

Surface Transportation: A State DOT Perspective

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2015 AMS Washington Forum
April 21-23, 2015



State DOT's Mission

- ◆ Mobility – Safe, Dependable, Reliable
- ◆ Benefit society
- ◆ Support the economy
- ◆ Connectivity between modes

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Weather Implications

- ◆ 27% of non-recurrent congestion weather related
- ◆ Significant impacts to the economy
- ◆ \$\$ Spent on weather related response not available for construction of infrastructure

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By The Numbers Yearly Average

1,336,027
23% of all vehicle crashes are weather related

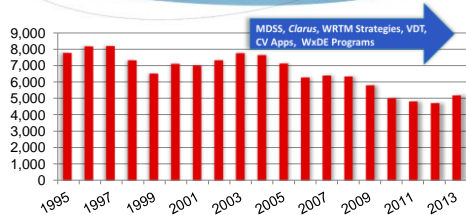
464,668
19% of all vehicle injuries are weather related

6,526
17% of all vehicle fatalities are weather related

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Weather Related Fatalities



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Proactive Response

- ◆ Proactive response by agencies and users require information that is:

Timely Accurate Consistent Relevant Actionable

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Access to Information: Agencies

- ◆ Road Weather Information Systems
- ◆ Mobile weather sensors
- ◆ Connected Vehicle data sources
- ◆ MDSS short term forecasts
- ◆ Staff meteorologist transportation specific forecasts

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Access to Information: Users

- ◆ Multiple weather providers
- ◆ Smart phone applications
- ◆ Agency provided warnings
- ◆ Agency provided road condition reports – 511
- ◆ Crowd sourced applications

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Information overload is a huge problem in today's social media society

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The Message

What's the road going to look like and when?

- ◆ Needs to be consistent
- ◆ Needs to be in a transportation context
- ◆ What action should be taken and when should it start?
- ◆ Should I alter my travel plans?

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Current Services a Good Start

- ◆ NWS Weather Ready Nation
 - ◆ Interpretation and Consultation
 - ◆ improve usefulness of products and services for decision making
 - ◆ Impact-based Decision Support Services
- ◆ Are State DOT's a NWS Core Partner?
- ◆ Needs to be more than weather – its road weather

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Impact-Based Decisions

- ◆ Thunderstorms-
 - ◆ If it comes through during the evening commute what will the road I take look like?
 - ◆ Should I leave work a little earlier or later?
- ◆ Frost Warning-
 - ◆ Will the bridges be slick on my morning commute?
 - ◆ Should I leave for work earlier than normal?
 - ◆ Should the DOT pretreat problem areas the day before?

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Impact-Based Decisions

- ◆ Wind Warnings
 - ◆ Are there stretches of road high profile vehicles should avoid?
 - ◆ Should the DOT activate warning signs or close sections of road to trucks?
- ◆ Winter storm warnings
 - ◆ When will it start and when will it end?
 - ◆ When will it affect the road?
 - ◆ Where will I be when it does and what actions should I take?

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Groups Focused on Solutions Pooled Fund Studies

- ◆ Maintenance Decision Support Systems - \$500,000/yr
- ◆ AURORA - all things RWIS - \$250,000/yr
- ◆ Clear Roads - winter maintenance chemicals and strategies - \$600,000/yr
- ◆ TRB Winter Maintenance and Surface Transportation Weather Committees
- ◆ AASHTO Winter Maintenance Technical Services Program-SICOP - \$130,000/yr

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Challenges

- ◆ Multiple data sources from both the weather and transportation communities which are not sufficiently integrated.
- ◆ Multiple layers of government
- ◆ Special interests – competing interests
- ◆ Variety of user needs
- ◆ Lack of funding

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Bringing the Pieces Together

- ◆ More integration is necessary
 - ◆ Technical and Institutional
 - ◆ At the Garage level – At the National level
- ◆ Continuous and sustainable progress cannot be realized without leadership and funding

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Thank You For Your Attention

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