

## DISTRICT OFFICES



- District 1 Office (Coeur d'Alene)  
(208) 772-1200
- District 2 Office (Lewiston)  
(208) 799-5090
- District 3 Office (Boise)  
(208) 334-8300
- District 4 Office (Shoshone)  
(208) 886-7800
- District 5 Office (Pocatello)  
(208) 239-3300
- District 6 Office (Rigby)  
(208) 745-7781



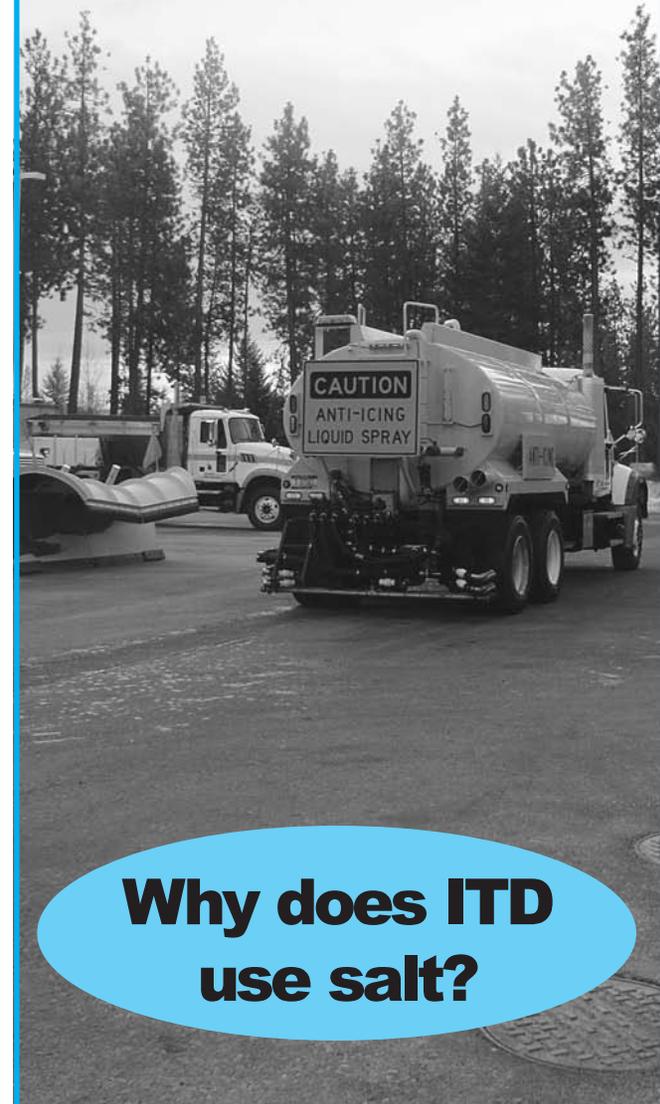
[www.itd.idaho.gov](http://www.itd.idaho.gov)

State of Idaho  
Transportation  
Department  
P.O. Box 7129  
Boise, Idaho 83707  
(208) 334-8000

02102012 500



## Frequently Asked Questions SALT & ANTI-ICERS



**Why does ITD  
use salt?**

## Frequently Asked Questions Salt & Anti-icers

### Why do we use salt in winter road maintenance activities?

The Idaho Transportation Department has used a salt and sand mixture in winter-maintenance efforts since the 1960s. ITD uses more than 138 million lbs. of salt and salt brine each winter to clear 12,000 lane miles of highway.



Salt increases the effectiveness of the sanding material by adding a snow- and ice-melting agent to improve traction. Additionally, it keeps stockpiles of sand from freezing solid.

Over the years, some regions began using liquid salt solutions of magnesium chloride as a de-icer on the roadways. Others switched to a salt brine solution to increase efficiency and lower costs in areas where it could be effective. Salt continues to be a key component to these efforts.

It takes much less straight salt to do the same job as a higher quantity of salt and sand mix. One truckload of salt will treat the same length of roadway as six loads of the salt/sand mixture.

This can be a big savings in personnel, equipment, fuel and time. It means that snow-removal equipment and personnel can move on to other highway routes sooner, thus improving the level of service across the entire highway system.



### Environmental considerations

Using less sanding material also has environmental considerations. The reduction of sand improves air quality, largely because it reduces the build-up of sand that can be released into the air by passing cars.

Overuse of sand can also contribute to other environmental problems. The sanding gravel once used by ITD caused loss of fish-spawning beds. The grit choked off the spawning beds, killing the fish eggs. The decreased use of sand, has allowed these spawning beds to return to vitality.

Soil tests confirm that using salt on the roads is environmentally safe when carefully applied. In addition, the Idaho Department of Environmental Quality's multi-year study of bodies of water along Interstate 90 showed that salt concentrations in these water bodies never reached thresholds dangerous to plants, wildlife or humans. The study found that although salt concentration during the winter increased slightly, this was only temporary and was flushed with the spring runoff.

### Needle Browning only temporary

The temporary "browning" condition noticeable on the trees lining the highway is a seasonal occurrence, the result of winter roadway maintenance.

Several events during snow removal combine to create the browning. The first is the physical abrasion of the snow plume coming out of the plow truck or blower when trees are very close to the road. The snow is launched at speeds of more than 100 mph. The physical damage may be permanent.

Second, the snow coming off the plows and blowers contains salts that pull moisture from the needles, causing them to dehydrate and brown. The needles fall off once the new annual growth emerges. Typically by mid-July, the trees are green again.



### Vehicle-corrosion issues

Corrosion of vehicles, particularly the undercarriage, has been an issue for as long as salt products have been used on the roads. Corrosion is an unfortunate by-product of using salt to maximize safety, but ITD is taking steps to minimize the damage.

Transportation agencies have experimented with buffering agents added into the salt. ITD uses sodium chloride salt, which is corrosive to iron and steel but has less impact on aluminum and copper. Also, auto manufacturers regularly apply protective coatings, so corrosion is reduced on modern vehicles.

The application rates used by ITD are far below those commonly used in other states.

The best method to minimize corrosion is the careful, minimal use of salt. Washing vehicles frequently will also help minimize corrosion.

