

Lake George Shoreland Protection Program: Protective Water Quality at the Edge



Kristen Rohne, Education Coordinator
Lake George Association

Our balanced approach to lake management has ensured the Lake's exceptional water quality, as well as the environmental and economic viability of the watershed over the past 129 years.

Lake George
32 miles long
2 miles wide at widest point
200 ft max, 70 ft avg depth
176 islands and miles of shoreline

Established in 1885, the LGA is the oldest lake association in the nation.



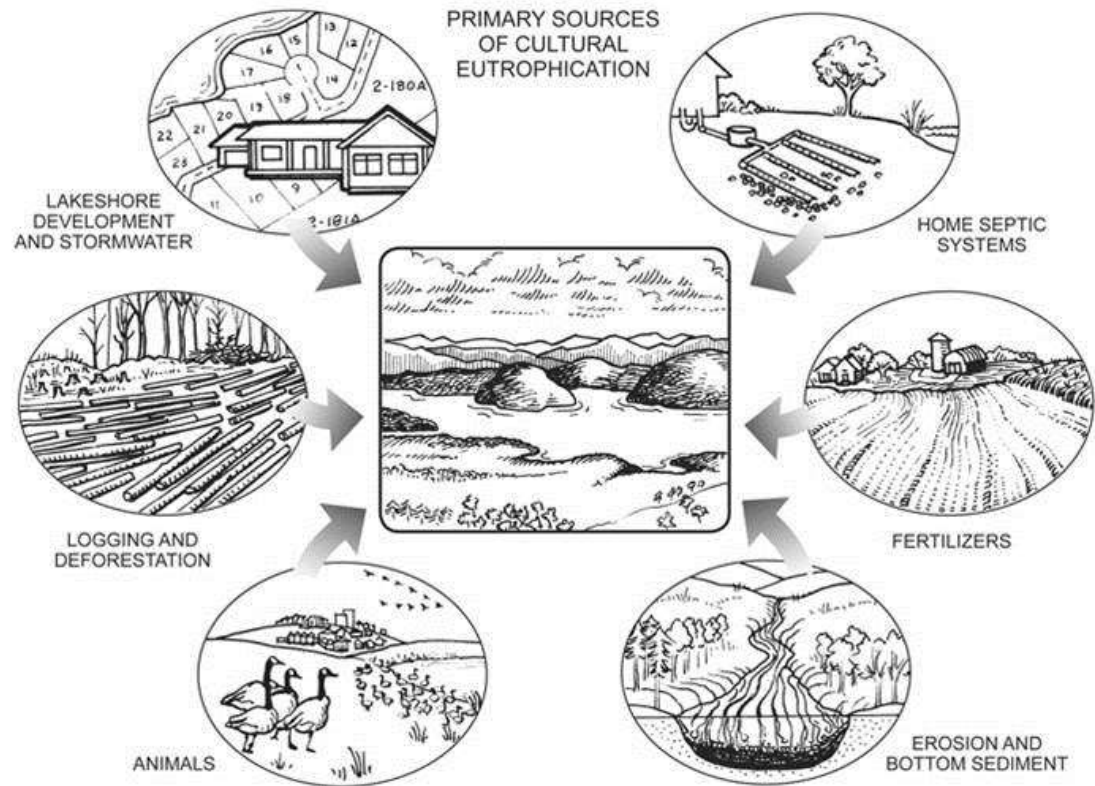
We educate residents and visitors of all ages, reach out into our local communities about lake-friendly living, and complete lake-saving projects with our partners to remediate existing water quality problems.



