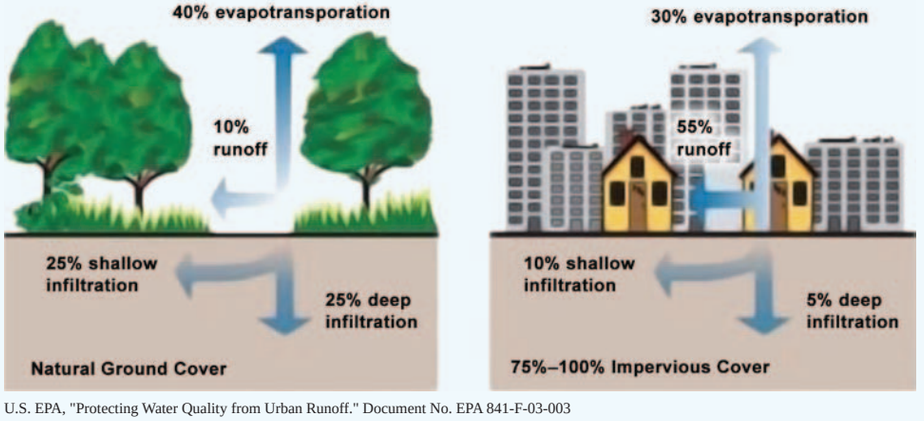
Stormwater Pollution Prevention

What is Stormwater Runoff?

Stormwater runoff is rain water or snowmelt that doesn't soak into the ground. Instead, it flows across the land surface, absorbing pollutants along the way before entering lakes and streams. As it travels across impervious surfaces, stormwater carries trash and pollutants such as sediment, nutrients, pesticides, oil, and gasoline to local lakes, streams, rivers, and wetlands. This untreated waste makes water unsafe for drinking and water-based recreation. People and animals may become sick from drinking the water or from eating the fish from contaminated lakes and streams. Stormwater runoff also contributes to flooding and can lead to expensive repairs for municipalities and homeowners.



U.S. EPA, "Protecting Water Quality from Urban Runoff." Document No. EPA 841-F-03-003

Why is Stormwater Runoff a Problem in Central New York?

With the growth of Syracuse and surrounding suburbs, paved surfaces have replaced forests, wetlands, and fields. Much of the landscape is now covered by impervious surfaces—such as sidewalks, parking lots, roads, driveways, and buildings—which cause water runoff to flow into storm drains instead of seeping into the soil.

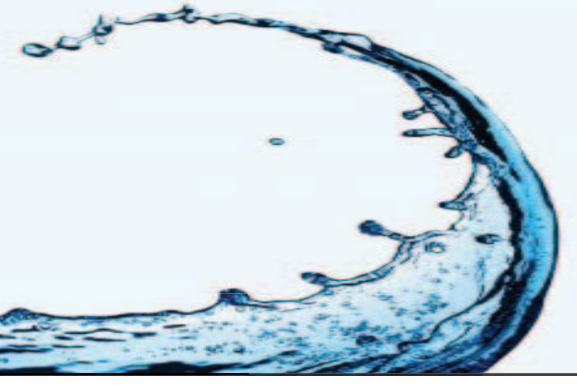
Runoff from impervious surfaces has become a major source of water pollution in local lakes and streams. Storm drains transport stormwater (often carrying pollutants) into Onondaga Lake and other waterbodies in Central New York. Impervious surfaces within a typical city block can generate five times more stormwater runoff than a forested area of the same size. Increased runoff after a heavy rainfall or rapid snowmelt in the spring can also lead to dangerous flooding and expensive repairs for municipalities and homeowners.

What are the Sources of Stormwater Pollution?

Stormwater pollution can originate from a variety of sources. Overuse of pesticides, herbicides and fertilizers (especially phosphorus) on lawns, gardens and agricultural fields can pollute local waters. Bacteria can originate from animal waste, poorly maintained septic systems and illicit connections to storm sewer systems. Oil and grease from poorly maintained vehicles and sediment from construction activities can threaten the health of aquatic life and habitat.

You Can Help by Making a Personal Commitment to Cleaner Water

By providing opportunities for stormwater to be absorbed or infiltrate into the soil, you can help reduce the flow of stormwater from your property and help improve water quality. Plants and naturally occurring microbes in soil will filter and break down some common pollutants found in stormwater. Trees and bushes slow the flow of stormwater runoff which reduces the potential for erosion and flooding. The roots absorb water and the leaves facilitate evapotraspiration. In addition to improving water quality, vegetation can boost property values and promote tourism. Clean, fresh water is not only essential for human health, it adds to the quality of life in Central New York.



