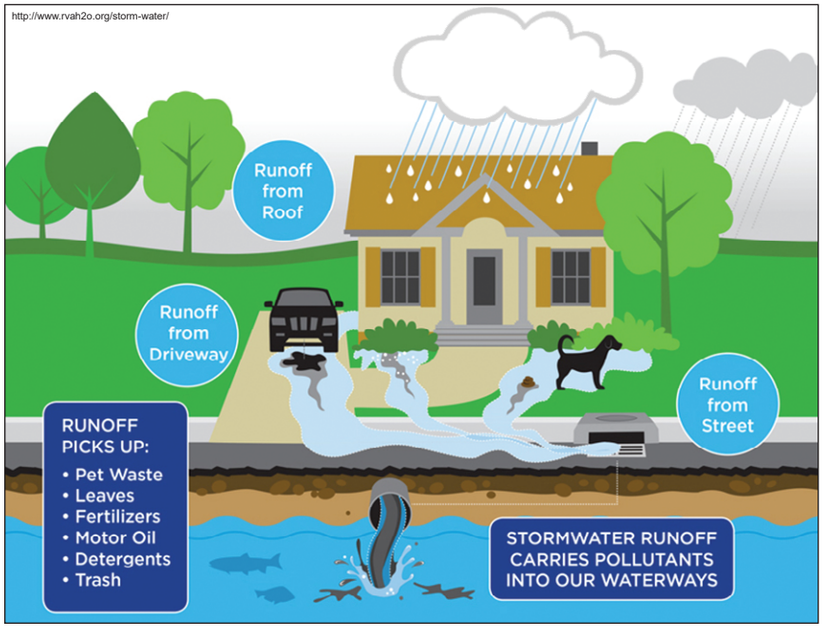
Earth Day 2017: Central New Yorkers are Making Smart Decisions to Protect Water Resources

Stormwater runoff is water from rainfall and snowmelt that flows across the land surface, finding its way to a nearby ditch or waterbody such as a river, stream, lake or pond. As landscapes become more developed, areas that once absorbed rainwater and snowmelt are replaced by impervious surfaces such as rooftops, driveways, parking lots and roads. Additionally, land is often compacted and leveled during construction, removing natural depressions in the landscape that once trapped rainwater and gave it time to seep back into the ground. As development increases, so does the rate and volume of stormwater that runs off into nearby waterbodies

Stormwater is a significant source of surface water pollution in Central New York. As stormwater runoff is collected and conveyed through stormwater sewer systems to our lakes and streams, it picks up pollutants such as soil particles, oil, pesticides, lawn fertilizer, litter, and bacteria from pet waste. The type of pollutants found in stormwater depends on nearby land use. Nutrients from lawn fertilizer, and bacteria and pathogens from pet waste are pollutants of concern that often end up in our local waterbodies. When nutrients are absorbed by stormwater and flow into surface water



they promote the growth of algae which restricts natural vegetation, depletes oxygen, and kills fish. Bacteria and pathogens from pet waste can also cause unsafe conditions for people, wildlife and aquatic life.

Polluted stormwater discharged from storm sewers directly to local streams, lakes, and rivers impacts drinking water, recreation, and fish and wildlife habitat. It would be prohibitively expensive for local communities to treat and remove pollutants from stormwater. The best way to address stormwater pollution is to prevent it. The following pages contain simple steps that you can take to protect water resources.

MUNICIPALITIES ARE WORKING TOGETHER

The NYS DEC, as directed by the U.S. EPA, has implemented a program to protect and improve surface water resources by reducing stormwater pollution and runoff. Public education and municipal stewardship are key components to the success of this program. The Central New York Stormwater Coalition is made up of twenty-nine municipal separate storm sewer system (MS4) operators in Onondaga and Oswego Counties. Coordinated by the Central New York Regional Planning & Development Board, Coalition members are working cooperatively to meet regulatory requirements. In the process, they are sharing services, reducing costs, and improving water quality throughout Central New York.

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
Syracuse City
Van Buren Town
NYS Fairgrounds

