

Plowing On

SDDOT ROLLS OUT HIGH-TECH WINTER MAINTENANCE

By

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“A lot of people like snow. I find it to be an unnecessary freezing of water.” SDDOT employees may agree with this quip by Carl Reiner. While snow is nice to look at and fun to play in, it can also be dangerous on the roads. To help accomplish the challenging task of keeping roads safe in winter, the department is deploying a new tool called a Maintenance Decision Support System (MDSS). “The overall goal is to provide the traveling public with safer roads while making more efficient use of equipment, manpower, and materials,” according to Pierre Region Engineer John Forman.

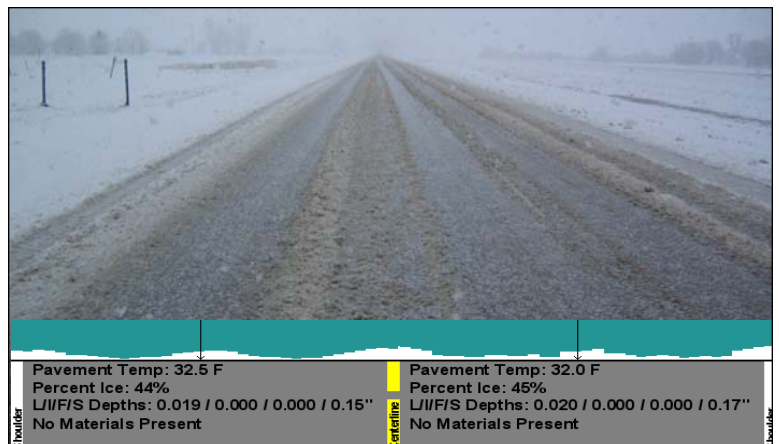
The MDSS uses information about recent, current and forecast weather - along with knowledge of the pavement composition, current road conditions, traffic levels, available maintenance resources and the behavior of snow, ice and deicing chemicals on roadways - to suggest effective maintenance treatments and timing. MDSS analyzes data from many sources, including roadside weather stations, radar, satellites and powerful weather forecast models.

Some of the information comes to the MDSS directly from Mobile Data Collectors in working snowplows. On-board air and pavement temperature sensors report

conditions along the plow route, which is tracked by a global positioning system (GPS). Plow position sensors tell when the road surface is being plowed and the truck’s spreader controller reports the amount of solid and liquid deicing material being applied. A touch screen computer allows the operator to enter basic weather and road condition observations and to receive forecasts, radar images and maintenance suggestions.

Custer Highway Maintenance Worker Gary Stender says the Mobile Data Collector is user friendly, with large, easy to read touch screen buttons and feels having real time weather radar and forecasts in the truck will be an

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Top: An on-board touch-screen computer reports information on road conditions and maintenance activity to the MDSS and returns weather forecasts and treatment suggestions to the snowplow operator. Bottom: MDSS’s prediction of snow depth across two lanes of I-29 compares well with conditions actually observed.

Preserving the now: Engineering the Future

GOVERNOR ROUNDS'S TAKE ON THE BUDGET


advantage for the driver. This winter, SDDOT's region shops will equip up to 100 trucks with MDC units purchased with dedicated Intelligent Transportation Systems funding.


The intent of MDSS is to support - not make - inter maintenance decisions. Operators and supervisors decide whether suggested treatments are appropriate. If they adjust a treatment, MDSS re-forecasts the resulting road conditions. Technology supports human intelligence to achieve the best results. According to Forman, "It's another tool in our toolbox. A better informed operator is a better operator."

Although MDSS is new, its development has taken several years. A group of four state DOTs - led by SDDOT's Office of Research - began work in late 2002 to refine a prototype developed by the Federal Highway Administration. Since then, the number of states in the pooled fund study has expanded to 14 and the group continues to grow. The states have tested MDSS in pilot field trials (South Dakota tested in Custer, Yankton and Winner areas) and several are moving to broad or

statewide deployment. The pooled fund MDSS is becoming recognized as the most innovative winter maintenance tool in the world.