Central New York Regional Planning & Development Board

Home and business owners, builders, and municipalities are working to control stormwater runoff in order to protect water resources, human health, and aquatic habitats. You can make a significant impact in your community. Keeping stormwater on site and out of storm drains will save money for municipalities by reducing maintenance and repair costs for drainage ditches, bridges, and roads. Reducing the amount of phosphorus fertilizer and sediment in stormwater runoff will improve the quality of local waters by reducing the number of algae blooms and improving aquatic habitat. Become part of this positive initiative by following these simple recommendations.

Car Maintenance

Keep your car engine well-tuned to prevent fuel and oil leaks from seeping into the ground or entering storm drains during a rain event. Fill your fuel tank slowly and don't "top off" or overflow the tank. Store oil, gasoline, antifreeze and other automotive products in tightly sealed containers in order to avoid leaks and spills and never put gasoline, oil, gardening products, pesticides and other household waste down the storm drain. If you need to wash your vehicle, use a commercial car wash or wash it on a lawn to avoid having the water drain directly into the storm sewer.

The Benefits of Rain Gardens

Rain gardens are landscaped areas that are planted with native, water tolerant plants. Rain gardens soak up rainwater when it flows off of roofs and pavement. During storm events or when the snow melts in the spring, the water flows into rain gardens where it has time to gradually seep into the soil rather than flowing into storm drains. Compared to a traditional lawn, rain gardens allow about 30% more water to soak into the ground, thereby reducing the threat of flooding and potential harm to aquatic habitats.

Home and Yard Care

You can reduce the amount of stormwater runoff from your property by taking simple actions to keep stormwater on site. Divert roof water to a rain barrel with an attached soaker hose. Use it to water plants in the early morning or late afternoon in order to minimize evaporation and make every drop count. Plant a rain garden or simply increase the amount of vegetation around your home to promote soil infiltration. Conserve water by sweeping sidewalks and driveways rather than using a hose.

Never dump trash into street gutters or storm drains because they transmit water directly to nearby lakes and streams. Be sure to remove leaves from rain gutters to avoid water overflow and erosion problems. If you have plans to replace paved surfaces such as driveways and patios, consider using porous material such as small blocks, porous paving asphalt, cobbles or gravel, wooden decking, brick, paving stones, mulch, grass or other natural ground covers. Using these materials will reduce the volume of runoff by allowing water to slowly infiltrate through the soil.

Be sure to clean up after your pet. Scooping your dog's waste isn't just a courtesy—it also helps to protect water resources. Pet waste left on the ground gets carried away by stormwater runoff when it rains. This can add bacteria, parasites and viruses to local lakes and streams. Bacteria and other pathogens from septic systems or pet waste can create unhealthy conditions for people and animals and can cause beach closures.

The Benefits of Rain Barrels

Rain barrels are used to collect and store rainwater that flows off of roofs. They are useful in reducing the amount of stormwater runoff from individual properties and the water can be used to irrigate flower gardens, trees, or lawns. Roof water may contain contaminants, so the rain barrel water should be used on non-edible plants such as landscape flowers and bushes, but not for vegetables.

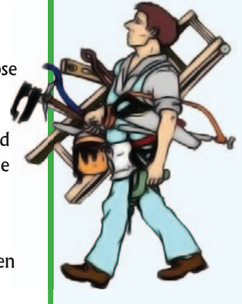
Home Improvement Projects

If you are planning a home improvement project, simple actions can help protect local lakes and streams. For example, protect storm drains from debris and other construction materials. Sweep up and properly dispose of yard waste and construction debris such as concrete and mortar. And never put your household or construction waste down a storm drain.

Use paints, solvents, and cleaners in the smallest amounts possible and follow the directions on the label. Clean up spills immediately and dispose of the waste safely.

Be sure to store household substances in tight, secure containers to avoid leaks and spills and use non-toxic, biodegradable, recycled and recyclable products whenever possible.

Clean paint brushes in a sink, not outdoors where the cleaning product can pollute surface and ground water. Filter and reuse paint thinner when using oil-based paints. When possible, dispose of excess oil-based paints through household hazardous waste collection programs. To dispose of latex paint, leave the container in a ventilated area until the paint is completely dried. When the paint is solidified, put the entire container in the trash. Slow the volume of stormwater runoff by directing downspouts away from driveways and other paved surfaces and in the direction of nearby lawns or rain barrels.



