

# Worcester Cyanobacteria Monitoring Collaborative

## WCMC Results April 29, 2023

Lake and Overall Risk	Phycocyanin Concentration (ug/l)	Particle Concentration (#/ml)	Cyanobacteria Density	Cyanobacteria Observed
Bell Pond	ND	4	none	none
Burncoat Pond	17	498	low	<i>Dolichospermum, Microcystis</i>
Coes Reservoir	ND	69	none	none
Cooks Pond	ND	39	none	none
Farm Pond	ND	13	none	none
Green Hill Park Pond	ND	25	none	none
Indian Lake	ND	213	low	<i>Microcystis, Microcystis Debris</i>
Jordan Pond	ND	25	none	none
Kiver Pond	23	158	low	<i>Microcystis</i>
Leeseville Pond	13	127	none	none
Lake Quinsigamond	ND	21	none	none
Little Indian Lake	ND	227	low	<i>Dolichospermum</i>
Manchaug Pond	ND	48	none	none
Newton Pond	ND	27	none	none
Patch Pond	9	76	none	none
Patch Reservoir	ND	57	low	<i>Microcystis</i>
Salisbury Pond	ND	191	low	<i>Microcystis, Microcystis Debris</i>
Stevens Pond	ND	30	none	none
Crystal Pond	20	568	none	none
Lake Chauncy	ND	12	low	<i>Aphanizomenon</i>
Lake Lashaway	ND	29	low	<i>Microcystis Debris</i>

## Lake's Not Tested this Period

Ecotarium Pond

Elm Park Pond

Risk of Exposure	Phycocyanin ug/l	Particles/ml	Comparative density of cyanobacteria
Almost none	0-15	0-1000	none
Low	15-20	1000-5000	low
Elevated	20-50	5000-10000	some
Blooming	>50	>10000	high

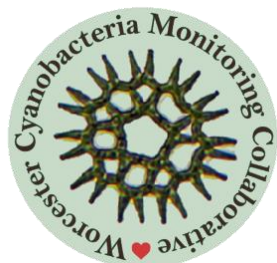


See reverse side for details

Results are based on methods that are not certified by the Commonwealth of MA but are presented as recommendations so that lake uses can make informed choices about their contact. We encourage people to use their best judgement, and "If in doubt, stay out!"

**If you or your pet has been exposed to water that may contain cyanotoxins, rinse the areas with tap water immediately. If your pet has ingested scums or water containing cyanobacteria, contact your veterinarian as soon as possible.**

[Learn more at WorcesterMA.gov/WCMC](http://WorcesterMA.gov/WCMC)



# Interpreting WCMC Results

**If you or your pet has been exposed to water that may contain cyanotoxins, rinse with tap water immediately. Do not let animals lick their fur. If your pet has ingested scums or water containing cyanobacteria, contact your veterinarian as soon as possible and see these CDC guidelines:**

**[Cyanobacterial Blooms: Information for Veterinarians | Harmful Algal Blooms | CDC.](#)**

The WCMC is a group of volunteer community scientists that is developing ways to assess risk to cyanotoxin exposure using fast and low cost methods. These results are based on methods that are not certified by the Commonwealth of MA but are presented as recommendations so that lake users can make informed choices about their contact.

***We encourage people to use their best judgement, and “If in doubt, stay out!”***

The WCMC does not measure cyanotoxins, instead the group uses four parameters to determine the **risk of cyanotoxin exposure**. These include **phycocyanin concentration**, **particle concentration**, **cyanobacteria density**, and the **cyanobacteria observed**. Each of the results are ranked and given a color to identify severity. The overall risk of exposure at each lake is determined by reviewing all four parameters together.

Risk of Exposure	Phycocyanin ug/l	Particles/ml	Comparative density of cyanobacteria
Almost none	0-15	0-1000	none
Low	15-20	1000-5000	low
Elevated	20-50	5000-10000	some
Blooming	>50	>10000	high

*ND = Below detection limits*

**Risk of Exposure:** Overall risk of exposure to cyanotoxins in the waterbody based on a holistic interpretation of the data collected.

**Phycocyanin:** Cyanobacteria-specific pigment concentration in the water. The more phycocyanin there is in the water, the more cyanobacteria are present. However, because different kinds of cyanobacteria produce different quantities of phycocyanin, the risk of toxin production is different for the same concentration of phycocyanin when there are different cyanobacteria present.

**Particle Concentration:** Particles include living and non-living materials and can be a proxy for overall turbidity of the water. High concentrations of particles in the water can be indicative of cyanobacteria blooms, but can also be the result of other factors such as non-living debris and sediment. The phycocyanin concentrations and cyanobacteria density help to interpret if particles are due to cyanobacteria or other sources.

**Cyanobacteria Density:** The ratio of cyanobacteria to other organisms in the sample. Higher densities can indicate elevated risk of exposure to cyanotoxins. Density results do not consider concentration, but in general, systems dominated by cyanobacteria are at higher risk for producing toxins.

**Cyanobacteria Observed:** Genera of cyanobacteria identified in the sample. Because different cyanobacteria have different levels of phycocyanin, observed cyanobacteria help determine the threshold of phycocyanin that is considered risky.