Water Quality Report
Sagamore Lake
2025

Report prepared for:　　　**Sagamore Lake Community Association**

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Monitoring performed:　　　*Late Spring and Mid-Summer*

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Summary

In 2025, at the request of the Lake Sagamore Community Association (LSCA), AEC continued with the water quality monitoring of Sagamore Lake located in Kent, NY (Figure 1). AEC performed a seasonal sampling for characterization of spring and summer water quality conditions at the same two sampling locations. In 2023 and 2024, nutrient levels, both nitrogen and phosphorus, in Lake Sagamore were not high enough to cause a public health concern, therefore, these parameters were excluded from routine sampling. Instead, we prioritized parameters that offered a more immediate water quality picture, such as chlorophyll-*a*, dissolved oxygen, pH, turbidity (secchi disk – water clarity), and phytoplankton community characterization. Nutrient sampling will be conducted only when these indicators suggest conditions associated with the potential for elevated nutrients. In these instances, nutrient testing could identify a nutrient point source which would require remediation. In 2025, the results of our water quality testing did not warrant sampling for either nitrogen of phosphorus. Additionally, based on the findings from the 2024 vegetation survey (very few observations of aquatic plants), AEC suggests that a vegetation survey may not be needed in 2026.

Figure 1. Sagamore Lake map with sampling locations.
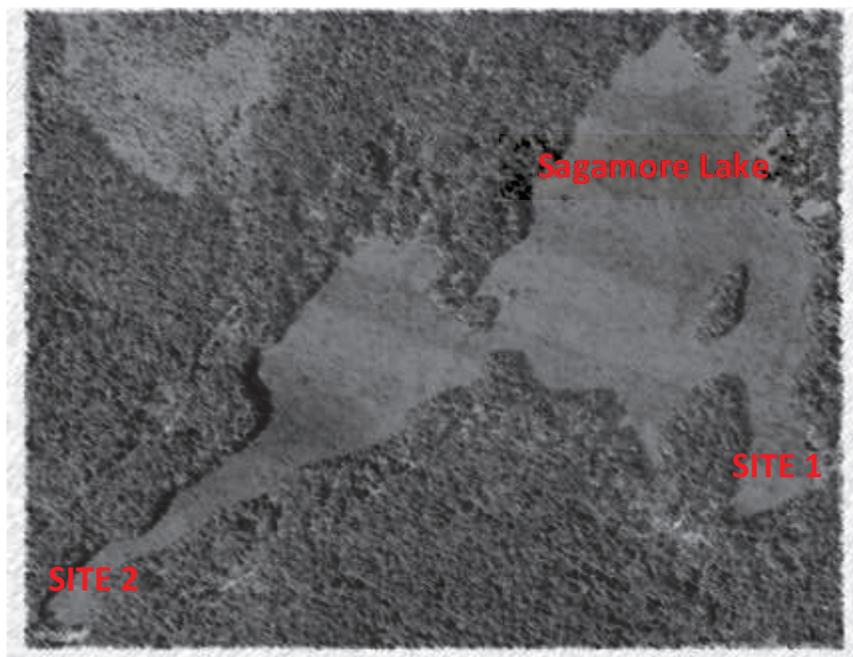
Source: Google Maps

In 2025, monitoring and visual observation performed by AEC suggests that Sagamore Lake continues to have excellent water quality. Throughout the season, there were reports by residents who observed aquatic plants and surface algae, but upon further investigation, the low density, specific species, or the short-lived duration of their presence did not warrant supplemental testing or management.

Historically, before the addition of triploid grass carp for vegetation control, Sagamore Lake had high coverage and density of submerged aquatic vegetation in the shallow southern basin, along with

moderate coverage in the shallow regions of the northern basin. The high vegetation coverage was impacting recreational use of Sagamore Lake. In 2025, AEC once again observed minimal (<1%) submerged and emergent/floating-leaved aquatic plants.

Methods

Water Quality Study

We sampled two sites; Site 1 (Dam), Site 2 (Croton River Inlet) during spring (June) and summer (August) at 0.5 meter depths. In addition, we measured water clarity, temperature and oxygen at 0.5-meter depths down to the bottom (4.5 meters) at Site 1 (deep-water near the dam). Sampling included physical and biological variables with associated methods listed in Table 1 to evaluate water quality in Sagamore Lake.

Table 1. List of variables and associated analytical methods

| Variable	Method
pH	YSI multi-meter
Conductivity	YSI multi-meter
Water Clarity	Secchi Disc
Chlorophyll a	Acetone extraction. Shimadzu Spectrophotometric analysis
Phytoplankton	Fixed samples with Lugol's. Identified species with an inverted microscope.
Temperature and Oxygen	YSI Multi-Meter
Phytoplankton Community Identification and Characterization	Microscopy

Results

Climatic Conditions

Water quality in waterbodies is highly influenced by climatic conditions. Temperature and precipitation vary from year to year and could be a catalyst to water quality issues. For example, the trend of warmer temperatures (Figure 2) has lengthened the growing season and has, alongside other issues such as human induced excess nutrients, increased the occurrence, frequency, duration, and severity of algae blooms.

In 2025, daily temperatures in June and August were similar; however, only in June were there days in which the temperature was greater than 90ºF. In addition, the daily temperatures in June were 10 to 15 degrees warmer than the historical average, whereas, daily temperatures were only 5 degrees warmer than the historical average in August. There were also more rain events in the spring (May through June) prior to the June sampling date than there were leading up to the summer sampling date (July through August). The warmer weather and greater precipitation in the spring most likely led to

cyanobacteria being the dominant algal species.

