



Cold Weather Practices

Winter brings with it lots of fun activities, like sledding, ice skating and skiing. But winter also means mounds of snow to shovel and layers of slippery ice to remove from our sidewalks and driveways. We often attempt to make the job easier by using various products like salt to melt the snow and ice. Besides sodium chloride, many deicers also contain chemicals like cyanide. When ice melts, the salts and chemicals dissolve and flow into street drains that lead directly to the river, endangering aquatic life. Look inside for a few tips to reduce salt use and prevent pollution year-round.

Tips on How to Reduce Salt Use and Prevent Pollution We Add to Our Rivers Year-Round

1. Ask yourself the following:

- Does snow or ice need to be removed? If so, how much?
- What is the temperature of the surface I want to treat?
(surface temperature is lower than air temperature)
- Will the surface be exposed to the sun, or shaded by trees or buildings?
(hence, warming the surface)
- What is the temperature range when the deicing product is most effective?
- How much product is needed to be effective?

2. Shovel early and often.

When it come to snow removal, there is no substitute for muscle and elbow grease! Deicers work best when only a thin layer of snow or ice must be melted. So head out and shovel and move as much snow as you can during the storm if possible. You can also use a hoe to scrape ice off the surface before putting down a deicer.

3. Reduce your salt use.

An important step in deicing, physically remove as much snow and ice as possible before applying salt. Break up ice before adding another layer of salt. Too much will harm your lawn, plants and end up in the rivers. Limit access to your home to one entrance during major snow events.

Help Prevent Stormwater Pollution This Winter!

4. Avoid Fertilizers and products with Urea

Some people recommend the use fertilizer including those with urea (carbamide, ammonium, carbonyl diamide, etc) because they don't contain chlorides and contain nutrients (urea is a form of nitrogen) that can help plant growth when the ice and snow melts. Urea-based products can be expensive and perform poorly below 20 degrees F. Very little actually gets to your lawn or soaks into the soil, but ends up washing into the street and storm drain.

5. Limit your use of Sand.

Sand doesn't melt ice, it simply provides traction. But through stormwater, sand increases the amount of sediment that is in our lakes, streams and rivers degrading or eliminating important habitat for aquatic organisms.

6. Try an alternative!

Calcium magnesium acetate (CMA) is an alternative because it has fewer adverse environmental impacts than salt and doesn't cause corrosion. It is recommended for environmentally sensitive areas. Sugar or corn carbohydrates by-products are one of the latest deicing products having negative environmental effect and safe for surfaces.

7. Sodium Chloride and Calcium Chloride

Both sodium chloride and calcium chloride have advantages and disadvantages. Sodium chloride is the less expensive deicing product, but not as effective as calcium chloride at lower temperatures. Calcium chloride costs more, but works well at very low temperatures (25 degrees F). Calcium chloride is less harmful to vegetation and only 1/3 as much is needed.

Other Deicing Products

Magnesium chloride, similar to calcium chloride (effective down to about 5 degrees F) but requires twice as much. Potassium acetate, a costly liquid not available to the public works at very low temperatures, but is known to lower oxygen levels in waterways. Ethylene glycol is highly toxic to aquatic life and mammals. Propylene glycol is considered a safer alternative for mammals, however it can decrease the oxygen in our waterways.

Dealing with ice and snow this winter is a way that protects our waterways is to shovel early and often, reduce the amount of deicer you use and be very contentions in how you apply deicing products. So get the hot coco brewing, pull on those snow boots and head on out to enjoy Indiana's winters! Besides, you might just meet a really nice neighbor or two in the process!