



TRUE BLUE News

Do You Know?

Summer is peak season for **algae** growth in lakes. When the lake is warm and hours of sunlight are long, increased **nutrients** cause algal blooms.

Stormwater carries nutrients like **phosphorus** and **nitrogen**.

Stormwater flows from upland properties into tributaries and roadside ditches emptying into lakes.

Stormwater flows over shoreline lawns like a sheet and goes directly into the lake.

Not all algal blooms are the same.

- Some algal blooms grow and float in clumps with a gelatinous coating on the water.
- Other algal blooms look like paint-often a thin layer of green or blue and float on the top of the water.
- Some algal blooms are toxic. They are composed of blue-green algae, also called cyanobacteria. Some cyanobacteria blooms harm fish, pets and people when a high concentration of toxins is released by the cyanobacteria.

You cannot tell if an algal bloom is harmful just by looking at it.

- When in doubt, stay out of the water, including your dogs.
- **Report suspicious looking algae to Michigan Department of Environment, Great Lakes and Energy: Call 800 662-9278 or email algalbloom@michigan.gov.**
- You can also email contact@conservetorch.org for local assistance.



Image: Wisconsin Department of Health Services

Key Facts:

Algal blooms have been increasing on the Great Lakes.

Lake Erie

Since the 1990s, algal blooms have become annual events in Lake Erie.

In 2015, the largest harmful cyanobacteria bloom recorded occurred in Lake Erie.

Harmful algal blooms prevent people from fishing, boating and swimming.

In 2014, it made the water supply for 400,000 residents of Toledo unhealthy for human consumption.



Satellite Imagery Lake Erie Algal Bloom October 2011

Image: NASA Moderate Resolution Imaging Spectroradiometer

Lake Superior

Lake Superior is the largest freshwater lake by surface area in the world.

Even with extremely high water quality, Lake Superior has experienced algal blooms for the past decade.

Two of the largest blooms of cyanobacteria occurred in 2012 and 2018 following a season of extreme rainfall, when concentrations of phosphorus and nitrogen were high.



Rapid Eye Satellite image of Lake Superior's south shore Aug 9, 2018

Photo: Sterner et al., 2020

Torch Lake

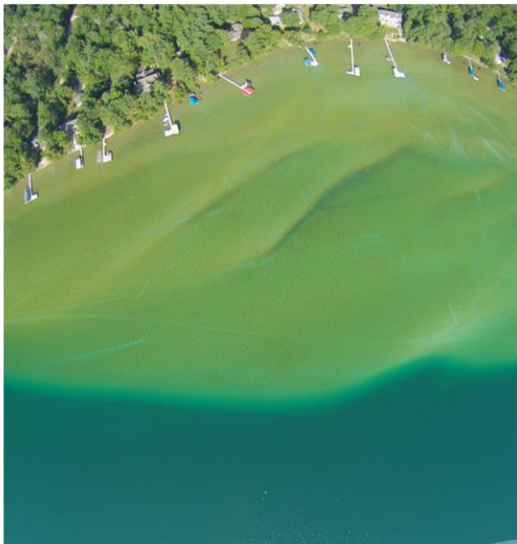
A bottom (benthic) algae has been visible on the lake bottom between the shore and the drop-off in Torch Lake for the past 10 years.

Surface algae has not been observed or reported on Torch Lake...yet.



Torch Lake 2010

Photo: Art Hoadley



Torch Lake 2020 Nonharmful algae growing on sand & rocks

Photo: Art Hoadley

You can stop nutrients from entering Torch Lake by taking two simple steps:

1- Stop fertilizing your lawn.

2- Plant native species between your lawn and the shore.

Native Plants are species present in North America prior to European settlement.

They have evolved to survive as the regional land changes.

Native plants have deep roots that can penetrate down in the soil more than 16 feet.

These deep roots protect Torch Lake by:

- Soaking up large amounts of water
- Taking up excess nutrients
- Holding soil in place and prevent erosion/loss of property

Once established, native plants are low maintenance.

They don't require expensive irrigation systems or weekly trimming.

Non-native plants such as

- plants from a different region,
- cultivated plants (developed by horticulturists for desired traits like blossom size and color) and
- lawn grass

are attractive but typically have short roots, decreasing their ability to absorb water or filter nutrients.