MDSS is expected to improve highway safety and reduce costs. An independent benefit-cost analysis found that over the past five years, the Colorado, Minnesota and New Hampshire DOT's could have achieved the same level of service with 20-25 percent less deicing chemicals by using MDSS statewide. Alternatively, they could have used the same amount of chemicals more effectively, providing better road conditions and reducing crashes and traffic delay. In either case, the economic benefit of using MDSS would have been about eight times the cost of deploying and using it.

"It comes down to providing a better product - safety - to our customers, the traveling public," said Operations Maintenance Engineer Ed Rodgers. Thanks to SDDOT and MDSS, snow may still be "an unnecessary freezing of water" but it should be a less serious hazard on the road. 

challenges as well. Costs increase faster than revenues every year, and even an increase in federal funds won't solve all of our problems, because federal funds can't be used under the current guidelines for most operations and maintenance. An interim legislative committee wrestled this summer with these difficult problems, and I appreciate their efforts and I understand some of the frustrations they expressed. There aren't any clear or popular solutions, but we need to continue discussing the problems and various options so that better solutions can perhaps be created. Some people want to talk about tax increases right now, but the right time for that discussion is only after all other options are explored. With the limited highway resources that we have, our intent will be to expend it in the following manner: First, we will match our federal funds. Number two, we will continue to do our immediate needs, such as snow removal and maintenance. Number three: we will try to fund roads where they can create economic development opportunities and jobs. And number four, if there's any money left, we will be doing ongoing road reconstruction. Today we have a very minimal amount of money available. Tax increases should be discussed, but only as a last option. We must do everything we can within our means before the public is asked to pay more in taxes at the pump. And we must also remember that if we do more in the future for our state roads and for our bridges, we must also include help for our local roads and bridges as well." 

Governor Rounds's State of the State

Transcript of transportation-related parts of Gov. M. Michael Rounds's Jan. 13, 2009, State of the State speech

"If Congress passes a stimulus package, I hope it will include ready-to-go construction projects to create jobs in South Dakota... Here in South Dakota, like many other states, we also have a backlog of highway and bridge construction and repair projects. With accelerated funding from the federal government, and the waiver of matching fund requirements, these ready-to-go projects could create many more jobs during the next two construction seasons. We hope that happens, but beyond the short-term, Congress needs to reauthorize the

Surface Transportation Act this year. High-population states want our national policy to emphasize the reduction of traffic congestion. That's important, but it's also just as important to preserve and enhance connectivity between our cities and rural areas for the safe and efficient movement of raw materials, finished products and food throughout the nation. Preserving access and connectivity for both rural and urban areas are critical elements in the national transportation policy that will be debated in Congress this year. So, through our governor associations, I have been emphasizing the importance of rural connections for rural areas. Here at the state level, we have

Highway of Life

SIGNIFICANT EVENTS IN THE LIVES OF SDDOT EMPLOYEES

New Employees



Quentin Berger, Highway Maintenance Worker, Aberdeen, Oct. 9.

Martha Patton, Senior Secretary, Legal-Pierre, Nov. 3.

Lenise Haag, Senior Secretary, Operations-Pierre, Nov. 9.

Dennis Myren, Highway Maintenance Worker, Hayes, Nov. 10.

Terry Reymolds, Highway Maintenance Worker, Redfield, Nov. 17.

Joanie Flottmeyer, Accountant, Finance & Management-Pierre, Nov. 24.

Brian Olson, Transportation Project Engineer, Local Transportation-Pierre, Nov. 24.

Jeremiah Horst, Highway Maintenance Worker, Ipswich, Dec. 1.

Danaca Schettler, Transportation Engineer, Bridge Design-Pierre, Dec. 1.

Shirleine Kleppe, Transportation Engineer, Bridge Design-Pierre, Dec. 3.

Matthew Grohs, Draftsman, Bridge Design-Pierre, Dec. 9.

Troy Hofer, Highway Maintenance Worker, Redfield, Dec. 15.

Ronald Kroll, Equipment Technician, Aberdeen, Dec. 15.

Michael Shilhanek, Transportation Engineer, Aberdeen, Dec. 29.

Benjamin Brown, Journey Transportation Technician, Mitchell, Jan. 12.

Charles Haynes, Highway Maintenance Worker, McIntosh, Jan. 24.

