A HOMEOWNER’S GUIDE TO
Lake Friendly Living

Help us Preserve, Protect, and Promote Cayuga Lake water quality.

TAKE THE PLEDGE
MAKE CHANGES
LEARN MORE
GET INVOLVED

BECOME A MEMBER
BECOME A VOLUNTEER

Cayuga Lake Watershed Network
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PRACTICES TO PRESERVE AND PROTECT CAYUGA LAKE WATER QUALITY
Your Guide to Lake Friendly Living

What happens around your home matters...
As one of over 100,000 residents who use Cayuga Lake as a primary water source, you can make a difference in the water quality of Cayuga Lake. The Cayuga Lake watershed encompasses over 785 square miles where storm water runoff moves into the lake and impacts its water quality.

What can YOU do?
Get started by taking the pledge to adopt Lake Friendly Living practices! The three basic practices focus on easy steps to protect Cayuga Lake.

1. Take the pledge. Learn about and adopt basic practices to reduce / eliminate pollutants and minimize runoff related to:
   - Lawncare
   - Hazardous waste
   - Vehicle maintenance
   - Septic maintenance
   - Minimize water use and runoff

2. Become a Cayuga Lake Champion. Learn about and implement advanced practices to capture and infiltrate water and reduce runoff related to:
   - Permanent gardening and landscape improvements
   - Reduction of impermeable surfaces
   - Minimizing erosion

3. Care for all of Cayuga Lake. Learn more about issues that impact Cayuga Lake and how to get involved!
   - Stormwater runoff
   - Harmful Algae Blooms
   - Prevent the spread of invasive species
   - Get Involved!

How is Cayuga Lake quality affected by sediment and pollutants?
Sediments can cloud water affecting lake plants, fish, and other aquatic life. Sediments can form deltas that impede navigation and lake access. These sediments can also create habitats where invasive species thrive. Pollutants include excess nutrients, bacteria, pathogens, and debris that can make water unsafe for drinking and swimming and disrupt healthy aquatic life.

What is storm water runoff?
Residential properties can generate runoff. Rain that falls on natural surfaces is infiltrated into the ground. Rain that falls on impermeable surfaces, such as roof tops, paved surfaces, etc. cannot soak into the ground and moves across these surfaces carrying sediment and pollutants with it into the lake.

Show your support for Lake Friendly Living!
Put a Lake Friendly Living sign in your yard, or on your door or car. Talk with neighbors and residents about what you are doing and the simple things they can do to help protect and preserve Cayuga Lake.

Share your results! Cayuga Lake Watershed Network wants to recognize your efforts and share your story. Visit www.cayugalake.org to share your photos and story.

The program includes three levels of basic and advanced practices:

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There is an abundance of information available to help you get started and progress. We encourage you to visit our website for resources and ways to learn more about Lake Friendly Living and getting involved to preserve, protect and promote Cayuga Lake.

If we all commit and practice Lake Friendly Living, we can all enjoy the beauty and health of Cayuga Lake for years to come. Visit www.cayugalake.org/lake-friendly-living/.
Know your soil's needs. Test soil then feed only if needed.

Fall is the best season to fertilize. Don't fertilize before a storm or to frozen ground.

Incorporate IPM (Integrated Pest Management) practices that use ecosystem-based strategies for pest prevention. https://nysipm.cornell.edu/

Scoop dog poop. Flush it or place it in the trash.

Eliminate the use of lawn fertilizer or apply phosphorus free fertilizer at the recommended rate (see footnote about phosphorus-free fertilizer and NYS law).

Fall is the best season to fertilize.
Don't fertilize before a storm or to frozen ground.
Consider skipping the fertilizer and build healthy lawn soil with mulched leaves and compost.
Incorporate IPM (Integrated Pest Management) practices that use ecosystem-based strategies for pest prevention. https://nysipm.cornell.edu/

Mow less. Create no mow zones or buffer zones and mow higher-2.5 to 3 inches (6.4 to 7.6 cm). This is healthier for your lawn and impacts runoff too.

Cover bare spots. Keep lawn areas vegetated to help prevent erosion, soil loss, and sediment from entering the lake.

Scoop dog poop. Flush it or place it in the trash.

Keep soil, leaves and lawn clippings out of the street, ditches, storm drains, streams and the lake. Instead, place in biodegradable lawn waste bags, compost, or leave on lawn as a natural fertilizer. Invest in a mulching lawn mower.

Footnote: In 2012, NYS enacted a law that requires phosphorus-free fertilizer be used on all lawns unless establishing a new lawn or soil test shows that additional phosphorus is required. Learn more at www.dec.ny.gov/chemical/67239.html

Reduce Households Hazardous Waste and Chemicals

These are any wastes or chemicals that are flammable, toxic, corrosive, or reactive, such as gasoline, oil, solvents, paints, paint thinners, pesticides, cleaners, batteries, and prescription drugs.

