

Acronyms in Technology News

AASHTO	American Association of State Highway and Transportation Officials
APWA	American Public Works Association
CTRE	Center for Transportation Research and Education (at ISU)
FHWA	Federal Highway Administration
Iowa DOT	Iowa Department of Transportation
ISU	Iowa State University
LTAP	Local Technical Assistance Program
MUTCD	Manual on Uniform Traffic Control Devices
NACE	National Association of County Engineers
TRB	Transportation Research Board



U.S. Department of Transportation
Federal Highway Administration



Iowa Department
of Transportation

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Strategies for snow and ice control continued from page 1

and quickly gives vehicles clear pavement under at least two wheels.

On multiple-lane pavements with medium to high traffic volumes, apply salt in a pattern that covers the full width of the roadway to provide melting action over the full width of the pavement.

Plowing

Snow plowing is used to clear snow and loose ice from the road during and after a storm. Plowing can be a challenge in both rural and urban areas. Operators in rural areas face challenges such as blowing and drifting snow and decreased visibility. In urban areas, operators must deal with parked cars, narrow streets, and cul-de-sacs.

To minimize dilution and waste of deicing chemicals, plow immediately before applying chemicals to the road.

For more on snow plow operations, see the safety tips on this page and the snow plow checklist on page 4.

Abrasives

Abrasives provide little to no snow- and ice-melting capability, but they are most useful in providing traction. The most popular abrasive is sand.

Many agencies in Iowa combine sand with salt as a half-and-half mixture. This mixture helps provide some traction support with some melting capability. In a winter where salt stores may be scarce, reducing the amount of salt used can be a useful strategy.

Final thoughts

Know your route

Snow plow drivers who know their routes well can navigate them more easily and avoid hazards. Review your route before the storm.

Know traffic volumes

Traffic volumes can impact the rate of chemical application since traffic can help work salt into the snow/ice and aid the melting process. Agencies can use a lower rate of application with higher traffic volumes.

Know the weather

Weather conditions can also affect the rate of application. A windy route, for example, will be more prone to rock salt blowing around.

Iowa's Roadway Weather Information System (RWIS) can assist agencies by providing road surface temperatures and atmospheric weather data.

For more information

For more information on snow and ice control strategies, contact the Iowa LTAP's local roads safety liaison Bob Sperry, 515-294-7311, rsperry@iastate.edu. ■

Safety tips for snowfighters

Check with your supervisor and follow your agency's policies and procedures.

Suggested personal safety gear

- Layers of clothes, extra gloves, heavy boots
- Shovel and ice scraper
- Flashlight for night operations
- Sunglasses for glare
- Water and/or hot liquid

Advance preparation

- Be properly trained and thoroughly familiar with all equipment and chemicals.
- Make sure an up-to-date first-aid kit, emergency contact information, and handheld radios or cell phones are available in your vehicle.
- Be in good physical condition with adequate rest.
- Perform a pre-trip safety check of truck and equipment. Make sure the vehicle has adequate warning lights in good working order.
- Make a practice run of assigned route to check for obstacles and potential problem areas.
- Know the contact procedures for reporting crashes or equipment breakdowns.

During operations

- Dress in layers with heavy boots.
- Wear highly visible apparel when out of your vehicle.
- Plow at appropriate speed.
- Watch for pedestrians and other vehicles.
- Don't back up without a spotter.
- Operate wings carefully.
- Make sure warning lights are activated.