



Gardens and Gutters

A Central New Yorker's Guide to Managing Stormwater Runoff

Autumn Leaves: Beautiful to Look At, Valuable to Your Wallet and the Environment!

Inside this issue:

Illicit Discharges and You 2

Can You Spot an Illicit Discharge? 3

Don't Let White Mulch Damage Your Green Infrastructure 4

Phosphorus: A Four-Season Threat to Water Quality 5

CNY Stormwater Coalition 6

Interactive Watershed Model Available for Loan 6

I was fortunate to find myself on a hillside in LaFayette, NY this past weekend. Autumn was in full force, and the view was priceless! I drank it in for as long as I could knowing that very soon, all of that glorious color would fade and fall to the ground.

Fallen leaves carry 50 to 80 percent of the nutrients a tree extracts from the soil and air, including carbon, potassium, and phosphorus. So why not take advantage of them as a natural, free source of nutrients for your lawn? Why not stop paying for chemical fertilizers that your lawn probably doesn't need? Generally, supplemental phosphorus is only needed when establishing a new lawn or when indicated by a soil test. When phosphorus fertilizer is applied to lawns that don't need it, it washes off and can cause water pollution.

Mulching leaves with your lawn mower and leaving the pieces in place to decompose returns natural phosphorus to your lawn along with important organic matter that can improve soil condition.

Applying a two-to three-inch layer of leaves over a garden plot provides several benefits. Leaves hold down weed growth, add organic matter, and protect garden soil from compaction caused by rainfall.

If you find that you simply have too many leaves to mow into your lawn or spread on planting beds, try composting them for use next spring. Rake your leaves into a compost pile. Maintain air circulation in the pile by not compressing the leaves. Next spring, the leaves on the outside of the pile will be largely intact, but the leaves at the

center of the pile will be fairly decomposed and ready to be incorporated into your garden soil.

If leaves cannot be disposed of on your property due to space limitations, check with your municipality to find out if a leaf collection service is available. Always follow curbside pick up schedules for your neighborhood. Some municipalities require that you bag leaves in paper for pick up, and others have placement requirements for leaf piles. Either way, leaves should never be placed in the storm drain, gutter, or street. Under these conditions, loose leaves will blow, flow, and clog storm water catch basins. Any leaves that make their way to local lakes and streams will release nutrients that contribute to the accelerated growth of algae, and negatively impact fish and other aquatic wildlife and habitat. More than 100 water bodies in the state cannot be used for drinking, fishing or swimming because they contain too much phosphorus.



Illicit Discharges and You

What is an illicit discharge?

An illicit discharge is any discharge into a stormwater conveyance system that is not composed entirely of stormwater. An illicit discharge could be the result of someone dumping a pollutant (automobile fluids, paint, wastewater, etc.) into the conveyance system; the result of an illicit connection into the conveyance system, such as a sewer pipe connected to the stormwater conveyance system; or a pipe that bypasses the sanitary connection or septic drain field producing a direct discharge into stormwater systems, lakes or streams.

What is an illicit connection to a stormwater conveyance system?

An illicit connection is an improper physical connection of illicit discharges to the stormwater conveyance system. Examples include: a sewer pipe that is connected to the stormwater conveyance system that produces a continuous discharge of raw sewage to the conveyance system; a shop floor drain that is connected to the stormwater conveyance system producing a discharge of waste water or other inappropriate flows into the storm sewer system.

What are the hazards associated with Illicit discharges?

Illicit discharges can contribute high levels of pollutants to waterbodies. Pollutants commonly found in illicit discharges include raw sewage (viruses and bacteria), heavy metals, toxics, oil and grease, solvents, and nutrients. Pollutant levels from illicit discharges have been shown in EPA studies to be high enough to significantly degrade water quality, close beaches, and threaten aquatic, wildlife and human health. Illicit discharges are a problem because, unlike wastewater that flows through a sanitary sewer pipe to a wastewater

treatment plant, stormwater flows to waterways without any additional treatment

What's being done to combat illicit discharges in my community?

Many communities that operate municipal separate storm sewer systems (MS4s) are required to develop programs to detect and eliminate illicit discharges. This includes mapping catch basins and other MS4 components, adopting an enforceable ordinance that prohibits illicit discharges, developing a plan to detect and address illicit discharges, and conducting an education program on the hazards associated with illicit discharges.