Landscaping Tips for Protecting Local Lakes and Streams

- Use only phosphorus-free fertilizer.
- Save time and money by testing your soil before applying fertilizer and only apply it when needed. Most soils in New York State have an adequate level of phosphorus to support a green, healthy lawn.
- If lawn fertilizer is needed, apply it only in the fall so that the grass develops a strong root system.
- Never apply fertilizer before a rain storm.
- Don't apply fertilizer on sidewalks, driveways or other impervious surfaces and be sure to sweep up any accidental spillage.
- Application of any fertilizer on lawns or non-agricultural turf within 20 feet of a water body is restricted unless there is at least a 10-foot buffer of shrubs, trees, or other plants between the area you are fertilizing and the water.
- Properly dispose of all pet waste and encourage others to do the same.
- Capture rainwater in a rain barrel to reduce runoff.
- Use mulch, bricks, gravel, or other pervious surfaces for walkways, patios, and driveways. This will allow water to seep into the ground, helping to filter pollutants while reducing the amount of runoff.
- Plant groundcover on steep slopes and apply mulch to bare soil, such as under trees.
- Clean up automobile oil spills on the driveway. Instead of using soap and water, spread cat litter over the oil, sweep it up and then throw it away in the trash.
- Sweep grass clippings, fertilizer, and soil from driveways and streets back onto the lawn to keep them away from the storm drain.

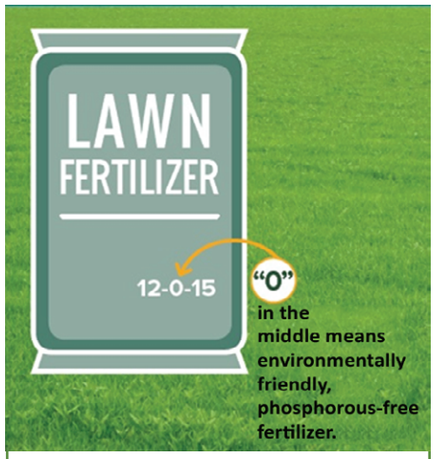
Small Choices Can Make a Big Impact!

When it rains, paper, plastic bottles, leaves and other litter left on the street are washed down storm drains and into local lakes and streams. Help keep our waters clean by preventing litter. Onondaga County's Connect the Drops program offers good advice for keeping our waterways free from litter. Visit their website at http://savetherain.us/drops to learn more.

the CONNECT DROPS Save the Rain

A HEALTHY APPROACH TO LAWN CARE WITHOUT THE PHOSPHORUS

Phosphorus fertilizer can boost the health of plants when applied at proper rates and at the appropriate times. When used in excess or at the wrong time, it can get washed into lakes and streams where it harms fish and other aquatic life. As you start planning your landscaping and garden projects, remember that New York State law limits the use of phosphorus lawn fertilizer to establishing a new lawn or on lawns where a soil test has shown that phosphorus is lacking. The law also prohibits the use of all fertilizer between December 1 and April 1.



Purchase phosorus-free fertilizer for your lawn.
The first number on a fertilizer bag refers to nitrogen (N), the second is phosphorus (P) and the third is potassium (K). A product labeled 22-0-15 contains 22 percent nitrogen, 0 percent phosphorus, and 15 percent potassium.

Phosphorus is one of the leading causes of water pollution in New York State. Even if you live far from a lake or stream, rain and melting snow can transport phosphorus and other pollutants from your yard to a waterbody through stormwater runoff. Too much phosphorus causes algae blooms that make the water appear green and that reduce opportunities for recreation and tourism. More than 100 waterbodies in the state cannot be used for drinking, fishing or swimming because they contain too much phosphorus.

ONONDAGA COUNTY STORMWATER POLLUTION HOTLINE

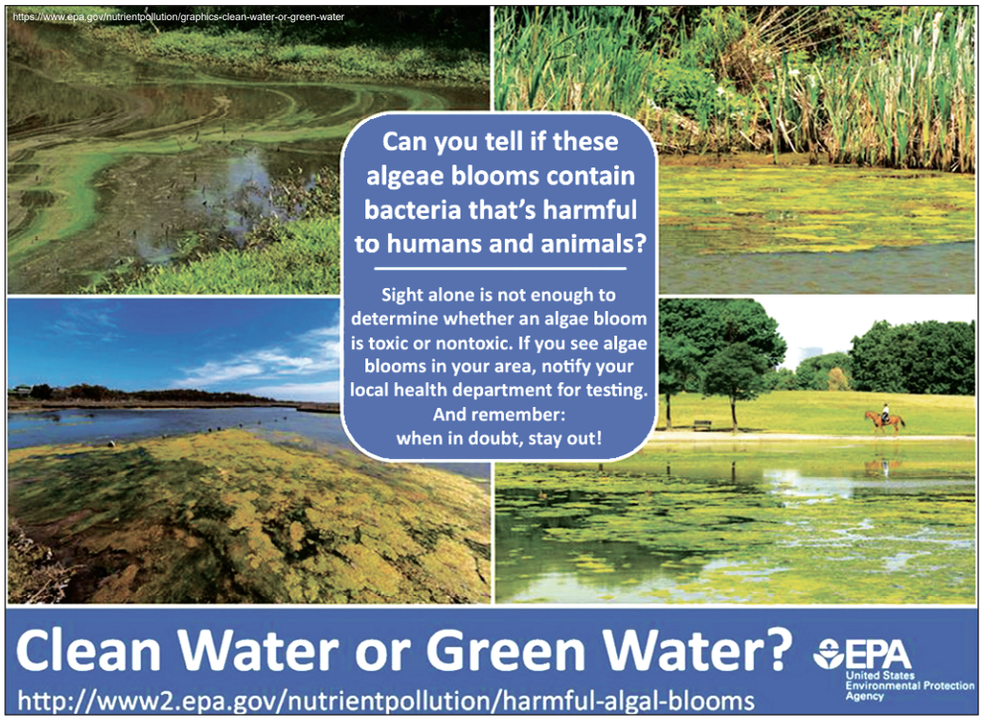
Any discharge into a storm drain system that is not composed entirely of stormwater can threaten human health and the environment. Stormwater runoff can contain pathogens, nutrients, and various toxic pollutants. Unlike sanitary sewer systems which flow to a wastewater treatment plant, storm sewers flow directly to our waterways. If you suspect someone has discharged contaminants such as cleaning chemicals, paint, or petroleum products to a storm sewer or catch basin, contact the Onondaga County Stormwater Pollution hotline at **315-435-3157**. The hotline is staffed 24-hours a day, seven days a week by the Onondaga County Office of Water Environment Protection.

