

What are cyanobacteria?

Cyanobacteria (also known as blue-green algae) are naturally found in fresh water in the U.S. and throughout Vermont. Cyanobacteria grow well in water that has high amounts of nutrients like phosphorous and nitrogen. Under the right conditions, cyanobacteria can multiply quickly to form surface scums and dense populations known as blooms, especially during the warm days of late summer and early fall.



Characteristics of a Cyanobacteria Bloom:

- May resemble thick pea soup or spilled paint on the water's surface
- May create a thick mat of foam along the shoreline
- Generally green or blue-green in color, but can be brown, purple, red or white
- Made of small specks or blobs floating at or below the water surface

A Cyanobacteria Bloom is NOT:

- Stringy, bright grass-green, long strands that feel slimy or cottony—this is harmless green algae
- Mustard yellow in color—this is probably pollen

For a video and photos of what cyanobacteria look like and what is not cyanobacteria, visit: healthvermont.gov/cyanobacteria.

Why should I be concerned about cyanobacteria?

General health effects caused by exposure to cyanobacteria cells (not their toxins) include:

- Rashes or skin irritation
- Allergy-like reactions such as a runny nose or a sore throat

Additionally, some cyanobacteria may produce harmful compounds called cyanotoxins. When these toxins are swallowed in large amounts, they can cause the following health effects:

- Sharp, severe stomach problems like diarrhea and vomiting
- Liver damage that may take hours or days to show up in people or animals
- Numb limbs, tingling fingers and toes or dizziness

Cyanobacteria toxins can also cause illness and sometimes death in pets and livestock. Possible symptoms animals may show after being exposed to a toxic bloom include:

- Weakness or staggering
- Difficulty breathing
- Convulsions
- Vomiting or diarrhea

It is not possible to tell if a bloom contains harmful toxins just by looking at it. Only laboratory tests of water samples can confirm whether a bloom is toxic. Signs that a bloom may be toxic include:

- Dead fish, ducks, geese or other animals
- Sudden and unexplained sickness or death of a pet that has been exposed to a bloom

There is ongoing research on potential health effects of exposure to cyanobacteria toxins. The Health Department looks at any new findings and updates health guidance materials when necessary.

How might I be exposed to cyanobacteria?

Activities that might expose you to cyanobacteria include:

- Swimming
- Boating or jet-skiing
- Water-based activities near or in blooms
- Drinking untreated surface water

Children and pets have a higher risk of being exposed to cyanobacteria because they are more likely to play near the shoreline where blooms are often the thickest. They are also more likely to swallow water, either on purpose or accidentally.

Public water systems on Lake Champlain work with state partners to monitor blooms that might impact the quality of drinking water.

How can I protect myself from cyanobacteria?

Do not come in contact with surface scums of cyanobacteria or with water that is deep green, blue or white in color.

Cyanobacteria Tracker Map

During the summer and early fall, the locations of blooms on Lake Champlain and some inland Vermont lakes are tracked on the Health Department's online Cyanobacteria Tracker Map at healthvermont.gov/tracking/cyanobacteria-tracker.

Data for the map are provided by a network of volunteers trained and coordinated by the Lake Champlain Committee and by scientists from the Vermont departments of Health and Environmental Conservation. Volunteers submit weekly visual observations of water conditions from sites around Lake Champlain.

The map provides information on bloom conditions at the time of the report, but *lake conditions can change very quickly*. It is important to **learn to identify signs of a bloom and use your best judgment** when thinking about swimming or doing other activities in the water.

What should I do if I see a bloom?

- Do not come in contact with the water
- Keep pets and livestock away from the water
- Call your town health officer or town office
- Contact the Health Department to report a bloom at BloomAlert@vermont.gov with the location and photos a suspected bloom or call 800-439-8550 during business hours

What can I do to prevent blooms?

Reducing phosphorous in our waters is the main way to limit cyanobacteria blooms. You can help by:

- Using only the recommended amount of phosphorous-free fertilizer if fertilizing your lawn
- Keeping fertilizers off driveways and sidewalks and out of storm drains
- Caring for and maintaining your septic system properly

Where can I get more information?

Vermont Department of Health

Call: 800-439-8550

Website: healthvermont.gov/cyanobacteria

Email: BloomAlert@vermont.gov

Vermont Department of Environmental Conservation

Call: 802-490-6130

Website: dec.vermont.gov/watershed/lakes-ponds/learn-more/cyanobacteria

Lake Champlain Committee

Call: 802-658-1414

Website: lakechamplaincommittee.org

Email: lcc@lakechamplaincommittee.org

Lake Champlain Basin Program

Call: 802-372-3213 or 800-468-5227 (NY & VT)

Website: www.lcbp.org

Email: lcbp@lcbp.org