An effective program needs to be both reactive (address spills and other illicit discharges that are found), and proactive (prevent illicit discharges through education and training).

What can I do?

Practice good housekeeping - inside and out! Never dump any waste water, chemicals, or trash on the ground or into a storm drain. Keep debris from clogging your storm drains. This includes yard waste and leaf piles. If you have a pool, make sure to de-chlorinate the water before draining it for the winter, and direct the drainage to a grassy area—not a paved surface or storm drain. If you wash your car at home, do so only on a grassed area, otherwise the soap and dirt you wash from your car will enter into nearby lakes and streams via the closest storm drain.

If you observe illegal dumping/illicit discharges, or if you see anyone pouring something into a storm drain in Onondaga County, call the Onondaga County Pollution Prevention Hotline at 315-435-3157. The hotline is staffed 24-hours a day, seven days a week. Outside of Onondaga County, report illicit discharges to your local code enforcement office or the NYS DEC.

Illicit discharges can occur anywhere; along a back property line, along a streambank, in a wooded area, in a parking lot, or on a driveway. An illicit discharge does not have to be in liquid form. The introduction of any type of debris, or anything other than stormwater runoff into a storm drain qualifies as an illicit discharge and can create pollution, block drainage, and contribute to flooding. Runoff from fire-fighting activities does not qualify as an illicit discharge and is exempt from local enforcement.



Can You Spot an Illicit Discharge?



Discharging anything other than stormwater to a storm drain is an illicit discharge. This includes waste water, paint, oil, solvents, cleaning solutions, and all non-stormwater substances.



Washing your car on your driveway or in the road results in an illicit discharge to the storm sewer system. Wash your car on your lawn, or bring it to a commercial car wash to protect water quality.



Stockpiling unprotected piles soil, mulch, sand or other materials will result in an illicit discharge. It is never advisable to store or dispose of any material in close proximity to a storm drain.



Liquid seepage and trash from dumpsters and garbage cans are illicit discharges and prohibited by local laws in many communities that operate separate storm sewer systems.



This is not an illicit discharge. Fire fighting is exempt from local illicit discharge laws. Protecting the safety of the public is the first and foremost important consideration.



Leaves and yard waste become illicit discharges when they enter storm drains. They also impede drainage and contribute to local flooding problems.



Swimming pool water may contain chlorine, biocides, algaecides and other chemicals. The discharge of chemically treated swimming pool water is an illicit discharge.



Dirt, trash, and automobile fluids that are released into the environment become illicit discharges. Maintain your automobile. Don't litter. Cover exposed soils. It all adds up.

Don't Let White Mulch Damage Your Green Infrastructure



Time to Winterize Your Rain Barrel

Winter is still several weeks away, but the time to prepare your rain barrel for winter storage is NOW! If you have 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 easily find them in the spring. You may also want to rinse out the barrel in order to remove any sediment. If you are storing the rain barrel outside, turn it upside down to keep out rain, ice, and snow. If possible, weigh 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 flow away from the foundation of your home. Attach another piece of downspout if necessary.

Winter Rain Garden Protection

Even though your plants are dormant throughout the winter months, avoid shoveling snow on the 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 when the snow melts in the spring.

Avoid using chemical deicers and limit the use of rock salt and grit along areas that drain into your rain garden. It may be necessary to rake any accumulations of grit that settle into your rain garden from public roadways in the spring.



A demonstration section of porous pavement in Lake George, NY shows the effective performance of the material during the winter months; ice and snow does not build up on the surface of the material to the degree that it does on the conventional surface areas surrounding the porous section.

Pervious Pavement? No Problem!

Snow melts faster on pervious walkways and driveways than it does on conventional pavements, but it's still necessary to shovel or plow following snow storms. Sand should not be applied for traction control, and salt should be used in moderation. Pervious surfaces work well in cold climates because the open void spaces provide rapid drainage thereby reducing the occurrence of freezing puddles and black ice. These design properties are diminished or lost when sand, silt and sediment are allowed to fill void spaces by accumulating on surface areas.

Phosphorus: A Four-Season Threat to Water Quality

Phosphorus is one of the leading causes of water pollution in Central New York. One of the primary sources of phosphorus is lawn fertilizer. Excess phosphorus in freshwater lakes and ponds can cause algae overgrowth, with serious impacts to the environment and public health.