Figure 2. Historical mean annual air temperatures in New York City from 1869-2024. (Graph: Climatestations.com)
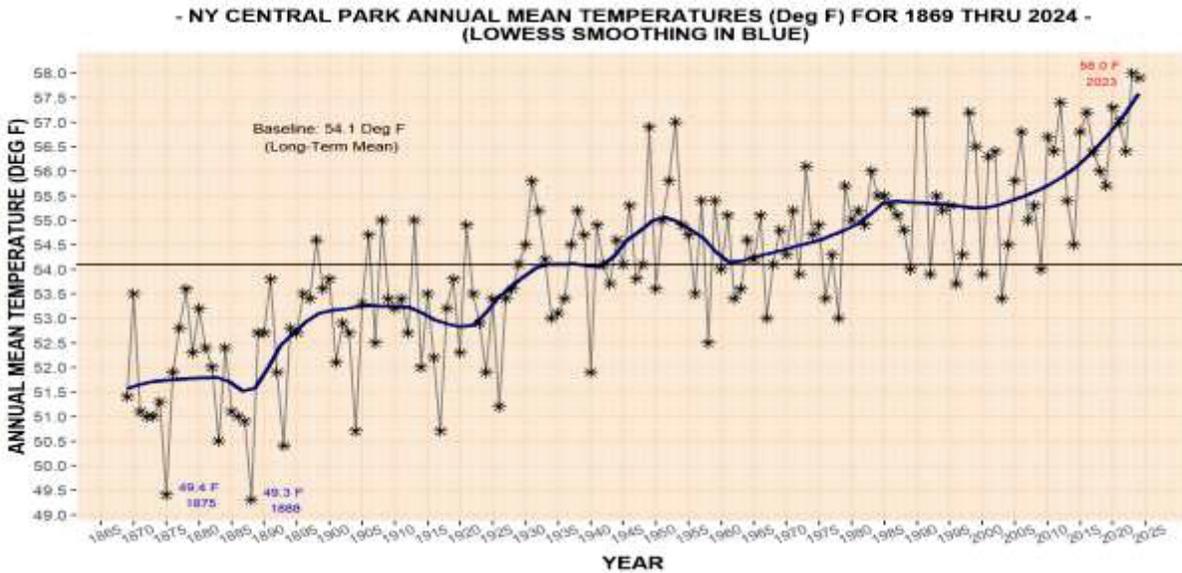
Water quality

Water quality variables are categorized into physical and biological parameters. We monitored and measured these variables to characterize water quality and inform on any emerging or current adverse conditions affecting aesthetics, recreation, or public health.

Physical Parameters

For the two sampling dates (Late Spring, Mid-Summer) and two sample sites (Dam, Croton River Inlet) AEC measured water temperature, oxygen, pH, and conductivity.

Table 2. 2025 physical parameters monitored in Sagamore Lake.

Late Spring 2024 vs 2025

Sample Site	Temp (ºC)	O2 (mg/L)	O2 Saturation (%)	pH	Conductivity (us/cm)
Dam	28.5	8.0	104	7.7	193
Croton River Inlet	25.3	8.1	101	7.6	174
Mean 2025	**26.9**	**8.1**	**103**	**7.7**	**184**
Mean 2024	**22.9**	**7.9**	**94**	**7.3**	**158**

Mid-Summer 2024 vs 2025

| Sample Site	Temp (ºC)	O2 (mg/L)	O2 Saturation (%)	pH	Conductivity (us/cm)
Dam	28.10	7.2	95	7.8	212
Croton River Inlet	28.00	7.0	92	7.8	208
Mean 2025	**28.1**	**7.1**	**93**	**7.8**	**210**
Mean 2024	**25.5**	**5.1**	**62**	**7.7**	**160**

Water Temperature

Water temperature reflects atmospheric temperature. As such, much higher than normal atmospheric temperature results in a longer than average growing season. Also, data from monitoring local surrounding lakes over the last 20 years indicates that water temperatures have been increasing. The consequence of an extended growing season is a contributing factor favoring the occurrence of algae/cyanobacteria blooms.

Oxygen

Dissolved oxygen (DO) is one of the most important indicators of water quality associated with aquatic life. It is essential for the survival of fish and other aquatic organisms. Dissolved oxygen is gaseous, molecular oxygen in the form of O_2 originating from the atmosphere or as a byproduct of photosynthesis. Once dissolved in water, it is available for use by living organisms and can play a significant role in many chemical processes in aquatic environments. Measurements of dissolved oxygen in lakes are an indicator of ecosystem health: repeated low dissolved oxygen measurements are an indicator of impaired water quality. In ecosystems with high photosynthetic production or eutrophic systems, dissolved oxygen fluctuates significantly from day to night as photosynthesis stops at night in the absence of sunlight. Also, acute events such as significant precipitation events with watershed runoff can cause temporarily low dissolved oxygen. The runoff carries nutrients which fuel bacterial growth. In turn, bacterial respiration uses up dissolved oxygen. Healthy oxygen levels in aquatic environments are greater than 6.5 mg/L (Figure 5).

