

# TOWN OF PLYMOUTH ANTI-ICING – SALT REDUCTION PLAN

Best Management Practices



## GET OUT EARLY

Typically, anti-icing is most effective if applied 1-2 hours before the precipitation begins however it can be applied up to 24 hours in advance

## TRY IT FIRST

Trying anti-icing for the first time? Make a 23.3% brine solution and before a storm spray pavement on your own property using a masonry/plant sprayer. Use this experiment to determine how best to use with your clients.

## LEAVE SOME PAVEMENT BARE

It's always best to use stream nozzles instead of a fan tip to avoid creating a slippery condition. If the anti-icing liquid freezes the bare pavement will still provide a traction surface

## USE OF FILTER

Having a filter in your liquid dispensing system will reduce clogs in your nozzle. Automotive in line fuel filters work quite well. If your liquid dispenser is not functioning properly be sure to check the filter first.

## ANTI-ICING

Anti-icing using brine, or an alternative is an efficient way of preventing ice to pavement bonding. one can compare it to using a non-stick spray on a pan before cooking. just like a nonstick spray prevents food from bonding to the pan, anti-icing prevents snow and ice from bonding to the pavement so that it can be plowed away. Anti-icing can save you money as reduces the amount of salt used reactive deicing by 50%.

## MAKE YOUR OWN SALT BRINE

When making brine it is important to add enough salt to produce a 23.3% solution which freezes at around 0°F. Roughly 2.5lb per gallon of water will produce a 23.3% solution. Verify using a salometer, a 23.3% solution will have a specific gravity of 1.176, or 85% salinity. Consult the Brine Making BMP sheet for more info.

## HOW MUCH SHOULD I USE AND WHEN

You can apply brine up to 24 hours in advance of the storm. Typical application rates range from 0.5 to 0.75 gallon per 1000sq.ft (10'x100' area). Other chemicals such as magnesium are also available – consult your supplier for application rates. Anti-icing is not advised prior to freezing rain events.

## GETTING STARTED

Try making your own salt brine by putting 13lb of salt in 5 gallons of water to get a 23.3% salt brine solution. Mix the brine until all of the salt is dissolved. Using a masonry sprayer apply the liquid several hours before a storm. Start by applying about 0.25-0.5 gallons to a 10'x50' area. Adjust the application rates based on your experience.

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