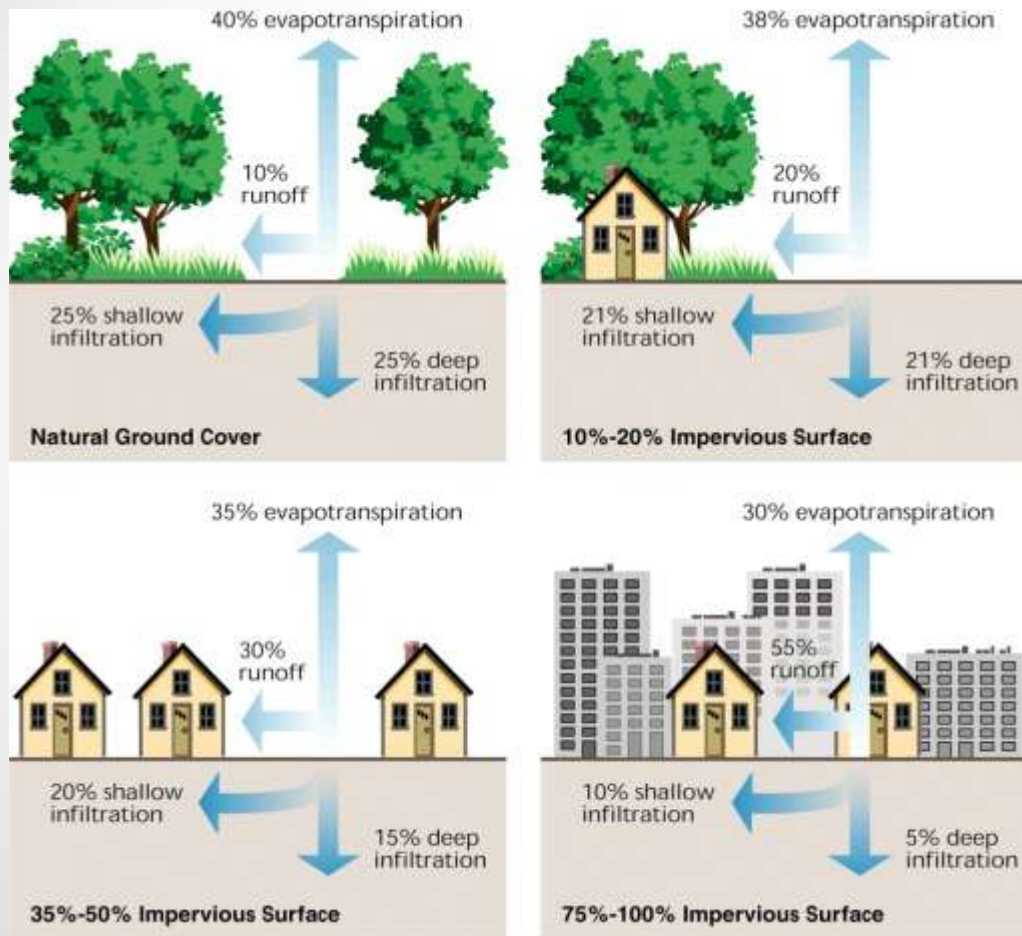
Land Management

Good land management protects a lake from:

- Phosphorus enrichment—or “eutrophication”
- Sedimentation
- Damage to fish and wildlife
- Shoreline erosion



Stormwater Runoff



Runoff carrying sediments down English Brook formed this delta. When the stream reaches the lake the water slows, and the sediment settles out in the lake at the mouth of the stream.

Our Approach

- **Education & outreach to homeowners**
 - key to gaining voluntary participation in lake-friendly development
- **Provide technical assistance**
 - work with local municipalities and contractors to improve projects and minimize their effect on water quality
- **Provide municipalities information**
 - educate the local government board members about water quality to help them make good decisions for the future of their communities
- **Work with municipalities around the Lake to advocate best practices for zoning, planning, and responsible growth**
 - local municipalities and/or the Adirondack Park Agency (APA) regulate land density, tree and vegetation removal, and setback regulations for shorelines, streams and wetlands within the watershed.
 - Lake George Park Commission (LGPC) oversees stormwater regulations.



15 simple strategies for sustainable lakeshores & landscapes to protect Lake George

Lake George Association



Minimize Runoff

Runoff picks up pollutants and carries them to the Lake. Minimize the hard surfaces that create runoff.