Figure 3. Dissolved oxygen tolerance ranges for fish.
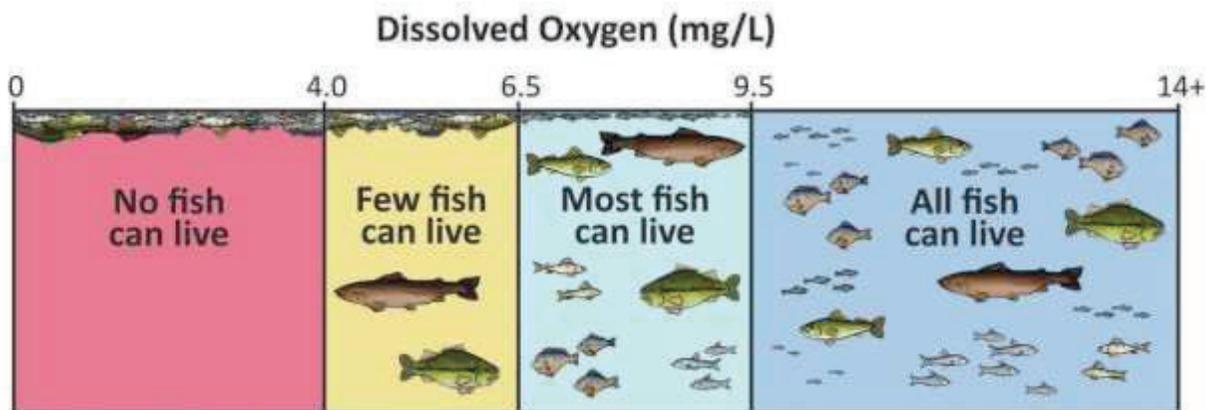
Source: Dissolved Oxygen (DO) (datastream.org)

Based on measured readings (Table 2), dissolved oxygen in Sagamore Lake was within optimal levels for survival and reproduction of most fish and other aquatic organisms during the spring and mid-summer monitoring. Oxygen levels were greater in 2025 than in 2024, which provides further support that last summer's sub-optimal conditions for oxygen is not a chronic condition of Sagamore Lake.

Temperature-Oxygen Profile

Temperature and dissolved oxygen were measured at a deep-water location (Site 1) where the maximum depth is about 4.5 meters. For most of the year (much more distinct in mid-summer months) the water column in temperate lakes, such as Sagamore, is stratified (**separated into 2 distinct layers with very little mixing**) based on water temperature. Winter conditions have colder temperatures at the top and warmer at the bottom and vice versa in other seasons. During the spring when temperatures

start to warm and autumn when temperatures cool, there is a brief period where water temperature and oxygen are uniform from surface to bottom. During this time, oxygen poor and nutrient rich water from the bottom mix with oxygen rich lower nutrient surface. These occurrences are called the spring and autumn turnovers. The mixing of nutrients favors the growth of algae and bacteria. During the monitoring period both spring and summer months had warmer surface water layer (epilimnion) than the lower depths (hypolimnion) (Figure 4).

Figure 4. Description of lake summer stratification.

Courtesy: https://images.app.goo.gl/LVULHNnyWYFqcbYi8
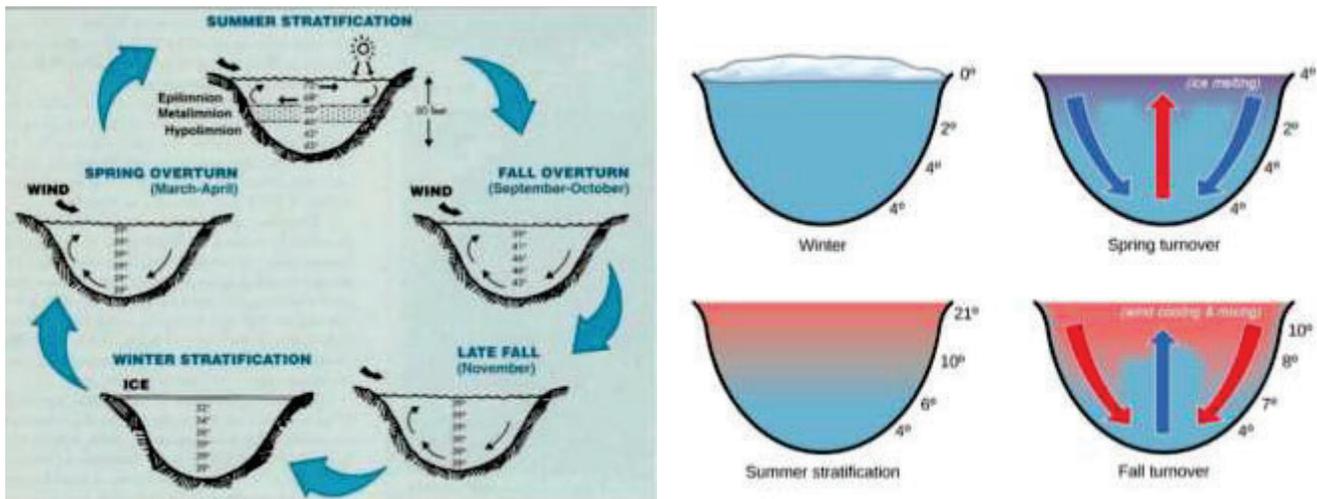
In addition to providing a snapshot of lake conditions, the measurement of a vertical temperature and oxygen profile is important for examining year to year patterns. Recent studies have mentioned the warming of lake benthic layers and how these impact nutrient dynamics in a lake and can promote the growth of algae/cyanobacteria.

