



CNY Stormwater Coalition

# Gardens and Gutters

*A Central New Yorker's Guide to Managing Stormwater Runoff*

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## Remember Water Quality this Winter

Another CNY winter is almost upon us. Whether you love it, hate it, or just cope with it, you're probably not thinking about the impact melting snow will have on water quality next spring. Most of us understand that as rain washes over the land it carries exposed soil and other substances into storm drains that flow to nearby lakes and streams. We think differently about snow, which appears stable in its frozen state. As long as our sidewalks and roads are clear, we simply accept snow as an unavoidable part of winter.

This changes in spring when the melting snow pack transforms our lawns into mudflats, floods our streams, clouds our lakes and reveals a full season's worth of accumulated trash and debris.

It's easy to lose sight of the fact that the substances we apply to keep our roads and driveways clear of snow and ice will be carried into our surface waters with the warmth of spring. Rock salt (sodium chloride) can affect spawning of certain fish species and harm vegetation if allowed to accumulate in the soil. If you use rock salt on your driveway, don't use more than you need or you may be flushing chlorides, and your money, down the storm drain. Consider trying a non-toxic, biodegradable ice-melt product. These products are less harmful to the environment and often have residual effects that prevent new ice from forming. As a result, you may use these products less frequently than rock salt.

Many homeowners use sand to provide traction on sidewalks. Although effective, wind and melting snow can transport sand into storm drains and surface waters where it can destroy aquatic habitat and create a substrate for unwanted plant growth. If you do use sand for traction, remember to sweep and collect it as soon as conditions allow.

Winter driving can be treacherous. Before you get behind the wheel, you'll almost certainly make sure you have plenty of windshield washer fluid in the reservoir to help you see where you are going. Most washer fluids contain toxic methanol as well as phosphates that contribute to algal blooms in our lakes and ponds. A single spray to clear the windshield may not add a lot of chemicals to the environment, but think about how many gallons you use over a typical winter. Then think about all of the other cars on the road that are probably using at least as much as you are.

The next time you reach for a gallon of traditional washer fluid at the store, take a look at the wide range of alternatives that are available, including concentrated liquids that are as effective and may be less costly than what you are currently using.

Before the snow flies, take a few minutes to collect the last leaves that may have accumulated in the storm drain or catch basin in front of your house. Not only will this help keep melting snow from pooling and refreezing during brief warm ups, but it will help reduce the amount of phosphorus and organic matter that enters our waterways next spring.

## Now is the Time to Button Up for Winter

### Winter Rain Garden Protection

Even though your plants are dormant throughout the winter months, avoid shoveling snow onto your established rain garden. When the snow melts in the spring, the excess water can saturate the soil and harm your plants. Normal snow accumulation won't create a problem, but when shoveling your driveway or walkway, place the snow on the uphill side of the rain garden. The garden will absorb the excess runoff as the snow melts in the spring.



### Ice Problems? Go Pervious!

Replacing your walkway or driveway with river stone, pervious pavers or other porous material will allow water to soak into the ground instead of becoming runoff.

Permeable interlocking concrete pavers separated by joints, pervious concrete, and porous asphalt have many advantages during the winter months when compared to conventional pavements.

- ❖ Snow melts faster on pervious pavements than on conventional pavements.
- ❖ Pervious pavements immediately drain the melted snow, reducing the risk of ice formation and hazards.
- ❖ Permeable interlocking concrete and porous asphalt are resistant to freeze-thaw cycles and require smaller amounts of de-icing materials.
- ❖ Pervious surfaces help reduce polluted stormwater runoff and erosion.

### Winter Rain Barrel Storage

Winter is several weeks away, but now is the time to prepare your rain barrel for winter storage. If you have the space, unhook the rain barrel from the downspout and store it in a garage or shed. If space isn't available, you can leave the rain barrel outdoors during the winter if you prepare it for the elements.

First, completely drain the rain barrel to avoid freezing or cracking. Then remove the spigots, screen, and hose and store them in a place where you can find them easily in the spring. You may also want to rinse out the rain barrel in order to remove any sediment. If you are storing the rain barrel outside, turn it upside down to keep out the rain, ice and snow. If possible, weight it down or secure it to keep it from blowing away. After you've prepped the rain barrel for winter storage, consider redirecting the downspout so that melting snow and ice flows away from the foundation of your home. Attach another piece of down-spout if necessary.



Create your own definition of form and function by using common materials in uncommon applications.

## *Winter Stormwater Pollution Solutions*

With the colder weather upon us, water pollution prevention is still very critical. Winter brings with it unique and significant pollution concerns to our lakes and streams. Because the ground will be frozen over the next few months, it acts like a hard surface similar to asphalt or concrete. It no longer has the ability to act like a natural filter.