Justin Cano, Highway Maintenance Worker, Martin, Jan. 24.

Joe Hanson, Highway Maintenance Worker, Brookings, Jan. 26.

Bradley Steeneck, Highway Maintenance Worker, Junction City, Feb. 9.

Jon Gregg, Highway Maintenance Worker, Martin, Feb. 9.

Robert Carrico, Highway Maintenance Worker, Belle Fourche, Feb. 9.

Promotions



Matt King, Highway Maintenance Worker, Brookings, Oct. 24.

Joel Jundt, Director, Planning & Engineering-Pierre, Dec. 8.

Tom Horan, Operations Engineer, Rapid City, Dec. 9.

Trevor Job, Lead Highway Maintenance Worker, Junction City, Dec. 9.

Jared Fosheim, Lead Highway Maintenance Worker, Philip, Dec. 24.

Gregg Ulmer, Highway Maintenance Worker, Winner, Jan. 9.

Transfers



Randy Sauter, Transportation Project Engineer, Rapid City, Oct. 24.

David Doan, Highway Maintenance Worker, Isabel, Dec. 9.

Randall Neilan, Lead Highway Maintenance Worker, Pierre, Dec. 9.

Larry Boomgaarden, Highway Maintenance Worker, Junction City, Dec. 24.

Sam Weisgram, Engineering Analyst, Project Development-Pierre, Jan. 9.

Terry Gunderson, Highway Maintenance Worker, Deadwood, Jan. 24.

Jason Digmann, Highway Maintenance Worker, Sturgis, Feb. 9.

Anniversary Milestones



10 years

Jennifer Clements, Finance & Management, Pierre, Jan. 4.

Darin Hodges, Materials & Surfacing, Pierre, Jan. 4.

Virjean Nelson, Materials & Surfacing, Pierre, Jan. 6.

Merna Imsland, Operations, Pierre, Jan. 6.

Shelley Larson, Pierre Region, Jan. 7.

Michael Schofield, Pierre Region, Jan. 9.

Darren Barondeau, Aberdeen Region, Jan. 25.

Todd Kirkie, Mitchell Region, Jan. 27.

Mark Honerman, Mitchell Region, Feb. 8.

Lisa Rombough, Materials & Surfacing, Pierre, Feb. 28.

15 years

Dean VanDeWiele, Project Development, Pierre, Jan. 2.

Patrick Deutsch, Aberdeen Region, Jan. 31.

Wayne Hein, Aberdeen Region, Feb. 8.

Anthony Ondricek, Pierre Region, Feb. 14.

20 years

William Green, Pierre Region, Nov. 13.

Scott Fuerst, Road Design, Pierre, Jan. 30.

Highway of Life (continued)

SIGNIFICANT EVENTS IN THE LIVES OF SDDOT EMPLOYEES

Jay Boldt, Pierre Region, Feb. 6.

Terry Patterson, Right-of-Way, Pierre, Feb. 6.

25 years

David Drake, Aberdeen Region, Nov. 2.

William Englehart, Internal Service, Pierre, Nov. 4.

Michael Carlson, Rapid City Region, Jan. 3.

Steven Johnson, Bridge Design, Pierre, Jan. 3.

Joel Aeschbacher, Pierre Region, Jan. 23.

Ralph Bush, Materials & Surfacing, Pierre, Feb. 14.

30 years

John Jacobson, Mitchell Region, Feb. 21.

35 years

Loren Brandner, Pierre Region, Nov. 12.

40 years

Cliff Reuer, Project Development, Pierre, Jan. 27.

New Arrivals



Jayse Preston

Jay & Dani Noem welcomed son, Jayse Preston, to the world on Nov. 2.

Jayse weighed 7 lb., 2 oz. and was 19.5 in. long. Jayse joins big sister Kaliana. Jay is a Journey Transportation Tech. in Custer.

Rich & Andrea Jahn are the proud parents of a baby boy, Hayden Christopher. Hayden was born Dec. 10 and weighed

9 lb., 5 oz. and is 21.5 in. long. Rich is a Lead Highway Maintenance Worker in Junction City.

