

PennDOT Winter Storm Tactics

Before the Storm

- PennDOT holds statewide Web conferences with department staff, weather experts and officials from PEMA and State Police to discuss upcoming weather and discuss preparations or sharing resources as needed.
- Department crews may pretreat with salt brine, essentially a mix of water and salt, from the backs of anti-icing trucks before frozen precipitation starts to fall.
- Salt brine is NOT a silver bullet and it isn't appropriate for every storm, but when it's used it helps prevent precipitation from bonding to the road and gives the department a jump start on removing ice and snow.
- Crews generally will not pretreat with salt brine when a storm is forecast to start as rain (rain will wash the material away) or when there is enough salt residue from a previous storm.
- PennDOT monitors weather forecasts to gauge when to call crews into action.
- Especially in high traffic areas, PennDOT may stage plows along major routes and interstates so they can quickly begin treating the roadway when precipitation begins.
- Some PennDOT regions use private contractors to supplement its state crews through the whole winter, while some areas supplement their crews based on storm forecasts.

During the Storm

- While snow is falling, roads will NOT be free of ice and snow.
- Why not? If snow is falling at 1 inch per hour, for example, and a truck takes three hours to return to the start of its route, 3 inches of snow has fallen.
- Whether an operator is plowing snow from a roadway depends on the depth or heaviness of snow or slush, severity of the storm and in what stage of the storm the truck is being operated.
- During a storm, plows use the same roads we all travel on. As traffic or precipitation increases, so does the time it takes for a plow to complete its route. If you're stuck in traffic, so are we.
- This means that if storms hit at rush hour, you should plan extra time for your commute.
- PennDOT provides additional service to areas near schools and other large public gathering places.

Materials

- PennDOT plow operators use technology in their trucks to monitor air temperature and road temperature so they can tailor their road treatment on the go.
- The major factors that determine what material will be used on a roadway are temperature and traffic.
- Because salt is most effective when traffic is crushing and spreading it on the road, the lower a road's traffic volume, the more PennDOT will mix salt with anti-skid or other materials.
- Salt also isn't a silver bullet – it becomes less effective once temperatures dip below 23-25 degrees.

Higher Traffic Roads

- Whether salt is pre-wetted or mixed with other materials during a storm depends on temperature, precipitation type and a road's traffic volume.
- A salt/anti-skid mix can be used when road surface temperatures are below 15°F, as straight salt and salt/chemical applications are less effective at lower temperatures.
- On higher traffic roadways, PennDOT may also wet or pre-wet road salt with salt brine to jump start the salt's melting action. But even this tactic is most effective when the pavement temperature is 25 degrees or higher.
- Pre-wetting salt can also help keep salt on the road by reducing bouncing.

Lower Traffic Roads

- On the state's lowest-traffic roadways, PennDOT will focus its salt/anti-skid usage on areas like hills, bridges, intersections, sharp curves or freezing-prone areas. Because traffic volume is generally too low for salt alone to be effective on these roads, anti-skid will be mixed in to help with traction.
- Anti-icing is generally not performed on low-volume roadways at below 15 degrees because falling snow is generally dryer and usually blows over the roadway surface.