



The Road Newsletter, Volume 7, Issue 12

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Salty Roads for Safer Travel



Have you ever wondered why we put salt on the roads? How exactly does salt make the roads safer or less icy? It's a simple chemical process that allows the Road Commission to make the roads a little less dangerous

When water freezes into ice the molecules bind together to form a solid structure. Any particle that can be dissolved into water will help slow down the process of forming ice, and it turns out that salt is very effective at doing that. When salt dissolves in water it lowers the freezing temperature of water, making it more difficult for ice to form. By lowering the freezing temperature of the water,

salt prevents ice from forming at the typical 32 degree freezing mark. The number of degrees the freezing temperature is lowered depends on the amount and type of salt used.

So how does this process work when dry salt is placed on existing ice? Ice has a very thin layer of water on it (especially at warmer temperatures). The salt dissolves in this thin layer of water and that salty water then melts the ice beneath it and the process continues. This process is also very effective on snowpack over top of ice. The salt melts the snowpack and the salty water then begins to work on lower layers of ice.

As is often noted in weather forecasts, salt doesn't work as in extreme cold temperatures. When temperatures are less than 20 degrees the salt takes too long to melt the ice and meltwater will quickly refreeze. As the temperature gets colder (below 10 degrees) and refreezing becomes faster, adding salt can cause more problems than good results. In these instances, there are some other ways the Road Commission can help combat the ice on the roads.

Sand and other abrasives are sometimes added to the roads. Sand doesn't help melt the ice, but when salt is no longer effective, sand can help cars maintain their grip. While sand doesn't melt ice, it aids drivers by adding traction for tires. In contrast, calcium chloride and other deicing liquid treatments do

melt ice, sometimes better than salt (sodium chloride) in some situations. These deicing liquids can also be used to decrease ice on roads.

It should be noted, that salt is usually only effective when placed on the roads after a snowfall. If salt is placed on bare roads, even though they are sometimes icy, most of the salt gets wasted by being blown or knocked off the road before it even has time to work. Salt does not stick to dry roads very well, and so it is generally a waste of salt and money to treat bare roads.



The Road Commission works hard to manage its winter maintenance budget effectively. In a bad winter the cost of winter maintenance can easily rise to above \$3 million, and use up to 25,000 tons of salt. It is essential for the Road Commission - and helpful for drivers - to understand how salt works and in what situations it is most effective to avoid wasting it and adding to the already high cost of winter maintenance.

Even though the Road Commission has ways to help battle the snow and ice, it is always best to drive safely and err on the side of caution. Especially as the roads get colder, the ice won't melt as fast and, even with salt on the roads, winter driving can be dangerous. It's always important in winter to be aware of the weather conditions and drive at safe speeds, giving yourself plenty of time to stop in case of snow and ice.

Frequently Asked Questions in Winter:

Why isn't my road being plowed?

The Ottawa County Road Commission has a snow plowing policy in place to clear the roads as quickly and effectively as possible. This means the highest volume roads are cleared first, and in a large storm event it may take some time to get to less traveled roads. The order is:

Priority 1 – State Trunk-lines (US 31, I-96, etc.)

Priority 2 – Multi-lane Primary Roads

Priority 3 – Primary Roads

Priority 4 – Local Paved Roads

Priority 5 – Subdivision Streets

Priority 6 – Local Gravel Roads

Priority 7 – Dead End Streets and Cul-de-sacs

So, please remember to be patient and know that we are getting to your road as soon as possible. You haven't been forgotten.

Why does the plow truck push snow back into my driveway?

The snowplow blade will push snow to the right. This means that if you pile snow at the end of your driveway and to the left side of your driveway (facing the road) it is likely that the snow could get pushed back in to your driveway. We recommend piling snow on the right-hand side (facing the road) of your driveway to help prevent snow being pushed back in.

Why do bridges freeze faster than other roads?

You have probably seen the signs warning drivers, but many people are still caught off guard. Especially early in the winter, the warmth of the ground can help keep ice from forming on roads, but bridges don't have contact with the ground. This coupled with wind factors can lead to bridges icing before other roadways. Always be cautious when the temperature drops and you're driving on bridges and overpasses.



What should I do if my mailbox is damaged?

When we get large snowstorms in Ottawa County, especially with heavy snow, mailboxes sometimes get damaged. While the Road Commission can't do anything about nature or the weather, if your mailbox is damaged by one of our snowplows we have a replacement policy. You need to contact our office and set up an appointment and bring either a picture of your damaged mailbox or your actual damaged mailbox to one of our locations to get a standard replacement mailbox and post.

How do I find out about current road conditions?

We recommend staying up to date on local weather and advisories. You can check the Michigan State Police website: www.michigan.gov/roadconditions to see current travel advisories. This page also has some useful links to an MDOT interactive map that shows current road conditions on Interstates around Michigan. Make sure that you always check local weather and other advisories before traveling during winter.



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more:
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Important Dates

Thursday – December 7, 2017 | 9AM | Board Meeting

Thursday – December 21, 2017 | 9AM | Board Meeting

Monday – December 25, 2017, Closed for Christmas Holiday



14110 Lakeshore Drive
PO Box 739
Grand Haven, Michigan 49417
616-842-5400
Office Hours: Monday-Friday; 7:30AM-4PM

The Ottawa County Road Commissioners: Tom Bird | Tom Elhart | Betty Gajewski | Tim Grifhorst | Jim Miedema
Managing Director: Brett Laughlin

Who manages the roads and how are they funded? The Ottawa County Road Commission manages the roads--not the Ottawa County Board of Commissioners or County staff. The Ottawa County Road Commission is primarily funded by fuel taxes and vehicle registrations. Concerns about roads should be directed to the Ottawa County Road Commission.