During the summer months, the upper water layer is warmer, well oxygenated and usually relatively nutrient poor, while the lower layer is cooler, has very low oxygen and is nutrient rich (Figs 5a-b). Northern lakes generally experience a turnover twice annually (during spring when the surface water layer warms up and autumn when it cools down) and is characterized by water temperature and oxygen levels being uniform from the surface to the bottom. The equal temperatures allow a homogeneous mixture of lake water at all depths, which in turn homogenizes oxygen conditions and causes an upwelling of nutrients from the benthic region. Because of the nutrient increase in the upper layers, photosynthetic organisms (algae) thrive, resulting in an algae bloom. The turnover date (spring and autumn) occurs at similar times of the year, though this has been happening earlier in spring and later in summer due to climate warming. The impacts of this are extended growing seasons which are a contributing factor to the occurrence of algae/cyanobacteria blooms, which are a public health concern.

The profiles for 2025 show a similar pattern to those in 2024. The late spring monitoring indicated that temperature stratification had been established (Fig. 5a), indicating warm spring conditions. The mid-summer monitoring (August) indicates a typical temperature and oxygen stratification (warmer surface temperature with higher oxygen, lower bottom temperature and oxygen) (Fig. 5b).
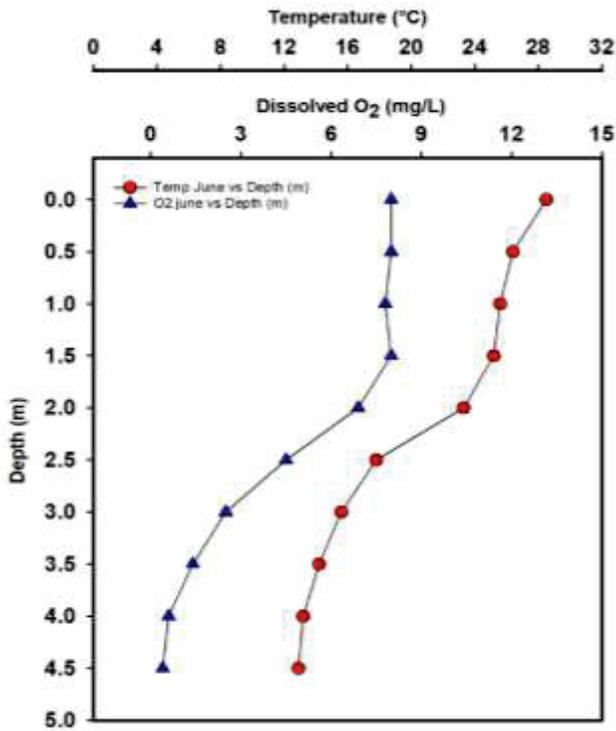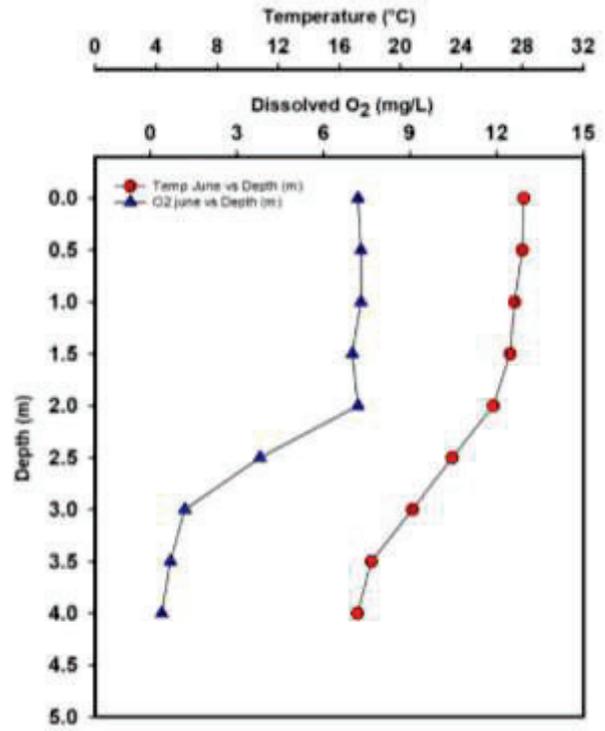
Figure 5a. Spring Temperature vs Oxygen 2025.   **Figure 5b.** Summer Temperature vs Oxygen 2025.

pH

The pH level of the water in rivers, lakes, and wetlands is important to plant and animal life. Most animal species cannot survive if the water is too acidic (generally below 5.0), or too basic (above 9.0). Optimal pH for many species is between 7.0 and 9.0 (Figure 6). The measured pH values in Sagamore Lake were all within the optimal pH range and thus supports most aquatic organisms (Figure 6).

