

NORTH CASTLE HIGHWAY *LEADING THE WAY FOR THE FUTURE*



23%

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77%

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SALT BRINE

Is prewetting the wave of the future or just another passing fancy? In North Castle we are willing to bet on prewetting with salt brine as the method of our future for preventing snowpack and ice on our roadways.

A relatively new weapon in the snowfighter's arsenal in North Castle is anti-icing, but it has a long history of keeping European roads safe and passable.

Anti-icing measures take place before snow falls and ice forms on the roadway. They aim to prevent the bond of frozen precipitation to the road surface. In some circumstances, anti-icing can dramatically cut the cost of maintaining road surface over conventional deicing. Anti-icing chemicals are supplied in liquid form.

North Castle has found that "prewetting (Anti-icing) the roadways works more effectively than does dry salt, with less waste." Instead of bouncing off the road or being swept away by traffic like dry salt, prewetting with salt brine clings. Using less salt saves money and exposes the environment to fewer toxic chemicals. The salt brine system North Castle will use has two 5,000-gallon storage tanks and a stationary salt-brine maker. In addition, we have a 1,250-gallon and 550 gallon prewetting applicators which will be mounted on highway department trucks. The truck-mounted applicators spray a 23% solution of salt and 77% water onto the roadways. Traditional deicing techniques break the bond between the pavement and ice or snow. Anti-icing techniques use chemicals to stop that bond from forming. Anti-icing takes advantage of new, sophisticated weather information systems that predict where and when storms will cause bad winter driving conditions. Such anti-icing strategies help keep roads passable for travel, reduce the environmental impact of winter operations, and make post-storm clean-up easier.

Advantages to anti-icing:

- The roadway surface is never "lost." Highway Department responds proactively.
- Anti-icing returns the roadway back to normal faster, with fewer delays.
- A wet roadway jump starts the melting process as salt needs moisture to work.
- Brine does not bounce or blow off the roadway, increasing efficiency.
- If precipitation is delayed, there is a residual effect, in place, ready to work.

Crews cover more territory by beginning the treatment in advance of the storm.