Eliminate Pollutants

Eliminate pollutants at their source. Avoid using fertilizers, household toxins, and other chemicals. Prevent soil erosion and failing septic systems.



Capture and Infiltrate

Capture and infiltrate any pollutant-carrying runoff that you didn't eliminate before it reaches the Lake - with shoreline buffers, rain barrels, and rain gardens.



Minimize Runoff

1. Reduce Impermeable Surfaces
2. Limit Lawn Size
3. Use Water Wisely



- Permeable Pavers
- Rain barrels



Eliminate Pollutants

4. Minimize Erosion
5. Be Smart About Lawn Care
6. Use Phosphorus-Free Fertilizer
7. Maintain Your Septic System
8. Don't Flush Your Drugs
9. Maintain Your Vehicles
10. Conserve Water
11. Reduce Household Hazardous Wastes



Protect Lake George Be WasteWater Wise

No matter whether you are on a municipal sewer system or have your own septic system, wastewater from your home can impact Lake George if not properly treated.

Please follow these tips to help protect the Lake and make sure that your septic or sewer system continues to work properly.



Opportunities for Lake-friendly Living brought to you by the Lake George Association

Septic System Maintenance

As a homeowner you are responsible for maintaining your on-site wastewater treatment system (OWTS) - or septic system. This not only protects nearby surface and groundwaters from being contaminated, but also protects your health and your investment in your home.

Typical pollutants found in household wastewater include nitrogen, phosphorus, and disease-causing bacteria and viruses. A properly designed, constructed, and maintained system can provide long-term, effective treatment of household wastewater. If not properly maintained, a failing system can cost thousands of dollars to replace.

Keep an eye out for signs of a failed system:

- pooling water or muddy soil around the tank or drainfield or in your basement
- bad smell coming from area of tank
- toilet or sink backs up with you flush or do laundry
- bright green grass over the drainfield

If you notice any of these signs - call a professional.



Alternative Systems

Due to unsuitable soils, high bedrock or groundwater, or small lot size - you may have a hard time making a traditional septic system work on your property.

There are alternative systems now available that use new technologies to improve treatment processes - many of which need less space to function. Such systems use sand, peat, or plastic media instead of soil to treat the wastewater. Contact our office at 518-668-3558 to learn more about these alternative systems. Photo above is a Poniflex system that uses peat media as a filter.



A typical septic system has 4 main parts:

- a pipe from the house that carries the wastewater into the tank
- a tank that holds the water long enough for the solids to settle out to the bottom and the oil & grease to float to the surface
- a drainfield where the water from the tank is discharged
- the soil where the microbes provide the final treatment

Septic and Sewer Care

Use water efficiently. The less water that goes through the system - the less you stress it and the longer it will last!

Flush only human waste & toilet paper
Your toilet is not a trash can - don't use it like one!

Never Flush or Put Down your Drain:

Cloggers

- flushable wipes
- diapers
- sanitary products
- dental floss
- paper towels
- coffee grounds
- grease & fats
- cooking oils
- cigarette butts
- cat litter

Even if you have a garbage disposal these materials can clog pipes in both sewers & septic - damaging these systems and possibly causing raw sewage to overflow - polluting groundwater and the Lake.

Killers

- household chemicals & cleaners
- medications & beauty products
- paints, stains & solvents
- gasoline & oil
- lawn care products
- antifreeze

Wastewater treatment systems are not designed to treat hazardous chemicals - which can diminish the effectiveness of the system and pollute groundwater and the Lake.

