

North/West Passage State Weather Messaging Webinar – Summary

May 11, 2021 3:00 – 4:30 p.m. CT

North/West Passage is a pooled fund program focused on developing effective methods for sharing, coordinating, and integrating traveler information and operational activities across state borders along I-90/I-94 from Washington (state) to Minnesota. This document is a summary of the North/West Passage State Weather Messaging Webinar that was held on February 18, 2021 from 3:00 – 4:30 pm (CT). During the webinar each North/West Passage state was asked to comment on the following questions:

- What type of weather information is published and who publishes it?
- What is your states process (e.g., example dynamic message sign (DMS) messages, when is the message posted, validate with the National Weather Service (NWS)) for posting weather messages on traveler information mechanisms?
- Do you currently coordinate with a bordering state or other agencies on weather events or other events (e.g., road closures)? If not, are there barriers for why it is not happening? Opportunities?

Approximately 20 individuals from the North/West Passage states participated in the webinar.

Project Purpose and Background

State departments of transportation (DOTs) have been increasing the use of weather messaging in traveler information systems, social media, and on DMS. States also coordinate with others on weather events including in-house meteorologists and NWS staff. Previously, in January of 2019, North/West Passage hosted a Pathfinder Peer Exchange which included a national perspective on Pathfinder provided by FHWA and the NWS as well as specific Pathfinder specific experiences from Wyoming DOT and the Minnesota DOT. In addition, many of the North/West Passage states have participated in Pathfinder workshops. The purpose of Pathfinder is to build transportation and weather organization relationships, and – most importantly – create more consistent messaging to the public regarding travel during weather events.

The overall goal of the webinar summarized in this document was to continue to enhance the information exchange that started in 2019 by understanding to what extent weather messaging is used in the North/West Passage states.

North Dakota DOT (NDDOT)

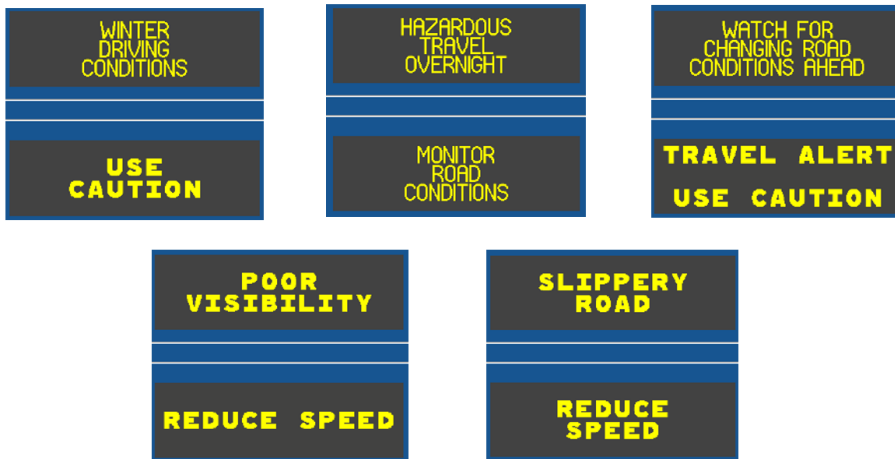
Brandon Beise summarized weather messaging at the NDDOT.

- NDDOT does not post weather forecasts, they are provided by other entities. NDDOT is focused on road conditions.
- NDDOT utilizes a contracted meteorologist that also support the Maintenance Decision Support System (MDSS). Weather radar is also provided through the MDSS.
- [NDDOT's travel map](#) was updated in the Summer of 2020. One of the new features added was NWS alerts.
- [NDDOT's Road Weather Information System \(RWIS\) map](#) provides the locations of RWIS and details (e.g., weather pavement sensors, friction, speed (radar)) at each location.

- For travel warnings information is displayed on the travel map, on DMS, and through press releases. First warning may indicate travel might be challenge, then no travel advised, and the third level is a road closure.
- Districts keep central staff updated to support weather messages on DMS (e.g., reduced visibility).
- Following are examples of travel warning DMS messages.



- Following are examples of winter storm DMS messages:



- Following are examples of non-winter DMS messages:



- NDDOT coordinates with neighboring states (e.g., contacting a TMC) as needed. NDDOT also coordinates with the weather service through participation in calls prior and during weather events.

Idaho Transportation Department (ITD)

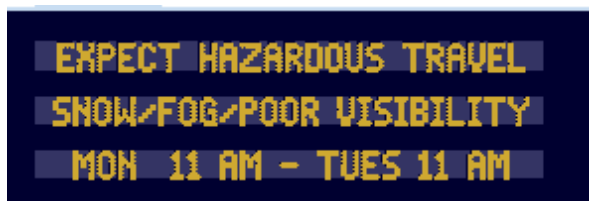
Tony Ernest provided a summary of weather messaging for ITD.

- [ITD's 511 traveler information website](#) is primarily used to provide current conditions (e.g., dry, snow covered followed by current weather conditions and then any recommendations (e.g., snow chains, avalanche danger)).
- Each winter road report pulls the NWS for spot weather forecasts and creates a dedicated shortrange forecast (e.g., 6 hours into the future).
- Storm warnings, tornados, flash foods provided by NWS are posted on ITD's 511.
- ITD has a full array of cameras in rural areas that include weather sensors that are available on the 511 website and app.
- Weather information provided by RWIS are reviewed and if deemed necessary (e.g., friction, high winds) a red RWIS icon pops up on the 511 map to alert travelers.
- DMS weather message requests go through district engineers. ITD is working with Idaho State Police for example to encourage they provide additional detailed information for message requests.
- Local news uses the RWIS camera information provided by ITD which is helpful in getting out consistent information to the public. ITD 511 information is available free of charge for 3rd parties to use.
- Pathfinder has been used with caution. It has only been activated in severe storm cases where the confidence level is very high.
- ITD shares camera information with neighboring states and provides a link to neighboring states and British Columbia cameras on ITD 511. ITD also coordinates with neighboring states on closures by activating DMS to alert travelers.