This contributes to increased amounts of nutrient-laden stormwater entering Torch Lake.

Preventing nutrient pollution in Torch Lake is easier to do and costs less than trying to clean up a polluted Torch Lake.



Native Plants and Trees Guarding Torch Lake from Nutrient Loaded Stormwater
Photo: TCC



LakeLove Looks Like

There are 3 places where landscaping with native plants will reduce the amount of nutrient loaded stormwater from leaving your property.

A. Establish gardens of native plants by replacing parts of your lawn.

Only use lawns to cover your septic field and the areas where you walk, play and eat.

B. Plant several gardens of native plants between:

- your lawn and the lake
- your lawn and the road
- your lawn and your neighbor's property.

C. Collect rainwater from your roof and direct your downspout to flow into a shallow depression filled with native plants, often called **a rain garden**.

Here is how to add native plants to your landscape:

Step 1. Identify an area of your lawn where you can plant native plants.

Step 2. Place cardboard over this area of lawn to kill the grass naturally without using toxic herbicides.

Weight cardboard down with rocks, bricks, logs or lumber. Let sit for 2+ weeks.

Step 3. Using a hoe or shovel dig up dead grass and its shallow roots.

Step 4. Add top soil and compost to the area to naturally enrich the soil.

Step 5. Determine the conditions of this area—sunny or shady; dry or wet soil.

Step 6. Pick native plants that match your conditions.

Step 7. Buy plants from local businesses:

Conservation Districts

Antrim County Conservation District and Grand Traverse Conservation District offer mid-May one-day sales.

Otsego County Conservation District Native Plant Nursery open Mon-Fri 8-4:30

Local nurseries (Listed alphabetically):

Barker Creek Nursery

Birdsfoot Native Nursery (sells only native plants)

Cayer Gardens and Landscaping

Pine Hill Nursery

Gallon-or quart-size plants are often easier to grow than smaller options but will cost more.

Step 8. Add 3-4 inches of mulch to keep in moisture and keep out weeds.

Step 9. First year, water frequently. Second year, pull weeds and reapply mulch.

LEARN MORE:

VISIT: Torch Conservation Center's website, conservetorch.org.

Install Buffer Garden

Plant Natives

Install Rain Gardens

VISIT: Torch Conservation Center's TRUE BLUE Gallery in Alden.

Pickup Native Plant brochures with list of plants and other information on TRUE BLUE Landscaping.



TRUE BLUE Gallery Landscaping Display Photo: TCC

VISIT: Native Plant Gardens Surrounding the TRUE BLUE Gallery in Alden.





Front and West TRUE BLUE Gallery Native Gardens

Photos: TCC

Heard around the Torch Lake Watershed

Kathy-"I love my shoreline native garden. It is beautiful viewed from the house or from the water. I love to sit close by and watch the bees and other pollinators enjoying the blooms of the blue vervain, joy pye, iris, milkweed, and more. It also provides shelter to the newly fledged robins and filters pollutants headed for the lake. I wish everyone knew how easy it is to establish and maintain a shoreline garden using the flats of natives available from many local conservation groups in the spring. I would be happy to provide guidance to anyone who is interested."

Theresa-"My neighbor and I have native gardens planted with viburnums where we lost trees in the big 2017 storm. My yard and water front are mostly native plants, some volunteers from my neighbor that I have let grow wild to filter run-off water before it gets to the lake. They really cheered up the shoreline and helped rebuild my deep root barrier between my lawn and the lake."

Sources:

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Stern, R. W. et al. 2020 A First Assessment of cyanobacterial blooms in oligotrophic Lake Superior. *Limnology&Oceanography* Vol 65 Issue 12
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It's Lake Time

Photo: Brian Apley



The TRUE BLUE Gallery is open for its 8th season!

Be inspired by our artists' interpretation of this year's theme

DEEP ROOTS
CONNECT US TO TORCH LAKE
PROTECT TORCH LAKE WATER

Gallery Hours: 11-5 Tuesday-Sat.
12-3 Sundays in July and early August

At [Torch Conservation Center](#), we **BELIEVE**
an informed Torch Lake Watershed community cares for Torch Lake
and keeps toxins, fertilizers and invasive species out of the water.

Join us.

[Donate now.](#)

Helping Torch Lake is just a click away.

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