**The Connecticut Agricultural Experiment Station**

123 Huntington Street

New Haven, CT 06511

# West Hill Pond

## New Hartford, CT

Aquatic Vegetation Survey
Water Chemistry

# 2022

**Gregory J. Bugbee**

**Riley S. Doherty**

**Summer E. Stebbins**

Department of
Environmental Science and Forestry

*June 2, 2023*

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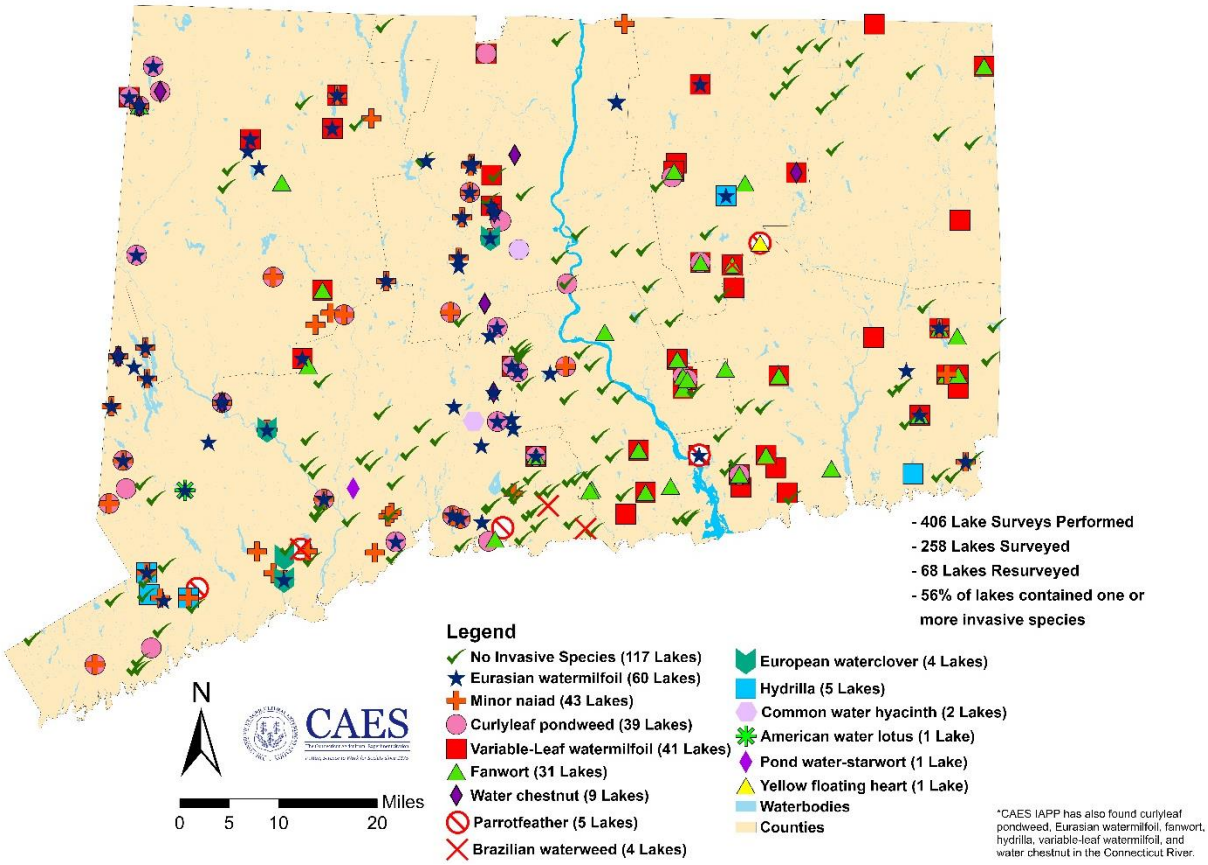


**Figure 1.** Locations of invasive aquatic plants found by CAES IAPP from 2004 – 2022.

## Introduction:

Since 2004, the Connecticut Agricultural Experiment Station Invasive Aquatic Plant Program (CAES IAPP) has surveyed the aquatic vegetation and water chemistry in over 400 Connecticut lakes, ponds, and rivers (Figure 1). Of these waterbodies, 56% contain invasive (non-native) plant species that can cause rapid deterioration of aquatic ecosystems and recreational value. CAES IAPP uploads all survey information into a database where stakeholders can view vegetation maps, transect data, herbarium mounts, temperature and dissolved oxygen profiles, and water chemistry (portal.ct.gov/caes-iapp). This information allows citizens, government officials, and scientists to view past conditions, compare them with current conditions, and make informed management decisions. The presence of invasive species is related to water chemistry, public boat launches, random events, and climate change (June-Wells et al., 2013, Rahel and Olden, 2008).

West Hill Pond is a 245-acre waterbody located in New Hartford, CT. It is historically among Connecticut's least eutrophic bodies of freshwater (Frink and Norvell, 1984). West Hill Pond provides wildlife habitat as well as recreational opportunities including fishing, swimming, and boating. The pond is home to two Boy Scout Camps, a state boat launch ramp, and numerous well maintained shoreline homes. It has a maximum depth of approximately 60 feet and an average depth of 32 feet. Two rocky, shallow areas occur in its center. West Hill Pond has large areas of rocky substrate that combined with its nutrient poor water and deep areas offer natural limitations to aquatic plant growth (Figure 2). Previous work on West Hill Pond dates to the 1940's when the State Board of Fisheries and Game (1942) described the lake as having exceptional transparency and "extensive submerged weeds below the wave action zone" (no specifics). Another publication by the State Board of Fisheries and Game (1959) mentions West Hill Pond having a sand, gravel and rubble bottom, very clear water, and scarce submerged vegetation (no specifics). The change from a lot to a little submersed vegetation from 1949 to 1952