**Figure 6.** pH tolerance ranges for aquatic organisms.
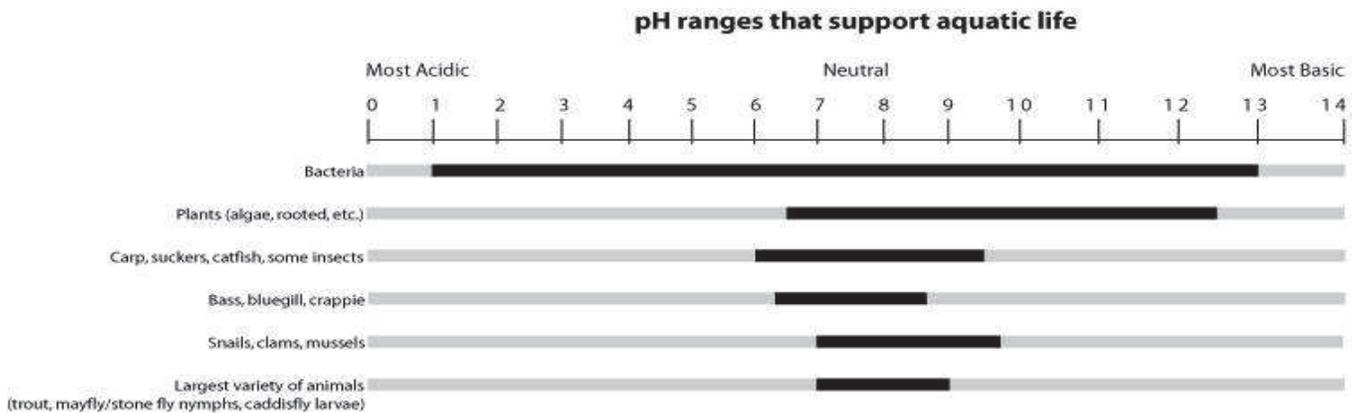
Source: pH | Limno Loan Program

Conductivity

Conductivity is a measure of a material's ability to conduct an electric current. Conductivity in water quality corresponds to a measure of dissolved salts. The concentration of dissolved salts in lakes and ponds has been increasing in the Northeastern United States. This increase is attributed to the use of salt and deicers to maintain safe road conditions in the winter. Unfortunately, the increased dissolved salt is having negative ecological impacts such as delaying spring turnover (the mixing of water and reoxygenation of bottom layers in a lake). Thus, harming less tolerant freshwater organisms, which in turn favors nuisance species, sometimes leading to adverse aquatic conditions. Conductivity measurements taken during the spring and summer (Table 2) were greater than those taken in 2024; however, were well within the optimal range to support fish populations (Figure 7) in Sagamore Lake.

Figure 7. Conductivity ranges that support fish species.
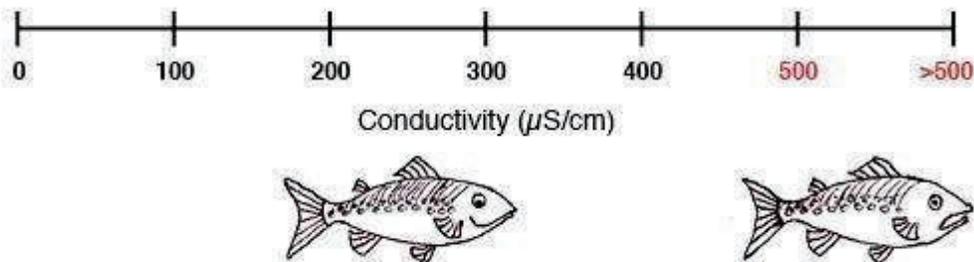
Source: Water Quality 101 | ACE Project (ace-project.org)

Biological Parameters

Biological parameters are monitored to evaluate indices of primary productivity and indicator species which can identify current or emerging water quality issues.

Chlorophyll a / Secchi Depth

Chlorophyll *a* is a measure of the amount of algae (phytoplankton biomass) growing in a waterbody. It can be used to classify the trophic condition of a waterbody. According to North American Lake Management Society's trophic state index (https://www.nalms.org/secchidipin/monitoring-methods/trophic-state-equations/), mean chlorophyll *a* measurements in Sagamore Lake are consistent with a mesotrophic or moderately productive lake (Figure 8). Additionally, chlorophyll *a* data indicates slightly lower phytoplankton abundance in 2025, but this was heavily weighted by lower phytoplankton abundance in spring 2025, and more specifically at the Croton Inlet site (Site 2), versus spring 2024.

Secchi depth (a physical parameter) is the measure of water clarity by dipping a Secchi disk to the depth at which it is no longer visible. This measurement is an index of water clarity and is related to turbidity. Turbidity is a measurement of the concentration of suspended particles such as suspended particulate matter or algae. Generally, lower turbidity or higher water clarity is associated with higher water quality and vice versa. Similar to chlorophyll *a*, water clarity can also be used to classify the trophic status of a lake, thus the water clarity of Sagamore Lake is consistent with a meso- to eutrophic condition (Figure 8). In 2025, water clarity was greater in the summer than in the spring. The lower water clarity in the spring was not likely related to algae since heavy rain occurred a day prior to sampling, which caused precipitation runoff of particulate matter into Sagamore lake, which then remained in suspension, and not necessarily due to algal abundance.