Shelley & Michael Larson

welcomed son, Samuel Aaron, on Nov. 22.

Samuel weighed 8 lb., 8 oz and is 19.25 in. long. He joins siblings Jacob and Emalee. Shelley is a Project Engineer in Pierre.



Samuel Aaron

Blake & Cindy Neu are the proud grandparents of a baby boy, Easton Gregory. Easton was born Nov. 21 and weighed 8 lb., 10 oz. and is 21 in. long. Blake is a Project Tech. in Sioux Falls.



Tryton Dane

Stacy & Chad Parmely

welcomed son, Tryton Dane, on Oct. 24. Tryton weighed

6 lb., 9 oz. and was 19.5 in. long. Stacy is an Accounting Assistant in Pierre.

Shirleen & Mike Fugitt are the proud grandparents of a baby girl, Isabella Jaymes.

Isabella was born Jan. 20 and weighed 8 lb., 14 oz. and was 21.5 in. long. Shirleen is a Receptionist in Pierre.



Isabella Jaymes

Mike & Kari Behm

welcomed daughter, Kallee, to the world on Feb. 5. Kallee



Kallee

weighed 8 lb., 5 oz. and was 19 in. long. Kallee joins big brother Ayden. Mike is an Assistant Director of Planning & Engineering in Pierre.

Sam & Amanda Weisgram are the proud parents of a baby boy, Brock Ryan.



Brock Ryan

Brock was born Feb. 7 and weighed 8 lb., 12 oz. and is 22 in. long. Brock joins big brother Blake. Sam is a Transportation Planning Engineer in Pierre.



Sophia Marie

Melissa Dockter & Jesse Hertz

welcomed daughter, Sophia Marie, to the world on

Feb. 24. Sophia weighed 7 lb., 14 oz. and was 19.5 in. long. Melissa is a Landscape Architect in Pierre.

Congratulations to all!

The DOT Executive Team welcomes newly appointed at-large members Mike Behm and Doug Sherman.

Concrete Achievements

WAY TO GO DOTers! KEEP THE ACHIEVEMENTS GOING.

Copy of an email sent to a DOT employee expressing thanks for doing such a good job cleaning the state highway system. Way to go all. Keep up the great work. This just goes to show what you do is appreciated.

I'm not sure who I would talk to, but I figured you would be a good place to start. I was just wanted to let the DOT know how much we appreciate them making sure that all our roads are cleaned off after a snowstorm. After this last snow, the guys out in the plows have done a wonderful job cleaning off the highway.

We have about 100-125 people that travel out to the two plants every morning and then we have guys coming out on the swing and graveyard shifts later in the day. Besides all of our employees, there are also a lot of trucks that come in and out of our plant (BPM) and the one next door (American Colloid).

Our plant is in Wyoming, so we travel Hwy 212 every morning. Yesterday, roads weren't so great the whole way out. By the time I left yesterday afternoon though, WY side of the hwy was awful, I could only drive about 30 MPH. As soon as I hit the border, it was like I was in a whole new world, the roads were clear in SD and I was able to drive the regular speed limit.

The same thing was true this morning coming out to work. SD side was awesome to drive on. Then again, I hit the border and I had to slow down to 30 MPH.

So, I just wanted to let everyone who works in DOT, especially the guys who go out in the plows and blades that all of us here at BPM appreciate the work they do and to keep up the great job.

Sincerely,
Natalie

Copy of a letter Secretary Bergquist received thinking our staff for the work done on the Scotland Hwy 25 project. Way to go all. Again, this shows people do appreciate the hard work you do.

January 2nd 2009
Secretary of Transportation
Honorable Darin Bergquist
Hansen Becker Building 700 East Capitol
Pierre SD 57501

Dear Secretary Bergquist:

Please consider this a letter of thanks and deep appreciation for the fine job the DOT did on the Scotland Hwy 25 project this year. Project Coordinator Greg Rothschadl and all the staff at the Regional office in Yankton did an excellent job through out the year. From keeping the public informed at their weekly meetings, to working with contractors, to dealing with the sometimes harsh elements that Mother Nature can give us, the entire DOT staff involved in the project did a great job! I would also like to commend Vanderpol Construction and all the contractors for their diligence, persistence and excellent workmanship on the project. I had the opportunity [on almost a daily basis] to see the progress on the Scotland Hwy 25 project that most legislators do not get to see. I was very impressed! Thank you again to every one involved in making this road a showcase of how a project is done right by the South Dakota Department of Transportation! Thank you Mr. Secretary and please pass this letter of appreciation on to all involved for a job very well done.

