

Brawley Consulting Group, LLC

Land Conservation and Management Services

Memo

Date: September 24, 2026
To: Bantam Lake Protective Association
From: Brawley Consulting Group
Re: Results of Cyanobacteria Monitoring of September 22, 2026



Summary

Based on cyanobacteria cell concentrations in samples collected from the lake on September 22, 2026, and other related water quality data, the risk to the public from cyanobacteria / harmful algal blooms was moderate. Cyanobacteria cell concentrations at two of the three sites sampled, and the lake average were consistent with the State's Visual Rank Category 2 conditions, i.e., moderate public health risk. Other surrogate measures of cyanobacteria productivity indicate increased growth over the last several weeks. Public interventions recommended for Category 2 conditions include reporting to the State, posting cautionary signage, and increased surveillance (CT DPH & CT DEEP 2023).

Methods and Conditions

On Tuesday, September 22, 2026, the Brawley Consulting Group collected data and water samples from the lake and analyzed those over the next several days as part of the Bantam Lake Cyanobacteria Monitoring Program. Detailed methods have been described in past summaries. Data and samples were collected at North Bay, Center Lake, and South Bay sites. Only field data were collected at the Folly Point site.

Arrival time at the Lake was approximately 12:30 PM. The lake water clarity appeared low. However, visible surface blooms were not observed. At the time of arrival and during all time on the water, there was bright sun with passing clouds; winds were light ([Weather Underground 2026](#)). The Bantam Lake water level ([BLPA 2026](#)) was below the baseline elevation.

Cyanobacteria and Algae Community

A total of 32 algae genera were identified in the plankton net or whole water samples. The taxonomic group with the greatest richness (number of individual genera) was the Chlorophyta (aka green algae) with 14 identified genera. Cyanophyta (aka blue-green algae or cyanobacteria) were represented by 7 genera. Three genera of Chrysophyta (aka golden algae) and three of Bacillariophyta (aka diatoms) were identified. Three other algal groups were represented by 1 or 2 genera each.

Table 1. Table 1. Site characteristics and cyanobacteria cell concentrations at Bantam Lake on September 22, 2026.

Sites	Cyanobacteria cells (cells/mL)	Total Depth (m)	Secchi Transparency (m)	Temperature Top/Bottom (°C)	Oxygen Top/Bottom (mg/L)
North Bay	19,345	6.17	1.74	20.3 / 20.1	8.9 / 8.4
Center Lake	31,054	8.12	1.54	20.5 / 20.1	9.4 / 8.4
South Bay	22,455	4.05	1.46	20.2 / 19.9	9.5 / 9.6
Folly Point	---	7.80	1.45	20.5 / 20.3	9.3 / 8.9

