CNY STORMWATER COALITION

Gardens and Gutters

A Central New Yorker's Guide to Managing Stormwater Runoff

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Keep Soil in its Place as Your Garden Plans Take Shape

After a long cold winter, many Central New Yorkers eagerly anticipate tackling yard and garden responsibilities. As you compile a wish list from your favorite garden catalog, prepare your garden plans, and develop landscaping projects, now is a great time to consider the best ways to protect your soil from runoff during periods of spring rainfall and snowmelt.

This edition of *Gardens and Gutters* provides helpful advice on garden and landscaping practices that will protect water resources by controlling erosion and stormwater runoff. We also cover topics such as why it's important to avoid using phosphorus fertilizer, the benefits of testing your soil before planting, and effective ways to avoid plant stress from road salt runoff.

The newsletter editors would like to hear from you! In our section called "Gardening Tricks of the Trade," we provide simple advice from gardeners and landscapers and encourage you to submit additional suggestions that we'll include in the next edition of the newsletter. Be sure to check the final page of the newsletter for information about the Central New York Stormwater Coalition. You'll learn how municipalities are working together on creative ways to reduce erosion and stormwater runoff while improving water quality throughout the region.

Apply a layer of mulch to your spring garden to reduce soil erosion, retain water, inhibit weed growth, and moderate soil temperature.

Inside This Issue

Spring into Action with this Garden and Yard Checklist

Spring is a busy and exciting time of year and it's a delight to watch as crocus flowers add splashes of color to dormant gardens and lawns. As you dust off your garden tools, here are a few recommendations that will provide an attractive yard and garden while protecting nearby water resources.

Test your soil before applying fertilizer. There's no sense in purchasing and applying fertilizer if you don't need it. If applied before a rain storm, there's also a good chance the fertilizer will end up in nearby lakes and streams where it promotes algae and rooted plant growth. Purchase low- or no-phosphorus fertilizer and follow the application rates found on the bag. Before applying any fertilizer to your lawn, be sure to review New York State laws regarding phosphorus fertilizer. New York residents should look for the zero on the fertilizer bag and buy phosphorous-free fertilizer in order to protect water resources. If fertilizer is needed, apply a slow-release form in the early spring that will allow time for gradual soil infiltration.

Maintain the correct soil pH. The soil pH in your garden can vary from year to year depending on gardening practices such as the type of compost you use. Use lime to adjust the pH so that it's between 6.5 and 7.2.This will increase the efficiency of nutrient absorption, will improve the health of your plants, and will save you time and money.

Mow your lawn at regular intervals. This will maintain healthy grass while minimizing soil erosion, nutrient loss, and excess strain on local storm sewers. Leave the clippings on the lawn after mowing. This simple practice will return organic matter and nutrients to the soil to boost the health of your lawn.

Conserve water. Timing is important when it comes to water conservation. Under-watering can harm your plants, but over-watering is expensive and might cause runoff to nearby streams or lakes. Water plants in the early morning or late afternoon to minimize evaporation or use a drip irrigation system or soaker hose for maximum benefit. Sweep your sidewalks and driveways rather than using a hose. Divert roof water to vegetated areas to allow for soil infiltration.

Cover piles of soil, sand, and mulch to prevent erosion. Wind and rain can transport this material to lakes and streams where it can damage aquatic habitat and promote weed and algae growth.

Maintain soil health by adding organic matter and mulch. Healthy soils will help to minimize runoff, retain water, and absorb excess nutrients, sediments and pollutants. Mulch will help to reduce evaporation, inhibit weed growth, moderate soil temperature, and reduce erosion. Common types of mulches include bark chips, leaves, grass clippings, and straw. Leave a few inches of space between trunks of woody plants and organic mulches to prevent rot. If the mulch is placed too close to the base of the tree trunks, the roots may grow in the mulched area which can harm the tree.

Continued on next page

Spring Into Action (*continued*) / Invasive Species

Limit your use of pesticides and herbicides to protect humans, pets, and water resources. Carefully follow the recommended timing, frequency, and application rates on the container. Excess amounts of pesticides and herbicides can flow into local waterbodies during storm events, affecting the health of people and aquatic life.

Carefully dispose of yard and household waste and automotive chemicals and keep gardening products, pet waste, pesticides, oil, and gasoline out of the storm drains. Hazardous waste from homes and yards (such as pesticides, fertilizer, and paint) can be harmful for the environment. Storm drains are designed only for rainwater and snowmelt from the street and help to prevent flooding. Water entering a storm drain flows directly into nearby waterways, untreated.

