate within or through new performance measures
  - Reliability and other operations measures which are being looked at within the Office of Operations and SHRP2 research program
  - Operations Efficiency Index (OEI) measures for top 40 metropolitan areas
- Identify refinements necessary to the existing performance measurement framework and develop a plan to quantify the measures
- Quantify all existing and new performance measures using current data to create a 2012 RWMP performance assessment report.

