



CNY STORMWATER COALITION

Gardens and Gutters

A Central New Yorker's Guide to Managing Stormwater Runoff

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When It Rains, It Pours!

Central New York has experienced more than its share of rain events this spring! Cooler temperatures and extended periods of wet weather have pushed back normal gardening activities as well as bloom times. Our seemingly never ending rain cycle is also causing problems with saturated lawns and soil erosion that can impact fisheries and recreation activities in nearby waterbodies. This edition of Gardens & Gutters provides helpful ways to protect lawns, gardens, and local water resources during periods of heavy precipitation and (hopefully) warming temperatures.

Heavy rain events can produce large amounts of stormwater runoff. As it flows over paved surfaces such as rooftops, parking lots, and bare soil, the runoff collects and transports pollutants such as animal waste, litter, road salt, pesticides, oil and grease from vehicles, grass clippings and soil from construction sites.

The stormwater travels over roads and through ditches to drainage pipes that empty into nearby streams, rivers, or lakes. Stormwater contains phosphorus and other pollutants that degrade water quality by impacting fisheries and posing a threat to human health. Excess stormwater also can overwhelm storm drains, resulting in flood damage to homes and municipal infrastructure such as



roads, bridges culverts, and sewers. The amount of stormwater runoff during a rainfall event is influenced by several factors such as the extent of impervious surfaces, topography, the type and amount of vegetation, and soil type.

The goal of stormwater management is to slow the rate at which the stormwater moves and to minimize the types of pollutants it picks up

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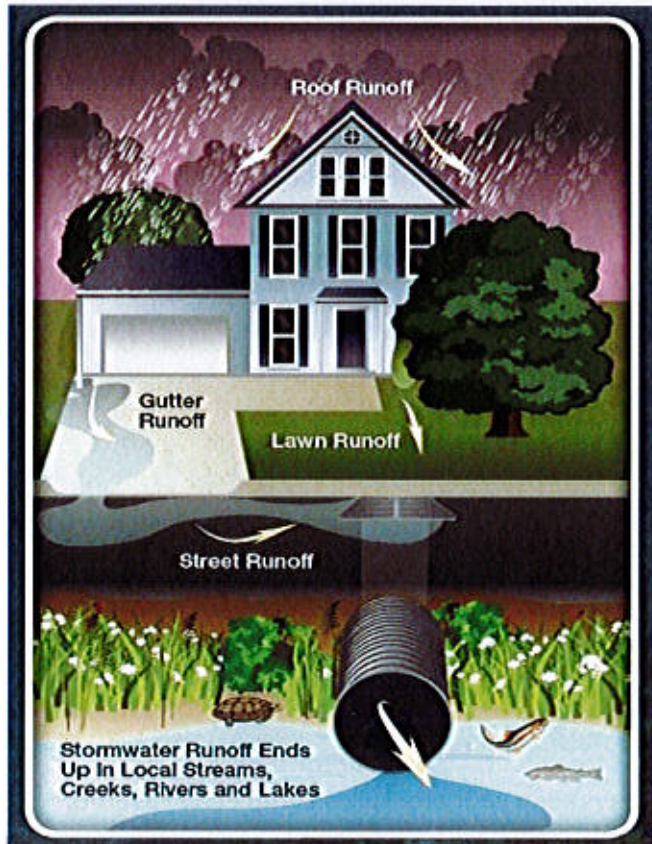
When It Rains, It Pours!

along its route. The most cost effective way to manage stormwater is at the source, where the contaminants can be identified, reduced or contained. For example, proper handling of fertilizers and pesticides can prevent pollutants from entering local waterways.

Listed below are additional ways to reduce stormwater runoff from your property.