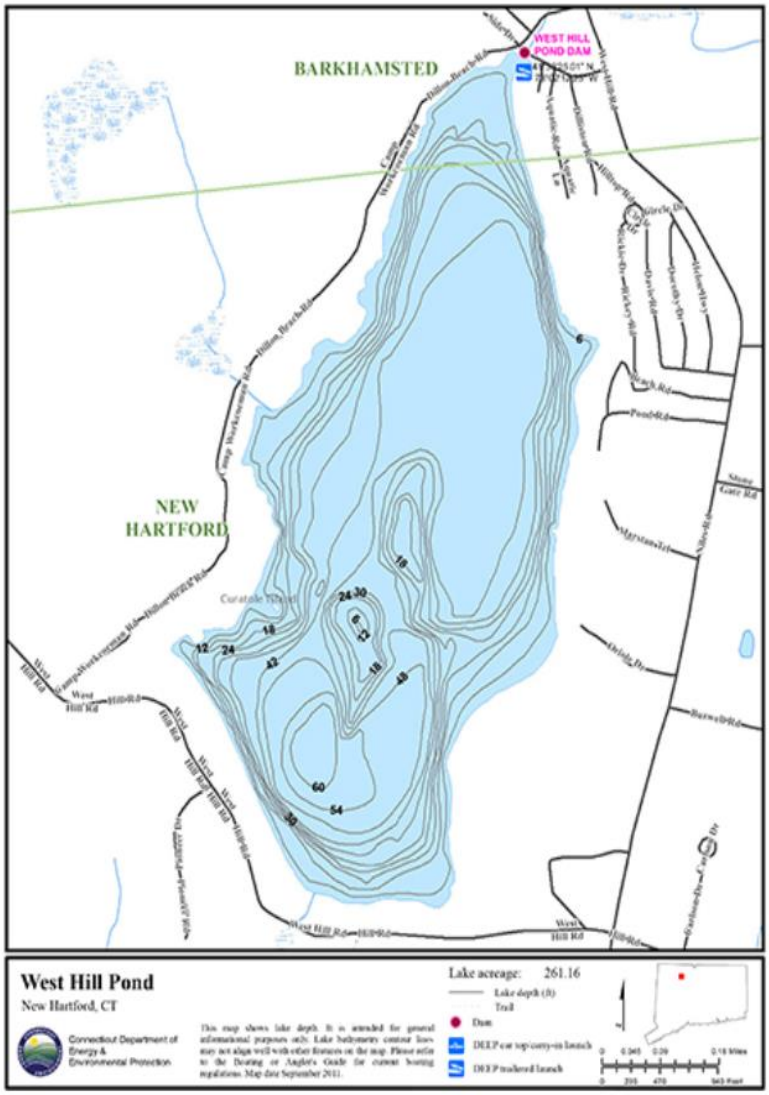


**Figure 2**. Topographic map of West Hill Pond (CT DEEP).

might be related to water level fluctuation caused by industrial use. The pond was also described as one of the best trout waterbodies in the State. CAES studied West Hill Pond in 1979 as part of a statewide investigation into changes in lake water chemistry (Frink and Norvell, 1984). In addition to detailed water chemistry, the study mentions West Hill Pond as having stonewort (charophyte) and wild celery (eelgrass) in water depths of 5-9 feet. The study ranked West Hill Pond among the most oligotrophic lakes in Connecticut. Recently aquatic plant management is utilizing diver assisted suction harvesting for nuisance plant management (Figure 3). The following report details the 2022 CAES IAPP survey of West Hill Pond thus expanding upon the surveys performed in 2005 and 2012.

**Figure 3.** Diver assisted suction harvesting apparatus used during the CAES IAPP 2022 survey.

## Objectives:

- Perform a third survey of West Hill Pond for aquatic vegetation and water chemistry
- Compare with previous surveys and review aquatic plant management
- Upload vegetation maps and water chemistry information to the CAES IAPP website

## Materials and Methods:

### *Aquatic Plant Surveys and Mapping:*

West Hill Pond was surveyed for aquatic vegetation on September 15, 16, 18, and 19, 2022. Because diver assisted suction harvesting had occurred prior and during

the survey those species removed could not be observed. The survey utilized methods established by CAES IAPP. Surveys were conducted from an 18-foot motorized boat traveling over areas that supported aquatic plants. Plant species were recorded based on visual observation or collections with a long-handled rake or grapple. The Lowrance® HDS 5 sonar system as well as ground truthing with occasional grapple tosses were used to identify vegetated areas in deep water. Quantitative information on plant abundance was obtained by resurveying 17 transects that were positioned perpendicular to the shoreline in 2005. Transect locations represented the variety of habitats occurring in the lake. They were located using a Trimble® R1 GNSS global positioning system with sub-meter accuracy. Sampling points were taken along each transect at 0, 5, 10, 20, 30, 40, 50, 60, 70, and 80 m from the shore. We measured depth with a rake handle, drop line, or digital depth finder, and sediment type was estimated. Abundances of species at each point were ranked on a scale of 1 – 5 (1 = very sparse, 2 = sparse, 3 = moderately abundant, 4 = abundant, 5 = very abundant). When field identifications of plants were questionable, specimens were brought back to the laboratory for review using the taxonomy of Crow and Hellquist (2000*a*, 2000*b*). One specimen of each species collected in the lake was dried and mounted in the CAES IAPP aquatic plant herbarium. Digitized mounts can be viewed online (portal.ct.gov/caes-iapp). Plant species are referred to by common name in the text of this report, however corresponding scientific names can be found in Table 1. Cattail and rush are wetland plants included in our survey; however, since they are not aquatic plants, they are not included in our statistical analysis. We post-processed the GPS data in Pathfinder® 5.85 (Trimble Navigation Limited, Sunnyvale, CA) and then imported it into ArcGIS® Pro 2.9.0 (ESRI Inc., Redlands, CA). Data were then overlaid onto recent high-resolution (1m or better) aerial imagery for the continental United States made available by the USDA Farm Services Agency.

**Table 1.** Plants present in West Hill Pond from 2005, 2012, & 2022. Present indicates the species presence in the lake while Frequency of Occurrence (FOQ) indicates presence of a species on transects.

| West Hill Pond | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Species** (invasives in bold) | | **2005** | | **2012** | | **2022** | |
| **Common Name** | **Scientific Name** | **Present** | **FOQ** (%/point) | **Present** | **FOQ** (%/point) | **Present** | **FOQ** (%/point) |
| Arrowhead | *Sagittaria* species | X | 9 | X | 13 | X | 5 |
| Bittercress | *Cardamine* species | X | 1 | | | | |
| Bur-reed | *Sparganium* species | | | | | X | 5 |
| **Curlyleaf pondweed** | ***Potamogeton crispus*** | **X** | **1** | | | | |
| Dortmann's cardinalflower | *Lobelia dortmanna* | X | 7 | X | 7 | X | 3 |
| Eelgrass | *Vallisneria americana* | X | 2 | X | 3 | X | 5 |
| Floating bladderwort | *Utricularia radiata* | X | 1 | | | X | |
| Large-leaf pondweed | *Potamogeton amplifolius* | | | X | 1 | X | 2 |
| Marsh primrose-willow | *Ludwigia palustris* | X | 1 | | | | |
| Mudmat | *Glossostigma cleistanthum* | | | | | X | 5 |
| Pickerelweed | *Pontederia cordata* | | | X | 2 | | |
| Primrose-willow | *Ludwigia* species | | | | | X | |
| Quillwort | *Isoetes* species | X | 15 | X | 2 | X | 2 |
| Ribbon-leaf pondweed | *Potamogeton epihydrus* | X | 2 | X | 2 | X | 5 |
| Robbins' pondweed | *Potamogeton robbinsii* | | | X | | X | 5 |
| Slender naiad | *Najas flexilis* | X | | X | | X | 3 |
| Slender watermilfoil | *Myriophyllum tenellum* | X | 5 | X | 2 | X | 11 |
| Small pondweed | *Potamogeton pusillus* | | | X | 2 | X | 4 |
| Snailseed pondweed | *Potamogeton bicupulatus* | | | X | | X | 5 |
| Spikerush | *Eleocharis* species | X | 11 | X | 10 | X | 13 |
| Spiral pondweed | *Potamogeton spirillus* | X | 2 | X | 2 | | |
| Watershield | *Brasenia schreberi* | | | | | X | 2 |
| Waterwort | *Elatine* species | X | 11 | X | 10 | X | 11 |
| Western waterweed | *Elodea nuttallii* | X | 2 | X | 3 | X | 8 |
| White water lily | *Nymphaea odorata* | X | | X | | X | |
| Yellow water lily | *Nuphar variegata* | X | 1 | X | 1 | X | 2 |
| Total Species Richness | 25 | 17 | 15 | 18 | 14 | 21 | 18 |
| Total Native Species Richness | 24 | 16 | 14 | 18 | 14 | 21 | 18 |
| **Total Invasive Species Richness** | **1** | **1** | **1** | **0** | **0** | **0** | **0** |

## *Water Analysis:*

Water was obtained from the deepest part of the lake at the same location in 2022 and 2012 and a slightly shallower location in 2005. Water temperature and dissolved oxygen were measured 0.5 m beneath the surface and at 1 m intervals using an YSI 58® meter. Water clarity was measured by lowering a six-inch diameter black and white Secchi disk into the water and determining to what depth it could be viewed. Water samples for pH, alkalinity, conductivity, total phosphorus, and total nitrogen (TBD) testing were obtained from 0.5 m beneath the surface and 0.5 m above the bottom. The samples were stored at 38˚C until testing.