Figure 8. Chlorophyll *a* / Secchi depth measurements: A comparison. 2023-2025
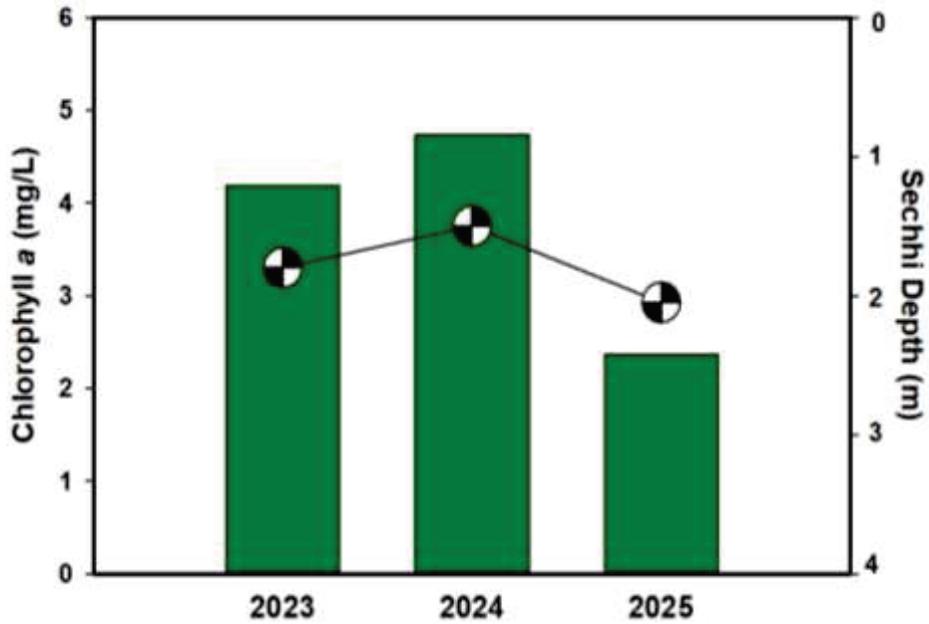
Sagamore Lake - Phytoplankton Community Characterization 2025

Background. Monitoring programs routinely use information based on the abundance (biomass) and species composition of phytoplankton assemblages (freely-floating algae), because they reflect a longer view of ecological conditions than can be provided by a set of nutrient samples from a single date. A diverse phytoplankton community is generally regarded as an indication of a healthy lake. These algae form the base of lake food webs and generate most of the oxygen in these ecosystems, but occasionally cause nuisance problems. For example, a diversity of species of diatoms, green algae and various flagellates (Figure 9a) with no single species in abundance, indicate lower nutrient levels and a generally healthy lake. In contrast, a dense phytoplankton assemblage dominated but a few species of cyanobacteria (Figure 9b) indicate elevated nutrients (human-caused eutrophication) and deteriorated water quality. (Note: the images shown below are samples from two different lakes as examples only, not Sagamore Lake).

Figure 9a: Example of a summer phytoplankton assemblage from a moderately nutrient-rich lake, with a diverse collection of diatoms, green algae, dinoflagellates and cyanobacteria

Figure 9b: Example of a summer phytoplankton assemblage from a eutrophic lake, with high levels of nitrogen and phosphorus, and low diversity community composed of cyanobacteria.

Spring – Summer Phytoplankton Community of Sagamore Lake in 2025

This was the third year in which an assessment of phytoplankton from Sagamore Lake was conducted. While somewhat preliminary, three years (2023-2025) of data provides some information on longer-term patterns for mid-summer conditions, which is a period in which adverse or excessive algal growth can occur in eutrophic lakes. Images of common phytoplankton species observed in Sagamore are shown on (Appendix I).

Samples and Purpose. Sampling was conducted on June 22 and August 14; on each date a surface sample was collected from near the inlet and near the dam. The goals of these data were (1) to assess the major algal groups in the community, and (2) determine what species serve as indicators of water quality. These data will serve as a basis for comparison with conditions in future years.

How to Read These Data. Table 3 list species of algae observed in samples collected from a 1-m depth by location. The numbers after species names represent the relative abundances (in ranks) of each species by site, to better assess differences in species richness and composition.

The ranks are as follows: 0 = absent or not seen; 1= rare (< 1%); 2 = occasional (1-5%); 3 = common (6-25%); 4 = abundant or dominant (26-50%); 5 = massive or blooms (>50%).

Because some species of cyanobacteria (blue-green algae), when in high ("bloom") densities, can impair water quality, this assessment also includes a percentage assessment of the relative importance of cyanobacteria in each period: the **Cyano Index**, with values from 0 to 100% of total biovolume.

Table 3. List of common phytoplankton (algal) species by taxonomic group, collected from Sagamore Lake in June and August 2025, with relative abundances given as rank scores: Name of species that have major increased abundance are highlighted yellow; major decreases in blue.

	0 = absent or not seen	1 = rare (<1%)	2 = occasional (1-5%)	3 = common (6-25%)	4 = abundant or dominant (26-50%)	5 = massive or blooms (> 50%)