- Plant grasses, shrubs, and trees in areas where stormwater runoff collects and along stream-banks and lake shorelines. The tree and plant roots will absorb and filter polluted runoff while reducing the threat of flooding. Vegetation also slows the flow rate of stormwater runoff so that pollutants and sediment can settle out of the water. Tree canopies slow rainfall and spread it over a larger area.
- Choose permeable material when designing a path, patio, or driveway. Use bricks, gravel, natural stone, or permeable pavers instead of asphalt or concrete. Permeable products will allow rain water to soak into the ground.
- Install a rain barrel or cistern to collect and store precipitation runoff from the roof and use the water to irrigate your non-edible garden plants. A shallow, gravel-filled trench is also an effective way to divert and slow stormwater runoff, especially at the base of a slope or along a driveway or patio.
- A rain garden is an effective way to control stormwater runoff. A rain garden is a constructed vegetated area that is used to temporarily retain stormwater runoff during storm events. Plants are used to filter pollutants and the garden provides an opportunity for water to slowly filtrate through the soil.
- Cover bare soil with mulch or a ground cover to reduce erosion and slow stormwater runoff. Apply mulch around garden plants and trees. Two or three inches of mulch such as bark chips or leaves can also add nutrients to the soil and will shade out weeds in plant beds.
- Only rain belongs in the drain! Don't dump any home, vehicle, or yard waste down the storm drain and clear away leaves and debris. Cover piles of soil, sand or mulch to prevent the material from being washed into storm drains, ditches or culverts.
- Use lawn and garden chemicals sparingly in order to minimize potential runoff to local water resources. Choose organic alternatives when possible and check the weather forecast to avoid applying them before a storm. Manage weeds between cracks and stone areas without the use of chemicals by applying vinegar or pour boiling water over the plants.
- Try to keep your lawn at least 3" in height to minimize weed growth, reduce the need for watering, and decrease the likelihood of pests. Leave the clippings on the lawn to block weeds and retain moisture. Sweep your sidewalks and driveway rather than hosing them down.
- Keep your septic system well-maintained to prevent leaks. A leaking septic system can leach harmful bacteria into storm sewer systems and local waterways. It is important to keep your system well-maintained to prevent costly repairs as well. Have your system inspected every three to five years by a trained professional.

When It Rains, It Pours!



Don't Drip and Drive!

Be sure to keep automobiles and gas-powered lawn and garden equipment (such as riding mowers and lawn tractors) well maintained and in good repair. Poorly-maintained vehicles and garden equipment can cause oil, gasoline, and coolant to drip onto roads, parking lots, and driveways. During rain storm events, these pollutants can flow into nearby lakes and streams, causing harm to humans, fish, plants, and wildlife.

Using Trees to Manage Stormwater

Stormwater runoff can be a significant problem in urban and suburban environments when impervious surfaces cause rainwater and snowmelt to pool in streets and on properties faster than the soil can absorb it or the storm system can transport it. This can result in soil erosion, flash flooding, property damage and damage to the structure of the soil that can impede growth in flower and vegetable gardens.

Trees are vital for urban stormwater management because they capture and store large amounts of water in their canopies and root zones. Water from precipitation or snowmelt is either used by the tree, filters through the soil to become groundwater, or is released into the atmosphere through evapotranspiration. Trees are beneficial in managing stormwater by slowing down and temporarily storing stormwater runoff. Tree roots also help to remove pollutants, improve soil conditions, and promote infiltration. Many communities incorporate trees into engineered stormwater systems and include trees in their plans to meet federal standards for water quality.

Did you know ...

- Well-maintained trees and shrubs can increase property values by up to 14%.
- When properly placed around buildings, trees can reduce air conditioning needs by 30%.
- A mature tree removes almost 70 times more pollution than a newly planted tree.

When It Rains, It Pours!

OUTDOOR WEEKEND WORK PLANS ON HOLD AGAIN?

DON'T FORGET TO PROTECT YOUR INVESTMENT WHILE YOU WAIT FOR THE WEATHER TO IMPROVE.

Sometimes, the best of plans and intentions just have to wait! If you have stockpiled soil, mulch or sand needed to complete a garden or home improvement project, don't forget to protect your investment, and local water quality as you wait for weather conditions to improve.

Whenever possible, locate stockpiles as close to or within the footprint of the project area where they will be used. This will reduce the number of times that you have to move the products as well as the number of opportunities for unintentional spills along the way.

NEVER APPLY FERTILIZER WHEN RAIN IS IN THE FORECAST

In New York State, it is illegal to apply lawn fertilizer with a phosphorus content greater than 0.67% unless establishing a new lawn or as indicated by a soil test. Our soils are naturally high in phosphorus, so very little additional phosphorus is need to maintain a healthy lawn.

Even zero phosphorus fertilizers should never be applied when rain is in the forecast as the fertilizer will wash off of the lawn before it can provide any benefits.

Equally Effective Stormwater Protection Practices



Always keep your stockpiles completely covered. Exposed materials are subject to the erosive forces of wind and rain. Make sure that the cover you use is impervious, large enough to fully protect the entire stockpile, and adequately weighted down so it remains in place despite the weather.

Avoid locating stockpiles in areas of concentrated overland flow, near roadways, or on hard surfaces such as driveways. Placing stockpiles on grassed areas will help slow the movement of material dislodged by a storm or rain event.

Time the delivery of your materials to coincide with the completion of site preparation work. This will lessen the time that your materials are subjected to the forces of wind and rain. Always use your materials as soon as conditions allow.

When It Rains, It Pours!