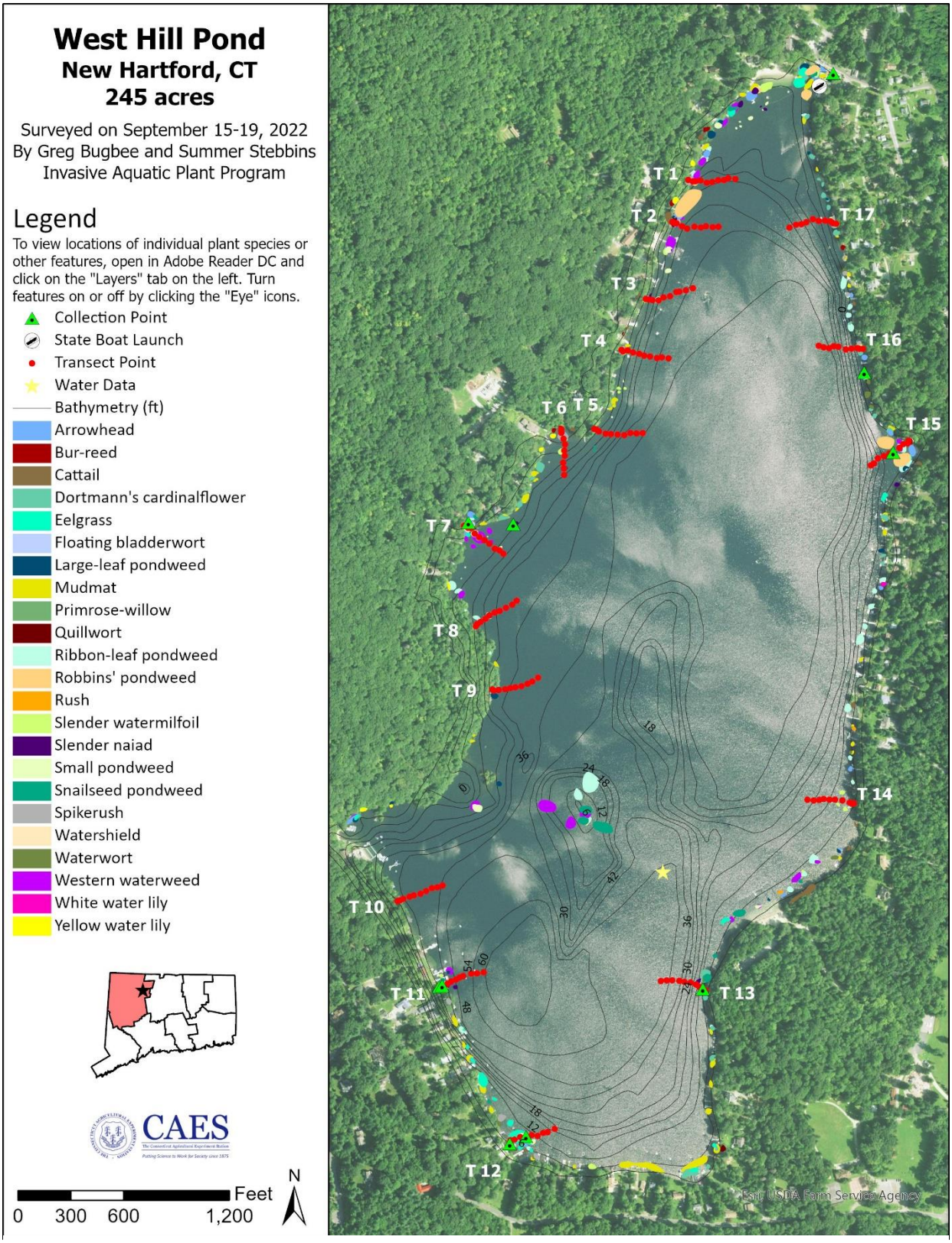


**Figure 4.** 2022 aquatic plant survey map of West Hill Pond.

A Fisher AR20® meter was used to determine pH and conductivity, and alkalinity (mg/L $CaCO_3$) was quantified by titration with 0.016 N $H_2SO_4$ to an end point of pH 4.5. We determined total phosphorus using the ascorbic acid method preceded by digestion with potassium persulfate (APHA, 1995). Phosphorus was quantified using a Milton Roy Spectronic 20D® spectrometer with a light path of 2 cm and a wavelength of 880 nm. Total Nitrogen was determined with a O-I Analytical 1080® Total Organic Carbon Analyzer (currently being repaired).

**Figure 5.** Typical low abundance patch of ribbon-leaf pondweed in West Hill Pond.

## Results and Discussion:

### *General Aquatic Plant Surveys and Transects:*

In 2022, West Hill Pond had a diverse aquatic plant community with 21 native species and no invasive species (Table 1). This compares to 16 native and one invasive (curlyleaf pondweed) species found in 2005 and 18 native species in 2012 (no invasive). Curlyleaf pondweed grows rapidly in the spring and dies off each summer. Thus, it is often not found in summer surveys. If surveyed in the spring, curlyleaf pondweed could still be present. Although providing details on the specifics of the native plants is beyond the scope of this report, information is available at USDA "About PLANTS" website (https://plants.usda.gov/about_plants.html).

West Hill Pond has a narrow littoral zone along the shoreline and two small shallow areas in the center. In 2022, aquatic vegetation occurred sporadically and in low abundance in the littoral zone (Figure 4). Large areas of rocky substrate, nutrient

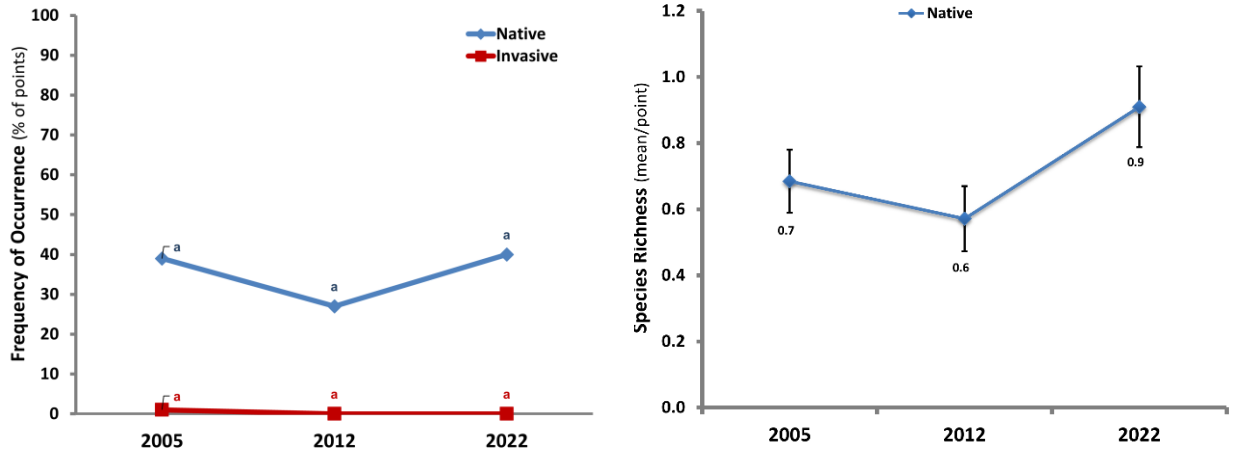


**Figure 6a & 6b.** Frequency of occurrence (FOQ, left) and species richness (right) of native and invasive aquatic plants on transects in West Hill Pond for years 2005, 2012, and 2022.

poor water, and deep areas likely limit plant growth. Floating leaf species observed in 2022 include large-leaf pondweed, ribbon-leaf pondweed, watershield, white water lily, and yellow water lily. Plants occurring in the shallows include arrowhead, bur-reed, pickerelweed, quillwort, spikerush, and waterwort. In deeper water Dortmann's cardinal flower, eelgrass, mudmat, Robbin's pondweed, slender naiad, slender watermilfoil, small pondweed, snailseed pondweed, and western waterweed were present. An advanced plant-like alga called charophyte, or stonewort, was common in deeper water up to 20 feet deep (see appendix for transect data and notes).