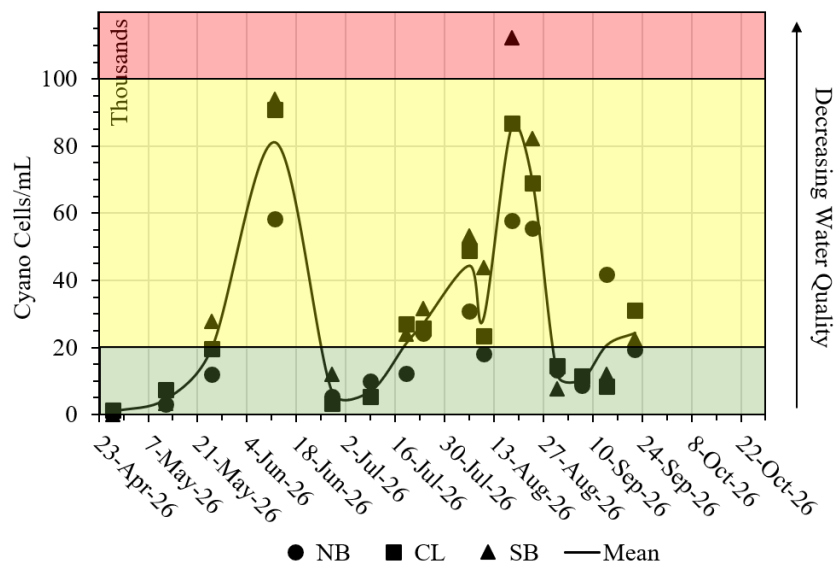


Figure 1. Cyanobacteria cell concentrations at the North Bay (NB), Center Lake (CL), and South Bay (SB) sites during the 2026 season at Bantam Lake. The plot is color coded to represent the CT DEEP's Visual Rank Categories for risk from harmful algal blooms: green = low risk; yellow = moderate risk; red = high risk.

Total algae cell concentrations were moderate and between 19,000 and 31,000 cells/mL at the three sites. Cyanobacteria constituted between 76% and 87% of the total cell concentrations (see Table 1 for site cyanobacteria cell concentrations). The lake average cyanobacteria cell concentration was 24,286 cells/mL and approximately 3,600 cells/mL greater than the September 14th average of 20,680 cell/mL (Fig. 1).

For comparison, CT DEEP describes a threshold of 20,000 cells/mL as a deliniation between low public risk and moderate public risk from harmful algal blooms in the State's guidance for municipalities (CT DPH & CT DEEP 2023). The suggested threshold between moderate and high public risk is 100,000 cyanobacteria cells/mL. Cyanobacteria cell concentrations at two of the three sites, and the lake average were within the moderate-risk range (Visual Rank Category 2). The cell concentration at the North Bay site was just within the low-risk (Visual Rank Category 1) range.

There was a shift in dominant the cyanobacteria genus with *Dolichospermum spp.* the clear dominant genus at North Bay and Center Lake sites. At South Bay *Dolichospermum spp.* was co-dominant along with *Aphanizomenon spp.* and *Woronichinia spp.* Other cyanobacteria genera observed included *Aphanocapsa spp.*, *Gomphosphaeria spp.*, *Microcystis spp.* and *Snowella spp.*

Water Quality

Several other indicators of cyanobacteria growth and water quality monitored as part of this program are Secchi disk transparency and relative phycocyanin concentration. Secchi transparency is a measurement indicating how far light transmits through the water column. The more algae and other particulate matter suspended in the water column, the less Secchi disk transparency there will be and vice versa. Secchi transparencies at the 4 sites on September 22nd were between 1.4 and 1.8 meters (Table 1). The lake average was 1.55 meters and the second lowest of the season (Fig. 2). The lowest was on August 24th at 1.41 meters.

Phycocyanin is a photosynthetic pigment mostly unique to cyanobacteria. It is measured fluorometrically in the field through the water column with field instrumentation. Measures are relative in that a primary standard was not used to calibrate the meter. Although relative, they are useful in that they are comparable to measurements at different depths and dates. The averages of the top three meters of the water columns were used here, as they have in the past.

The lake's average relative phycocyanin level on September 22nd was 10.6 µg/L which surpassed the previous high of 10.5 µg/L recorded on August 24th (Fig. 2). Concentrations at Center Lake and South Bay were nearly identical. The lowest relative concentration was at North Bay and the highest was at Folly Point.

Relative levels have steadily increased following the late August low resulting from the August 28th algicide treatment.

Site Condition

Water temperatures near the surface continue to gradually decrease. Surface temperatures were approximately 20°C (68°F) at all sites. The water columns were mixed at all sites including the Center Lake site. Temperatures at the bottom of all sites were also 20 °C.

Oxygen concentrations were high at all depths of all sites. Oxidation-reduction potentials (ORP) were >200 mV at the bottom of the water column at all sites. ORP levels <200 mV near the bottom of the water column have been correlated with internal loading of phosphorus from lake sediments.

Conclusions

The risk to public health from cyanobacteria and harmful algal blooms at Bantam Lake on September 22, 2026 was moderate. Cyanobacteria cell concentrations at two of the three sites and the lake average were consistent with Visual Rank Category 2 levels, which is indicative of moderate public health risk.

