

This report was prepared by citizen scientist Frank Galicia on behalf of Friends of Great Hill Pond, an organization dedicated to controlling invasive aquatic plant species, promoting the ecological health of the pond, and preserving a safe and enjoyable environment for residents and visitors. The collection and analysis of these water quality data provide a basis for monitoring temporal changes in the pond's ecological condition.

Because of limitations in available sampling equipment and resources, two representative sampling sites were selected to characterize overall pond conditions. The results summarized in the following table identify several water quality parameters that may contribute to an increased risk of algal blooms as the summer season progresses. Algal growth is influenced by multiple interacting environmental factors, including nutrient concentrations, air and water temperature, precipitation, solar radiation, and water circulation. Elevated concentrations of phosphates, together with increased nitrate levels, can promote algal blooms, particularly during periods of sustained air temperatures above 80°F and limited rainfall, when reduced water circulation and flushing may favor algal growth.

The most significant finding in this assessment is the positive detection of total coliform bacteria. Although total coliform bacteria are not necessarily pathogenic, their presence serves as an indicator that environmental contamination or fecal material from wildlife, domestic animals, or human sources may have entered the water. Because coliform bacteria are considered indicator organisms, a positive result suggests an increased potential for the presence of disease-causing microorganisms. Additional microbiological testing, including confirmatory coliform analyses and, if appropriate, testing for *Escherichia coli* (*E. coli*), is recommended to better assess potential health risks and identify possible sources of contamination.

Date		7/16/2026	7/16/2026
Time		8:30 AM	8:30 AM
Site ID		Middle pond	Dam
Phase		No treatment since May	No treatment since May
Dissolved Oxygen (ppm)	Normal A normal and healthy lake dissolved oxygen (DO) level typically ranges from 6.5 to 8 ppm (or mg/L). Levels around 8 to 9 ppm are considered ideal for most aquatic life, while concentrations dropping below 5 ppm cause stress, and below 2 ppm are lethal.	8	8

airTemperature (°C)		24	24
Water Temperature (°C)		26	26
pH	Normal. 6.5-8	7.5	8
Phosphate (ppm)	HIGH. In healthy, natural freshwater lakes in Connecticut, normal total phosphorus levels typically range from 0.01 to 0.03 ppm (10 to 30 ppb). Baseline soluble reactive phosphate concentrations are generally even lower, usually falling between 0.005 and 0.05 ppm. High < 0.1 for lakes is standard.	1	1
Nitrate (ppm)	Eutrophic-Elevated Unpolluted lakes typically range from 0.1 to 3 ppm.	5	5
Turbidity	Normal	0	0
Coliform +/-	A positive coliform test means bacteria from the environment or animal/human waste have entered your water supply. While not all coliforms are harmful, they act as "indicator organisms" signaling that disease-causing pathogens may also be present.	Positive	N/A (not tested)
Cloud Cover: ☐ 0-5% ☐ 6-24% ☐ 25-49% ☐ 50-69% ☐ 70-89% ☐ 90-100%		0-5	0-5
Light Conditions: ☐ Bright ☐ Cloudy-bright ☐ Overcast		bright	bright
Precipitation: ☐ None ☐ Rain ☐ Snow		none	none

Wind Conditions: ☐ Calm ☐ Light ☐ Light to Breezy ☐ Breezy ☐ Windy ☐ Very Windy ☐ Strong		calm	calm
Water Surface Conditions: ☐ Completely calm ☐ Small waves, frequent whitecaps		completely calm	completely calm

Harbor Evening

1000

WHITE MOUNTAIN

2) DO 8.11
3) DO 8.0
4) N/A

Coliform

Turbidity



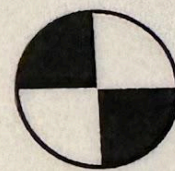
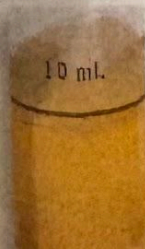
4