Species found for the first time in 2022 include bur-reed, mudmat, primrose-willow, and watershield. Mudmat is considered by some to be a nonnative invasive species, however it is not recognized officially as such in Connecticut (Connecticut Invasive Species List, Connecticut General Statutes Sec. 22a-381d). It often formed dense mats less than one inch tall and comingled with native Dortmann's cardinal-flower. Because of its extremely low growth habit, mudmat is unlikely to become a nuisance and may prevent the establishment of other nuisance plants. Cattail (*Typha* sp.) is a native nonaquatic plant species that CAES IAPP sometimes includes in surveys. We documented it in 2022 and Frink and Norvell (1984) recorded it in 1982. Nonaquatic species such as cattail are not included in the data analysis. Cattail was likely present

in 2005 and 2012 CAES IAPP surveys but not documented. The CAES IAPP website contains digitized survey maps where individual plant layers can be viewed separately (portal.ct.gov/caes-iapp).

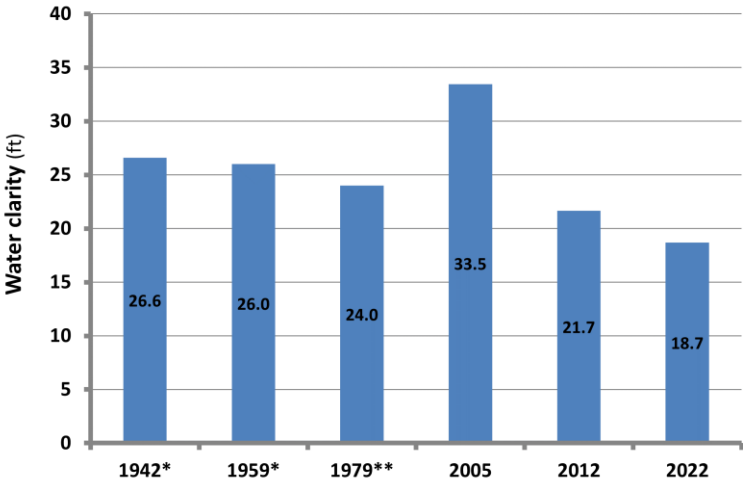


**Figure 7.** Water clarity in West Hill Pond. *State Board of Fisheries and Game, **CAES, and CAES IAPP.

Comparisons of our frequency of occurrence (FOQ) data from transect points in 2005, 2012, and 2022 found little overall change in total native species (Figure 6a, see appendix for transect data). The plant species found on the most transect points in 2022 (Table 1) were spikerush (13%), slender watermilfoil (11%), waterwort (11%), and western waterweed (8%). Arrowhead was found less frequently on transects in 2022 compared to 2005 and 2012. Invasive curlyleaf pondweed was found in our 2005 surveys and has not been found since. Species richness refers to the average number of species per transect point. There was a significant increase in species richness on transect points from 0.6 in 2012 to 0.9 in 2022 (Figure 6b). Since only one invasive species was found in 2005, species richness was only calculated for native species.

## *Water Chemistry:*

Water clarity in Connecticut's lakes ranges from 1-33 feet with an average of 7 feet (CAES IAPP, 2023). In 2022, West Hill Pond had a water clarity of 18.7 feet, which is below the range of 33.5 to 21.7 feet recorded in previous surveys by CAES IAPP and others (Figure 7). The highest water clarity measurement (33.5 feet) was recorded in 2005. Water clarity may have been reduced in 2022 due to sediment disturbance caused by suction harvesting occurring during the survey.

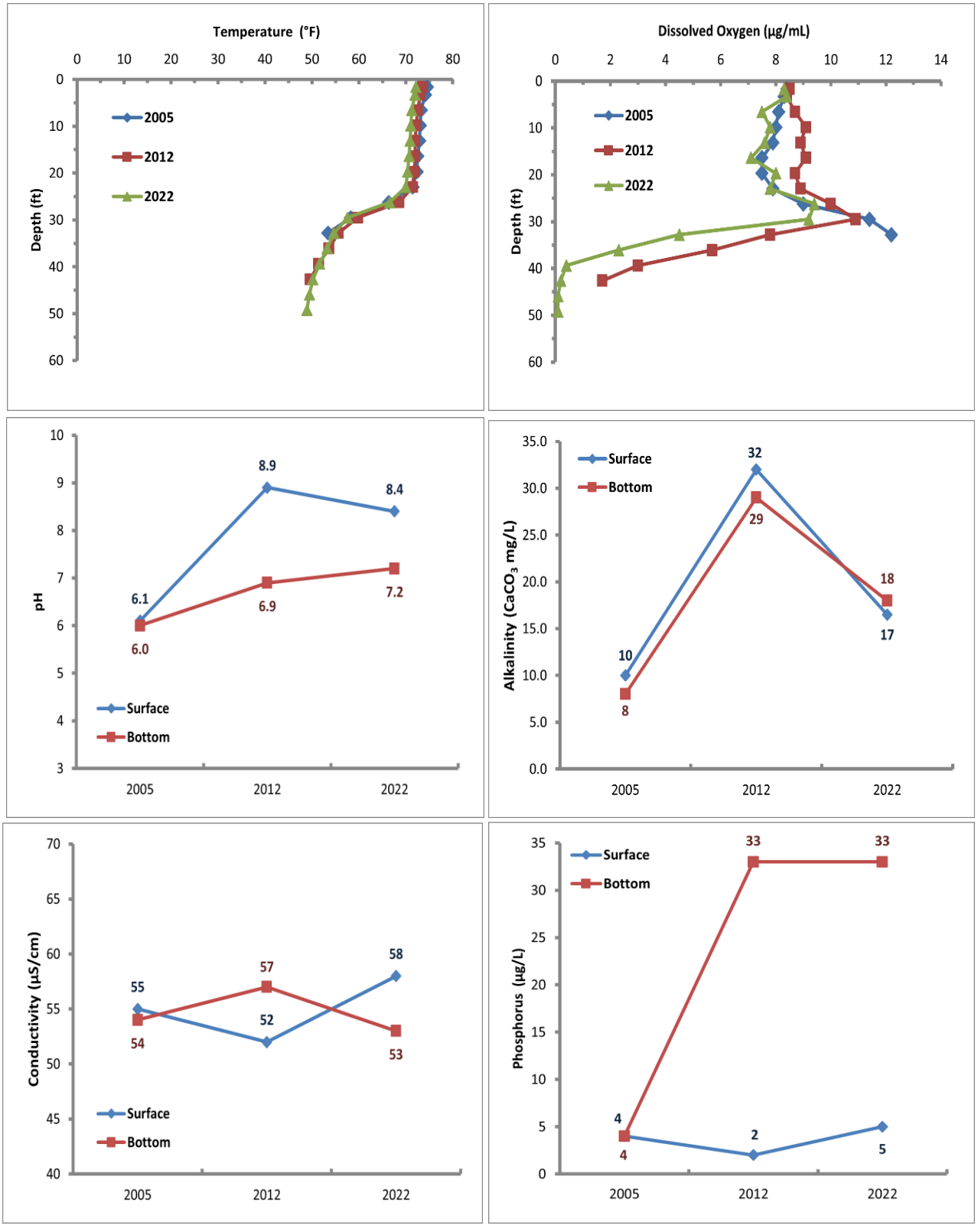


**Figure 8.** West Hill Ponds water chemistry in 2005, 2012, and 2022.

West Hill Ponds temperature profile with depth stayed remarkably consistent throughout all CAES IAPP surveys. From the surface to about 25 feet down the water temperature was near 75˚F, followed by a sharp decline to near 50˚F from 30 feet deep to the bottom. Dissolved oxygen followed a similar profile with highly oxygenated water to a depth of 30 feet and a rapid decline thereafter. Beyond about 40 feet dissolved oxygen became insufficient to support most fish. This is normal for a stratified lake in Connecticut.

