

The USDOT Road Weather Roadmap

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14 August 2014
Salt Lake City, Utah

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Topics

- Key Focus Areas
- Featured New Projects
- ITS Strategic Plan 2015-2019
- Program Focus (FY 15 to FY19)
- Program Funding Update



Key Focus Areas for the RWM Program

- Track 1: Stakeholder Coordination
- Track 2: Program & Performance Management
- Road Weather Research & Development
 - Track 3: Data
 - Track 4: Applications
 - Track 5: Weather-Responsive Traffic Management
- Track 6: Technology Transfer, Training & Education
- Track 7: Operations, Climate Change & Sustainability



Featured New FY14 Project - #1

Integrated Modeling for Road Condition Prediction

- Objective

- Integrate real-time and archived data into ensemble forecasts and probabilistic models (e.g. weather, road condition, traffic, work zones, maintenance, incidents, etc.), and fuse them to predict the future overall road/travel conditions for travelers, transportation operators, and maintenance providers.
- The tool will be for tactical (right now) and strategic (in the near future) decision making.

! We'll be looking for Interested DOT Partners !



Featured New FY14 Project - #2

Performance Management Prototype Application Development

- Objective
 - Prototype, test and evaluate a road weather performance management tool that will highlight the potential for connected vehicle data to enhance and transform road weather performance measurement and management

! Looking for Interested DOT Partners !



Few More New FY14 Projects

- **Mobile Observations and Numerical Weather Prediction**

- Develop problem statements to explore the use of mobile observations for road weather forecasting; run WRF to assess the impact of the assimilated vehicle observations

- **Regional Assessment of Weather and Freight Impacts**

- Conduct a more extensive assessment and analysis of the impact of weather on freight

- **Field Testing for Road Surface Assessment**

- Further exploration of measuring pavement surface condition with data from on-board vehicle sensors

- **Road Weather Testing in the AMS Testbed**

- Develop Analysis, Modeling, and Simulation (AMS) testbed for weather-related Active Transportation and Demand Management strategies that use connected vehicle data

- **Climate Change/Sustainability - Operational Adaptation Guide**

- Document climate-sensitive decisions made for operations and maintenance, and develop a primer to help agencies assess adaptation needs and plan accordingly



ITS Strategic Plan 2015-2019

Strategic Themes

- Enable Safer Vehicles and Roadways
- Enhance Mobility
- Limit Environmental Impacts
- Promote Innovation
- Support Transportation Connectivity



ITS Strategic Plan 2015-2019

Program Categories

- Connected Vehicles
- Automation Research
- Emerging Capabilities
- Enterprise Data
- Interoperability
- Accelerating Deployment



RWM Program Focus (FY15 to FY19)

- **FY15** - Connected vehicle prototype applications developed, tested, evaluated, and potential demonstrated
- **FY16** - Vehicle Data Translator and Weather Data Environment mature and ready for road weather connected vehicle data capture and management
- **FY17** - Weather-Responsive Traffic Management strategies implemented, tested, and ready for deployment; Guidance on State DOT/NWS operations completed
- **FY18** - High-resolution (spatial and temporal) and route/segment-specific road condition prediction capability proven for mainstream implementation
- **FY19** - Weather-sensitive automation capabilities demonstrated; Guidance for weather-related performance measurement and management ready



RWMP Funding Update

- Inputs:
 - Congressionally set-aside funding for Road Weather R&D ended with SAFETEA-LU
 - Very little push from the community for weather in the recent ITS Strategic Planning process
 - Recognition of the cross-cutting nature of weather across ITS, including connected vehicles, automation, smart connected cities
- Result:
 - Weather-related research needs will be met through other programs in FY17 and beyond



Questions?



Recap Conversation

- CV Pilot Deployment Webinar: www.itsa.org/cvpilotswebinar
- Citizen reporting
- Networking HUGE
- NWS attendance - excellent
- New players attending & presenting
- Lots of data and how to deal with it
- WAZE
- Vendor technology
- CV Demo @ ITS World Congress
- Privacy by Design - how PII is handled within USDOT
- Vermont - what do you value more - your civil liberties or your life?
- Crowdsourcing: empower the people with structure, demographics is changing as more people have "smartphones", WAZE is 30 - 40 yrs old



Recap Conversation

- Data Sharing Agreements
 - Email or letter introducing to “higher-ups”
 - Include “higher-ups” in web conferences
- NTCIP 1204 - please participate (states & vendors) - siting of sensors
- Plugging pooled fund studies - great
- 1201 Rule will affect dissemination of road weather information
- On-going operational costs is a real issue for agencies
 - Benefit/cost
 - What level in the framework is acceptable
 - Upgrading system costs



Recap Conversation

- Cycle of market research and technology is becoming shorter
- Number of deaths/accidents/etc should be communicated more broadly - who should know and how should we communicate it
- Idaho - number of lives and cost savings for RWIS deployment
- Vermont - RWIS data used for law suits especially relating to speed during inclement weather
- Alaska - problem showing how information collected & disseminated actually changes driver behavior
- Michigan - matching program dollars for federal funds reduces operational monies - always having to deal with law makers trying to get them to understand (program, operations, maintenance, etc.)
- Performance management will soon be coming out of MAP-21
- WRTM statistics will be interesting to see how the law makers and public responds



Recap Conversation

- Climate change for a DOT
- Cross agency collaboration
- Cross department collaboration
- Cross jurisdictional collaboration
- Northwest passage, I-95 coalition, I-80 coalition, etc.
- Roundtable hot topics
- The winter that was hot stories

