



BEDFORD DPW'S ANTI-ICING PROGRAM

- **WHAT IS SALT BRINE?**

Salt brine is water saturated with sodium chloride, or more simply rock salt dissolved in water. It is part of the Bedford DPW's anti-icing program to take a proactive approach to controlling snow and ice on Bedford's roadways.

- **WHEN IS SALT BRINE USED?**

Salt brine is best used to pre-treat the roads in anticipation of winter storms. Salt brine can prevent ice on the road for up to three days in advance of a snow/ice storm. The salt brine will begin working as soon as the first snowflake falls and will delay the accumulation of snow and ice on the pavement due to lowering the freezing temperature. Salt brine can be applied when the temperatures are between 15° and 32°F, but works at temperatures down to 0°F. Typically, once a storm event is forecasted, the DPW will pre-treat with salt brine during a normal work day, thus reducing the need for additional overtime.

- **WHAT ARE SOME OTHER BENEFITS OF SALT BRINE?**

Once a winter storm is in progress, salt brine is sprayed onto the rock salt as it is applied to accelerate the melting of snow and ice. This is known as "pre-wetting". Pre-wetted rock salt stays on the pavement instead of bouncing off the roadway and wasting material. Pre-wetting with salt brine in this manner reduces the amount of rock salt that the Bedford DPW must use overall. Salt brine costs much less than other liquid chlorides – up to 10 times less per gallon!

Salt brine allows the Bedford DPW crews to be proactive and get a jump-start on the storm. This means that Bedford DPW crews can treat the roads before the driving conditions decline and they can have entire routes pre-treated so that the ice and snow never has a chance to bond to the pavement. Salt brine applied in advance of a storm event can treat about 1 inch of snow before the road crews have to make another round. This also means the roads will return to bare pavement much quicker once the storm has ended.

The DPW can pre-treat our main roads, hills, bus routes and school parking lots with about 2 tons of salt used as salt brine. In comparison, the equivalent route would use approximately 48 tons of straight rock salt. At \$60/ton, that's a savings of about \$2,800 per event.

- **HOW IS SALT BRINE APPLIED TO THE ROAD?**

Motorists can expect to see Bedford DPW crews pre-treating the roads with salt brine using special units that slide into the back of a typical plow truck. Most of this equipment is capable of spreading salt brine over one, two, or three lanes of pavement.

- **HOW DOES SALT BRINE FIT INTO BEDFORD'S ANTI-ICING APPROACH?**

Bedford's proactive use of salt brine is twofold:

- First, salt brine is used on roads and bridges prior to a storm to delay ice and snow from sticking to the roadway.
- Second, salt brine sprayed on rock salt is used in plowing to fight the buildup of ice and snow throughout the storm.

- **WHAT SHOULD I DO WHEN FOLLOWING A VEHICLE APPLYING SALT BRINE?**

Vehicles applying salt brine usually travel at speeds of less than 25 miles per hour. Motorists should stay back at least 200 feet from the back of the vehicle.

