

# Worcester Cyanobacteria Monitoring Collaborative

## WCMC Results May 15, 2023

Lake and Overall Risk	Phycoyanin Concentration (ug/l)	Particle Concentration (#/ml)	Cyanobacteria Density	Cyanobacteria Observed
Bell Pond	ND	57	none	
Burncoat Pond	49	561	none	
Coes Reservoir	ND	105	low	<i>Dolichospermum</i>
Cooks Pond	ND	42	none	
East Lake Waushacum	ND	44	none	
Ecotarium Pond	32	259	none	
Elm Park Pond	100	1999	some	<i>Dolichospermum, Microcystis Debris</i>
Green Hill Park Pond	9	39	none	
Indian Lake	11	732	low	<i>Dolichospermum, Microcystis, Microcystis Debris</i>
Jordan Pond	ND	42	none	
Kiver Pond	ND	74	none	
Leeseville Pond	ND	22	none	
Lake Quinsigamond	ND	124	low	<i>Microcystis</i>
Little Indian Lake	ND	139	low	<i>Microcystis</i>
Manchaug Pond	ND	52	some	<i>Dolichospermum</i>
Newton Pond	9	64	none	
Patch Pond	ND	361	none	
Patch Reservoir	ND	43	none	
Salisbury Pond	28	161	low	<i>Microcystis Debris</i>
Stevens Pond	ND	30	low	<i>Dolichospermim</i>
Crystal Pond	ND	652	none	
Lake Chauncy	ND	34	none	
Lake Lashaway	9	59	some	<i>Dolichospermum</i>

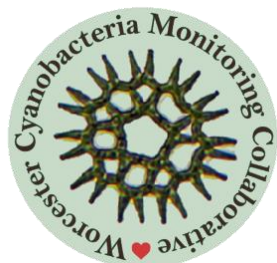
### Previous Results for Lakes Not Tested this Period

Farm Pond	ND	13	none	Last tested 4/29/23
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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!"

**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 or water containing cyanobacteria, contact your veterinarian as soon as possible.**

[Learn more at WorcesterMA.gov/WCMC](https://www.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.