Use smallest amounts possible.
Use non-toxic, biodegradable products when possible.
Follow instructions on labels.
Store properly to prevent leaks or spills.
Dispose hazardous waste at collection sites and events.
Do not flush prescription drugs.

Maintain Vehicles, Watercraft, and Other Recreational Vehicles

Prevent fluids leaking onto driveways or roads. Change oil with a pan to catch drips. Use an absorbent material to wipe up spills and dispose properly.

Wash vehicles on the lawn vs. impermeable surfaces or use a car wash facility. Soapy water contains chemicals that can harm fish and water quality.
Using water wisely around the yard helps prevent pollution from storm water runoff. Water when cool (morning or evening) to minimize evaporation. Adjust sprinkler to cover only the lawn and not hard surfaces such as a street or sidewalk. Install a rain sensor on an irrigation controller so the system won’t run when it is raining. Use drip irrigation for shrubs and trees to apply water directly to the roots. Use a broom instead of the hose to clean driveways and sidewalks. Spread a layer of organic mulch around plants to retain moisture. Choose drought resistant vegetation and ground cover instead of turf in hard to water areas like steep slopes.
Level Two
Become a Cayuga Lake Champion

Lake Champions understand their own water use, catchment, conservation, water quality, and other important water related areas. They look for ways to practice lake friendly living through advanced gardening and land management practices. These practices include and go beyond those at the Pledge level. They may be larger projects that require more expertise and resources. Lake Champions engage in these meaningful individual actions and also collective actions that benefit people and nature.

Capture and Infiltrate
Capture and infiltrate pollutant-carrying runoff before it reaches the lake

Implement Permanent Landscaping Improvements
There are several landscaping techniques that provide long-term sustainable impacts on water quality.

- **Limit Lawn Size**
  - Lawns absorb less rainfall than natural areas.
  - Grading to create a lawn removes natural topography where water can collect and have time to absorb.
  - Without the branches and leaves of trees and shrubs, rain hits the ground hard and runs off faster.
  - Consider reducing lawn size and replacing with trees, shrubs, native plants, and rain garden landscaping techniques.

- **Install a Rain Barrel**
  - Capture and recycle the rain washing off the roof.
  - Rain water is “soft water” and ideal for gardens, flower pots, and car and window washing.
  - Personalize the look and utility of the barrel to match your property aesthetics and water needs especially during periods of drought.

- **Plant Native**
  - Native plants are adapted to local climate and need less watering and less chemicals to thrive.
  - Native plants attract helpful wildlife including birds, butterflies, and ladybugs.
  - Native plants’ deep roots absorb and filter water more effectively than grass and other shorter root plants.
  - To find more information on NYS native plants, visit: [www.dec.ny.gov/docs/lands_forests_pdf/factnatives.pdf](http://www.dec.ny.gov/docs/lands_forests_pdf/factnatives.pdf).

- **Plant a Rain Garden.**
  - A well-placed rain garden collects rainwater, filters pollutants and reduces runoff and flooding.
  - Rain gardens enhance your yard and communities and provide habitat and food for wildlife.
  - Rain gardens should be located in an area where runoff from a downspout or other source can be directed. On average, rain gardens are around 100 to 300 sq. feet (27.9 square m) and 4 to 8 inches (10.2 to 20.3 cm) deep.

To find more information on NYS native plants, visit: [www.dec.ny.gov/docs/lands_forests_pdf/factnatives.pdf](http://www.dec.ny.gov/docs/lands_forests_pdf/factnatives.pdf).
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Advanced Practices
Landscape management techniques for large-scale property changes

Champions of Lake Friendly Living understand the effects of storm water. The practice of using water wisely as explained on page 6 is an important first step. There are also landscape management techniques that may require new installations or changes to your property and ongoing efforts. Cayuga Lake Champions look for and invest in these types of practices.

Reduce Impermeable Surfaces

☐ Keep paved driveways as small as possible and use permeable/porous pavement, crushed stone, or grass-stone pavers.

☐ Use permeable pavers or stepping stones for walkways.

☐ With new home construction or additions, minimize roofline by building up instead of out.

Minimize Erosion During New Construction

☐ Preserve existing vegetation where possible.

☐ Avoid parking or driving heavy equipment near trees to avoid compaction and maintain proper infiltration.

☐ Build a gravel access road to minimize site compaction. Locate soil piles away from the road, water, or drainage paths and protect with silt fences or cover with a tarp.

☐ Grade area to divert runoff around disturbed areas to minimize erosion.

☐ Properly install erosion and sediment control measures, such as silt fence and straw bales during construction and keep in place until the site is stabilized and replant the area as soon as possible.

Additional practices to help protect water quality on Cayuga Lakeshore properties.

☐ Minimize erosion of lakeshore area and increase runoff infiltration by maintaining or installing a natural vegetative buffer.