- Heavy mats of algae deplete the water of oxygen that fish need to survive.
- Algae overgrowth makes water recreation unpleasant and potentially harmful.
- Algae growth may cause carcinogens to form in drinking water during chlorination.
- Phosphorus feeds blooms of toxic algae, creating health risks to people and animals.

Across the state and throughout the country, communities that operate Municipal Separate Storm Sewer Systems (MS4s) that discharge to waters impaired by phosphorus, such as Onondaga Lake, are working to reduce the amount of phosphorus leaving their systems. This is an important effort that supports the attainment of water quality standards for drinking, fishing, swimming, and other non-contact recreational uses, such as boating.

MS4s have limited options for reducing phosphorus: they can implement very costly stormwater retrofit projects, or they can work with their residents, businesses and commercial entities to eliminate phosphorus inputs at the source.

Recently, NYS adopted a new law prohibiting the use of lawn fertilizer containing phosphorus for any use other than establishing a new lawn. Because phosphorus

is naturally occurring in CNY, supplemental phosphorus fertilizers are typically not needed to maintain healthy lawns. When you or your neighbor applies phosphorus fertilizer where it is not needed, the fertilizer, and your money, wash off of your lawn and flow into nearby lakes, ponds and streams when it rains.

Support municipal efforts to protect and improve water quality and responsible spending by getting on board with zero phosphorus lawn care.

Learn more, then take action. The following websites will help you get started.

- **General information on the phosphorus runoff Law:**

www.dec.gov/chemical/67239.html

- **Frequently asked questions about lawn fertilizer:**

www.dec.ny.gov/chemical/74885.html

- **Green lawns and gardens**

www.dec.ny.gov/public/44290.html

- **Blue-green harmful algal blooms**

www.dec.ny.gov/chemical/77118.html

- **CNY Stormwater Coalition**

www.cnyrpdb.org/stormwater



Beautiful autumn foliage frames a freshwater pond impaired by phosphorus. The heavy mat of algae blanketing the water can deplete oxygen needed by fish to survive, negatively impact recreation, and create health risks for people and animals.

CNY Stormwater Coalition

The CNY Stormwater Coalition was formalized in 2011 in order to establish a regional approach for stormwater management and water resource protection. The Coalition is made up of 28 local governments and the NYS Fairgrounds. Each member operates a Municipal Separate Storm Sewer Systems (MS4). Through the Coalition, members are working together to meet regulatory requirements while improving water quality.

CNY STORMWATER COALITION MEMBERS

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

You're invited to attend the next CNY Stormwater Coalition Meeting

The CNY Stormwater Coalition meets quarterly throughout the year. Meetings are held on Tuesday afternoons from 1:00 to 2:00 at various municipal buildings around the region. All meetings are open to the public, and your attendance and participation are always welcomed! The next meeting is scheduled for November 17, 2015. The location will be posted on the CNY Stormwater website at www.cnyrpd.org/stormwater



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.



Central New York Regional Planning & Development Board

Interactive Watershed Model Available for Loan

The CNY Stormwater Coalition recently purchased a tabletop watershed model for use at public events. The Coalition is pleased to make the model available for use by other groups that are interested in promoting water resource management through education. The interactive model requires a responsible, live body to set up and perform the runoff demonstrations. The model is relatively easy to transport and set up., and demonstrations can be tailored to your audience and message.

If your group would like to borrow the model for an upcoming event, E-mail Kathy Bertuch at Bertuch@cnyrpd.org to make arrangements.

The model unit includes: nonpoint source landscape top (topographical map) with storm drain pipe, clear base, houses, barn, factory, drain pipe, treatment plant, trees, golf flags, cows, cars and best management practices such as buffer strips, clay berms, manure container, soil, oils and chemicals (cocoa, drink mixes and oil mix), bridges, water catcher, rainmaker, water plug, and User's Guide.

Stormwater pollution and runoff are visually apparent when rain falling over the landscape carries soil (cocoa), chemicals (colored drink mixes) and oil (cocoa and water mixture) through a watershed to a body of water. Stormwater runoff and storm drain functions are also addressed.

Best management practices include felt buffer strips as vegetation, clay to create berms and other methods to show conservation and water pollution prevention measures at work. The model shows nonpoint source pollution and the steps everyone can take to help prevent environmental contamination.

The model also teaches the overall watershed concept. Two waterways flow into a larger water body, which is representative of a lake, river, bay, or ocean. The unit comes complete with a kit containing everything you need to demonstrate the movement of water through a watershed and the pollution that runoff may cause.

