American Association of State Highway and Transportation Officials

AASHTO

The Voice of Transportation

DRIVING INNOVATION FOR TRANSPORTATION

TIG

AASHTO TECHNOLOGY IMPLEMENTATION GROUP

MDSS | MAINTENANCE DECISION SUPPORT SYSTEM

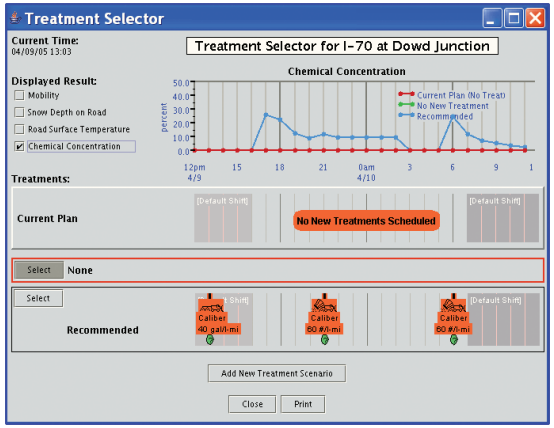
Guiding Your Customers Through the Storm

Winter maintenance is a complex and challenging endeavor for highway agencies, bringing together skilled operators and their vital equipment in a battle against the fury of Mother Nature.

Maintenance Decision Support System (MDSS) technology is based on a simple premise. If maintenance managers know:

- current road conditions
- the weather forecast
- the behavior of snow, ice, and chemicals on road and bridge surfaces, and
- available equipment, material, and manpower

they can determine the best maintenance treatments and the best time to apply them.



SAFETY

What if your agency had a tool to help make winter travel safer for motorists?

Whether you are a senior manager, front-line supervisor, equipment operator, traffic operations technician, or public information officer, MDSS provides support for critical decisions about how, when, and with what material to address winter driving conditions.

Integrating data on current road conditions and approaching weather, MDSS helps predict the future condition of the road surface if standard treatments, innovative treatments, or no treatments at all are applied. Improved road conditions can help reduce crashes, meaning fewer deaths and injuries, less property damage, and less incident-related congestion.

That's a win-win for transportation agencies and their customers.

INFORMATION NOW

What if all the vital information you need to manage a winter weather response was synthesized into a single tool, updated frequently in a matter of minutes, and accessible through a well-organized set of windows on your laptop computer?

MDSS brings together a diverse set of information resources to provide a continuous stream of current and accurate data about road conditions and responses as a storm progresses. It can even be configured to acquire information directly from plows on the road.

MDSS can feed information to 511 or web-based travel information systems, helping motorists make better decisions about when, where, and how to travel during bad weather.

From top management to equipment operators to customers, MDSS supports well-informed decisions in an environment of rapid change.

MANAGING MONEY AND RESOURCES

What if you had a system that helped you manage your resources and extend your winter maintenance budget?

MDSS can be configured to consider the number of operators and trucks you have available and suggest how to deploy them most effectively. It can also be designed to suggest chemical applications appropriate to the specific, evolving conditions of the road and the storm – and the optimum time at which to use them.

MDSS can help you make decisions that lower costs, while maintaining good roads. It even helps support economic growth by supporting reliability and safety for motorists and freight.

THE ENVIRONMENT

What if you could determine just the right amount of chemicals and abrasives with which to battle the weather conditions at hand?

MDSS can help you fine-tune the amount of sand, salt, and other deicing agents needed to maintain safer roads, suggesting effective – not excessive – application rates. This helps you reduce the amount of chemicals and sediments entering streams, rivers, and wetlands, while minimizing air contaminants and damage to roadside vegetation.

Imagine saving lives and saving money – while doing your part to preserve the environment.

REGION TO REGION

What if you could better align a consistent, high quality of maintenance across broad regions in the changing face of a storm?

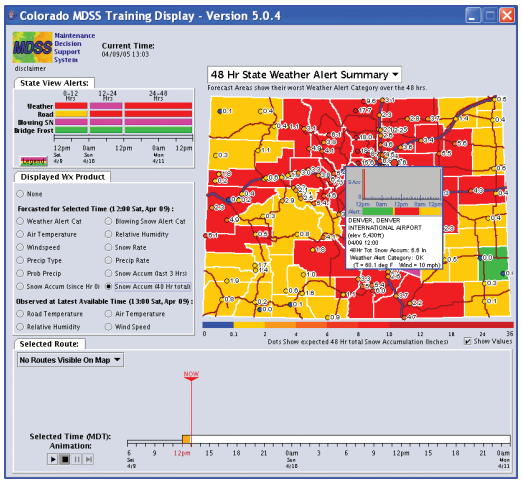
MDSS can include features that help you view and integrate timely information from several locations, moving easily from one to another, with detailed information about the track and progress of a storm as your guide.

The demands of freight and personal mobility mean our highways are the backbone of our economy and our way of life. Even in the most challenging weather, the flow of people and goods continues. Motorists moving from one region or state to another expect consistent roadway conditions. They do not expect to suddenly encounter icy or snow-packed roads just because they have crossed an invisible county or state line.

LEVEL OF SERVICE

What if you had a tool that helped you achieve a level of service you specify, conforming to your policies, operating procedures, and prior experience?

MDSS can be tailored to meet the requirements of your agency, your roads, and your traveling public. It supports the consistent use of effective practices, whether you or your workers have been on the job for twenty years or just two. With a mobile workforce and a wave of baby boom retirements challenging every agency, MDSS is a partner in change.



IN THE EYE OF THE STORM

Imagine turning on your computer, starting your MDSS, and having immediate access to the information you need to manage a breaking weather event.

No need to pound the keyboard, waiting for multiple programs and systems to load and open. No need to wear out the floor mat swiveling from one computer to another to access all the information you need. No need to wonder if you've missed important information that could help you make the best decisions as conditions worsen and pressures mount.

Take command of the tools that can help you maintain safety and mobility during the most challenging weather conditions. Take command of your manpower, machinery, and materials. Take command of your budget and resources for winter operations.

Take command of a host of features that can be integrated into a Maintenance Decision Support System and find at your fingertips the information you need to lead your agency, your staff, and your customers more safely through the storm.

MDSS | MAINTENANCE DECISION SUPPORT SYSTEM

*For additional MDSS resources, visit **www.aashtotig.org** and click on MDSS.*

*Also visit **www.ops.fhwa.dot.gov/weather/mitigating_impacts/programs.htm***

ABOUT TIG

Dedicated to sharing high-payoff, market-ready technologies among transportation agencies across the United States, TIG promotes technological advancements in transportation, sponsors technology transfer efforts, and encourages implementation of those advancements.

For more information visit
www.aashtotig.org

HOW DO I LEARN MORE?

AASHTO's Technology Implementation Group – or TIG – is leading an effort to promote the adoption by transportation agencies of Maintenance Decision Support Systems.

TIG's Lead States Team on the project includes DOT representatives who can help you evaluate the use of the technology in your agency. Turn to team members for insight, expertise, and advice.

For more information about deploying MDSS, contact:

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