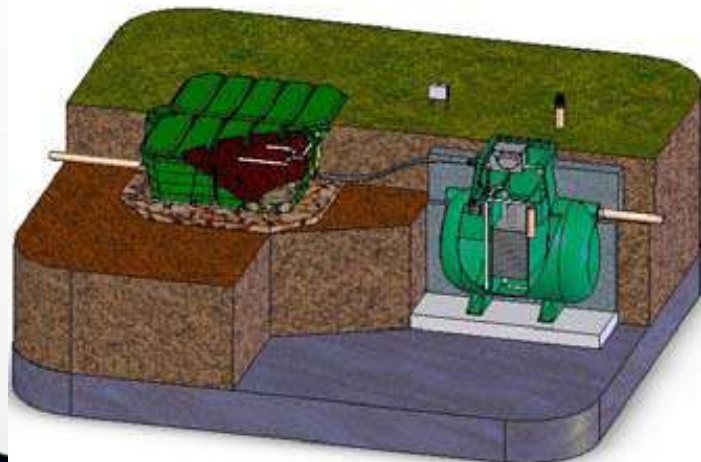
Alternative Systems

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function. Such systems use sand, peat or plastic media instead of soil to treat the wastewater. Many of these systems are already being used on Lake George. Contact our office to learn more about these alternative systems. *Photo at left is a Puraflo system that uses peat moss as a filter.*



Capture and Infiltrate

- 12. Install a Vegetative Buffer
- 13. Plant a Rain Garden
- 14. Go Native



Lake-friendly Living
OPEN HOUSE

Lake George Association
2392 State Rt. 9N, Lake George
518.668.3558
www.lakegeorgeassociation.org



Trade In

Dig up an unruly invasive plant from your yard...

Green Up
...And replace it with a Lake George-loving native plant!
Free!



Help protect Lake George from invasive species by land and by sea!
Did you know that many ornamental plants still used in landscaping are highly invasive?
Go Native to help protect Lake George. **Trade in & Green Up Today!**



A naturally landscaped yard adds value to your property and can also benefit Lake George's water quality and overall health.

What is a vegetative buffer?

A vegetative buffer, or buffer zone, is a strip of natural vegetation along the shoreline of a lake or waterbody.

Ideally, the vegetation should cover at least 50-75% of the property's lake frontage.

By restoring the shoreline with native plants, you restore the ecological functions of the lakeshore. The benefits of buffers include:

- Food and shelter for local wildlife,
- Stabilized soil and reduced erosion,
- Filtration of pollutants and sediments,
- Absorption of nutrients,
- Deterrence of nuisance species,
- Privacy from lake users,
- Save time and money in maintenance.

Got geese?

Canada geese love short, tender grass and avoid tall grass where predators can hide. A shoreline buffer will send the geese packing.



Vegetated Buffer Strips



Buffer



Rain Garden





October 2012



August 2013
Project partners:
LCLGRP, Silver
Bay YMCA



NATIVE PLANT RAIN GARDEN A HEALTHY LAKE DEMONSTRATION PROJECT

A rain garden is a vegetated depression that collects rainwater. This allows the rain that falls on rooftops, driveways, and patios to infiltrate into the ground instead of becoming stormwater runoff. Stormwater runoff from developed areas is the greatest threat to the water quality of Lake George.

Rain gardens are beneficial in many ways. For example, they:

- Help keep water clean by filtering stormwater runoff before it enters local waterways.
- Help alleviate problems with flooding and drainage.
- Enhance the beauty of yards and communities.
- Provide habitat and food for wildlife like birds and butterflies.
- Reduce the need for expensive stormwater treatment structures in your community.

Getting Started:
The first step is siting and sizing your rain garden. You want to pick a location on your property that you can direct a downspout or other source of runoff to. It should be at least 10 ft. from your home's foundation and flat or gently sloping.

A typical homeowner rain garden is around 100-300 sq. ft. and 4-8 inches deep. Just how big your rain garden should be and how involved it will be to create will depend on your soils, slope, and the use of the area that drains to the garden.

LGA staff can help you site and size a rain garden for your own property based on your specific site conditions. Just give the office a call at 518-668-3556.

Planting the Garden:
Since a rain garden is flooded periodically, you need plants that can live in both wet and dry conditions. Plants native to New York are best for a rain garden. They are hardy, adaptable, and have deep roots to help infiltrate water.

