



## The Association to Preserve Cape Cod's Photo Guide for Assessing Cyanobacteria Scum



*Figure 1 APCC intern Jacob Scola sampling a pond for cyanobacteria on August 18, 2024.*

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**DISCLAIMER: Any of the cyanobacteria scums pictured below may be indicative of a larger bloom and cyanotoxins may be present in the scum and/or the water. When in doubt, stay out!**

**Please read prior to using the photo guide:**

The Association to Preserve Cape Cod's (APCC) Cyanobacteria Scum Photo Guide helps assess whether a cyanobacteria scum can be considered significant or insignificant for the purpose of APCC's Cyanobacteria Monitoring Program ([link](#)). **This guide is not a standalone tool** - while visually identifying cyanobacteria scum can offer great insight, factors like cyanobacteria distribution in the water column, wind, poor lighting, or photo angles may affect the accuracy of a visual assessment.

This photo guide is designed to help determine a pond's current risk tier according to APCC's 2025 Risk Tier Table (**Figure 2**) based on visual characteristics, primarily coverage. A scum will be considered **insignificant** if it covers a small area, or if it's a thin line along the shore. **Significant** scum is typically more extensive and denser. Photos of the scum and the samplers written description of the scum will be considered in the assessment.

In addition to scum assessment, a pond's risk tier is also informed using other methods, including microscopy (for genus identification), phycocyanin concentration (which tracks cyanobacteria biomass), and toxin concentration (depending on the genus).

APCC's Cyanobacteria Monitoring Program aims to provide transparent and standardized information about the risks associated with cyanobacteria blooms. This allows individuals to make informed decisions about whether to recreate at a given pond, based on their own risk tolerance.

APCC 2025 Cyanobacteria Risk Tiers

**Acceptable**

- A cyanobacteria scum was not detected, and the Bloom Forming Colony sample had a phycocyanin measurement <500ug/L.
- A cyanobacteria scum was detected but was determined to be visually insignificant and the Bloom Forming Colony sample had a phycocyanin measurement <100ug/L.

**Potential for Concern**

- A cyanobacteria scum was not detected but the Bloom Forming Colony sample had a phycocyanin measurement  $\geq 500$ ug/L.
- A cyanobacteria scum was detected and determined to be visually significant and/or the Bloom Forming Colony sample had a phycocyanin measurement  $\geq 100$ ug/L.

Stripes are added on the map if the town posts a warning that is not an official Public Health Advisory.\*

**Use Restriction Warranted**

- The town posts a Public Health Advisory.
- Microcystin test measures  $\geq 8$  ppb (MassDPH guidance).
- Once a pond is categorized as Use Restriction Warranted it will remain in this category for two consecutive Acceptable sampling events (MassDPH guidance).

Stripes are added on the map if the town posts a Public Health Advisory and are removed once the town removes the Public Health Advisory.\**If and when the town informs APCC of their action*

Figure 2 APCC's 2025 Cyanobacteria Risk Tier Table

### ***Insignificant Scum:***

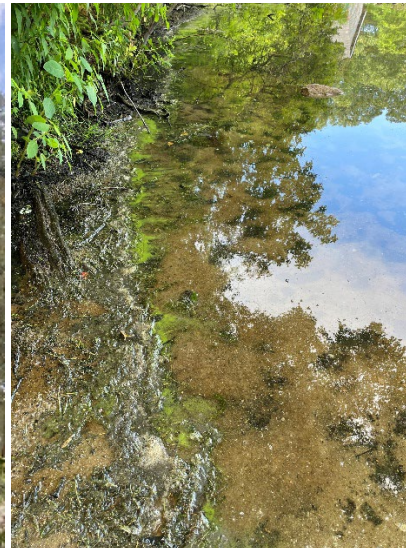
- **Small Area:** The scum covers a limited part of the water surface - the total extent of the scum is clearly less than the size of a small car and is limited to this area. The scum is patchy, thin and not forming streaks.
- **Thin Line (≤3 inches wide):** If the scum is concentrated along the shoreline or in narrow, thin patches, it can be considered insignificant.
- **Scattered:** If the scum is spread out in small, isolated patches and is only visible in a limited area (less than the size of a small car) without forming larger mats, it can be considered insignificant.

