

A look inside ODOT's winter storm toolbox

Our goal is to use the right tool at the right time to increase traveler safety while limiting environmental damage.

By themselves, our winter storm tools — sanding, salting, deicing and plowing — do not make the roadway surface completely safe during or immediately after a storm. You, the traveler, play a very important role: You judge whether it's safe to travel.

Your role requires you to be practiced in the skills necessary to travel safely in the conditions you face; to know when it's best to not travel, if conditions are too dangerous; to keep your vehicle in safe operating condition to be able to travel; and to have the tools, equipment, food and water you need in case you must stop and wait for help.

Travel at speeds appropriate for current road and weather conditions. Carry chains when you travel through Oregon's snow zones.

Solid salt

We don't plan to use salt every time it snows or we encounter an ice storm. Solid salt is just another tool in our toolbox, along with liquid deicer, sand and our equipment (an increasing variety of snowplows). Each has a time and place; each is deployed when we believe it is most effective. Our goal is to maximize safety while minimizing the envi-

ronmental effects each of the different winter toolbox tools can cause. In eastern Oregon salt is primarily used on the interstate system and some secondary highways, depending on the need and a variety of other factors. Typical salt application rate is around 200 pounds per lane mile.

We continue to analyze our use of salt. Since each storm is different, we cannot state ahead of time when or where we will use salt. Our best advice is to assume that we used sand, salt or liquid deicer to fight snow and ice before, during and after every winter storm. Always wash your car after a winter storm, including the undercarriage.

Liquid deicer

Liquid magnesium chloride with corrosion inhibitor has proven to be an effective way to provide reasonably safe road surfaces in winter conditions. We generally use it both before and during a storm to prevent ice and snow from bonding to the pavement. Travel is safer. And we can use less sand. As with the other tools in our toolbox, we use the lowest application rate at the right time and place to achieve the desired road conditions. To protect water quality, we only use deicers that meet strict quality specifications.

Sand

When deicers will not be cost-effective (based on a variety of environmental and pavement variables), we use sanding material to provide better traction for safer driving. We use sand only when and where appropriate. We try to avoid applying sand to bare pavement to avoid bounce and scatter. We often pre-wet sanding material with liquid deicer to help it stay where we placed it. We place barriers to capture scattered sand along sensitive waterways. And we pick up sand after placing it — often repeating the drop/pickup cycle several times during a storm. It takes three to five times as long to pick it back up than it does to place it.

Snowplows

Plowing is the most efficient way to remove snow and ice from the pavement, and is most effective when salt or liquid deicer has been used to break the bond between pavement and ice or snow. In 2018 ODOT added new tow plows and dual wing plows in eastern Oregon that can clear two lanes of freeway in one pass. The new plows function as a "force multiplier," doing the work of two trucks with only one operator. This helps free up crews and equipment that may be needed elsewhere.



ODOT's dual wing plows can clear two lanes in one pass.