

Brawley Consulting Group, LLC

Land Conservation and Management Services

Memo

Date: September 2, 2026
To: Bantam Lake Protective Association
From: Brawley Consulting Group
Re: Results of Cyanobacteria Monitoring of August 31, 2026



Summary

Based on cyanobacteria cell concentrations in samples collected from the lake on August 31, 2026, and other related water quality data, the risk to the public from cyanobacteria / harmful algal blooms was low. Cyanobacteria cell concentrations at all sites sampled, and the lake average were consistent with the State's Visual Rank Category 1 conditions, i.e., low public health risk. This follows a Rank Category 2 assessment (moderate risk) on August 24th followed by an algicide treatment on August 28th. No public interventions are recommended for Category 1 conditions (CT DPH & CT DEEP 2023).

Methods and Conditions

On Monday, August 31, 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 Folly Point. The samples were collected four days after an algicide treatment implemented because of elevated cyanobacteria levels in prior weeks.

Arrival at the Lake was at approximately 3:30 PM. The lake water clarity was fair. Visible surface blooms were not observed. At the time of arrival and during all time on the water, skies were overcast and winds were light ([Weather Underground 2026](#)). The Bantam Lake water level ([BLPA 2026](#)) was slightly above the baseline elevation.

Cyanobacteria and Algae Community

A total of 29 algae genera were identified in the plankton net or whole water samples. The taxonomic groups with the greatest richness (number of individual genera) were the Chlorophyta (aka green algae) and the Cyanophyta (aka blue-green algae or cyanobacteria) with 10 and 9 genera observed, respectively. Bacillariophyta (aka diatoms) were represented by 3 genera. Four other algal groups were represented by 1 or 2 genera each.

Total cell concentrations were moderate and between 8,000 and 17,000 cells/mL among the three sites. Cyanobacteria constituted between 85% and 95% of the total cell concentrations at the three sites (see Table 1 for site actual cyanobacteria cell concentrations). The lake average cyanobacteria cell concentration was 11,785 cells/mL and approximately 57,000 cells/mL less than the August 24th average of 68,837 cell/mL (Fig. 1).

Table 1. Table 1. Site characteristics and cyanobacteria cell concentrations at Bantam Lake on August 31, 2026.

Sites	Cyanobacteria cells (cells/mL)	Total Depth (m)	Secchi Transparency (m)	Temperature Top/Bottom (°C)	Oxygen Top/Bottom (mg/L)
North Bay	13,143	6.60	2.00	23.8 / 22.8	7.4 / 0.1
Center Lake	14,544	6.55	1.72	23.9 / 20.7	7.0 / 0.1
South Bay	7,668	7.92	1.94	24.5 / 22.2	7.5 / 0.1
Folly Point	---	4.72	1.97	23.8 / 23.0	6.3 / 4.0

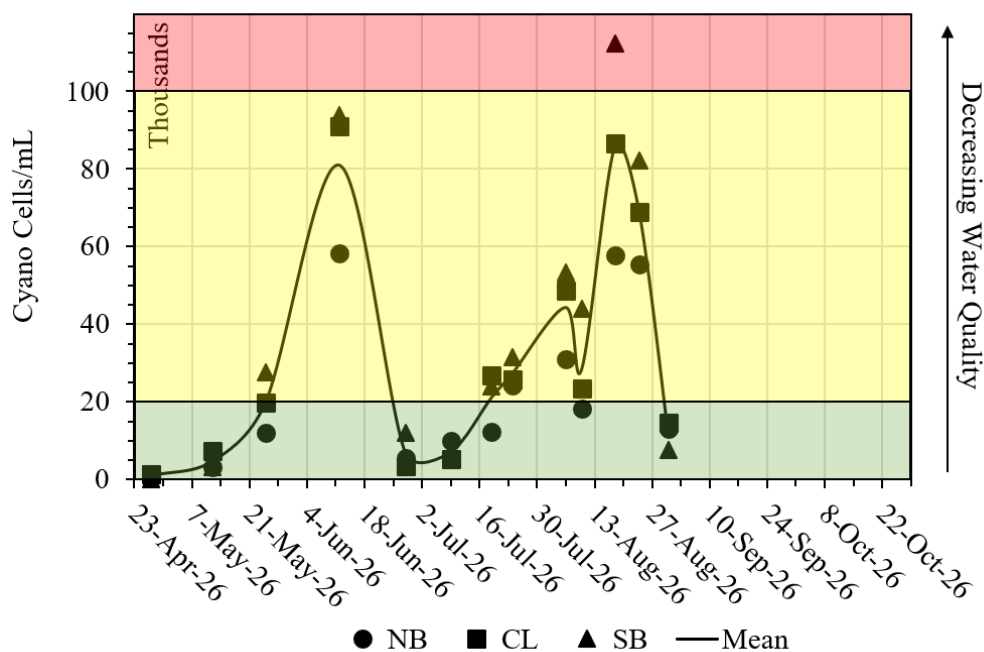


Figure 1. Cyanobacteria cell concentrations at the North Bay (NB), Center Lake (CL), and South Bay (SB) sites during the 2026 season at Bantam Lake. The plot is color coded to represent the CT DEEP's Visual Rank Categories for risk from harmful algal blooms: green = low risk; yellow = moderate risk;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

For comparison, CT DEEP describes a threshold of 20,000 cells/mL as the threshold between low public risk and moderate public risk from harmful algal blooms in guidance for municipalities. The recommended threshold between moderate and high public risk is 100,000 cyanobacteria cells/mL (CT DPH & CT DEEP 2023). Cyanobacteria cell concentrations at the three sites, and the lake average were within the low risk range (Visual Rank Category 1).