Pollutants accumulate in snow banks and ice all winter long. Once the snow melts, all the grime, grit, dirt, road salt, and other pollutants are washed into our stormwater systems, lakes, and streams. The seasonal addition of melt water contributes significant amounts of pollutants and sediment to sensitive streams and lakes. It is important that we take steps to reduce the amount of potential pollution sources during the winter months to protect our waterways all year long.

**Be stingy with your salt application and consider alternative salting methods.** Salt can be harmful to plants, aquatic life and drinking water supplies. Salt alternatives can be less damaging to homes and landscaping. Not all deicers improve traction on walkways and driveways. If you do apply salt, an alternative or sand/grit for added traction be sure to shovel first and apply as little product as possible. Mixing salt with natural substances like beet juice can increase the salt's effectiveness at lower temperatures and reduce the amount of salt needed.

**Rethink rinsing your garage floor.** While it's tempting to take out the hose and wash the crusty, gray sludge and salt off of your car and out of your garage on a mild winter day—please don't! Your garage runoff most likely drains into a storm sewer or ditch which means you'll be flushing pollutants from your garage right into our streams and eventually into one of our beautiful local lakes. One alternative is to clean your car by taking it to a commercial car wash where the drains flow to waste water treatment facilities. If you must clean the garage floor, mask up and use a push broom to sweep the floor clean. Bag and properly dispose of the dried grit and dust.

**Watch your waste.** Picking up pet waste is just as important in the wintertime as it is in the warmer months. Animal waste can be a significant source of harmful bacterial and disease. Cooler temperatures and frozen soil slow down the decay process. When the snow finally does melt, you will have a very unpleasant surprise waiting if pet waste is not removed daily. If you have horses or livestock, don't spread manure in the winter months. Manure is not effective in cold weather and doesn't break down in the soil. It accumulates on the surface and is then washed directly into streams and lakes during thaws contributing bacteria and excessive nutrients to our surface waters.

**Cover bare soil.** If you are doing earthwork or some other maintenance activity in the winter remember to practice erosion and sediment control practices to keep soil and other pollutants on your site and out of our streams and lakes. Late winter thaws and saturated soil conditions can lead to a very muddy spring. So be prepared and maintain erosion and sediment control practices all winter long, and plant winter ground cover on areas with bare soil to prevent soil erosion.

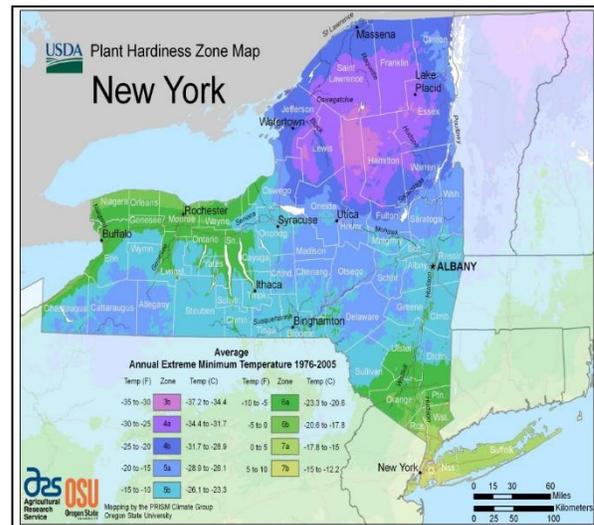
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## Maintaining a Healthy Landscape: What You Should Know About Salt

Winter can be hard on your landscape if you don't have shrubs that can withstand road salt. Plants in cold-weather planting zones may need to endure several applications of salt per year. Minimize the amount of salt reaching plants by mixing sawdust or ash with road salt before application and direct saltwater drainage away from plants. Choosing the right plants makes a big difference if you want a vigorous post-winter landscape. Check with your county extension office, or the U.S. Department of Agriculture website to find your growing zone. They are numbered 1 through 9 and represent the temperature conditions and corresponding geographic areas under which plants will grow. Newer zone charts include both high and low temperature ranges.

Road salt is extremely tough on plants, both from its build-up in the soil near treated surfaces and its physical contact with foliage and branches as salt-laden spray is splashed or aerosolized by fast-moving traffic. When dealing with areas where salt may be a problem, such as along a roadside where winter salting is done, it is helpful to wash salt spray off plants and to flush the soil with fresh water. Roadside salt should be flushed out vigorously in early spring. If the soil is sandy, be sure to add organic material when planting, and also use it regularly as a mulch.

Call your local road maintenance department to find out what kind of salt application is used near your landscape. In some areas, deicing salt is dispersed by aerial application, others use only ground applications. Air-borne deicing salt on plants draws moisture out of plant tissue. Salt spray produces dieback on branches starting at the tips of leaves and needles of vulnerable shrubs. Spray and excess soil salts stunts growth of stems and foliage, and causes lack of vitality and death.