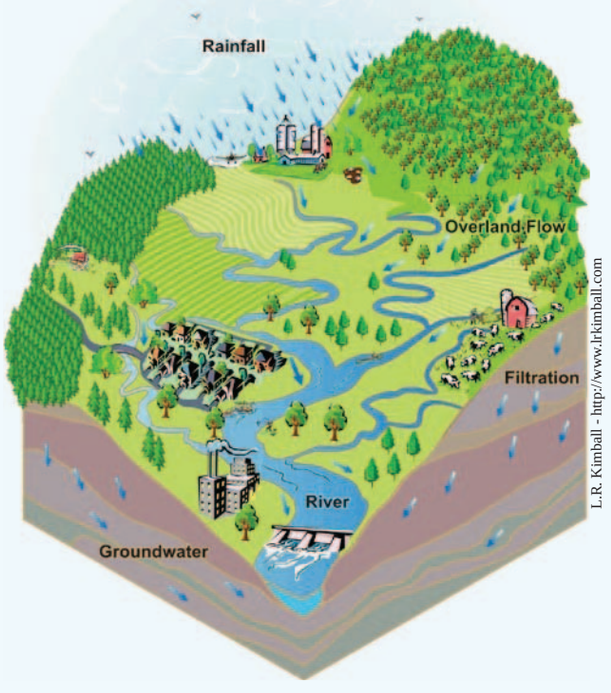
Trees and Bushes

Did you know that trees can reduce rain water runoff by 15 to 35 percent? In urban areas, a deciduous tree can intercept up to 750 gallons of stormwater runoff per year. A mature evergreen can intercept up to 4,000 gallons! If you live along a lake or stream, plant bushes along the shoreline. The roots will slow the rate of stormwater runoff and will reduce soil erosion. The plantings will also improve wildlife habitat.

Municipal Participation in Stormwater Management

The control of stormwater runoff is a national priority. A federal regulation, commonly known as Stormwater Phase II, requires permits for stormwater discharges from Municipal Separate Storm Sewer Systems (MS4s) in urbanized areas and for construction activities disturbing one or more acres. To implement the law, the NYS Department of Environmental Conservation has issued two general permits: one for MS4s in urbanized areas and one for construction activities. The permits are part of the State Pollutant Discharge Elimination System (SPDES).

Municipal officials are working hard at the local level to protect water resources through better stormwater management. Throughout Central New York, municipalities are making provisions to allow the use of permeable paving materials on public projects when conditions are appropriate. Developers are being asked to incorporate more green spaces in new developments and to avoid disturbing existing vegetation that naturally slows and infiltrates stormwater runoff. Municipal turf management programs no longer rely on the routine use of pesticides and chemical fertilizers. Roadway maintenance crews routinely remove trash and debris from storm drains and culverts. This reduces stormwater backups, road hazards, and the threat of flooding. These efforts are designed to improve water resources through the control of stormwater runoff.



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Stormwater Pollution Hotline

The direct discharge of anything other than stormwater to a storm drain is called an illicit discharge. Illicit discharges to storm sewers are a problem because the waste generally flows directly to local waterways without any additional treatment.

A Stormwater Pollution Hotline has been established for reporting illicit discharges to surface water collection systems within regulated Municipal Separate Storm Sewer Systems (MS4) in Onondaga County. If you suspect someone has illicitly discharged contaminants such as chemicals, construction materials, paint, or petroleum products to a storm sewer or roadway, please contact the Onondaga County Stormwater Pollution Hotline at 435-3157. The hotline is manned 24-hours a day, seven days a week.

For additional information about Onondaga County's rain barrel program and green infrastructure, refer to Onondaga County's "Save The Rain" website at http://savetherain.us.

Municipal Participation in a Stormwater Coalition Protects Water Resources While Saving Time and Money!

28 municipalities in the three-county Syracuse Urbanized Area have signed an intermunicipal agreement to establish a stormwater coalition. The Central New York Intermunicipal Stormwater Coalition, organized by the Central New York Regional Planning and Development Board, is a cost-effective and efficient way for local municipalities to reduce stormwater runoff and improve water quality. Through the Coalition, municipalities are creating opportunities to share services and reduce costs.

STORMWATER PHASE II SYRACUSE URBAN AREA

This information is provided by the Central New York Regional Planning and Development Board on behalf of the Towns of Camillus, Cicero, Clay, DeWitt, Geddes, Hastings, LaFayette, Lysander, Manlius, Marcellus, Onondaga, Pompey, Salina, Sullivan, and Van Buren; the Villages of East Syracuse, Central Square, Fayetteville, Liverpool, Manlius, Marcellus, Minoa, North Syracuse, Phoenix, and Solvay; the City of Syracuse; and Madison and Onondaga counties.