West Hill Pond's pH was 8.4 at the surface and 7.2 at the bottom in 2022. These measurements were similar to 2012 (8.9 at surface, 6.9 at bottom), but considerably higher than 2005 (6.1 at surface, 6.0 at bottom). Higher surface pH's are common during sunny afternoons when more plants and algae are photosynthesizing, and winds are calm to reduce mixing. These differences may account for the change from 2005. West Hill Pond had an alkalinity of 17-18 mg/L $CaCO_3$ in 2022 which is moderately low for Connecticut lakes which ranges from near zero to greater than 170 (CAES IAPP, 2023). Low alkalinity waterbodies are more prone to pH change due to outside influences such as watershed activities and acid rain. West Hill Pond's conductivity of 58 µS/cm at the surface and 53 µS/cm at the bottom in 2022 was similar to previous survey years. Conductivity is an indicator of dissolved ions that come from natural and man-made sources (mineral weathering, organic matter decomposition, fertilizers, septic systems, road salts, etc.). Connecticut waterbodies have conductivities that range from 50 - 250 µS/cm.

A key parameter used to categorize a lake's trophic state is phosphorus (P) in the water column. High levels of P can lead to nuisance or toxic algal blooms (Frink and Norvell, 1984, Wetzel, 2001). Rooted macrophytes are less dependent on P from the water column as they obtain a majority of their nutrients from the hydrosoil (Bristow and Whitcombe, 1971). Lakes with P levels from 0 - 10 µg/L are considered nutrient-poor or oligotrophic. When P concentrations reach 15 - 25 µg/L, lakes are classified as moderately fertile or mesotrophic and when P reaches 30 - 50 µg/L they are considered fertile or eutrophic (Frink and Norvell, 1984). Lakes with P concentrations

>50 µg/L are categorized as extremely fertile or hypereutrophic. West Hill Pond's P concentration in 2022 was 5 µg/L at surface and 33 µg/L near the bottom (Figure 8). Surface P has changed very little in all surveys and combined with the excellent water clarity would classify West Hill Pond as oligotrophic. Bottom water was considerably higher in 2022 and 2012 compared to 2005. This is likely explained by the slightly shallower spot where the sample was obtained. We tested total nitrogen (TN) for the first time in 2022 and found 291 µg/L at the surface and 587 µg/L near the bottom. Although nitrogen is likely less limiting to the growth of aquatic plants and algae compared to terrestrial plants, it may play a role in lake productivity. Frink and Norvell (1984) found TN in Connecticut lakes ranged from 193 - 1830 µg/L and averaged 554 µg/L.

### *Aquatic Vegetation Management:*

Native aquatic plant species have an important role in lake ecosystems. Aquatic plants provide habitat and food for fish, wildfowl, and other aquatic organisms. Other ecosystem services of aquatic plants include carbon dioxide uptake and oxygen release, sediment stabilization, and nutrient uptake (Schroeder and Fulton, 2013). West Hill Pond currently supports limited vegetation likely due to infertile water and substrate. Natural nutrient enrichment from sources such as leaf fall, runoff, and aquatic plant dieback is a slow process. Unnatural nutrient enrichment from fertilizers, erosion, failing septic systems, decay of invasive aquatic plants, and nonmigratory geese etc. will greatly accelerate the process. Prevention through education, boat ramp monitors, timely surveys etc. is critical. While no invasive aquatic plant species were found in 2012 and 2022, having a plan in place in case a new invasive species is introduced is important. Early Detection and Rapid Response (EDRR) is a set of actions to locate and eradicate new invasions before they spread. This can be volunteer lake monitors that check for any new invasions.

Diver assisted suction harvesting is currently being performed to manage some of the sparse population of aquatic vegetation, particularly ribbon-leaf pondweed

(Figure 5). Although removal of this vegetation when it becomes problematic in swimming areas etc. creates a short-term benefit, long term benefits are likely minimal, and a reduction of aquatic habitat is possible. Perennial plants such as ribbonleaf pondweed have root systems. Root removal is difficult in the best of circumstances and more difficult when roots are imbedded in hard bottom often found in West Hill Pond.

## Conclusions:

West Hill Pond is among one of Connecticut's few oligotrophic lakes. It offers important wildlife habitat as well as recreational opportunities including fishing, swimming, and boating. The pond has a diverse aquatic plant population with a total of 21 species documented in 2022, none of which were invasive. There was an increase in species richness on transect points from 2012 to 2022, but little overall change in the frequency of occurrence (FOQ) of species on transect points. No invasive plant species were observed in 2022. Water tests found West Hill Pond to have excellent transparency, moderately low alkalinity, and low total phosphorus. Changes in water chemistry in 2022 from 2005 and 2012 were minimal. Current aquatic plant management with diver assisted suction harvesting likely is affording a short-term reduction in vegetation.

## Acknowledgments:

The technical assistance of Mark June-Wells, Brian Hart, Robert Capers, Roslyn Reeps, and Joseph Barsky is gratefully acknowledged.

## Funding:

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# Appendix

# Narrative from State Board of Fisheries and Game Lake and Pond Survey Unit – 1959

## West Hill Pond

West Hill Pond is potentially one of the best trout ponds in the state. It is located in Litchfield County in the township of New Hartford. These waters are natural in origin, but the water level has been raised by a low earthen and masonry dam. The pond has a surface area of 238 acres, a maximum depth of 59 feet and an average depth of 31.8 feet. The bottom is of sand, gravel and rubble. Submerged vegetation is scarce and confined mostly to below the zone of wave action. The water is clear and transparency exceeds 26 feet. These waters are fed mainly by bottom springs. The fertility level is average for the region. This impoundment is thermally stratified, and the deep waters are abundantly supplied with dissolved oxygen. Water from West Hill Pond is used for industrial purposes and the water level is subject to considerable fluctuation. The shoreline of the pond is well wooded.

Access to these waters is guaranteed by a state-owned right-of-way. Boats are also available at a livery near the state right-of-way. Fishing from shore, docks or floats is prohibited except with written permission of the property owner involved. Outboard motors are restricted to 7½ horsepower and all motor-driven craft must be registered with the town clerk. Fishing is limited to the period from the third Saturday in April through October 31, during the hours from 6:00 a.m. to 10:00 p.m. prevailing time.

West Hill Pond has been stocked with smallmouth bass, land-locked salmon, lake trout, catfish, chain pickerel, yellow perch, calico bass, smelt, bullheads, sunfish, golden shiners, brook trout, rainbow trout and brown trout.

