



*The Road Newsletter, Volume 6, Issue 11*

November 2016

## Taken with a Grain of Salt

If you live in Michigan, then you are very familiar with plow trucks spreading salt on roads to melt the ice. But how does this process work?

If you ever watch salt melting ice, you can see the dissolving process happen. The ice immediately around the grain of salt melts, then the melting process spreads out from that point. As you know, ice forms when the temperature of water goes below 32 degrees Fahrenheit (0 degrees Celsius). Salt has the ability to lower the freezing/melting point of water. What this means is that water will need to be colder than 32°F to turn liquid into ice and that ice can melt even when the temperature is below 32°F.

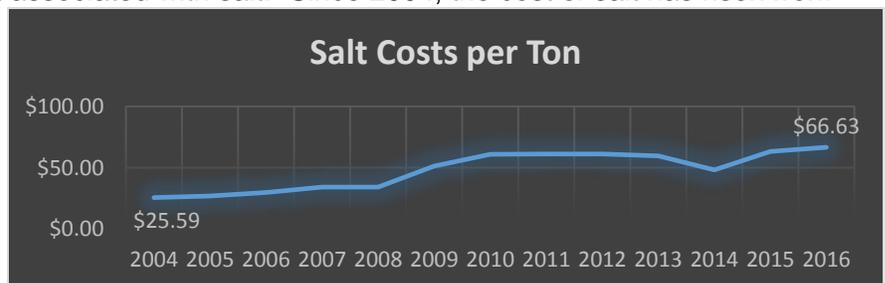


For example, when you add salt to ice, that freezing/melting point drops: A 10-percent salt solution freezes at 20° F (-6° C), and a 20-percent solution freezes at 2° F (-16° C). On a roadway, this means that if you spread salt on the ice, you can melt it even when the temperature is below 32° F. The salt dissolves into the liquid water in the ice and lowers its freezing point. There is one catch though, if the temperature of the roadway is lower than 15° F or so, salt cannot get into the structure of the solid ice to start the dissolving process, making the salt ineffective.

When you are making ice cream at home, the temperature around the ice cream mixture needs to be lower than 32° F if you want the mixture to freeze. Salt mixed with ice creates a brine that has a temperature lower than 32° F, that freezes the ice cream mixture you are making.

Under most conditions, the use of salt on county roadways can be an effective tool for winter maintenance operations. Unfortunately there is a cost associated with salt. Since 2004, the cost of salt has risen from \$25.59/ton to \$66.63/ton. With an average yearly use of 27,000 tons, that equates to a \$1,108,080 increase over the 12 year period.

There is some good news, however. Salt bids for the 2017 season have come in at \$49.27/ton, which could provide \$468,720 of potential savings.