The filamentous *Dolichospermum spp.* and/or *Aphanizomenon spp.* were the dominant cyanobacteria depending on site. Other cyanobacteria genera observed included *Aphanocapsa spp.*, *Gomphosphaeria spp.*, *Lyngbya spp.*, *Microcystis spp.*, *Planktothrix spp.*, *Pseudanabaena spp.*, and *Woronichinia 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 August 31st were between 1.7 and 2.0 meters (Table 1). The lake average was 1.91 meters, which was 50 cm greater than the August 24th average (Fig. 2).

Phycocyanin is a photosynthetic pigment mostly unique to cyanobacteria. It is measured fluorometrically through the water column with the

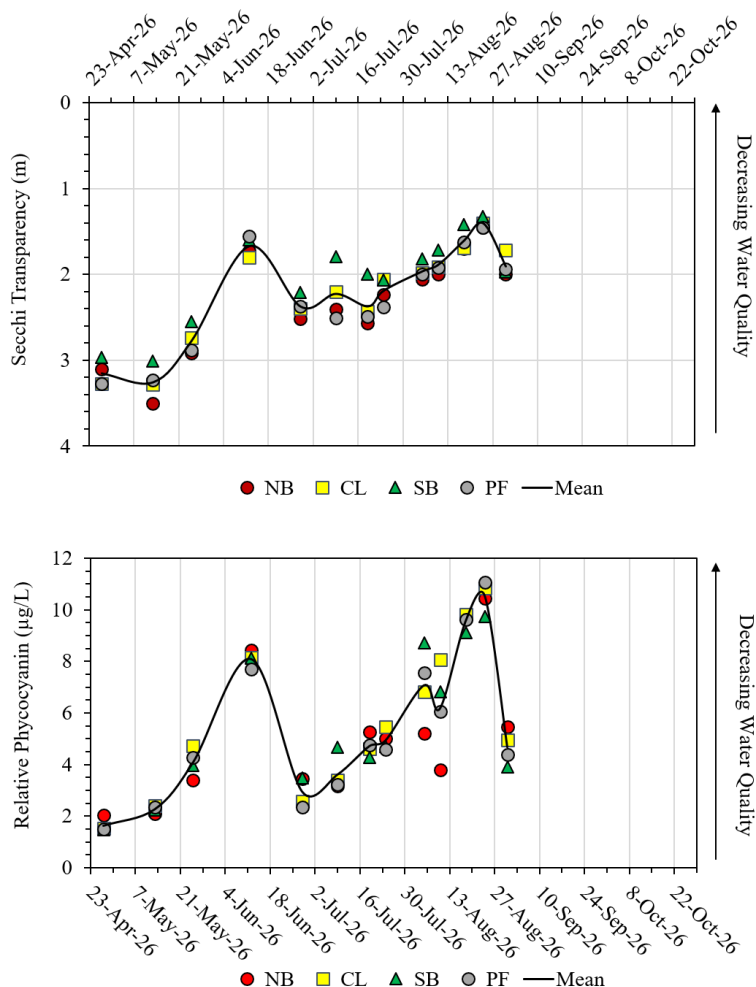


Figure 2. Secchi disk transparency measurements (top) and relative phycocyanin top 3-meter averages (bottom) during the 2026 season. The solid curved line represents the lake averages.

instrumentation used to collect field data. 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 collected 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.

Relative phycocyanin levels on August 31st were notably lower than the August 24th levels (Fig. 2). Differences among sites were minor. The decrease in cyanobacteria biomass was observed across the lake. Relative concentrations were tightly grouped between 3.9 and 5.5 µg/L.

The reduced relative phycocyanin and cyanobacteria cell concentrations were likely due to the August 28th algicide treatment that occurred between the two sampling dates. The lack of a greater improved Secchi transparency response was likely due to highly overcast skies and inorganic material in the lake washed into the lake from recent rain events.

Site Condition

Water temperatures near the surface continue to gradually decrease. Surface temperatures were approximately 24°C (75°F) at all sites except South Bay where they were 24.5°C (76°F). The water columns were mixed at all sites except the Center Lake site where the thermocline was situated between 6 and 7 meters of depth.

Oxygen concentrations in the top 4 meters of the water columns of all sites were between 6 and 8 mg/L. At the North Bay and Folly Point sites, oxygen concentrations decreased to <1 mg/L by 6 meters of depth. At South Bay, an oxygen concentration of 4.0 mg/L was measured near the bottom. At the Center Lake site, concentrations decreased from 6.1 mg/L at 4 meters to 0.3 mg/L by 7 meters, and 0.1 mg/L by 7.5 meters.

Oxidation-reduction potentials (ORP) were <200 mV near and/or at the bottom of all sites except the South Bay site. ORP levels <200 mV have been correlated with internal loading of phosphorus from lake sediments.

Conclusions

The risk to public health from cyanobacteria at Bantam Lake on August 31, 2026 was low. Cyanobacteria cell concentrations and the lake average were consistent with Visual Rank Category 1 levels, which are indicative of low public health risk. No public interventions are recommended.

Improved conditions over those observed on August 24th were most likely the result of the algicide treatment that occurred on August 28th. Lake users are still advised to be vigilant, avoid and report any cyanobacteria (algae) blooms that may develop.

Analysis by



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Literature Cited

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>

Weather Underground. 2026. White Memorial Conservation Center – KCTLITCH9.
<https://www.licor.cloud/dashboards/public/b8d1aa99-7e1f-45e9-b9c5-99a2ff75846c/true?filters=%7b%22davra-timeselector%22:%7b%22type%22:%22relative%22,%22unit%22:%22days%22,%22value%22:3,%22live%22:false%7d%7d>