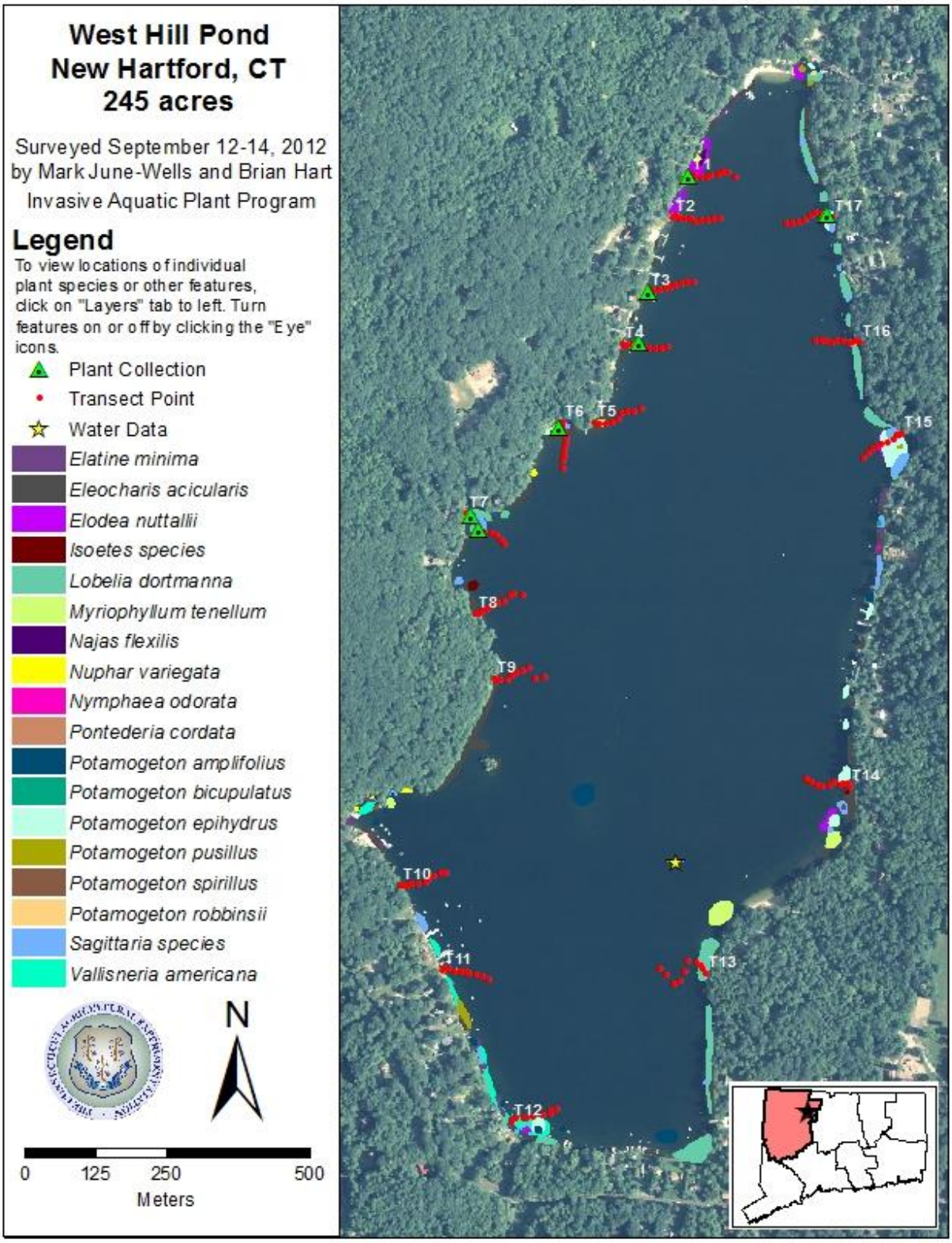
Smallmouth bass, yellow perch, common sunfish and red-bellied sunfish are scarce in all age classes. Chain pickerel, bullheads, golden shiners and calico bass are reported, but none were taken or observed by the survey unit. Smallmouth bass growth is well below average. Yellow perch growth is well above average.

Fishing for warm-water fish is poor. Most of the angling satisfaction is supplied by two-year-old hatchery brown trout. Very few holdover trout are caught. The bulk of the catch consists of trout stocked the same year.

West Hill Pond has a considerable volume of cold, well-oxygenated water best suited for trout management. This lake can furnish the greatest angler satisfaction if it is reclaimed with rotenone and then restocked with trout only. This pond should be capable of producing an annual catch of more than 10,000 trout. If West Hill Pond is reclaimed, it will be necessary to prohibit the use of fish as bait.

No other special regulations are necessary.

# Previous Years Aquatic Plant Survey Maps


West Hill Pond
New Hartford, CT
245 acres
Surveyed September 12-14, 2012
by Mark June-Wells and Brian Hart
Invasive Aquatic Plant Program
Legend
To view locations of individual plant species or other features, click on "Layers" tab to left. Turn features on or off by clicking the "Eye" icons.
Plant Collection
Transect Point
Water Data
Elatine minima
Eleocharis acicularis
Elodea nuttallii
Isoetes species
Lobelia dortmanna
Myriophyllum tenellum
Najas flexilis
Nuphar variegata
Nymphaea odorata
Pontederia cordata
Potamogeton amplifolius
Potamogeton bicupulatus
Potamogeton epihydrus
Potamogeton pusillus
Potamogeton spirillus
Potamogeton robbinsii
Sagittaria species
Vallisneria americana
N
0
125
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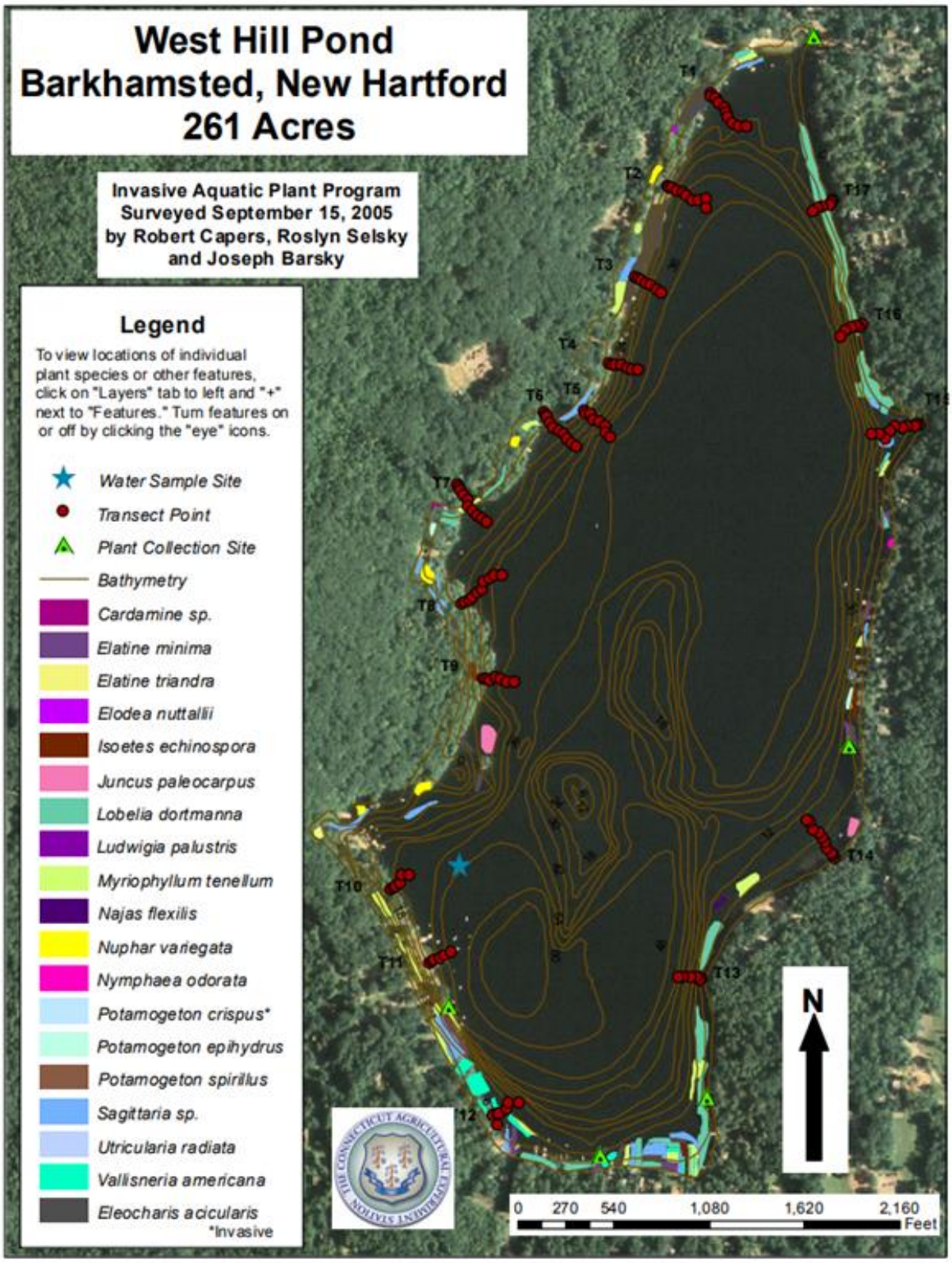
West Hill Pond
Barkhamsted, New Hartford
261 Acres
Invasive Aquatic Plant Program
Surveyed September 15, 2005
by Robert Capers, Roslyn Selsky
and Joseph Barsky
Legend
To view locations of individual plant species or other features, click on "Layers" tab to left and "+" next to "Features." Turn features on or off by clicking the "eye" icons.
Water Sample Site
Transect Point
Plant Collection Site
Bathymetry
Cardamine sp.
Elatine minima
Elatine triandra
Elodea nuttallii
Isoetes echinospora
Juncus paleocarpus
Lobelia dortmanna
Ludwigia palustris
Myriophyllum tenellum
Najas flexilis
Nuphar variegata
Nymphaea odorata
Potamogeton crispus*
Potamogeton epihydrus
Potamogeton spirillus
Sagittaria sp.
Utricularia radiata
Vallisneria americana
Eleocharis acicularis
*Invasive
T1
T2
T3
T4
T5
T6
T7
T8
T9
T10
T11
T12
T13
T14
T16
T17
N
0 270 540 1,080 1,620 2,160
Feet