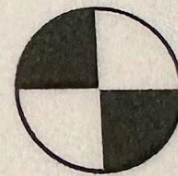
negative



positive



0 JTU



40 JTU



24-85 @ 1M

CODE
0100

ssol
xyg

Nitrate



5 ppm



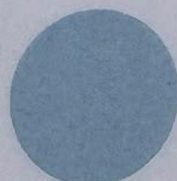
20 ppm



Phosphate



1 ppm



2 ppm



Phosphate



5 ppm



20 ppm



0 ppm

1 ppm

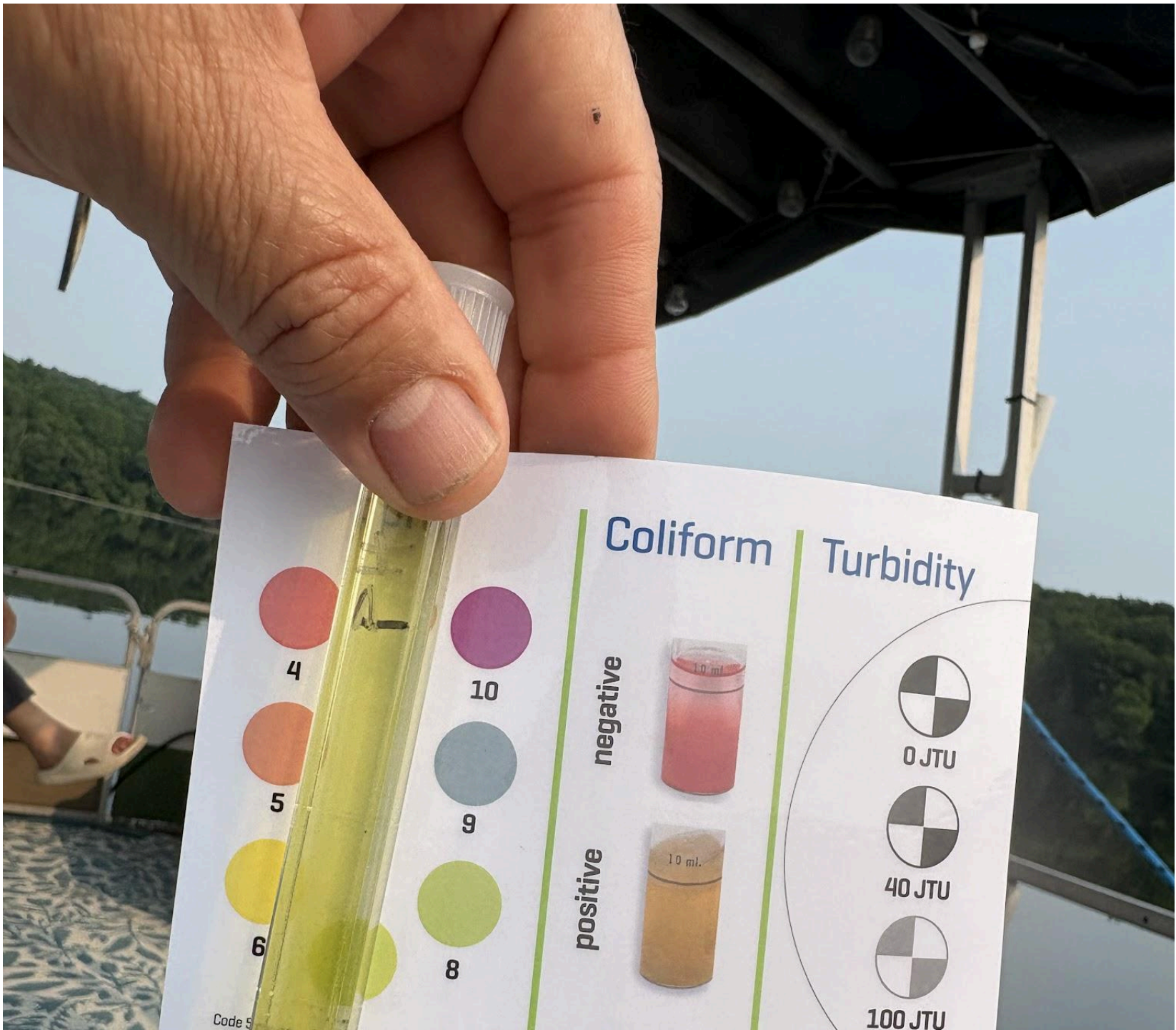


2 ppm



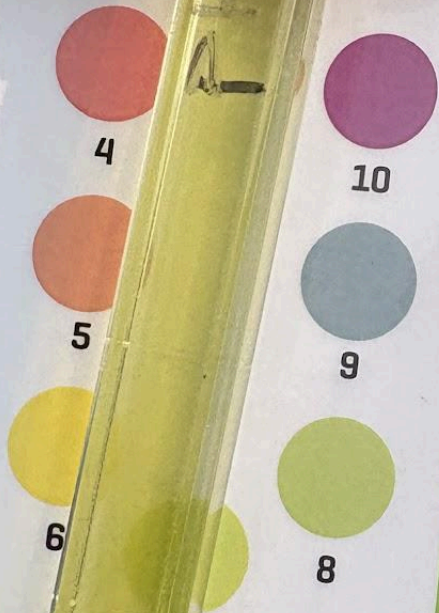
4 ppm

Coc



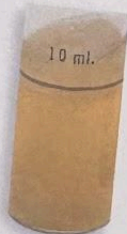
Coliform

Turbidity



negative

positive



0 JTU

40 JTU

100 JTU