Simplified field identification instructions:

Extracted from the UWW Tier 1 Manual

<u>Step 1. Is this filamentous green algae or cyanobacteria?</u>

Green algae may be common at your site. This algae can be filamentous, forming silky "clouds" below the surface or viscous mats on the surface. **While bothersome, filamentous green algae is harmless.**

Filamentous green algae. Sources: Clemson University (left), New York State Department of Environmental Conservation (middle, right).

Confirm filamentous algae using the stick test:

1. Find a long sturdy stick.
2. Be careful not to touch the water.
3. Drag the stick through the surface mat and slowly lift it out of the water. Be careful not to fall into the water while retrieving material.
4. Look at the end of the stick to see what came out of the water.
    a. **If the stick comes out looking like it has been thrust into a can of paint, the mat on the pond is likely a cyanobacteria scum (potentially toxic).**
    b. **If the stick pulls out strands that look like green hair or threads, the mat on the pond is likely filamentous green algae (non-toxic).**

Step 2. Is there surface scum?

Cyanobacteria, unlike other types of algae, are able to regulate their buoyancy and move throughout the water column and tend to float to the surface of the water. During periods of calm winds, thick surface mats can develop. These mats can be blue, green or white and are often described as looking like spilled paint. Cyanobateria blooms or HABs can be toxic to humans, pets, and our ecosystems.

Surface scum algae. Sources: New York State Department of Environemntal Conservation (left) Utah Health Deptepartment (middle, right).

Step 3 (Optional). Do algae in the water column appear to be cyanobacteria?

Many types of phytoplankton live in the water column. Cyanobacteria is sometimes dispersed in the water column after wind or other mixing events. This is an indicator of a potenial HAB. **If you wish, take photographs** of the bloom (close up and full scope) and email them to waterquality@usu.edu to determine whether the algae is cyanobateria.

Algae in the water column. Sources: Raymond Li (left), Ohio Environmental Protection Agency (middle), New York State Department of Environmental Conservation (right).