# Transect Data

Appendix West Hill Pond Transect Data (1 of 4)

| Transect | Point | Distance from Shore (m) | Surveyor | Latitude | Longitude | Date | Depth (m) | Substrate | Notes | Brasch | ElaSpp | EleSpp | EloNut | GloCle | IsoSpp | LobDor | MyrTen | NajFle | NupVar | PotAmp | PotBic | PotEpi | PotPus | PotRob | SagSpp | SpaSpp | TyphaSp | ValAme |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 0.5 | Summer Stebbins | 41.88881 | -73.03947 | 9/15/2022 | 0.6 | Bedrock | | 0 | 2 | 2 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 |
| 1 | 2 | 5 | Summer Stebbins | 41.88879 | -73.03937 | 9/15/2022 | 1.0 | Bedrock | | 0 | 2 | 2 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 |
| 1 | 3 | 10 | Summer Stebbins | 41.88879 | -73.03932 | 9/15/2022 | 2.2 | Bedrock | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 |
| 1 | 4 | 20 | Summer Stebbins | 41.88880 | -73.03922 | 9/15/2022 | 2.3 | Bedrock | Charaphyte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 5 | 30 | Summer Stebbins | 41.88877 | -73.03909 | 9/15/2022 | 4.2 | Bedrock | Charaphyte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 6 | 40 | Summer Stebbins | 41.88878 | -73.03897 | 9/15/2022 | 4.3 | Bedrock | Charaphyte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 7 | 50 | Summer Stebbins | 41.88881 | -73.03884 | 9/15/2022 | 4.4 | Silt | Charaphyte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 8 | 60 | Summer Stebbins | 41.88881 | -73.03872 | 9/15/2022 | 4.4 | Silt | Charaphyte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 9 | 70 | Summer Stebbins | 41.88884 | -73.03863 | 9/15/2022 | 4.4 | Silt | Charaphyte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 10 | 80 | Summer Stebbins | 41.88883 | -73.03849 | 9/15/2022 | 4.4 | Silt | Charaphyte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 1 | 0.5 | Summer Stebbins | 41.88816 | -73.03980 | 9/15/2022 | 0.3 | Sand | | 0 | 3 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 1 | 2 | 0 |
| 2 | 2 | 5 | Summer Stebbins | 41.88814 | -73.03975 | 9/15/2022 | 0.3 | Sand | | 0 | 3 | 4 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 2 | 3 | 10 | Summer Stebbins | 41.88814 | -73.03971 | 9/15/2022 | 1.9 | Organic | | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 0 | 0 | 0 |
| 2 | 4 | 20 | Summer Stebbins | 41.88809 | -73.03960 | 9/15/2022 | 2.4 | Bedrock | Charaphyte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 5 | 30 | Summer Stebbins | 41.88805 | -73.03949 | 9/15/2022 | 2.7 | Bedrock | Charaphyte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 6 | 40 | Summer Stebbins | 41.88808 | -73.03934 | 9/15/2022 | 2.7 | Bedrock | Charaphyte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 7 | 50 | Summer Stebbins | 41.88807 | -73.03920 | 9/15/2022 | 5.7 | Silt | Charaphyte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 8 | 60 | Summer Stebbins | 41.88809 | -73.03910 | 9/15/2022 | 8.0 | Silt | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 9 | 70 | Summer Stebbins | 41.88808 | -73.03896 | 9/15/2022 | 7.0 | Silt | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 10 | 80 | Summer Stebbins | 41.88808 | -73.03884 | 9/15/2022 | 7.8 | Silt | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 1 | 0.5 | Summer Stebbins | 41.88695 | -73.04035 | 9/15/2022 | 0.5 | Bedrock | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 2 | 5 | Summer Stebbins | 41.88694 | -73.04029 | 9/15/2022 | 1.5 | Sand | | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 3 | 10 | Summer Stebbins | 41.88693 | -73.04021 | 9/15/2022 | 2.4 | Bedrock | Charaphyte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 4 | 20 | Summer Stebbins | 41.88693 | -73.04008 | 9/15/2022 | 2.4 | Bedrock | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 5 | 30 | Summer Stebbins | 41.88698 | -73.03998 | 9/15/2022 | 3.0 | Bedrock | Charaphyte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 6 | 40 | Summer Stebbins | 41.88700 | -73.03984 | 9/15/2022 | 3.2 | Bedrock | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 7 | 50 | Summer Stebbins | 41.88706 | -73.03971 | 9/15/2022 | 6.0 | Silt | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 8 | 60 | Summer Stebbins | 41.88707 | -73.03965 | 9/15/2022 | 10.2 | Silt | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 9 | 70 | Summer Stebbins | 41.88709 | -73.03951 | 9/15/2022 | 10.8 | Silt | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 10 | 80 | Summer Stebbins | 41.88712 | -73.03937 | 9/15/2022 | 11.0 | Silt | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 1 | 0.5 | Greg Bugbee | 41.88616 | -73.04085 | 9/16/2022 | 0.3 | Gravel | | 0 | 2 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 2 | 5 | Greg Bugbee | 41.88613 | -73.04082 | 9/16/2022 | 1.5 | Sand | | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 3 | 10 | Greg Bugbee | 41.88615 | -73.04072 | 9/16/2022 | 2.0 | Sand | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 4 | 20 | Greg Bugbee | 41.88612 | -73.04061 | 9/16/2022 | 2.5 | Bedrock | Charaphyte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 5 | 30 | Greg Bugbee | 41.88610 | -73.04048 | 9/16/2022 | 2.7 | Bedrock | Charaphyte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 6 | 40 | Greg Bugbee | 41.88607 | -73.04038 | 9/16/2022 | 3.0 | Bedrock | Charaphyte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 7 | 50 | Greg Bugbee | 41.88605 | -73.04025 | 9/16/2022 | 6.5 | Bedrock | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 8 | 60 | Greg Bugbee | 41.88603 | -73.04011 | 9/16/2022 | 8.8 | Silt | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 9 | 70 | Greg Bugbee | 41.88604 | -73.04001 | 9/16/2022 | 10.4 | Silt | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 10 | 80 | Greg Bugbee | 41.88603 | -73.03987 | 9/16/2022 | 11.4 | Silt | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 1 | 0.5 | Greg Bugbee | 41.88492 | -73.04141 | 9/16/2022 | 1.0 | Sand | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 2 | 5 | Greg Bugbee | 41.88491 | -73.04137 | 9/16/2022 | 1.0 | Organic | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 3 | 10 | Greg Bugbee | 41.88488 | -73.04132 | 9/16/2022 | 2.3 | Organic | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 4 | 20 | Greg Bugbee | 41.88485 | -73.04118 | 9/16/2022 | 2.6 | Bedrock | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 5 | 30 | Greg Bugbee | 41.88484 | -73.04107 | 9/16/2022 | 2.9 | Bedrock | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 6 | 40 | Greg Bugbee | 41.88484 | -73.04093 | 9/16/2022 | 3.6 | Bedrock | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 7 | 50 | Greg Bugbee | 41.88483 | -73.04079 | 9/16/2022 | 4.0 | Bedrock | Charaphyte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 8 | 60 | Greg Bugbee | 41.88486 | -73.04066 | 9/16/2022 | 8.2 | Silt | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 9 | 70 | Greg Bugbee | 41.88485 | -73.04053 | 9/16/2022 | 10.6 | Silt | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 10 | 80 | Greg Bugbee | 41.88486 | -73.04040 | 9/16/2022 | 11.0 | Silt | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Appendix West Hill Pond Transect Data (2 of 4)