Cyanobacteria cell concentrations and especially the relative phycocyanin (i.e., cyanobacteria) biomass are trending upward. The discrepancy between those two variables (i.e., a more notable increase in relative phycocyanin concentration vs cell count) may be due to the shift in the dominant genus. *Dolichospermum* cells are larger than *Aphanizomenon* cells and therefore have greater biomass.

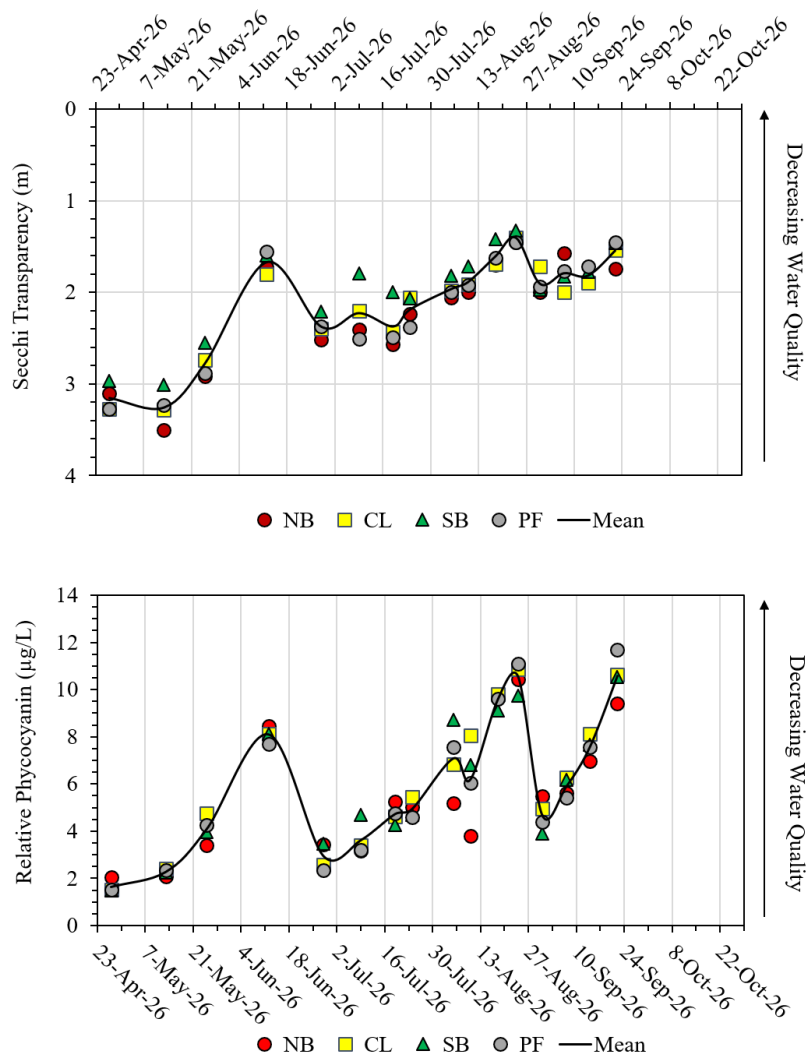


Figure 2. Secchi disk transparency measurements (top) and relative phycocyanin top 3-meter averages (bottom) during the 2026 season. The solid curved line represents the lake averages.

The public using the lake should be vigilant, be aware of changing conditions, report and avoid contact with cyanobacteria blooms that may develop.

Analysis by



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References

Bantam Lake Protective Association. 2026. Our Lake: Water Level Monitor.

<https://www.bantamlakect.com/>

Connecticut Department of Public Health and Connecticut Department of Energy and Environmental Protection. 2023. Guidance to Local Health Departments for Blue-Green Algae Blooms in Recreational Freshwaters. See <https://portal.ct.gov/-/media/DPH/EHDW/Blue-Green-Algae-Blooms/Guidance-to-LHD-for-Blue-Green-AlgaeBlooms.pdf>

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