You should also consider if your site is sunny or shady when selecting plants. You might want a variety of height, color, and blooming time as well. Remember, a rain garden can be both functional and pretty!

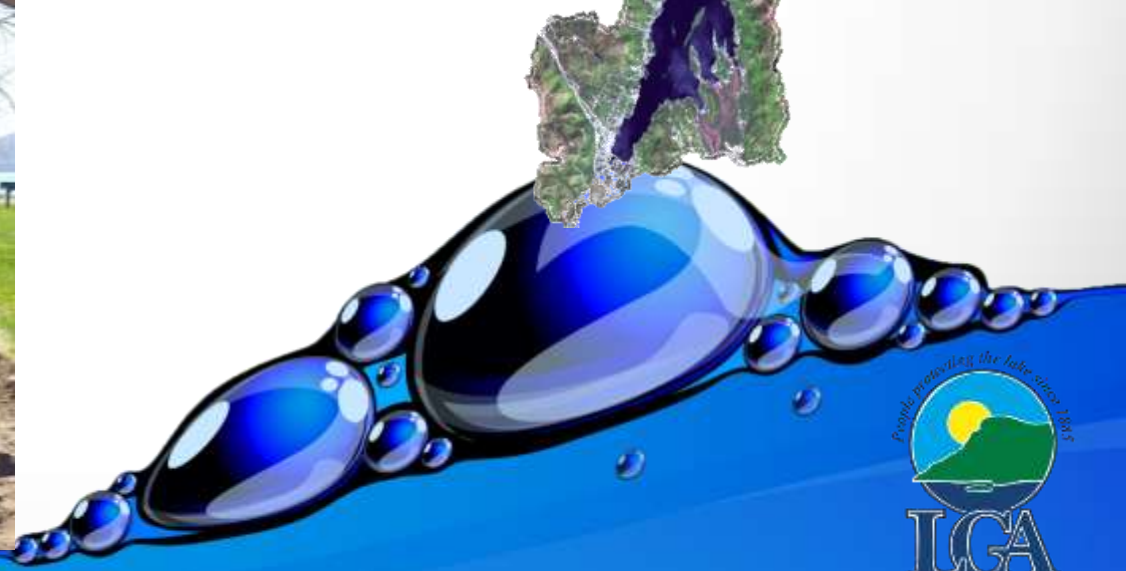
Special thanks to the International Paper Foundation and the Helen & Paulson Foundation for providing funding and to the Lake George Association's Lake Charlemagne, Lake George Region Planning Board, and Pickering Creek Native Plant Nursery for their demonstration rain garden and educational signage.








Rain Garden





May 7

June 12

**Project Partners: ECSWCD,
Town of Ti, Adirondack
Landscaping, Keller
Williams Realty**

Aug 27



Sunset Lane Dry Wells

- September 2013
- Two 8' dia. dry wells in a small 3,200 sq ft watershed. Each holds approx 1,500 gallons
- Project partners: WCSWCD, Town of Qbry



On September 17th-19th the Town of Queensbury Highway Department installed two 8 ft diameter dry wells on Sunset Lane to capture runoff from a small 3,200 square foot watershed on the southeast side of the lake and allow it to infiltrate into the ground rather than run directly to Lake George. After they were installed, the dry wells were surrounded with washed stone to add additional storage capacity and then covered with filter fabric and paved over. Once the project was complete and the road was paved - the stormwater structures may be out of sight - but they will be there underground protecting the lake forever.