Not all gardening plants can tolerate these poor conditions. Gardeners must research the growing requirements of plants to determine their tolerance to road salt and other disadvantages near sidewalks, walkways or streets.

Bearded iris is a hardy perennial that's tolerant of road salt. Frequently grown as a border plant along sidewalks and roadsides, it can thrive under poor growing conditions.



The most important growing requirement for bearded iris is good drainage. It does not tolerate wet soil or standing water, which causes its rhizomes to rot. It prefers full sun and moderately dry soil for prolific blooming. Bearded iris grows best in United States Department of Agriculture hardiness zones 3 to 10. At maturity, iris can reach 36 inches tall. Many cultivars of iris exist, which offer blooms in a rainbow of colors and bi-colors.

## Bold, Beautiful and Salt Tolerant Species for Landscape Enhancement



**Bee balm** thrives in full sun or part shade and is tolerant of road salt. Planted as a border along walkways or streets, bee balm typically grows 2 to 4 feet tall at maturity.

As a hardy perennial, bee balm grows best in USDA hardiness zones 4 to 9. Similar to the rhizomes of irises, bee balm also requires well-drained soil.



Some **daylilies** have very fragrant blossoms. Gardeners embrace the daylilies versatility and hardiness. While the daylily tolerates road salt, it also requires well drained soil.

Daylilies bloom best in full sun but can remain vigorous in partial shade. Daylilies are recommended for USDA hardiness zones 3 to 9.

**Garden phlox** is a hardy perennial that's impervious to road salt. This tough plant grows best in full sun. The woodland phlox is a variety that enjoys shade. Recommended for USDA hardiness zones 4 through 8, garden phlox can reach 4 feet tall at maturity. Gardeners can plant creeping phlox for a groundcover. Providing adequate water with good drainage will keep all varieties of garden phlox blooming for years.



Of course, there are a multitude of salt tolerant shrubs that can be planted for both their beauty and their benefits including Rose of Sharon, Hydrangea, Sumac and Witch Hazel. Your local Cornell Cooperative Extension office is a great source of information to help you select native, non- invasive, salt tolerant perennials, shrubs and trees.

Forget the calendar. It's never too early to think about Spring!

### Featured Plant: Christmas Fern



This plant is hard to beat. It handles just about any soil, takes shade or sun, and is green year-round. It's also one of the few plants native to our area that you can keep as a houseplant. The Christmas fern is popular in cultivation as an ornamental plant for gardens and natural landscapes because it is easy to grow and can be used in many settings and soils.

This fern does double duty as it provides soil conservation and erosion control functions on steep slopes. The fronds are semi-erect until the first hard frost, after which they recline to be flat on the

ground.

With proper care, the ferns provide winter interest in the garden when most other plants remain dormant.

# The CNY Stormwater Coalition



The CNY Stormwater Coalition was formed in order to establish a regional approach to stormwater management and water resources protection. The Coalition is made up of 29 cities, towns, villages, counties and the New York State Fairgrounds that

operate Municipal Separate Storm Sewer Systems (MS4s).

Through the Coalition, municipalities are working together to meet regulatory requirements while improving water quality in Central New York.

### CNY STORMWATER COALITION MEMBERS

- |                  |                        |
|------------------|------------------------|
| Camillus Town    | Baldwinsville Village  |
| Cicero Town Clay | Camillus Village       |
| Town DeWitt      | Central Square Village |
| Town Geddes      | East Syracuse Village  |
| Town Hastings    | Fayetteville Village   |
| Town LaFayette   | Liverpool Village      |
| Town Lysander    | Manlius Village        |
| Town Manlius     | Marcellus Village      |
| Town Marcellus   | Minoa Village          |
| Town             | North Syracuse Village |
| Onondaga Town    | Phoenix Village        |
| Pompey Town      | Solvay Village         |
| Salina Town      | Syracuse City          |
| Sullivan Town    | Onondaga County        |
| Van Buren Town   | NYS Fairgrounds        |

When you are out and about enjoying your favorite activities, this winter remember that your actions have a long-lasting impact and can affect our water quality next Spring.

Anything you leave behind on the snow and ice when you are walking the dog, ice skating, ice fishing, snow shoeing or skiing will be there when the weather starts to warm up next spring.

Please pick up after your yourself and your pets to prevent bacteria and other pollutants from contaminating the waterways.

Remember, water quality protection is a four-season job!



The CNY Stormwater Coalition is staffed and coordinated by the Central New York Regional Planning & Development Board. For more information, visit the CNY Stormwater website at [www.cnyrpd.org/stormwater](http://www.cnyrpd.org/stormwater)



Central New York Regional Planning & Development Board