	June 22		August 14	
	Inlet	Dam	Inlet	Dam
Cyanobacteria ("blue-green" algae)				
Aphanizomenon flos-aquae	1	1	1	1
Aphanocapsa parasitica	0	0	1	0
Aphanocapsa sp. 1	2	2	2	3
Aphanothece sp. 1	1	3	1	2
Dactylococcopsis cf. smithii	1	0	0	0
Dolichospermum cf. affine / macrosporum; 5.0-6.5 um; akinete distant	5	4	4	3
Dolichospermum cf. flos-aquae; coiled	3	2		
Dolichospermum planctonicum; spherical 7.3-9.1 um; akinetes pairs	3	4	4	4
Planktolyngbya cf. limnetica (1-15.um; ends rounded)	0	1	2	3
Pseudanabaena sp. 1	0	1	0	0
Merismopedia tenuissimia	0	2	0	0
Microcystis cf. aeruginosa	0	2	2	1
Microcystis wesenbergii	3	2	0	2
Oscillatoria sp. 1 (4-5 um)	0	1	0	0
Woronichinia naegeliana	3	2	3	2
Chlorophyta (green algae)				
Ankistrodesmus falcatus	1	0	0	0
Botryococcus braunii	2	0	0	2
Eudorina elegans	0	2	0	0
Oocystis lacustris	1	2	1	1
Pediastrum tetras	0	1	0	0
Planktosphaeria gelatinosa	1	0	1	1
Quadrigula lacustris	0	1	0	0
Scenedesmus spp.	0	0	2	1
Sphaerocystis schroeteri	2	2	1	2
Staurastrum sp. 1	0	0	0	1
Tetraedon gracile	1	0	0	0
Tetraedon minimum	0	0	2	2
Tetraedon cf. regulare	0	1	0	1
Euglenophyta (euglenoids)				
Euglena cf. mutabilis	0	2	1	2
Phacus sp. 1	0	0	0	2
Strombomonas sp. 1	0	1	0	0
Trachelomonas cf. hispida	0	2	3	2
Trachelomonas volvocina	2	1	2	2

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Table 3, continued. List of common phytoplankton (algal) species by taxonomic group, collected from Sagamore Lake in June and August 2025, with relative abundances given as ranks:

0 = absent or not seen	1 = rare (<1%)	2 = occasional (1-5%)	3 = common (6-25%)	4 = abundant or dominant (26-50%)	5 = massive or blooms (> 50%)

	June 22		August 14	
	Inlet	Dam	Inlet	Dam
Chrysophyta (golden algae)				
Chrysosphaerella cf. longispina	0	0	0	2
Dinobryon bavaricum	0	0	0	1
Dinobryon cylindricum	0	0	2	2
Dinobryon divergens	3	3	3	3
Mallomonas cf. akrokomos	1	0	0	1
Mallomonas sp. 1	2	0	2	1
Bacillariophyta (diatoms)				
Achnanthidium cf. minutissimum	0	0	1	0
Asterionella formosa	2	2	0	0
Aulacoseira granulata	0	1	0	2
Aulacoseira granulata var angustissima	2	2	2	2
Cocconeis plcentula	0	0	2	0
Discotella stelligera	0	0	0	1
Fragilaria cf. capucina	3	2	1	2
Fragilaria crotonensis	2	2	2	1
Fragilaria mesolepta	0	1	0	1
Gomphonema sp. 1	0	1	1	0
Gomphonema acumunatum	0	1	0	0
Navicula sp.1 small	0	1	0	1
Nitzschia sp. 1	0	0	0	1
Rhoicosphenia abbreviata	1	0	2	0
Tabellaria fenestrata	3	2	2	2
Ulnaria delicatissima	1	1	0	0
Ulnaria ulna	0	1	1	1
Urosolenia eriensis	0	0	1	1
Pyrrophyta (dinoflagelates)				
Ceratium hirundinella	0	3	0	0
Peridinium sp. A (small: 20-22 um long)	2	1	3	3
Peridinium sp. B (larger, with spine; 45-50 um)	0	1	3	3
Cryptophyta (cryptophytes)				
Cryptomonas sp. A (24-35 um)	2	2	2	1

Comments and Ecological Indications. The algal community in Sagamore Lake continues to be typical of meso-eutrophic to (increasingly) eutrophic lakes that are in our region. Detailed comments are below.

Major species:

In June and August 2025, (as in June 2024) Sagamore Lake experienced a bloom of the filamentous cyanobacteria, mainly *Dolichospermum cf. affine / macrosporum* and *Dolichospermum planctonicum;* both are nitrogen fixers. The 3-year re-occurrence of *Dolichospermum* species and the extension of the bloom from June through August in 2025 suggests a chronic problem, possibly due to elevated dissolved phosphorus levels in the lake. As in 2024, they co-occurred with the chrysophyte, *Dinobryon divergens*. We reiterate that not all algal blooms are health concerns, but heavy growth of *Dinobryon and o*ther chrysophytes, like Dinobryon species, can cause taste or odor issues ("fishy "smell), especially if water is used for drinking water purposes. Below is a comparison of the estimated Cyano-Index values (by percentage) for the three years (Table 4). **Note**: in 2023, cyanobacteria dominated the phytoplankton community only in August, and in 2024 only in June; but in 2025 the bloom continued across both months.

Figure 10: A comparison of the estimated Cyano-Index values (by percentage) for the three years.

	2023				2024				2025			
	June 13		August 27		June 13		August 23		June 22		August 14	
	Inlet	Dam	Inlet	Dam	Inlet	Dam	Inlet	Dam	Inlet	Dam	Inlet	Dam
% Cyano	13.3%	12.0%	53.0%	57.4%	40.8%	36.9%	23.5%	27.1%	65.8%	58.5%	58.1%	49.3%
% Greens	1.5%	0.6%	1.4%	1.7%	3.5%	8.5%	8.0%	6.8%	3.8%	6.5%	2.6%	5.2%
% Euglenos	0.6%	0.3%	0.9%	3.4%	2.3%	1.9%	1.1%	10.2%	1.4%	4.3%	2.6%	6.7%
% Chrysos	59.8%	65.1%	30.6%	13.6%	11.9%	16.8%	19.8%	23.7%	8.7%	9.2%	15.4%	16.7%
% Diatoms	24.1%	21.3%	13.7%	20.4%	38.8%	32.5%	25.1%	18.6%	18.9%	11.4%	10.3%	11.1%
% Dinos	0.6%	0.6%	0.5%	3.0%	0.4%	1.7%	19.3%	11.9%	1.4%	9.8%	11.0%	11.1%
% Cryptos	0.0%	0.0%	0.0%	0.4%	2.3%	1.7%	3.2%	1.7%	0.0%	0.3%	0.0%	0.0%

