

Managing Snow and Ice on Kansas Highways



When there's ice and snow, it's important to take it slow. It's also important to know that each winter storm is unique. Widespread combinations of sub-freezing temperatures, rain, sleet, snow, and wind can frustrate the best efforts to maintain passable roads.

Trained highway crews with the Kansas Department of Transportation (KDOT) are ready 24 hours a day, seven days a week to treat or plow ice, slush, and snow. These tasks take precedence over all other non-emergency work. Although we have a variety of equipment and

chemicals in our winter arsenal, the effectiveness of snow and ice management is strongly influenced by the weather. Heavy or wind-driven snow can cover or block roads in just minutes after they're plowed. Chemical treatments may become ineffective at temperatures near or below 15° F.

Ahead of the Storm

KDOT supervisors consult with meteorologists and monitor weather forecasts to help KDOT personnel plan the equipment, materials, and people that might be needed for a coming storm. They also monitor pavement conditions using permanent sensing stations in KDOT's Road Weather Information System and using vehicles equipped with infrared pavement temperature sensors. Efforts are focused on staying ahead of a storm.

Salt Brine

One way to stay ahead of a storm is to prevent snow, ice, or frost from bonding to the pavement. To do this, crews may spray liquid salt brine, an anti-icing solution made from rock salt, on roads and bridges before a storm hits or early during a storm. Salt brine sticks to the pavement and can't be blown off by wind or traffic. It helps keep snow, ice, or frost from bonding to the pavement. KDOT has been using salt brine since 1998.



Which Roads are Tackled Most Often?

KDOT maintains about 10,000 miles of interstate, Kansas and U.S. highways. To use resources effectively and efficiently within its funding, KDOT must decide which roads are treated and plowed most frequently. KDOT divides the highways into three categories based on much they're used. Each category has a minimum level of snow and ice control that KDOT crews attempt to achieve.

- **Category I** roads are treated and plowed most frequently. They are multi-lane roads with over 3,000 vehicles daily.
- **Category II** roads are treated and plowed frequently. They are two-lane roads with 1,000 to 3,000 vehicles daily.
- **Category III** roads are treated and plowed less frequently. These are two-lane roads with less than 1,000 vehicles daily.

Plowing, Salting, and Sanding

Snowplows work individually or in teams to plow snow from the pavement and push it to one side. They can't cover all the roads all the time, so they work on the higher priority roads most frequently. Plow operators may apply salt brine or rock salt behind them to help promote melting. However, rock salt and salt brine generally don't work when temperatures are near or below 15° F.

Rock salt can be used alone or in combination with sand to help with traction, but, on a very cold road, wind and gusts from passing vehicles can blow these materials off the road. Bridges cool faster than the rest of the roadway, so they may be the first places to develop a stubborn icy surface. Road crews may add extra salt and sand on bridges to help with traction, but drivers should add extra caution.

Closing a Road

There are times when the weather makes it impossible to achieve or maintain a passable highway. When that happens, the only alternative is to close the road. We don't want motorists to get stranded on a highway that is impassable or has no available safe lodging. KDOT collaborates with state and local law enforcement when a road needs to be closed. KDOT may close highways for one or more reasons, including:



1. Road crews can't maintain a passable roadway due to overwhelming snow or ice conditions.
2. Lodging and truck parking spaces are becoming scarce as travelers seek shelter from the severe conditions.
3. Conditions in a neighboring state forced officials to close the road in that state. In that case, KDOT may have to progressively close sections of the highway as local lodging and truck parking spaces fill to capacity. This may occur even though roads in Kansas are passable. This is common for highways that link Kansas and Colorado, such as I-70.

Safe Travel around Snowplows

Snowplows sometimes spread anti-icing materials from the back of the truck and may need to stop or change lanes to avoid stranded vehicles. If you find yourself behind a plow, stay behind it or use caution when passing. The road behind a snowplow will be safer to drive on.

1. Don't crowd the plow. Snowplows plow far and wide—sometimes very wide. The blade extends several feet in front of the truck and may cross the centerline and shoulders.
2. Plows turn and exit the road frequently. They may drive slowly, so give them plenty of room. Stay at least 15 car lengths (200 feet) behind the plow.
3. On multi-lane roads, watch for plows in either lane.
4. Snowplows can create a cloud of snow that can reduce your visibility to zero in less time than you can react. Never drive into a snow cloud - it could conceal a snowplow.
5. A snowplow operator's field of vision is restricted. You may see them but they may not see you.