UNDERSTANDING HARMFUL ALGAE BLOOMS (HABS)

Several lakes in Central New York have experienced harmful algae blooms in the past few years. This condition is often featured in local newspapers when it causes the temporary closure of recreation areas for swimming and boating, or more significantly, when it impacts public drinking water supplies.

Although most algae are harmless and are an important part of the food web, certain types of algae can grow quickly and form blooms, which can cover large portions of a lake. Even large blooms are not necessarily harmful. However, some species of algae can produce toxins that can be harmful to people and animals that come into contact with, or drink the affected water. Blooms of algae species that produce, or have the potential to produce, toxins are referred to as harmful algal blooms (HABs). HABs most often occur in nutrient-rich waters, particularly during hot, calm weather.

In addition to health issues, HABs cause unpleasant appearances and odors which can result in economic hardship for shoreline businesses when recreational opportunities are restricted. HABs also cause problems for fish and other aquatic organisms by reducing oxygen levels. The only way to tell the difference between HABs and non-harmful algae blooms is through a laboratory analysis, but that's not often practical. To be safe, the NYSDEC recommends that people, pets and livestock avoid coming in contact with or drinking water from a lake or stream with an algae bloom.



SMART TIPS FOR LAKE USERS

Although scientists still have a lot to learn about what triggers algae blooms, here are a few guidelines for lake users:

- 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 you or your pet comes in contact with the water, rinse carefully to remove the algae.
- Never drink untreated surface water, whether or not algae blooms are present. Untreated water might contain bacteria, parasites or viruses that could cause people and animals to become sick.
- In-home treatments such as boiling water, disinfecting it with chlorine or ultraviolet light, and water filtration units do not protect people from HAB toxins.
- Contact your doctor immediately if you have symptoms such as vomiting, nausea, diarrhea, skin, eye or throat irritation, allergic reactions or breathing difficulties after drinking or having contact with blooms or untreated surface water. Report these health symptoms to NYS Health Department (harmfulalgae@health.ny.gov) and your local health department.
- If you think that you have seen a HAB or you, your family, or pet has been in contact with a bloom, report it to the NYSDEC. Additional information is available at the following link: http://www.dec.ny.gov/chemical/77118.html.
- Shoreline homeowners are encouraged to lower nutrient levels in the lake by controlling stormwater runoff, minimizing fertilizer applications, and through the routine maintenance of on-site septic systems.

http://www.apawabovedogtraining.com/

RESPONSIBLE PET CARE BENEFITS EVERYONE

Stepping in dog waste can be a nasty experience. Even worse is the knowledge that dog waste may be polluting our drinking water, local swimming areas, and favorite fishing areas. Scooping your dog's waste isn't just a courtesy for those walking behind you; it also keeps our water resources safe.

Pet waste pollutes local water resources and can be a significant public health risk! When rain or snowmelt flows over land surfaces it carries pet waste to storm drains, which eventually flow into nearby lakes, streams, and wetlands. The polluted runoff contains harmful bacteria and pathogens that can cause illness, and nutrients such as phosphorus and nitrogen that can make lakes and streams unsafe for drinking and swimming by promoting the growth of unwanted algae and rooted aquatic plants in lakes and streams.