Sincerely;

Senator Frank Kloucek



The Mobridge Area selected its first "Triple A" winner (a team of) - Highway Maintenance Workers, Robert Kern and Charles Haynes. Congratulations Robert and Charles on a job well done!

They were nominated by their peers for their efforts as roller operators on

a project chip sealing seven miles of road in the 372 Maintenance Unit. "These two men did an outstanding job of running the rollers without complaint while sitting in the hot sun day in and day out," said Terry Schweitzer.

Did you Know?

The SDDOT Intranet has useful information for employees. Just click on the Employee Resources link from the home page and you will find a wealth of information. For example, heading out of town and need to know a place to stay and how much you get reimbursed for meals and mileage? Under Documents & Forms there is a link to the most current Meals & Mileage rates and under Outside Links you can find a link to a list of Lodging establishments that offer state rates.

The SDDOT Internet is also a good source of information from all of our offices. This month's feature is the Project Development planning office - <http://www.sddot.com/pe/projdev/planning.asp>. They are busy, busy, busy in their office providing employees and the general public information on every aspect of planning that the Department is involved in. For instance, click on the Special Studies link to find detailed, up-to-date information on big projects being planned around the state. The I-29 Corridor, Exit 73 to Exit 77 is an especially active page with continuous updates on public meetings, advisory team meeting information, and a monthly newsletter.

If there is information you routinely use that others in the DOT may find useful, please contact Kristi Sandal to discuss putting it on the DOT Intranet and if you see information that is in need of being changed or updated, please let her know that as well.



Operations Support collected food and snacks for the Backpack Food program.



Transportation Inventory Management collected 181 coats and 36 blankets to the Dept. of Social Services to help families in need.

Policy Update

"Earth Retaining Structures and Systems," DOT-P&E-MS-2.0, supersedes "Earth Retaining Systems," MS-2004-03. This policy was changed because the Highway Innovative Technology Evaluation Center (HITEC) associated with the American Society of Civil Engineers is no longer receiving Federal Highway Administration money for evaluations. FHWA was its primary source of funding. Although HITEC plans to continue with some vendor-funded evaluations, SDDOT has decided to do its own reviews of new retaining structures or systems not on the SDDOT Approved Product List.

<http://intranet.dot.sd.gov/policy/docs/DOT-P&E-MS-2.0.doc>

"Aggregate Gradation Deviation for Portland Cement Concrete Pavement," DOT-OS-OC-3.1, is now in effect. It supersedes DOT-OS-OC-3.0. The policy now has language making it clear that the procedures apply when an aggregate sample deviates from gradation requirements "or FM wideband requirements."

<http://intranet.dot.sd.gov/policy/docs/DOT-OS-OC-3.1.doc>

Safety Corner

Did you know that: "recent research suggests that using a cell phone is associated with a fourfold increase in the likelihood of a serious crash among drives of all ages." This is good reason to hang up and buckle up before you drive. (Source: *National Cooperative Highway Research Program, Report 500, Volume 19.*)

For more safety tips: contact Cliff Reuer, SDDOT Traffic and Safety Engineer, 773-5361.

Winter Fundraiser Results

The Finance Office bake sale and silent auction raised \$960 to buy Christmas gifts for 41 children in the Adopt-a-Family program.

The Secretaries Office raised \$290 for Pierre area charities during an ice cream social for Homeless and Hunger Awareness Week. They also collected 11 grocery bags of food for the Pierre Food Pantry.

In addition to the coats and blankets collected, Transportation Inventory Management also raised \$354 for the SHARE food program.

Connecting the DOTs

is the periodic employee newsletter of the South Dakota Department of Transportation.

This and previous issues are available on the DOT Internet site: www.SDDOT.com

To report news/events:
Contact Amy Brady at
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