

# What You Need to Know About

# Long Lake

## and its Potential for Harmful Algal Blooms

### 384 Acre Glacial Lake

○ Max depth **28** ft. ○ Average depth **10.5** ft. ○ Water volume **4012** acre ft. ○ Shoreline length **5.76** miles

### Long Lake is Fed by a 24,000 Acre Watershed

Water flows in from **3** sources:

- Squaw Creek – Long Lake’s main source of water, extends south to Mundelein
- Round Lake Drain – in-flow in from Round Lake and Highland Lake
- Eagle Creek – drains areas north and east to Lake Villa

∴ Water flows out only through Squaw Creek which extends downstream to Fox Lake and the Chain O’ Lakes.

∴ Primary pollutant of concern: Phosphorus – contributes to hazardous blooms of blue-green algae.

∴ Current pollution sources: roads, farms, industries, businesses and homes throughout the watershed.

Blooms of potentially toxic blue-green algae were common **30–40** years ago.

Long Lake’s water quality has improved from this time, but blue-green algae, which can be toxic to people and pets, is still likely to bloom anytime in the summer and early fall.

Historical pollution sources include all the above plus:

- Round Lake and Lake Villa operated sanitary districts that discharged treated waste water into Long Lake with very high levels of phosphorus into the **1980**’s.
- Local septic systems contributed additional phosphorus until sewers were introduced in the **1980**’s.

## HARMFUL ALGAL BLOOMS

### HOW TO SPOT THEM

Blooms often look like a thick, paint-like layer of scum on top of water. Sometimes they appear puffy and foamy, or like swirling colors just below the surface. They can be green, blue, or brown, and sometimes produce a foul-smelling odor.

**Swimming, boating, jet-skiing, and fishing should be avoided in waters near suspected HABs.** Toxins can build up in the entrails of fish caught in a harmful algal bloom-area, so special care should be taken to ensure these parts are not eaten by animals or pets.

*These photos show two areas in Long Lake where an HAB was suspected and reported.*



### WHAT THEY ARE

Blue-green algae, also known as cyanobacteria, is a naturally occurring part of Illinois' aquatic ecosystems. However, an influx of nutrients into warm, sunny waters can cause the algae to grow rapidly and produce toxins. The resulting harmful algal bloom (HAB) can hurt humans, animals, and the environment.

### WHAT CAUSES THEM

Harmful algal blooms usually occur in the summer months, between June and September in Illinois. Warm water, direct sunlight, and low wind exposure provide ideal conditions for algal growth. The introduction of nutrients like nitrogen and phosphorus

into these warm waters can trigger the quick growth of an HAB. A nutrient influx is often due to runoff from agricultural or residential fertilizer washed into nearby waterways. Physical contact with or consumption of HABs can seriously harm people and pets, and the presence of HABs disrupts aquatic ecosystems.

### DANGERS

Toxins produced by HABs are harmful to humans and pets. Exposure to toxins can occur when surface scums or waters are swallowed, when they come in contact with skin, or when airborne droplets containing the toxins are inhaled. They can cause skin irritation, nausea, vomiting, throat irritation, or difficulty breathing. If affected water is ingested in large quantities, toxins can damage the liver, GI tract, and nervous system. Children are especially vulnerable to the adverse effects of algal blooms as they have more sensitive skin and lower body weights.

### REPORTING

It is impossible to tell by visual inspection alone if an algae bloom is toxic, so **any area of concern should be avoided** and reported to the Lake County Health Department so proper testing for algal toxins can be done.

Lake County Health Department  
Environmental Services contact number  
847-377-8020.

### WHAT WILL HAPPEN WHEN A CONFIRMED TOXIC ALGAL BLOOM IS FOUND IN LONG LAKE

LLISA will send an email blast and post notice on Facebook page.

Notices will be posted at neighborhood beaches and at the Long Lake dam.

### WHAT HOMEOWNERS CAN DO

Homeowners can do their part to help reduce nutrient inputs that fuel algae blooms. Here are some simple guidelines to follow:

1. Homeowners who hire lawn care companies should make sure they are following the law and only using lawn fertilizer that does not contain phosphorus. The Lawn Care Products Application and Notice Act also prohibits leaving fertilizer on paved surfaces where it can wash directly into the lake. Lawn fertilizer cannot be applied within 15 feet of the lake. If a deflector is used, fertilizer should not be applied within 3 feet of the lake edge.
2. Homeowners who fertilize their lawns themselves should take care to only purchase lawn fertilizer that does not contain phosphorus. Illinois soils have

sufficient phosphorus to grow healthy turf grass. Instruct landscapers to not blow leaves or anything into the lake.

3. Shoreline Management: Stabilizing shorelines and maintaining a native vegetation buffer along the edge of the lake will also help keep nutrients out of the lake. See [tinyurl.com/IEPA-LakeNotes](http://tinyurl.com/IEPA-LakeNotes) for tips.
4. Waste management: Never dump anything like yard and pet waste into the lake. All contain nutrients. Clean up of pet waste is key to a healthy lake.
5. Look for a "zero" as the middle number when buying fertilizer at the big box stores.



### RESOURCES

Illinois Dept. of Public Health HAB,  
[@ tinyurl.com/IDPH-HAB](http://tinyurl.com/IDPH-HAB)

Illinois EPA HAB,  
[@ tinyurl.com/IllinoisEPA-HAB](http://tinyurl.com/IllinoisEPA-HAB)

USEPA HAB,  
[@ tinyurl.com/USEPA-HAB](http://tinyurl.com/USEPA-HAB)

NOAA HAB,  
[@ tinyurl.com/NOAA-GreatLakes-HAB](http://tinyurl.com/NOAA-GreatLakes-HAB)

### CONTACTS

Long Lake Improvement & Sanitation Association  
PO Box 175, Ingleside, IL 60041

[www.llisa.org](http://www.llisa.org)

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Let Us Know Your Thoughts About Long Lake  
by filling out the form [@ tinyurl.com/LongLakeInput](http://tinyurl.com/LongLakeInput)

*This brochure prepared by LLISA and the  
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