Re-use and recycle whenever possible. Recycle unused plastic flower pots, use broken clay pots for drainage, and donate your old tools and equipment to other gardeners. The OCRRA website (OCRRA.org) has helpful guidance on how to deal with garden waste and they will also provide free recycling supplies for homes and businesses in Onondaga County.

Purchase native plants for your yard and garden. They are well-adapted to local soils and climatic conditions, rarely require fertilizer, and tend to be more resistant to

Multiflora Rose (Rosa multiflora) is extremely prolific and can form dense thickets, excluding native plants species. The rose invades open woodlands, forest edges, early succession pastures and fields, fence rows, right-of ways, roadsides, and margins of swamps and marshes.

What are Invasive Species?

Invasive species refer to plants or animals that are non-native to a particular ecosystem, and whose introduction causes or is likely to cause economic or environmental damage or harm to human health. Invasive species can harm natural communities and systems (plants and animals found in particular physical environments) by out-competing native species, reducing biological diversity, altering community structure and, in some cases, changing ecosystems. Invasive species threaten New York's food supply, harvested wildlife, fish and shellfish, parks and gardens, recreation resources, and animal and human health. All New Yorkers have a stake in the invasive species issue. Click on the following link for additional information about prohibited and regulated plants in NY State http://www.dec.ny.gov/docs/lands_forests_pdf/isprohibitedplants2.pdf

How to Deal With Damage from Road Salt

Central New York winters bring plenty of snow, ice, and a good supply of road salt to keep drivers safe on slippery roads. Refined rock salt with approximately 98.5% sodium chloride is usually applied to icy roads and serves a valuable function by keeping them safe during the winter months. The salt however, presents a major challenge for water quality. Most gardeners are also familiar with the harsh effects that road salt can have on nearby lawns, trees, and gardens.

After a heavy rainfall or periods of spring snowmelt, road salt flows into the soil where it affects how roots absorb nutrients. Sodium ions in road salt can be absorbed by plant roots, replacing essential minerals such as potassium, calcium and magnesium. The salt restricts moisture intake from the roots of roadside plants and dehydrates the leaves, causing them to turn brown and die. Excess salt in the soil can also limit healthy root formation and plant growth. Decreased water intake by the roots causes the leaves to dry out and stops the process of chlorophyll production and photosynthesis. Perennials impacted by salt runoff do not leaf out as strongly or develop buds as other healthy plants would. Road salt can also change the soil structure, permeability and aeration.

Example of bushes damaged by road salt.

There are several options for addressing salt damage to your lawn or garden. Pelletized gypsum, for example, is an inexpensive way to repair grass and encourage new growth while helping the soil retain water. Rinsing plants with water for several days in a row in the spring will also help to decrease damage from salt by washing the salt from the vegetation and flushing it from the soil. After the flushing process, remove the dead grass from the lawn and use a steel rake to loosen the soil to promote healthy plant growth.

There are also a number of things that can be done to help reduce salt problems from occurring next winter.

- When shoveling snow from your driveway, don't place it onto the lawn where it might damage your grass.
- When possible, place plastic, burlap or snow fencing in your yard to minimize the effects of salt spray from the road.
- Instead of salt, use alternative deicing products such as kitty litter or sand to melt ice along driveways and sidewalks. These products won't damage your plants in the spring.
- Remember to sweep the kitty liter or sand for disposal as soon as conditions allow in the spring. If left on the ground, these materials will wash into storm drains, lakes and streams during rain events.
- Consider the use of resistant or salt-tolerant grass varieties.

Water Conservation Practices for Your Garden

The amount of water that a plant requires during the growing season is influenced by several variables such as plant type (rooted vs surface plants), soil type, and amount of sun exposure. For example, root vegetables such as carrots may have access to deep soil moisture while pole beans rely on moisture from the soil surface. Shade-loving plants such as pachysandra will have an easier time during dry periods because they are typically planted around the base of trees and away from direct sunlight. Gardeners can save money, reduce water use, and avoid potential stormwater runoff by grouping flowers and vegetables with similar watering requirements. This will protect your plants from both under-watering and overwatering by addressing each zone based on their individual needs.

As you begin to design the layout of your garden and review seedling options, here are some additional water-savings tips to consider that will reduce stormwater runoff and soil erosion while keeping your plants looking healthy and strong during dry periods.

