

## PATHFINDER OVERVIEW



### WEATHER-SAVVY ROADS

## What Is Pathfinder?

Heavy rain, snow, and other storms can have significant impacts on the safety, mobility, and productivity of road users. The Federal Highway Administration (FHWA) Weather-Savvy Roads effort, in coordination with the National Weather Service (NWS), and through round four of Every Day Counts, is encouraging the implementation of Pathfinder to minimize these impacts.

Pathfinder, a collaborative strategy for proactive transportation system management ahead of and during adverse weather events, encourages State departments of transportation (DOTs), NWS, and weather service contractors to share and translate weather forecasts and road conditions into consistent transportation impact messages for the public.

## Pathfinder Benefits

- **Enhanced collaboration.** Working together to implement Pathfinder strengthens the relationships between the NWS and DOTs.
- **Informed travelers.** Impact-based road weather statements and decision support enables drivers to make better decisions regarding where, when, and whether to travel.
- **Improved safety, mobility, and economy.** With the ultimate goal of saving lives and property, and minimizing the impact of weather events, consistent impact messages can reduce traffic demand.

“Before Pathfinder, working together was often disjointed because there were misunderstandings and a lack of knowledge and end goals. After Pathfinder, relationships improved, [and] communication was more consistent and action-oriented. Pathfinder helped build structure and an organized path of communication between all parties involved.”

— Vice President of Road Weather/Meteorologist, DayWeather, Inc.

## Pathfinder Partners

There are many organizations involved in keeping the traveling public informed about weather conditions that affect roads. These are the partners commonly involved with Pathfinder implementation:

- **State DOTs.** DOT traffic management and maintenance operations function in real time, and their work is heavily influenced by weather.
- **NWS.** NWS provides weather forecasts and warnings to protect life and property, and to mitigate impacts from weather events.
- **Private sector meteorological services.** This sector includes a range of companies that provide weather road condition forecasts, observation-based technologies, and decision support systems, to various clientele including DOTs.
- **Emergency management.** Emergency management encompasses all actions to prepare for, respond to, and recover from a disaster or emergency. Weather and road condition information is a key input for determining when and where emergency managers need to act.
- **Local public works.** Cities, counties, and other local governments operate and maintain a significant portion of the roadway network, and their actions are heavily influenced by weather.

## Pathfinder Implementation

Pathfinder implementation includes an 8-step process on information sharing across these partners.

1. **Identify partners.** Determine the key points of contact across all of the key agencies, organizations, and companies.
2. **Determine qualifying collaboration events.** Examples of impactful weather events affecting travel are rain, snow, high winds, etc.
3. **Select communication mediums and set procedures.** This could include using conference calls, chat rooms, website functions, and other approaches for group communication.
4. **Establish a point person at each participating entity.** Announce regular shift hours, obtain name and contact information for after hours, and define lines of communication.
5. **Synchronize forecast schedules.** As much as possible, synchronize schedules and the release of information to the public.
6. **Establish definitions and create shared resources.** This could include a photo repository, PowerPoint templates, shared impact messages, or dynamic message sign templates.
7. **Create shared impact message for the public.** Recognize contributions of each entity—for example, by retweeting messages or using others' graphics in social media posts.
8. **Conduct post event review,** archive data, and document operating procedures.

## SUCCESS STORIES

Pathfinder was born out of the success surrounding the coordination between the Utah DOT and the NWS local forecast office during the 2002 Winter Olympics. FHWA and NWS worked with the Utah DOT to document the processes, and then expanded them to be applicable across the country. The document was next used by the Nevada and Wyoming DOTs and then refined to become the Pathfinder Implementation Plan (<https://ops.fhwa.dot.gov/publications/fhwahop16086/fhwahop16086.pdf>).

[www.fhwa.dot.gov](http://www.fhwa.dot.gov)

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