Wyoming DOT (WYDOT)

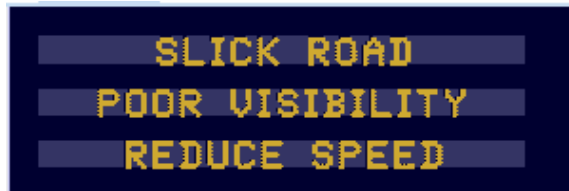
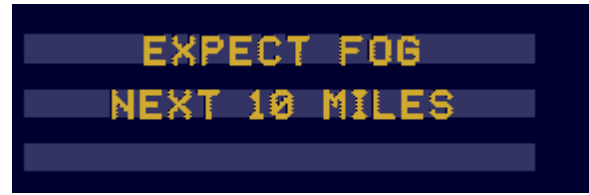
Gabe Gutierrez highlighted weather message efforts of WYDOT.

- WYDOT does post weather forecasts on DMS (Pathfinder), through collaboration efforts between the NWS and contracted DayWeather meteorologists for high impact road and weather conditions.



- Weather radar is available on WYDOT's traveler information map.
- NWS Weather Watches, Warnings and advisories are also available on WYDOT's traveler information map.
- WYDOT's traveler information map provides locations of RWIS with details (e.g., weather pavement sensors, friction, speed (radar)) at each location.
- Real-time road and weather conditions are displayed on DMS, highway advisory radios, and traveler information website and map.

- Closure events are coordinated with neighboring states.
- An example of a WYDOT weather briefing is provided at: <https://www.youtube.com/watch?v=9JusLW7zNOo>
- The following are examples of real-time road and weather alerts on DMS:



- Examples of non-winter DMS messages:



Washington State DOT (WSDOT)

Justin Belk summarized weather messaging at WSDOT.

- WSDOT is in its 3rd season of Pathfinder. Thresholds have been determined of when to activate Pathfinder such as snow amounts or freezing rain.
- WSDOT is working with NWS on communicating a unified message during weather events with a focus on the impact to travel.
- Short term forecasts and mountain pass information is available through 511.
- It is challenging when travelers set out in the morning with clear roads, but snowfall is expected in the middle of the day to alert the public with confidence through DMS messages that a weather event is anticipated.
- Once a snow event happens and the snow is visible, the signs go blank due to concerns with liability.
- WSDOT is developing a document to describe when it is appropriate to place weather messages on DMS. This document will be utilized for new operators or forecasters.
- WSDOT does coordinate with bordering states, however, there have been challenges if one state for example is messaging for high winds and another state does not.

South Dakota DOT (SDDOT)

Dave Huft provided a summary of weather messaging at SDDOT.

- Types of weather messaging at SDDOT include content (e.g., temperature, relative humidity, wind speed and direction) and format (e.g., website, apps, 511 phone, DMS, Twitter/Facebook, press releases).
- Forecasts are useful information to many who are traveling or are planning to travel.
- [SDDOT's traveler information website](#) provides weather information through RWIS stations that are the cameras symbols on the website that provide additional detail (e.g., temperature, road conditions). There is an option to provide a radar overlay or temperature overlay on the map.
- SDDOT is not a 24-hour agency, if an event happens overnight, it will not be reported in real time.
- Environmental Sensor Stations (ESS) use radar to detect precipitation which are built into high-resolution cameras at SDDOT. ESS at one location in South Dakota is used to detect high winds and redirect traffic as necessary.
- DMS are used if an event is significant (high impact and high probability).
- Variable Speed Limit (VSL) signs are being deployed a couple locations in South Dakota for severe weather events and for high winter crash rates.
- SDDOT coordinates with neighboring states through regional meetings and contact lists. Coordination also occurs with the NWS.

Minnesota DOT

Garrett Schreiner provided an update on weather messaging at MnDOT.

- Weather information posted by MnDOT is focused on road weather.
- MnDOT automatically imports road conditions from MDSS to display on [MnDOT's 511 traveler information system](#). However, staff can also manually enter road conditions.
- MnDOT focuses on real time conditions, not forecasted conditions.
- There are inconsistencies between districts on triggers of when to post weather messages on DMS. MnDOT is working with their involvement in Pathfinder to help minimize the inconsistencies. For example, if the NWS issues a blizzard warning, MnDOT will post a message 6 hours in advance. MnDOT is currently working on a project for these types of weather messages to automatically post through a module in MnDOT's Advanced Traffic Management System (ATMS).
- Through Pathfinder MnDOT's communication staff is involved to ensure consistent messaging during a weather event.
- Coordination with other states is done ad hoc and not in a unified process.

Montana DOT (MDT)

Mike Warren highlighted weather messaging for MDT.

- MDT weather information that is published is exclusively related to roads.
- [MDT's traveler information map](#) includes weather radar.
- Traveler information is centralized at MDT and is operated 24/7. The highest condition is severe driving and beyond that road is closed. MDT does not have emergency travel messages.
- If high winds are detected traffic will be rerouted and communicated through DMS and Highway Advisory Radio (HAR).
- RWIS locations are provided on MDT's traveler information map. Currently MDT is working on a pilot project with 50 to 60 virtual RIWS sites. If the pilot is successful, the virtual RWIS information would be provided to MDT maintenance and then eventually to the public.
- MDT has worked with Pathfinder for a number of years and coordinates with 4 different NWS offices on weather messages to post (e.g., expecting winter weather tomorrow afternoon).
- MDT also coordinates with neighboring states on ad hoc basis.