



# City of Goshen

## STORMWATER TOOLBOX

**Public Works & Utilities**

**Department of Stormwater**

204 E. Jefferson Street

Goshen, Indiana 46528

574-534-2201

**Stormwater Superintendent:**

**Dustin Sailor**

**Stormwater Coordinator:**

**Jason Kauffman**

### When it Snows

When it snows the Street Department's snowplows are sure to follow. Our Street Department works very hard each winter to make sure our city streets are safe for travel by plowing and applying deicers, which are primarily salt and sand. Homeowners will also apply deicers to their driveways and sidewalks to prevent spills and falls at home. The application of deicers is very important from a safety standpoint but there are environmental impacts to consider as well.

The Street Department uses a combination of the three deicing materials (salt (sodium chloride), sand, and BOOST (a calcium chloride and molasses solution)) to reduce snow and ice buildup on city streets. The Street Department uses a 1:1 mix ratio of salt and sand, with approximately 10 to 12 gallons of BOOST per ton mixed in to keep the mixture from freezing in the trucks or to the pavement. Two different methods are used to apply the deicing mixture and they are conveyors and augers. This is the first winter the Street Department is using augers for the application of deicing materials. Augers provide a constant feed to the spinner, which prevents cavities from forming, and they use less material which will save the City money and reduce stormwater pollution.

Q: How much sand and salt does the Street Department use?

A: It depends on the storm. The Street Department determines how much material is needed, when it needs to be applied, and where.

No matter how much sand and salt is used during the winter, it is always cleaned up during the warmer months of the year. The Street Department's street sweepers remove the material from the edge of the streets, while the Water & Sewer Department's vactor trucks remove accumulated debris from catch basins, which are designed to capture debris in stormwater runoff.



A Street Department dump truck outfitted to spread a mixture of sand and salt.



The spinner plate that helps spread salt and sand.

The application of salt, sand, & other deicing materials to our roadways is important for safety during the winter months, but as snow and ice melt it washes those materials into roadside vegetation and into storm sewers where it is transported to our local waterways untreated. It is important to find that balance between public and



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personal safety and the health of our local environment. The Street Department and Water & Sewer Department work hard to manage stormwater pollution and there are ways each of us can lessen our impact upon stormwater, groundwater, and landscaping plants at home.

At home, or work, the more salt you use does not mean increased safety. Instead it could be harmful not just to plants and animals, but also damaging to your home or driveway. Salt can cause the depletion of oxygen supplies needed by aquatic animals and plants, changes in the composition of soil making it hard for plants to grow, leaching into groundwater (our primarily source of drinking water), and causing paved surfaces and buildings to deteriorate. Sand can bury aquatic habitat and plant and animals; cloud the water; cause floor surfaces to deteriorate prematurely when tracked into buildings; and enter catch basins, storm sewers, or nearby surface waters.



The conveyor belt of a hopper installed on the back of a Street Department dump truck.



One teaspoon of road salt can pollute five gallons of water ([www.wisaltwise.com](http://www.wisaltwise.com)).

The following tips will help increase your safety and reduce the negative impacts of salt and sand:

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- ❖ Pre-treat pavement with a small amount of liquid deicer (learn how here: [bit.ly/1QxbHtp](http://bit.ly/1QxbHtp)).
- ❖ Remove snow before it becomes ice; if ice is an issue try using an alternative removal method like a shovel or scrapper.
- ❖ Choose a deicer that works at the current temperature.

- ❖ Rock salt (sodium chloride) works until the pavement is colder than 15°F, then you will either need to use sand or bird seed (for traction) or other deicers like magnesium chloride or calcium chloride (for more information visit - [bit.ly/2009zAv](http://bit.ly/2009zAv)).
- ❖ Make sure the deicing material you select is not harmful to pets or damaging to the surface where it will be applied.
- ❖ Use a pound of salt (what fits in a 12 oz mug) per 250 square feet (an average parking space is about 150 square feet). If there is any leftover material sweep it up and use it again.

For more information check out the following resources:

- ❖ Save Money – Use Less Salt This Winter ([bit.ly/1OLqrm0](http://bit.ly/1OLqrm0))
- ❖ Myfairlakes.com – Deicers/Salt ([bit.ly/1KB2n1l](http://bit.ly/1KB2n1l))
- ❖ Wisconsin Salt Wise – Homeowners Salt Resources ([bit.ly/1PygINc](http://bit.ly/1PygINc))
- ❖ Purdue University – Salt Damage to Landscape Plants ([bit.ly/1Nwz8MW](http://bit.ly/1Nwz8MW))
- ❖ Clean Water Starts at Home – Tip #7 Winter Walkways Worth their Salt? ([bit.ly/1Unv33o](http://bit.ly/1Unv33o))
- ❖ Salting Goes Beyond the Pavement ([bit.ly/1OU32gh](http://bit.ly/1OU32gh))



# A DROP OF NEWS

## Your Stormwater Newsletter

### The Great Stormwater Hunt of 2016

If you see any of the following illicit discharge situations please call Jason Kauffman directly at 574-537-3832 (office) or the Stormwater Department at 574-534-2201.

**What is an Illicit Discharge? An illicit discharge is anything other than rain that could flow or be washed into a storm drain. Things to look for are:**

- ❖ Oil sheens on the surface of water
- ❖ Concrete washout/white residue on the ground
- ❖ Grease marks/stains around catch basins
- ❖ Discolored water in waterways
- ❖ Unknown materials on the pavement or soil
- ❖ Dirt/sediment being tracked or washed onto the road
- ❖ People pouring or washing liquids down storm drains
- ❖ Any other situation where you think a potential pollutant could come into contact with stormwater



A resident dumped used oil/grease in and around a storm structure.

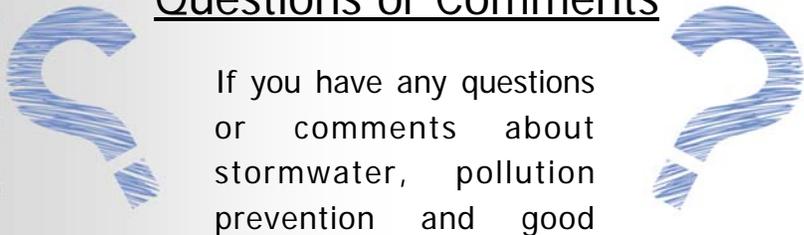


An abandoned vehicle with an engine leak was parked next to a storm drain inlet.



Tea colored water coming from an storm sewer outfall pipe.

### Questions or Comments



If you have any questions or comments about stormwater, pollution prevention and good

housekeeping, or something you would like to see in the Stormwater Toolbox Newsletter please call Jason Kauffman or send him an email at [jasonkauffman@goshencity.com](mailto:jasonkauffman@goshencity.com). We all learn together and your thoughts and questions are appreciated.