Most cyanobacteria were filamentous forms, including Aphanizomenon flos-aquae, Dolichospermum cf. affine / macrosporum, Dolichospermum planctonicum, and Planktolyngbya cf. limnetica, but there was one common colonial form, Woronichinia naegliana. **None of these species are known to be toxin producers**. Aphanizomenon flos-aquae may at times produce toxins when very abundant, but it was a minor member of the phytoplankton on both dates. Otherwise, species compositions were roughly similar in each year (examples below).

Figure 11. Examples of common phytoplankton species observed in Sagamore Lake in 2025.
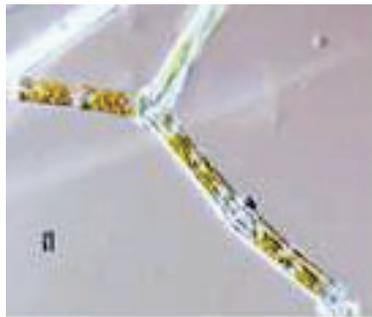

Dinobryon divergens

Dolichospermum planctonicum

Dolichospermum cf. affine

Woronichinia naegliana

Tabellaria fenestrata à

Peridinium sp. B à

Conclusions

Physical Parameters

Overall, Sagamore Lake's physical variables indicated unimpaired water quality. As we have mentioned in previous reports, the more global issue is increasing water temperature due to climate change which extends the growing season and increases the chances of harmful or nuisance algae blooms. All other physical parameters suggest water quality is suitable to sustain a healthy fish population and ecosystem.

Biological Parameters

Chlorophyll *a* and phytoplankton community characterization also both suggest Sagamore Lake is a moderately productive lake. Although there appears to be an increase of cyanobacteria measured in the spring and summer samples, a widespread surface water algal bloom was not observed in 2025. There were reports by residents of algal 'blooms', but their distribution was very limited and their existence was short-lived a (few hours to a few days). Specifically, the algae observed near the dam was a green filamentous species known as *Mougeotia*, which in abundance can form mucilaginous mats. Although it is not aesthetically pleasing, it is not toxic and very common in freshwater lakes.

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In addition, a resident reported the existence of an aquatic plant by the shoreline of her property. Upon further inspection, this plant appears to be a species of Najas/Naiad (water nymph). There are two common species in NY lakes, one is Brittle Naiad (invasive) and one is Slender Naiad (native). AEC has often observed that it is usually one of the first species to make a comeback before other plant species. So, with that in mind, there is a high probability that residents will observe this plant again, and possibly more of it. That being said, it is going to take a few years before it becomes an issue.

Overall, Sagamore Lake is safe and generally has excellent quality, but as with other lakes in the region, they are moderately productive and susceptible to nutrient influxes due to climatic driven issues (extreme precipitation events, warmer temperatures extending the growing season), which result in increasingly common harmful and nuisance algae blooms, and elevated fecal coliform bacteria. Below are management methods currently used or should be considered to maintain water quality and correct issues.

Sagamore Lake management methods in use and to be considered:

In use: Sterile triploid grass carp – Triploid Grass Carp are a controlled species for aquatic vegetation control and require a permit from the NYS DEC **(http://www.dec.ny.gov/outdoor/7973.html)**.
Since adding too many carp has implications for the occurrence of cyanobacteria blooms, eradicating all vegetation (re-emerging species are sometimes not the same and can be more of a nuisance) is not beneficial to the whole lake system, the carp stocking program could only be resumed once vegetation coverage increases to DEC guided targets. Once this is attained, a small amount of carp re-stocking should occur every 2-3 years to maintain a stable population (since they cannot reproduce, some are lost to mortality). Also, their feeding rates drop significantly after approximately 8 years. This method should continue to be used and evaluated year to year (by conducting a vegetation survey), in order to guide future stocking. Since there is <1% vegetation coverage, a vegetation survey will not be necessary until some vegetation coverage is restored.

Proposed: Aquatic Herbicide/Algaecide – if significant algae or aquatic vegetation becomes a nuisance to recreation, the application of aquatic herbicides in a targeted manner is very effective at quickly eradicating any algal or excess aquatic vegetation. However, it needs to be performed annually and cost is relatively high. In addition, the application of chemicals, though a low risk, does have some environmental concerns, with the accumulation in the sediment, resulting in higher costs if dredging is required. Herbicide or algaecide is not preferred in Sagamore Lake but can be considered in the event of a massive, prolonged algae bloom. Typically, to employ this management method, a permit must be filed in spring of each year since it takes 8-10 weeks to obtain a permit and a timely response would not be possible if applying when an algae bloom or excess vegetation condition emerged. For 2025, AEC proposes to apply for an aquatic herbicide application permit. AEC recommends the use of this herbicide only if there is an algal bloom. This is considered a last resort strategy to restore the interruption of recreational use of Sagamore Lake.