

What's the big deal about stormwater?

If you live in one of the Orange County municipalities listed below, your community has been designated a **regulated MS4** (Municipal Separate Storm Sewer System) under the new Phase II Stormwater Regulations.

City of Middletown	Town of Wawayanda
City of Newburgh	Town of Woodbury
Town of Chester	V. of Cornwall on Hudson
Town of Cornwall	V. of Greenwood Lake
Town of Highlands	Village of Harriman
Town of Monroe	V. of Highland Falls
Town of Montgomery	Village of Kiryas Joel
Town of Mount Hope	Village of Monroe
Town of New Windsor	Village of Otisville
Town of Newburgh	Village of Walden
Town of Wallkill	V. of Washingtonville
Town of Warwick	

This means that the town, city or village in which you live needs a permit under the State-wide Pollutant Discharge Elimination System (SPDES) in order to discharge **stormwater**. **Stormwater run off** is the rainwater that falls onto lawns, rooftops, roads, driveways, parking lots, and other outdoor surfaces, and is not soaked up by the soil.



What happens to all of this water? Most of it flows into storm drains, which often flow directly into a stream or lake, and ultimately, to a river such as the Hudson. It can carry with it sediment, trash, oil and

hydrocarbons, metals, nutrients such as phosphorus and nitrogen, potentially harmful bacteria, and toxic substances into these water resources. This water may then become muddy, harmful to fish and wildlife, and unsafe for recreation. This is known as **nonpoint source pollution**. Although you may think of a stormwater discharge pipe as a point source because the outflow enters a stream at a



single point, contaminants in the pipe are accumulated from all over the surface of the **watershed** (area of land drained by a given stream or outfall pipe). Rain or snowmelt picks up pollutants and carries them downhill in pathways that flow together to one location.

How can I minimize stormwater pollution?

Many people do not realize it, but there are a number of simple things that homeowners can do to minimize water pollution.



Home repair

If you are a do-it-yourselfer, use non-toxic, biodegradable products. Before you begin an outdoor project, locate storm drains and be sure that they are protected from any materials that the work may produce, including mortar, concrete, debris, and other substances. Paint brushes and other application tools should be cleaned indoors rather than washed outside with the hose.





Don't litter. Recycle or dispose of trash properly.

This includes not only metals, plastics, paper, and glass, but also hazardous materials such as batteries, paints, and other household chemicals. Contact Orange County Environmental Facilities & Services at (845) 291-2643 to find out about County hazardous waste days, or visit the County's website at www.co.orange.ny.us for more information.



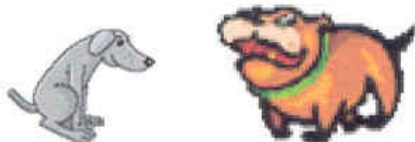
Gutters and sump pumps

Collect roof runoff in rain barrels, and then utilize this water later on to water your garden. Rain barrels to which you can hook up a garden hose can be purchased or constructed. **OR**

Direct water to grassy or vegetated areas rather than down the driveway and into the street. Lawns will soak up much of the water and cleanse it of pollutants.

Pet waste

Flush it down the toilet. Animal waste material is rapidly absorbed by rainfall and carried into storm drains. The nutrients in it encourage the growth of pathogens and



Swimming Pools

Before you drain your pool, test the water to make sure that chlorine is not detected. Then direct the drainage to a sanitary sewer, if possible.



Outdoor chemicals



Always store chemicals and cleaning products in a covered area, where any leaks can be contained.



Septic systems

Have your septic inspected at least every two years. A malfunctioning septic system can contaminate not only groundwater, but surface water as well. Generally, septic tanks must be pumped every 3 to 5 years at a minimum.

Don't plant trees or park vehicles over your septic absorption field—this can damage the pipes and lead to leaks.

Refrain from pouring any household chemicals, gasoline, oil, pesticides, or antifreeze down the drain or into toilets; these substances will inhibit the action of bacteria that keep the septic tank system functioning. Additionally, avoid disposing of diapers, cat litter, coffee grounds, cigarettes, feminine hygiene products, and grease into a septic system; they will clog the system's components.



Your lawn and yard

When applying pesticides, do so in dry, calm weather. Follow the recommended application rate on the label.

Spread grass clippings back on the lawn. This returns nutrients to the soil.

Otherwise, sweep up yard waste rather than spraying it off the driveway with a hose. Plant debris can be used as mulch or turned into compost.



Don't apply fertilizer right before rain, it will be washed out and wasted. It takes time for biochemical processes in the soil to incorporate fertilizer.

Select native grasses and other plants—they tend to require less water and less fertilizer.

Test your soil - do you really need fertilizer?

Good farmers test their soil before they invest in fertilizer or manure. Find out the blend of nutrients your lawn needs. Call Cornell Cooperative Extension for an inexpensive soil test, at (845) 344-1234.

Excess fertilizer is not taken up by plants, but runs off into streams and lakes, where it leads to algae growth and fish kills. Fertilizer can also leach into groundwater, the drinking water supply for most of Orange County.



Conservation planting

When soil is washed off the surface of the land and into a water body, it becomes a pollutant itself. If you have planted grass seed in a bare soil area, keep it covered with a tarp or burlap until germination occurs, especially during the winter. Don't mow your lawn to the edge of a stream—maintain trees and shrubs near the edge of the bank. These plants have deeper roots more capable of holding soil in place.



Washing your vehicle

Do it on the lawn, not in the driveway. Soaps and accumulated "dirt" can harm our waterways, but lawns filter out these contaminants. **OR**



Better yet, go to a car wash where the dirty water can be properly discarded.

Maintaining your vehicle

Use only as much windshield washer fluid as you really need.

Check periodically for leaking oil, gasoline, engine coolant, and transmission, brake, and power steering fluids.

Use cat litter, sand, or other absorbent material to clean up oil or chemical spills.

Don't pour used automotive liquids into storm drains—have them recycled.



For more information, check out these websites:

Orange County Soil and Water Conservation District:

www.ocsoil.org

New York State Department of Environmental Conservation: Division of Water Mainpage

www.dec.state.ny.us/website/dow/mainpage.htm

Phase II Stormwater Requirements

www.dec.state.ny.us/website/dow/futurreg.htm

Phase II General Permits and Information

www.dec.state.ny.us/website/dow/PhaseII.html

United States Environmental Protection Agency:
National Pollutant Discharge Elimination System

www.epa.gov/npdes/stormwater

Polluted Runoff – Nonpoint Source Pollution

www.epa.gov/nps

US Department of Agriculture—Natural Resources Conservation Service: Backyard Conservation

<http://www.nrcs.usda.gov/feature/backyard>

Center for Watershed Protection

www.cwp.org

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