If you are a dog owner, help protect local water resources by cleaning up after your pet. Always bring a plastic bag with you when you walk your dog. Use the bag like a glove, pick up the pet waste, turn the bag inside out, and seal it. Then place the bag in the trash or flush the un-bagged waste down the toilet. Never place the dog waste (bagged or un-bagged) in the storm drain! Storm drains lead directly to streams, rivers, lakes and wetlands.

IT'S GOOD BUSINESS TO PROTECT WATER RESOURCES

Implementing safe environmental measures in your office, shop or restaurant is a good investment. Here are a few simple tips for your business or job site that will help keep Central New York water resources healthy and free of pollutants.

- Keep the dumpster area clean and the dumpster lid closed. Never fill it with liquid waste. Dumpsters and garbage cans should be placed in protected areas to avoid exposure to precipitation and wind. When possible, store the dumpster under cover or inside to prevent exposure to rain and snow.
- Clean your floor mats, filters and garbage cans in a mop sink, wash rack, or floor drain connected to the sewer through a grease trap. Never wash them in a parking lot, alley, sidewalk or street where the waste could flow into surface or groundwater.
- During vehicle maintenance, place drip pans underneath to capture fluids. If spillage does occur, clean the area by sweeping and using absorbent materials. Never use a hose to clean up spills.
- Recycle grease and oil. Don't pour it into sinks, floor drains, or onto a parking lot or street. Always keep grease bins covered and contained.
- Keep your liquid wastes separated. Many automotive fluids can be recycled through hazardous waste disposal companies if they aren't mixed.
- Recycle solvents, oil and used filters, anti-freeze, batteries, lubricants and metal filings. Contact a licensed hazardous waste hauler for additional guidance.

Gardens and Gutters—Your Local Stormwater Connection

Gardens and Gutters is the electronic newsletter of the CNY Stormwater Coalition. Distributed by e-mail four times a year, each edition is filled with informative articles, seasonal stormwater management tips, upcoming events and links to useful tools and resources you might otherwise not be aware of.

CNY Stormwater Coalition

Gardens and Gutters

A Central New Yorker's Guide to Managing Stormwater Runoff

Volume 1 Issue 3

Autumn 2015

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

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I was fortunate to find myself on a tribute in Los Angeles, NY this past weekend. As I came down to Earl Stone, and the view was breathtaking. The trees, the leaves, the ground browning that very soon, all of this glorious color will be gone for the winter.

Fallen leaves carry 30 to 60 percent of the nutrients a tree extracts from the soil and air, including carbon, potassium, and phosphorus. Left on the ground, fallen leaves are a natural, free source of nutrients for your lawn and garden. Instead paying for chemical fertilizers that are expensive, contribute to pollution, and can be harmful to humans, pets, and wildlife, rake or mow leaves or when indicated by a soil test, add phosphorus fertilizer. Phosphorus is a nutrient that doesn't travel. It washes off and can cause water pollution.

Mulching leaves, or mow, leave mower and leaving the pieces in place to decomposes and return nutrients to the soil. Leaves, along with important organic matter that improves soil structure.

Applying a two to three inch layer of leaves over a garden plot provides several benefits. Leaves hold down weed growth, add organic matter to the soil, and slowly release nutrients contained in the leaves.

If you find that you simply have too many leaves, you can compost them in a dedicated planting beds. Ivy composting there for use next spring. Rake your leaves into a compost pile. Maintain an consistent on the pile by not overpowering the leaves. Turn the pile every two weeks. Depending on the pile will be largely rotted, 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 see if a fall leaf collection service is available. Always follow curbside pick up schedules for your leaves. Do not place leaves in storm drains, some that you bag leaves in paper for pick up, and others have placement requirements. Leaves, grass, and other yard waste should never be placed in the storm drain, gutter, or street. Under these conditions, leaves can be washed into the storm drain, storm water catch basins. Any leaves that make their way to local lakes and streams can cause water quality problems, such as accelerated growth of algae, and large or lively 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.

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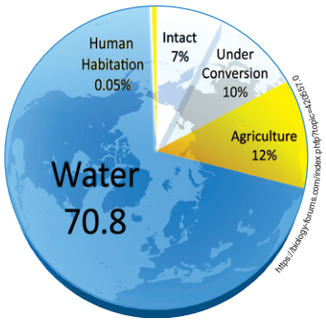
To subscribe, send an e-mail to **stormwater@cnyrpdb.org** with the word "subscribe" in the subject line. If you are not satisfied with the content, simply respond to the unsubscribe link that is part of every edition.

Hurry! The Spring edition will be out soon!



https://biology-forums.com/index.php/blog/entry-42663-0

April 22 is Earth Day. Nearly 71% of the earth's surface is covered with water. The best gift you can give to future generations is fresh water.

Central New York Stormwater Coalition

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