

Nutrient Pollution

is present in many Rockland County waterbodies.

This is due to **excess Nitrogen and Phosphorus nutrients**

carried by our outdoor activities and stormwater

that quickly carry the excess nutrients to storm drains, then to the nearest waterways leaving little opportunity for soil and plants to filter them out.

This leads to **Nutrient Eutrophication** ("richness"), a top Water Quality Issue in NYS, that impairs our waters.

Aren't Nutrients Good for Waterbodies?

YES!

How Do They Cause Harm?



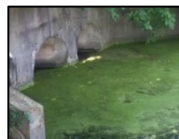
Excess Nutrients flush to waterways from lawn fertilizer, yard clippings, soaps, sediment, etc and lead to Nutrient Eutrophication ("richness") in our waterways.



The way to stop this chain reaction is to cut out the **excess Nutrients**. Some algae produce toxins which can lead to **Harmful Algae Blooms**.

Nutrients promote growth in the water. In excess they lead to algae blooms and aquatic weed growth that sink to the bottom when they die and are eaten by bacteria.

The bacteria **use up the water's oxygen** as they decompose all the algae and aquatic weeds. Fish & other life are deprived of life-sustaining oxygen.



Are Nutrient-Impaired Waters Harmful for Human Recreation?
If Harmful Algae Blooms form, recreation would be impacted.

Nutrient Pollution Solutions

Fertilizer: Over-fertilized lawns is a significant source of excess nutrients in local waterbodies. If using fertilizer see **Rockland County's Fertilizer Law**, and **Look for the Zero** in the middle number indicating phosphorus-free (see links on back).

Trash: The grate in the street leads directly to local waters where we fish and recreate. Dispose of trash and **Pet Waste** Properly!



Improperly managed **Septic Systems** send pathogens and nutrients to local waterways and ground water.

Soaps: Many Soaps (particularly car wash soap) contain phosphorus. Use phosphorus-free items since **wastewater** plants can't remove it all and direct car wash-water to the lawn which will filter it out, but never to the storm drain.

Leave the Leaves and Grass-Clippings as free, organic fertilizer which will directly return nutrients to your lawn. Many fall flooding issues are a result of blocked storm drains.

Water-Smart Landscaping: Grass alone can require 2-3x the water of a **drought-tolerant mixed landscape** which typically use no fertilizers (less watering and maintenance!).

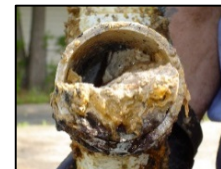


Shredding your leaves with a mulching mower will reduce their volume and speed up decomposition time.



Sanitary Sewer Overflows (SSOs):

Washing **grease/cooking oils** down drains or flushing **wipes** (including 'flushable') or disposables **clogs sewer lines causing overflows** during heavy rainfall to local waterways (and homes) that carry nutrients, bacteria and other pathogens. **Pour cooled grease/cooking oil into a container then seal & discard with garbage. Wipe pan clean with a dry paper towel prior to washing.**



Water-wise Landscaping will soak up Nutrient & Stormwater Pollution!

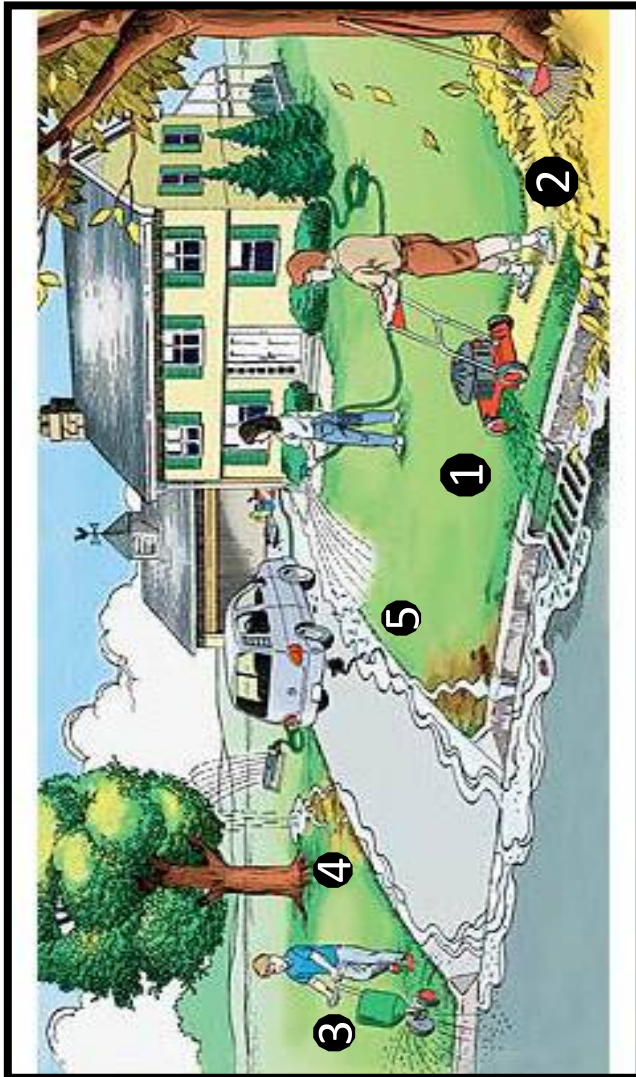
A drought-tolerant mixed landscape will use less water and be less maintenance once established.



CCE's Fact-Sheets for Water-Wise Landscaping, Rain Gardening, Xeriscaping, Fertilizing, etc:

<http://rocklandcce.org/fact-sheets>

Where does Nutrient Pollution come from?



- 1&2:** Leaves & Grass Clippings to Catch Basin
3: Applying Fertilizer on Impervious Surface (washing to Catch Basin)
4&5: Overwatering fertilized lawn, draining to Catch Basin

These practices cause **Nutrient Pollution** and contribute to **Algae Blooms**

Get Involved with Water Quality!

Get YOUTH, COLLEGE STUDENTS or the WHOLE FAMILY involved with **ENVIRONMENTAL STEWARDSHIP** in Rockland County!

<http://rocklandcce.org/stormwater-consortium-water-quality-education/volunteer-opportunities>

Sediment & Illicit Discharges: Excess sediment around/in catch basins, particularly from construction sites should be reported to your municipality with photograph if possible, as should any suspicious material in storm drains (soap, sewage, oil & grease).



Rain Barrels and Composters are available at Cornell Cooperative Extension in Rockland, or at the Rockland County Solid Waste Management Authority

Additional Educational Resources:

CCE's Nutrient Pollution and Algae Bloom Education:

<http://rocklandcce.org/stormwater-consortium-water-quality-education/nutrient-pollution-and-algae-blooms>

NYSDEC Harmful Algae Bloom Notification Page:

<https://www.dec.ny.gov/chemical/83310.html>

CCE's Stormwater and Water Quality Education:

<http://rocklandcce.org/stormwater-consortium-water-quality-education>

Composting Instructions & Lawn Guidance:

<http://rocklandcce.org/gardening/compost-resources>

Rockland County Fertilizer Law Fact-Sheet:

<http://rocklandcce.org/fact-sheets>

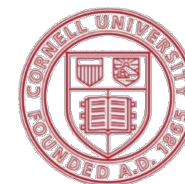
Fertilizer & Pesticide Certificate Programs:

<http://rocklandcce.org/environment/fertilizer-law-certificate-program>

Your Home and Water Quality Impacts In Rockland County



Harmful Algae Bloom



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