

BB-65

2020

## Green Filamentous Algae

### **What are filamentous algae?**

Filamentous algae are a large assemblage of various species of phytoplankton (microscopic aquatic plants). However, most of the filamentous algae seen in New Hampshire surface waters are simply a form of harmless green algae (Chlorophyceae), that grow in the water, often forming large bundles or masses that can be seen by eye.

### **How can I recognize green filamentous algae?**

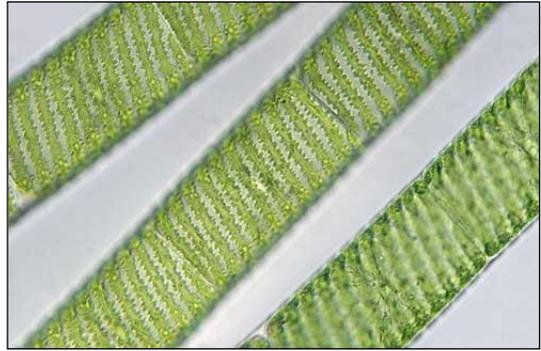
Filaments (commonly described as long hair-like strands) are usually found free-floating in masses that often carry other phytoplankton and microorganisms within it. They typically appear as bright neon-green, yellow-green when healthy or brownish-green as they decompose. The masses typically feel slimy to touch. Bundles of green filamentous algae have also been described as moving freely like a tumble weed throughout the water, as “cotton-candy-like” clouds hovering over the sediment near beaches, or found bubbling just under the water’s surface. This happens when strands of the hair-like algae stick together, often because of a mucilage they (or other associated algae) secrete, and gasses become trapped inside the masses, causing them to float up in the water column.



Subsurface masses of green filamentous algae

**What are the common types of green filamentous algae in New Hampshire?**

The most common taxa of green filamentous algae in New Hampshire comprise those in the Order, Zygnematales; which include species of *Zygnema*, *Spirogyra*, and *Mougeotia*. The picture to the right shows *Spirogyra* as seen under a microscope.



**How can I tell the difference between harmless green filamentous algae and toxic cyanobacteria blooms in New Hampshire?**

One way to distinguish green filamentous algae from a cyanobacterial bloom is to try the “stick test.” Grab a stick and attempt to lift the mass out of the water. If it stays on the stick when lifted out of water and appears as a bundle of green slimy threads of hair, it is most likely green filamentous algae. If it disperses and clouds the water, and you cannot easily lift a bundle, then it could be cyanobacteria. In either case, please report your findings to the New Hampshire Department of Environmental Services (NHDES) by calling (603) 848-8094. It is recommended that you take a photo to text, or email if needed, and share your location.



Strands of green filamentous algae (left) and ribbons of cyanobacteria accumulating nearshore (right).

**Are green filamentous algae dangerous?**

No. Unlike cyanobacteria blooms that may contain toxins harmful to human health, green filamentous algae are harmless. Though unsightly, green filamentous algae do not produce toxins.

**How do I remove green filamentous algae from my lake?**

**Please contact NHDES before removing anything suspicious from your lake.** It is best to get confirmation of what you are seeing. We will often ask for a voucher photo to start, or possibly a specimen if possible, and a more detailed description on where biologist staff can obtain additional specimens for confirmation. Once confirmed, you can attempt to remove the bundles from the water by hand or by net as long as the bottom or other aquatic life (plants, fish, etc.) is not disturbed. These large green masses are typically good for composting, or adding directly to your ornamental or vegetable garden. *Please DO NOT compost toxic cyanobacteria or apply blooms to your gardens.*

In terms of lake management for green filamentous algae, you could work with your lake association to identify and reduce runoff and nonpoint source pollution to your lake. Stressors to the environment, such as pH, nutrients and salts can help propagate green filamentous algae or cause, even worse, harmful cyanobacterial blooms. However, green filamentous algae often occur in low nutrient lakes. They tend to appear and grow in clear, warm and calm waters. It's best to wait them out, or scoop them out if they float into your swim area. Wind and currents will move the masses throughout the lake, and once caught at the surface or shoreline, the sun will degrade the filaments and it will eventually dissipate naturally.

**Who should I contact?**

Please report any suspicious algal growths to NHDES by calling (603) 848-8094 or sending an email to [HAB@des.nh.gov](mailto:HAB@des.nh.gov).