Soaker hoses. Place a soaker hose alongside rows or through planted areas to deliver water gradually without waste. Soaker hoses can be damaged by the sun so be sure to cover them with a layer of mulch. Soaker hoses are more efficient than overhead sprinkling, but not quite as efficient as drip irrigation.

Drip irrigation. This technique is a bit more trouble because you have to run a tube to every plant, but it's very effective in small gardens and pots. The tubes and emitters deliver water where you place them (at the base of each plant) and nowhere else. Drip irrigation was perfected for agriculture in the desert climate of Israel where every drop counts — so it's no surprise that it is the most efficient method of watering in New York State.

Water deeply. Allow water to soak deep into the soil. Frequent, shallow watering is tempting, but it's not good for the plants because it encourages roots to stay near the surface, making them more susceptible to drought. It's better to water deeply once or twice a week than to water a little every day. Deep watering means applying at least an inch of water at a time. You can measure this by placing a container where it can catch the water. When it is filled to an inch, you've applied enough.

Mulch around the base of your plants. A two- to three-inch layer of mulch around your plants will reduce the threat of erosion and keeps the soil moist for a longer time by protecting plants from the drying effects of sun and hot air. As an added benefit, mulch keeps weed seeds from sprouting. You can mulch with straw, homemade compost, or even sheets of newspaper that are four sheets thick.

Add plenty of compost to improve soil texture and health. Compost adds nutrients to the soil, helps to retain moisture, suppresses weed growth, and reduces the need for pesticides which keeps pollutants out of our water supply. If you don't have a compost pile, it is never too late to start one.

Collect water in rain barrels. You can buy official rain barrels with spouts or you can fashion your own from many types of barrels or large containers. Use these to collect water from gutter downspouts or other areas where water runs and is easily collected. Then use the water on your garden plants during dry periods. Be sure to child-proof your container to avoid accidents, and place screening over the opening to keep mosquitoes and litter out.

Adapted from https://bonnieplants.com/library/drought-busting-techniques/

Gardening Tricks of the Trade / Responsible Pet Care

Gardening can be a bit easier of you know a few tricks of the trade. These simple words of wisdom can help to save time and improve the productivity of your garden. More importantly, responsible gardening will help to keep local water resources healthy and safe for people, pets and wildlife.

For example, a local gardener is on a tight budget, so his personal garden designs include recycled materials. In his creative urban garden, he has used everything from concrete blocks, glass bottles, and old windows for a cold frame. He built a stand using burglar bars which elevate his rain barrels to create gravity for the water to flow. He even hangs old license plates to scare off wildlife and the reflection and clanging noise keeps the birds away.

Are you spending a lot of time watering your garden each evening? Try using a timer on your spigot that will turn off the flow of water without having to depend on your memory or busy schedule. They are available at garden centers and home improvement stores at prices starting about $20. They're worth every penny.

Avoid using salt on frozen driveways and sidewalks during the winter months. When the warm weather melts the snow and ice, the salt will damage nearby lawns and waterbodies. Sand, organic kitty litter or sawdust is much safer for the environment and is as effective as salt.

Do you have any advice for other gardening enthusiasts in Central New York? Please send your creative gardening tricks of the trade to asaltman@cnyrpdb.org.

Responsible Pet Care

Remember to keep your yard clean. While there are no laws requiring you to clean up animal waste on your own property, there are good reasons to be careful. Some diseases can be transmitted from pet waste to humans through soil contact. Children who play outside and adults that work in their yards and gardens are most at risk for infection, so cleaning up waste from play and garden areas is especially important. Washing hands with anti-bacterial soap and water after working or playing in the soil is the best protection from disease.

Picking up after your pet also helps to keep our local lakes and streams clean (and your neighbors happy). When dog waste is left on the ground, rain or melting snow transports it to lakes and streams where it can negatively affect water quality and cause human health problems. Dog waste also contains nitrogen and phosphorus that promote the growth of unwanted algae and rooted aquatic plants in lakes and streams. In fact, dog waste has a higher phosphorus concentration than cow and swine manure and is considered to be a major contributor of pollution in urban watersheds. Scooping your dog's waste isn't just a courtesy for those walking behind you; it also keeps our water resources safe.