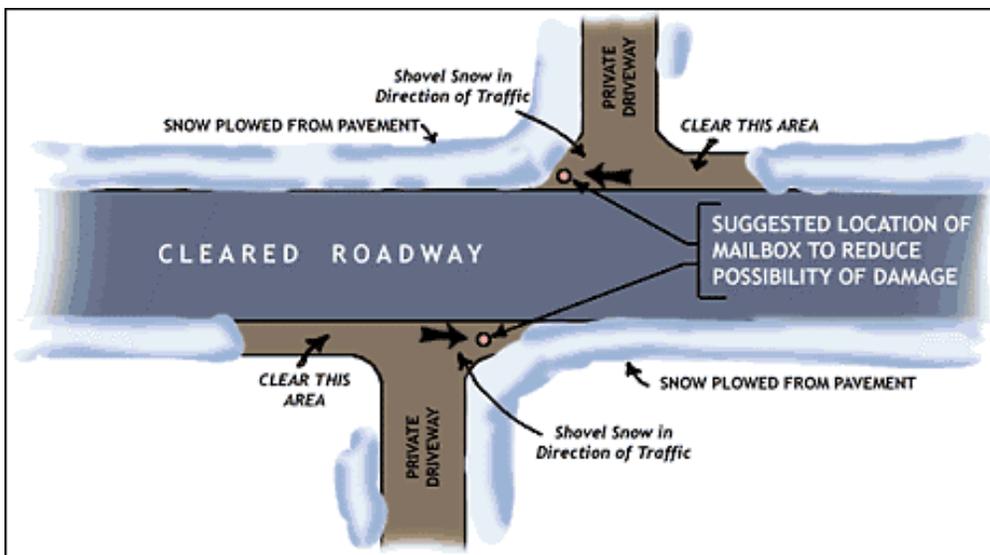
# Shake Your Mailbox

The County Road Association of Michigan, in conjunction with local road agencies and the U.S. Postal Service, encourages you to check your mailbox. Fall weather is conducive to shaking it out to see what repairs are needed. Doing it now will save many headaches, when compared with waiting until winter.

## A simple check:

If you can physically shake your mailbox and it "gives", even just a little, it will give out when the snow and ice removal operations commence.

In addition to making sure your mailbox is strong enough to survive winter, clearing snow to the right (the approach side) of your driveway will help reduce the amount of snow deposited in your drive and pushed against the mailbox post during winter maintenance operations.



## Did you know:

Flying snow makes it look like the snow plow trucks are traveling much faster than they are, but their speed of travel ranges from 15-35 mph.

Even at these speeds, the force of the snow being pushed off the road can damage mailboxes and other roadside objects.

# Sidock Joins Engineering Team



The Road Commission is pleased to announce the addition of Valerie Sidock as a Project Engineer in the Engineering Department.

Valerie graduated from Michigan Technological University with a Bachelor of Science degree in Civil Engineering and brings to the Road Commission experience in civil and utility design, soil mechanics, and water resources.

Valerie enjoys outside activities including boating, hiking, camping, and tennis. She also loves to travel and experience new adventures.

Please welcome Valerie to the Engineering Team.

## Deer in the Headlights

Hunting season is a particularly dangerous time of year for potential deer-vehicle collisions. The Road Commission encourages drivers to slow down and watch the road carefully. Scan the side of the road for wildlife, and use high-beam headlights at night when there is no oncoming traffic. Also, be aware that deer tend to travel in groups. So, if you see one deer, slow down and watch for more.



The responsibility for picking up and disposing of dead animals has been a long-running debate. Surprisingly, there is no statutory requirement for any agency in Michigan to perform this service. Animal control authorities and the Michigan Department of Natural Resources (MDNR) have both stated they have no authority on the issue. Citizens usually call the local road agency to pick up the dead animals. While most road agencies will not dispose of the dead animals, they will move the carcasses off the traveled portion of the road that pose a hazard to motorists.

Over the years, the Road Commission has picked up and disposed of dead animals as a courtesy service for the public.

However, costs and budget constraints have limited this service to just one day a week, and only dead deer or other large animals will be picked up. State regulations regarding the disposal of dead animals can be very confusing. The Road Commission brings dead animals to a local landfill for disposal. The costs to pick up and dispose of dead deer have ranged from \$7,500 to \$15,000 per year.

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## Safe Roads for Everyone

**Winter driving: Are you prepared?** As the weather changes from fall to winter, the chances of being involved in a vehicular crash increase dramatically.

Winter driving can be hazardous. Factors such as rain, snow, ice, sleet, fog, and limited daylight hours present real challenges to motorists, whether driving for work or leisure. In fact, when it comes to winter, the number of casualty crashes almost doubles when motorists are driving too fast for the road conditions.



**Remember** - Know-before-you-go. Check road conditions beforehand and ask yourself; "Do I really need to drive during inclement winter weather?"

If you must drive, then drive smart. Prepare yourself. Prepare your vehicle. Always drive for the winter conditions. Remember that the posted speed limit is set for ideal driving conditions. When determining your speed, you should ask yourself, "Can I recognize and respond to road hazards such as black ice, snow, rain, low light, and fog?"

More driving tips and information can be found on the Michigan State Police website at [www.michigan.gov/msp](http://www.michigan.gov/msp).

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## Important Dates

Thursday – November 10, 2016 | 9AM | Board Meeting

Wednesday – November 23, 2016 | 9AM | Board Meeting



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



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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. Questions? [Contact Us](#)

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