LANDSCAPE DESIGN

Brighten your Landscape with a Rain Garden

By Kaitlin Johnson | April 13, 2017, Arbor Day Foundation

Have you considered adding a rain garden to your landscape? Spring is a wonderful time to redesign your yard. The soil is softer to dig and the rainy weather contributes to initial watering. Rain gardens are a beautiful way to enhance your landscape both visually and sustainably.

A rain garden is a garden in a shallow depression made to naturally gather and filter rainwater —designed to temporarily collect stormwater runoff from roofs, driveways, walkways, patios, and lawns. Once the water is collected, it percolates down into the soil and is absorbed by trees, shrubs, and other plants — filtering water pollutants such as pesticides and fertilizers. Rain gardens are also a natural habitat for butterflies, birds, and insects.

Before you start

When choosing a rain garden site, decide where the rain garden will filter stormwater from such as a downspout, driveway, or sump pump. The area should receive water regularly from its source during a rainstorm. Be sure to choose a garden site that is at least 10 feet away from building foundations and septic systems to avoid stormwater from draining into these areas.

Find your hardiness zone before selecting your trees and shrubs. Determining your hardiness zone is important to choosing species that will grow properly in your area. Select plants that will add beauty, but also have the ability to thrive in wet soils. Check out the tree wizard for tree and shrub recommendations.

Suitable shrubs for planting

There are numerous plant options to choose from when planting your rain garden.

The sweetbay magnolia is an excellent choice for a rain garden (hardiness zones 5-9). Its creamy white flowers have a light lemon scent and are visible in late spring and early summer. Vibrant scarlet seeds display in the fall, attracting a variety of songbirds.

Another colorful shrub is the redosier dogwood. It grows in a wide range of soils (hardiness zones 2-7). Its fibrous root system provides effective erosion control on banks and slopes. The shrub showcases vibrant red stems that stay through the winter, adding year-round color.

A bird-friendly option is the prairifire flowering crabapple. Long-lasting spring blossoms add variety and color to its year-round beauty. Additionally, this ornamental tree is disease-resistant and able to adapt to numerous climate conditions (hardiness zones 2-7).

Planting the shrubs

Once you've selected shrubs for your rain garden you can start to prepare them for planting. Space shrubs out accordingly. Mulch the area with woodchips that won't drift away and apply two to three inches of mulch. Once the site is mulched, remember to water the plants.

While your plants are absorbing excess rain water, you can relish in the splendor you just created. Designing a rain garden is a sustainable way to add appeal to your landscape and prevent stormwater runoff.

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	Manlius Village
Camillus Town	Marcellus Town
Camillus Village	Marcellus Village
Central Square Village	Minoa Village
Cicero Town	North Syracuse Village
Clay Town	Onondaga County
DeWitt Town	Onondaga Town
East Syracuse Village	Phoenix Village
Fayetteville Village	Pompey Town
Geddes Town	Salina Town
Hastings Town	Solvay Village
LaFayette Town	Sullivan Town
Liverpool Village	Syracuse City
Lysander Town	Van Buren Town
Manlius 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 www.cnyrpd.org/stormwater



Central New York Regional Planning & Development Board

WET WEATHER GETTING YOU DOWN? CHECK OUT THESE FUN ALTERNATIVES TO PLAYING OUTSIDE IN THE DIRT.

Presentation: Houseplant Pests Bugging You

- **Wednesday, June 12, 2019, 7:00 PM - 8:00 PM**

The Master Gardeners of Onondaga County will be delivering a presentation on Houseplants Bugging You? This presentation is free and open to the public.

Please contact the Community Library of DeWitt and Jamesville at 315-446-3578 to register.

Location

Community Library of DeWitt and Jamesville
5110 Jamesville Rd
Jamesville, NY 13078

Master Gardener Plant Sale

- **Saturday, June 8, 2019, 9:00 AM - 1:00 PM**

7th Annual Plant Sale provided by the Master Gardeners of Onondaga County at Beaver Lake Nature Center. Perennials, herbs, ferns and vegetables. All grown locally and reasonably priced.

FREE with admission to Beaver Lake Nature Center. Contact Lisa Lickona, Master Gardener Program & Volunteer Coordinator lm1273@cornell.edu

Location

Beaver Lake Nature Center
8477 East Mud Lake Road
Baldwinsville, New York 13027

Kitchen Herb Garden

- **Tuesday, June 11th, 2019, 11:00 AM - 12:00 PM**

Create your very own customized herb garden. The herbs that you like to use for cooking and grilling can be available all season long, fresh and just outside. Select a container and herbs.

Registration fee: \$7.50

Materials fee varies according to selections.

Location

Carol Watson Greenhouse
2980 Sentinel Heights Rd., LaFayette, NY 13084
315-677-0286



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