Winter Weather Resources

Innovative Approach

WSDOT uses the most innovative technology for treating snow and ice on the roadway, which provides a more proactive approach to winter weather events. At WSDOT, prevention begins before snow and ice hits the roadway.

Maintenance crews use advanced weather forecasting to predict where snow and ice will accumulate, before it arrives. This information is then used to initiate a preventative response by applying de-icing agents to roadways in high priority areas. The de-icing agents also help during extreme cold temperatures, when precipitation on roadway surfaces turn into ice.

Advanced Weather Information Systems

The Highway Advisory Radio Systems (HARS) broadcast traffic and weather conditions to motorists in the immediate area. Southwest Region HARS stations are located on I-5 in Ridgefield, Castle Rock, Napavine and on US 97 in Maryhill.

WSDOT currently owns 65 Road Weather Information Systems Environmental Sensor Stations and has access to 6 additional sites. These systems record real-time weather information used for forecasting and operations, including air temperature, road surface temperatures, humidity, wind speed, and, in some cases, the percent of anti-icing solution on the roadways.

Snow and Ice Program

The Snow and Ice Program is WSDOT’s comprehensive strategy to maintain the state highways for winter driving. The Southwest Region Snow and Ice Plan aids in preventing snow and ice buildup on the roadway and provides for the removal of snow and ice when winter weather arrives.

What is the Snow and Ice Program?

The Snow and Ice Program is WSDOT’s comprehensive strategy to maintain the state highways for winter driving.

How to know which roads are clear?

The Southwest Region’s highways are ranked in priority for snow and ice removal. WSDOT uses the most current statistics to determine this priority, including traffic volumes, number of steep hills, sharp curves, intersections, ramps, or other potentially dangerous areas. These statistics then determine what resources, equipment, and supplies are necessary on a particular highway.

The goal is to provide a bare and wet highway surface on all state highways in the region as soon as possible after a storm. The priority listed below is the order in which WSDOT deploys resources.

Road Condition Goals/Resource Allocation

1st priority Bare pavement (Plow and chemicals)
2nd priority Bare pavement (Plow and chemicals)
3rd priority Bare pavement - possible snow/ice (Plow and chemicals)
4th priority Maintain traction - expect snow/ice (Plow and chemicals)
5th priority Maintain traction - Road closes when conditions dictate (Plow until conditions improve)

Contact Us

Rick Spangler, Southwest Region Maintenance and Operations Manager
E-mail: sjolanr@wsdot.wa.gov
Phone: (360) 905-2020

Mailing Address:
WSDOT Southwest Region
P.O. Box 1709
Vancouver, WA 98668-1709
The Southwest Region uses two types of treatment and preparedness to ensure safe winter driving.

### Methods and Equipment

**Snow Plows**

The Southwest Region uses two types of snow plows to remove snow and ice from the roadway.

- **The snow plow on the left has a “Bat Wing” front plow and a wing plow mounted on its right side. The two-way dump box is able to dump forward or backwards, granting increased plow mobility during adverse weather conditions.**
  - This snow plow on the right has a front plow blade with a hopper sander box that is used for applying solid chemicals and sand, if needed.

**Tandem Plowing**

Tandem plowing uses two or more plows working in succession at speeds up to 35 mph.

- **Tandem plowing is used when plowing can only be done in one direction, such as on multi-lane divided highways, or freeways.**
  - Tandem plowing works to clear the highways, fast and efficiently.

**Snow Blower**

Snow blowers are used to clear deep snow on mountain passes, and along the highway where snow builds up and must be moved clear of obstructions.

- **The Kodiak snow blower shown in both pictures travels at 1 ½ to 3 mph. At this speed, the blower can throw the snow well over 100 feet.**
  - The Kodiak snow blower in action, blowing snow to clear the roadway.

**Liquid Spray Truck**

Liquid spray trucks are used to apply a liquid anti-icing chemical to the roadway. When the road is bare, applying a liquid anti-icing chemical can prevent ice from forming.

- **When snow falls, applying liquid anti-icing chemicals to the roadway helps break up the snow and ice, making removal easier and more effective.**

### Treatment and Preparedness

WSDOT has reduced its use of sand and implemented a program that includes liquid and solid chemical treatments to control snow and ice, improving roadway conditions.

**How It Works**

The main anti-icing and de-icing agents used are solid and liquid forms of Calcium Chloride and Magnesium Chloride.

- **The liquid is applied in advance of a storm to prevent ice from forming or snow from sticking, and after a storm to melt existing snow and ice. The solid is used to melt hard packed snow and ice after a storm. In addition, WSDOT uses liquid salt brine mixed with a corrosion inhibitor on highways in Lewis County.**

Region wide, WSDOT has reduced the use of abrasives like sand and gravel and has implemented a program that includes liquid and solid chemical treatments to control snow and ice.

**De-icing Agents**

**Anti-icing** - Liquid calcium chloride or magnesium chloride is applied to a bare road before a storm to prevent a hard bond of ice from forming, to reduce the amount of snow buildup, and to accelerate the snow and ice break up after a storm.

**De-icing** - Liquid or solid calcium chloride or magnesium chloride is applied to remove a thin layer of snow or ice already on the road. It can also be very effective for melting and preventing black ice and freezing rain from adhering to the road.

**Pre-wetting** - Wetting solid chemical material and sand with calcium chloride causes them to stick to snow better. Keeping solids on the road is nearly impossible in some circumstances, especially in very cold weather with high-speed traffic. In these instances, liquid calcium chloride can help keep the sand from blowing off the road.

### Safe Winter Driving Tips

- **Plan ahead, check your routes, and carry chains as a precaution if you don’t have four-wheel drive.**
- **Drive with your headlights on.**
- **Slow down when approaching intersections, off-ramps, bridges or shady spots on the roadway.**
- **Plan ahead and distance yourself from other motorists on the road.**
- **Give yourself distance between snow plows on the roadway. They can throw up a cloud of snow that can reduce your visibility.**
- **Keep your vehicle clean during the winter. It helps keep snow and road grime from sticking to your vehicle, as well as corrosion caused from chemicals on the roadway.**
- **Avoid abrupt actions while steering, braking or accelerating to lessen the chances of losing control of the vehicle.**
- **Trucks take longer to stop. Don’t cut in front of them.**
- **Stopping on snow or ice without skidding requires extra time and distance. If you have anti-lock brakes, press the pedal down firmly and hold it. If you don’t have anti-lock brakes, gently pump the brake pedal.**
- **Never pass a snow plow when it’s engaged in snow removal operations.**
- **Do not pass a snow plow on its right side, as that is where the snow is thrown. The plow may also have a wing plow that extends from the right side and may not be visible.**

Get the most up-to-date information about weather impacts, travel alerts, highway closures or mountain pass conditions can be obtained on WSDOT’s Traveler Information Web page (www.wsdot.wa.gov/traffic), or by dialing 5-1-1 from any phone.