Harmful Algae Blooms

With the summer season is just around the corner, now is a good time to provide information about Harmful Algae Blooms (HABs). HABs have been identified in lakes throughout New York State in recent years. Exposure to surface water resources during these outbreaks can cause health problems for people, pets and wildlife. HAB outbreaks are caused by cyanobacteria and the blooms generally occur during extended periods of warm weather with high nutrient levels in the lake. There are several ways in which the public can help to reduce the threat of HABs in local water resources.

- Limit lawn and garden fertilization (especially phosphorus)
- Pump your septic tanks every three years
- Plant rain gardens and vegetative buffers to reduce nutrient runoff and to control soil erosion from your property.

Important things to know about HABs

⇒ If you see it - avoid it and report it! People, pets and livestock should avoid contact with water that is discolored or has algae scums on the surface. Colors can include shades of green, blue-green, yellow, brown or red. If contact does occur, rinse thoroughly with clean water to remove algae.

⇒ Never drink untreated surface water, whether or not algae blooms are present. Untreated surface water may contain other bacteria, parasites or viruses, as well as cyanotoxins that could cause illness if consumed. People not on public water supplies should not drink surface water during an algal bloom, even if it is treated, because in-home treatments such as boiling, disinfecting water with chlorine or ultraviolet light, and water filtration units do not protect people from HABs toxins.

⇒ Stop using water and seek medical attention immediately if symptoms such as vomiting, nausea, diarrhea, skin, eye or throat irritation, allergic reactions or breathing difficulties occur after drinking or having contact with blooms or untreated surface water.

⇒ Report any health symptoms to your physician and the NYS Department of Health (harmfulalgae@health.ny.gov) or contact your local health department.

⇒ If you suspect that you have seen a HAB or you, your family, or pet has been in contact with a bloom, report it to the NYS DEC. Fill out and submit a Suspicious Algal Bloom Report Form (http://www.dec.ny.gov/docs/water_pdf/suspalgformedit.pdf). Email the completed form and if possible attach digital photos of the suspected bloom to HABsInfo@dec.ny.gov.

For additional information, contact your regional DEC office or go to the DEC HABs FAQ page. http://www.dec.ny.gov/chemical/83310.html#Important

CNY STORMWATER COALITION

The CNY Stormwater Coalition was formed in 2011 in order to establish a regional approach for stormwater management and water resource protection. The Coalition is made up of 30 local governments and the NYS Fairgrounds. Each member operates a Municipal Separate Storm Sewer System (MS4). Through the Coalition, members are working together to meet regulatory requirements while improving water quality.

CNY STORMWATER COALITION MEMBERS

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

The CNY Stormwater Coalition meets quarterly throughout the year. All meetings are open to the public. Check the Coalition's website for the times, dates, and additional meeting details.

The CNY Stormwater Coalition is staffed and coordinated by the Central New York Regional Planning and Development Board. For additional information, visit the CNY Stormwater website at www.cnyrpdb.org/stormwater

NYS Law Restricts the Use of Lawn Fertilizers Containing Phosphorus

In New York State, it is illegal to use phosphorus fertilizer on lawns that don't need it. The NYS Dishwasher Detergent and Nutrient Runoff Law is designed to reduce the amount of phosphorus entering the state's waters and improve water quality. The law restricts the use of phosphorus fertilizer on lawns or non-agricultural turf and applies to homeowners, landscapers, and lawn care professionals. Only lawn fertilizer with less than 0.67 percent by weight phosphate content is permitted.

The law also applies to fertilizer/pesticide combination products when these products contain over 0.67% phosphorus, and organic phosphorus fertilizer such as bone meal. The law does not apply to agricultural fertilizer, fertilizer for trees, shrubs, gardens, or compost. Before buying lawn fertilizer, check the bag for a set of three numbers showing the percentage of nitrogen, phosphorus and potassium. Select the bag with a "0" in the middle. A zero in the middle means the fertilizer is phosphorus-free.

Spring Burn Ban Begins

For many, springtime means cleaning up the yard by removing downed branches and vegetation. All that yard debris can be bagged for municipal pick-up or placed in the compost bin. All residential open burning is banned statewide from March 16 to May 14 and burning garbage and leaves is also prohibited year-round! NYSDEC enforces the ban on brush and yard debris. Besides creating toxic plumes of smoke, an unattended fire can quickly spread to surrounding dry plant material, sparking a wildfire. Violators can face criminal or civil enforcement actions and a minimum fine of $500 for a first offense. To report environmental law violations, call (844) 332-3267 or report it on DEC's website. For additional information, visit DEC's website to learn before you burn.