WCMC Results May 21, 2022

Lake and Exposure Risk	Phycoyanin Concentration (ug/l)	Particle Concentration (#/ml)	Cyanobacteria Presence	Cyanobacteria Character
Elm Park Pond	423	315095	high	Dolichospermum, Microcystis w/ debris
Lower Ecotarium	29	77442	none	
Kiver Pond	26	48879	none	
Burncoat Pond	21	38522	low	Microcystis
Salisbury Pond	18	14300	some	Microcystis debris
Patch Pond	15	9936	none	
Little Indian Lake	15	5270	low	Microcystis
Indian Lake	13	4439	some	Microcystis, Dolichospermum
Manchaug Pond	11	1767	some	Dolichospermum, Oscillatoria
Jordan Pond	10	1462	none	
Green Hill Pond	10	3367	some	Aphanizomenon
Lake Quinsig	9	1271	low	Dolichospermum
Singletary Lake	ND	2157	none	
Farm Pond	ND	780	some	Dolichospermum, Microcystis debris
Cooks Pond	ND	2387	none	
Bell Pond	ND	415	none	
Newton Pond	ND	1924	none	
Leeseville Pond	ND	3381	none	
Sterling Pond	ND	1303	none	
Stevens Pond	ND	1344	none	

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

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 cyanobcteria, 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 uses 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.

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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 cyanobactera identified in the sample. Because different cyanobacteria have different levels of phycocyanin, observed cyanobacteria help determine the threshold of phycocyanin that is considered risky.