**Photo examples of visually “insignificant” cyanobacteria scums:** According to APCC’s 2025 Risk Tier Table, a pond with a visually insignificant scum is categorized as “Acceptable” if the Bloom-Forming-Colony (BFC) phycocyanin (PC) value is <100 ug/L, and as “Potential for Concern” if the BFC PC value is ≥100 ug/L. A pond can be moved into the “Use Restriction Warranted” risk tier if microcystin levels ≥8 ppb or a town posts an official advisory.

#### **Small Area:**



**Thin Line (less than 3 inches wide):**



**Scattered (small, isolated patches):**



**Significant Scum:**

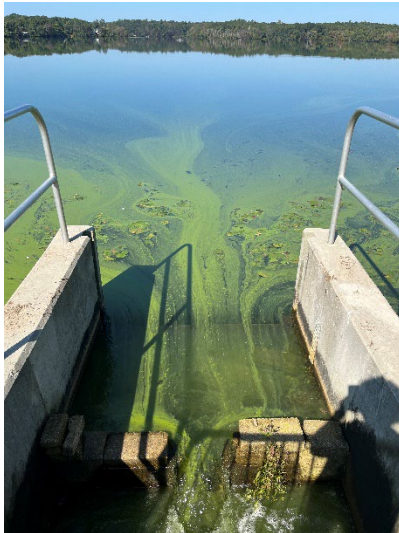
- **Large Area:** The scum covers an area larger than the size of a small car or a line along the shore that is wider than 3 inches.
- **Dense Patches:** If the scum forms thick or consistent patches that cover a wide area, it can be considered significant.
- **Visible Mats:** If the scum forms large floating mats or visible streaks across the water, it can be considered significant.

**Photo examples of visually “significant” cyanobacteria scums:** According to APCC’s 2025 Risk Tier Table all the cyanobacteria scums pictured below would move a pond into the “Potential for

Concern” risk tier. A pond can be moved into the “Use Restriction Warranted” risk tier if microcystin levels  $\geq 8$  ppb or a town posts an official advisory.

**Large Area (larger than car size or >3 inches wide line along the shore):**

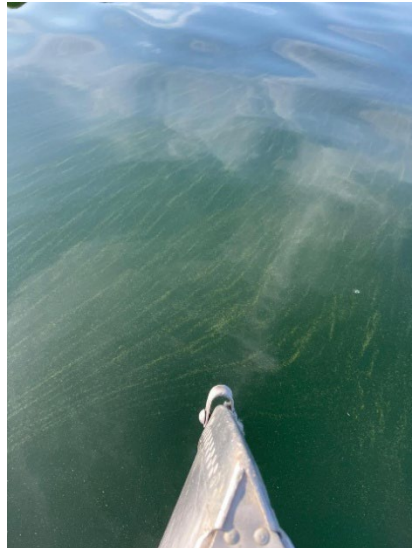
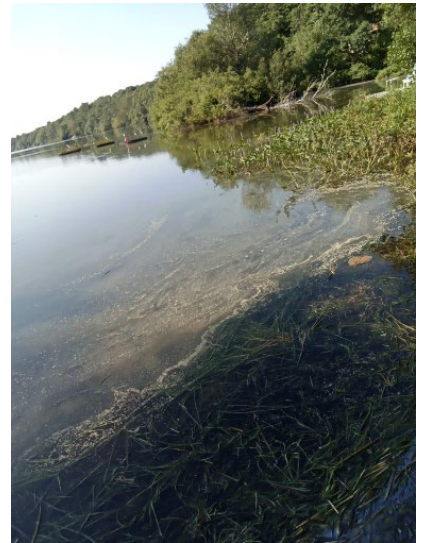




**Dense Patches and Clumps:**



**Visible Mats or streaks across the water:**



If the photos you receive are unclear or of poor quality:

- Focus on the **overall extent** of the scum. Even blurry images can often show whether the scum covers a large area or just a small section.
- Look for **edges or defined lines**—a thin line along the shore or scattered patches generally indicates insignificant scum.

### When in Doubt

If photos are unclear or don't provide enough visual information, take a cautious approach. It may be helpful to go back to the pond, take another look and capture some better photos.

### Cyanobacteria scum lookalikes!

Here are a few examples of scums that are **pollen** NOT cyanobacteria. Please collect a sample anyways, the only way to be sure that scum is not predominantly cyanobacteria is by looking at a sample under the microscope!



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