LG Town Hall Stormwater Retrofits





June 2012

Phase 1: drywells

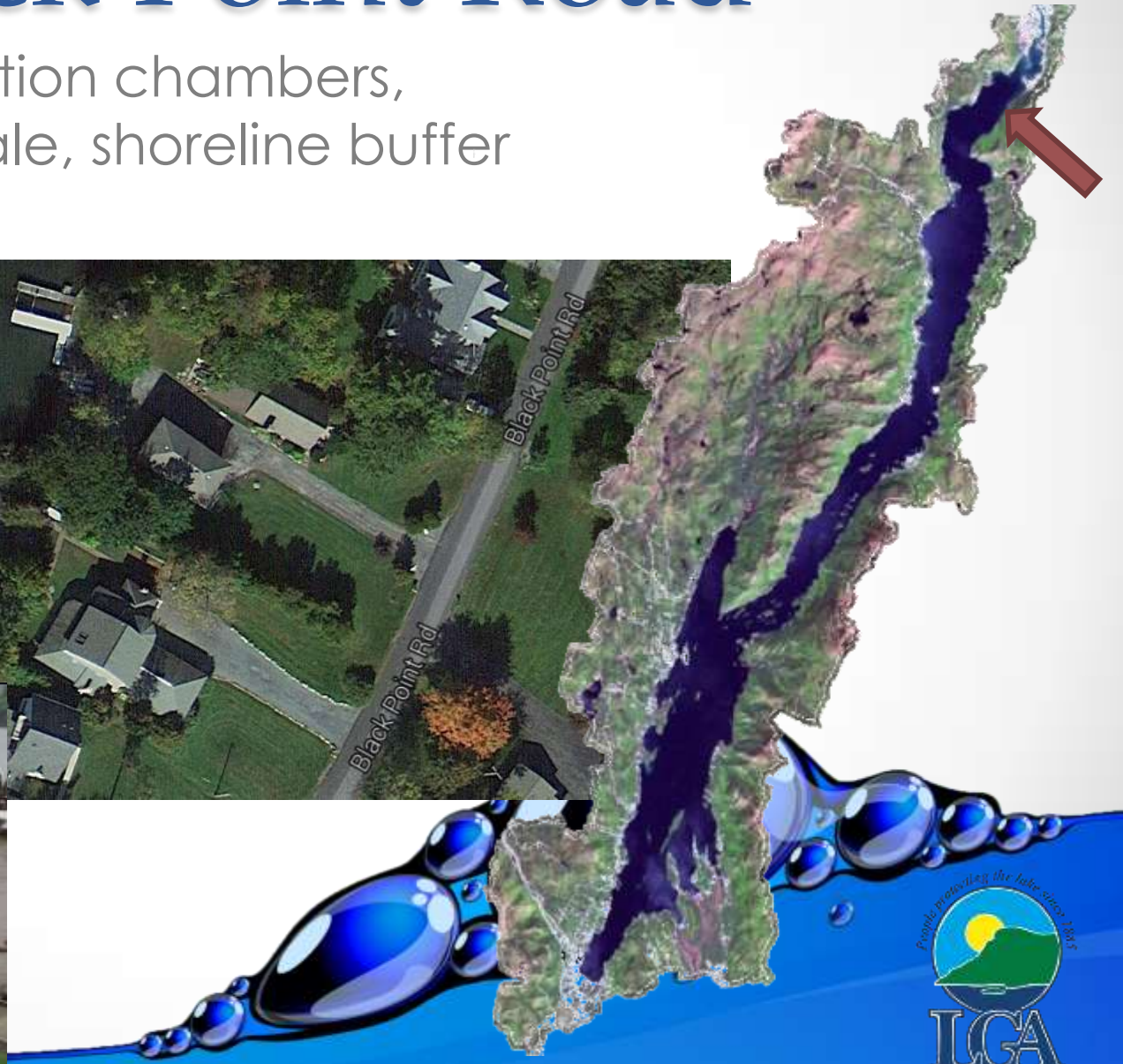
Phase 2: native plants

Project partners:
WCSWCD, Town of
LG



Black Point Road

- Dry well, infiltration chambers, vegetated swale, shoreline buffer





Black Point Road





Usher Park



Fall 2013 – Phase 1





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Lake George Association

www.lakegeorgeassociation.org