☐ Avoid hardening the shoreline. Natural vegetation should ideally cover 50 to 75% of lake frontage.

☐ By restoring the shoreline with native plants, you restore the ecological functions of the lakeshore with many other benefits, including food and shelter for local wildlife, absorption of nutrients, deterrence of nuisance species, privacy from lake users, and saved time and money in maintenance.

☐ Prevent nuisance animals, such as Canada geese. They prefer short, tender grass and avoid tall vegetation where predators can hide.

☐ Keep lawns and steep slopes vegetated.

☐ Plant or maintain vegetative buffers along streams or drainage paths.

Before starting any construction, check with Town and County agencies about required permits and zoning laws. In addition, when doing work near the lakeshore, check with the two regulating agencies, the New York State Department of Environmental Conservation and US Army Corps of Engineers to inquire about permit requirements. For more information, visit www.dec.ny.gov/permits/6222.html and www.nan.usace.army.mil/Missions/Regulatory/Obtaining-a-Permit.
What is a Harmful Algae Bloom (HABs)?
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 all or portions of a lake. However, some species of algae can produce toxins and are referred to as harmful algal blooms (HABs) or cyanobacteria. Cyanobacteria blooms (HABs) are not really algae, they are bacteria and are likely to produce a range of natural chemical compounds, many of which are toxic to humans and pets. These toxins, termed cyanotoxins, can cause health concerns if touched, ingested, or inhaled.

How can you tell if a bloom is a HAB?
HABs have been described as having the appearance of spilled green paint or pea soup. They can also look like parallel streaks in the water or like green dots. For more information about HAB's, go to www.dec.ny.gov/docs/water_pdf/cayugahabplan.pdf.

What are the main causes of HABs?
HABs are likely triggered by a combination of water and environmental conditions that may include: excess nutrients, lots of sunlight, low-water or low-flow conditions, calm water, and warm temperatures. Depending on the weather and the characteristics of the lake, HABs may be short-lived (appearing and disappearing in hours) or long-lived (persisting for several weeks or more).

According to a study conducted by the DEC, four factors were found to be correlated with HABs occurrences: phosphorus levels, presence of dreissenid mussels, maximum lake fetch length, and the lake compass orientation of its maximum length. For every 0.01 mg/L increase in phosphorus levels, the probability that a body of water will produce a HAB increases by roughly 10-18%. However, the other three factors have a much greater range of uncertainty. The presence of dreissenid mussels are estimated to increase the probability of HABs by 18-66%, a northwest orientation of the longest fetch length is estimated to increase HABs probability by 10-56%, and finally, every mile of increased fetch length is estimated to increase the probability of HABs by 20%. While these four factors were identified by the DEC, they are likely not the only four that exist.

More information on this can be found in the Cayuga Lake HABs Action Plan here: www.dec.ny.gov/docs/water_pdf/cayugahabplan.pdf.

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KNOW IT - AVOID IT - REPORT IT
If you believe you have seen a suspicious harmful algal bloom in Cayuga Lake, send the location of the bloom, the date and time observed, and two pictures to habshotline@gmail.com or call the Community Science Institute at 607-257-6606. A trained HABs Harrier will respond and collect a sample if necessary.
This guide is one resource to help you learn and apply Lake Friendly practices. Visit our Lake Friendly Living website for links to more information about specific topics and projects.

www.cayugalake.org/lake-friendly-living/

Thank you! for your commitment and efforts to preserve, protect, and promote Cayuga Lake water quality.

Prevent the Spread of Invasive Species

CLEAN - DRAIN - DRY

Before leaving the launch area, CLEAN watercraft and equipment of all visible mud, plants, fish, and animals, DRAIN the motor, bilge and livewell, and DRY everything that came in contact with the water. Use provided bins for proper disposal of aquatic hitchhikers.

Clean - Drain - Dry

Other things you can do:

- **Show your support for Lake Friendly Living.** Put up a Lake Friendly Living sign in your yard, or on your door or car. Talk with neighbors and residents about what you are doing and the simple things they can do to help protect and preserve Cayuga Lake.

- **Share your results.** Cayuga Lake Watershed Network wants to recognize your efforts and share your story. Please send photos and your story to info@CLWN.org.

- **Learn about Key Agencies and Resources in the Cayuga Lake Watershed** [www.cayugalake.org/lake-friendly-living](http://www.cayugalake.org/lake-friendly-living)

- **Become a Cayuga Lake Watershed Network member!** [www.cayugalake.org/volunteer/become-a-member/](http://www.cayugalake.org/volunteer/become-a-member/)

- **Volunteer and join activities around the lake that help preserve and protect Cayuga Lake.** To get involved and learn about events, visit [www.cayugalake.org/news-events/upcoming-events](http://www.cayugalake.org/news-events/upcoming-events)