| Transect | Point | Distance from Shore (m) | Surveyor | Latitude | Longitude | Date | Depth (m) | Substrate | Notes | Brasch | ElaSpp | EleSpp | EloNut | GloCle | IsoSpp | LobDor | MyrTen | NajFle | NupVar | PotAmp | PotBic | PotEpi | PotPus | PotRob | SagSpp | SpaSpp | TyphaSp | ValAme |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | 1 | 0.5 | Greg Bugbee | 41.88492 | -73.04211 | 9/16/2022 | 0.4 | Bedrock | Fontinalis | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 6 | 2 | 5 | Greg Bugbee | 41.88489 | -73.04211 | 9/16/2022 | 1.0 | Bedrock | Fontinalis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 3 | 10 | Greg Bugbee | 41.88486 | -73.04210 | 9/16/2022 | 1.5 | Muck | Fontinalis, boulders | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 |
| 6 | 4 | 20 | Greg Bugbee | 41.88477 | -73.04205 | 9/16/2022 | 1.5 | Bedrock | boulders | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 5 | 30 | Greg Bugbee | 41.88468 | -73.04202 | 9/16/2022 | 2.1 | Organic | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 6 | 40 | Greg Bugbee | 41.88458 | -73.04204 | 9/16/2022 | 2.4 | Organic | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 7 | 50 | Greg Bugbee | 41.88450 | -73.04203 | 9/16/2022 | 2.5 | Bedrock | Charaphyte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 8 | 60 | Greg Bugbee | 41.88440 | -73.04206 | 9/16/2022 | 2.6 | Bedrock | Charaphyte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 9 | 70 | Greg Bugbee | 41.88431 | -73.04205 | 9/16/2022 | 3.6 | Bedrock | Charaphyte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 10 | 80 | Greg Bugbee | 41.88420 | -73.04204 | 9/16/2022 | 3.6 | Bedrock | Charaphyte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 1 | 0.5 | Greg Bugbee | 41.88340 | -73.04413 | 9/16/2022 | 0.3 | Gravel | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 |
| 7 | 2 | 5 | Greg Bugbee | 41.88338 | -73.04404 | 9/16/2022 | 1.0 | Muck | Fontanalis | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 3 | 10 | Greg Bugbee | 41.88337 | -73.04398 | 9/16/2022 | 1.5 | Muck | Fontanalis | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 4 | 20 | Greg Bugbee | 41.88328 | -73.04390 | 9/16/2022 | 2.0 | Muck | | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 5 | 30 | Greg Bugbee | 41.88323 | -73.04381 | 9/16/2022 | 2.4 | Muck | Charaphyte | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 6 | 40 | Greg Bugbee | 41.88318 | -73.04370 | 9/16/2022 | 2.4 | Muck | Charaphyte | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 7 | 50 | Greg Bugbee | 41.88313 | -73.04359 | 9/16/2022 | 2.9 | Muck | Charaphyte | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 8 | 60 | Greg Bugbee | 41.88305 | -73.04348 | 9/16/2022 | 3.2 | Muck | Charaphyte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 9 | 70 | Greg Bugbee | 41.88302 | -73.04338 | 9/16/2022 | 3.5 | Muck | Charaphyte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 10 | 80 | Greg Bugbee | 41.88297 | -73.04330 | 9/16/2022 | 3.8 | Muck | Charaphyte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 1 | 0.5 | Greg Bugbee | 41.88184 | -73.04387 | 9/16/2022 | 1.0 | Bedrock | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 2 | 5 | Greg Bugbee | 41.88187 | -73.04384 | 9/16/2022 | 1.8 | Organic | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 3 | 10 | Greg Bugbee | 41.88191 | -73.04378 | 9/16/2022 | 2.0 | Organic | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 4 | 20 | Greg Bugbee | 41.88195 | -73.04368 | 9/16/2022 | 3.6 | Organic | Charaphyte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 |
| 8 | 5 | 30 | Greg Bugbee | 41.88201 | -73.04359 | 9/16/2022 | 4.0 | Organic | Charaphyte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 6 | 40 | Greg Bugbee | 41.88205 | -73.04348 | 9/16/2022 | 5.4 | Organic | Charaphyte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 7 | 50 | Greg Bugbee | 41.88208 | -73.04338 | 9/16/2022 | 6.4 | Organic | Charaphyte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 8 | 60 | Greg Bugbee | 41.88213 | -73.04325 | 9/16/2022 | 8.0 | Silt | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 9 | 70 | Greg Bugbee | 41.88218 | -73.04311 | 9/16/2022 | 9.0 | Silt | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 10 | 80 | Greg Bugbee | 41.88224 | -73.04302 | 9/16/2022 | 9.2 | Silt | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 1 | 0.5 | Greg Bugbee | 41.88085 | -73.04352 | 9/16/2022 | 1.0 | Bedrock | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 2 | 10 | Greg Bugbee | 41.88084 | -73.04350 | 9/16/2022 | 2.5 | Organic | Charaphyte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 3 | 10 | Greg Bugbee | 41.88085 | -73.04339 | 9/16/2022 | 4.0 | Organic | Charaphyte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 4 | 20 | Greg Bugbee | 41.88086 | -73.04326 | 9/16/2022 | 6.6 | Organic | Charaphyte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 5 | 30 | Greg Bugbee | 41.88087 | -73.04315 | 9/16/2022 | 7.7 | Organic | Charaphyte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 6 | 40 | Greg Bugbee | 41.88089 | -73.04304 | 9/16/2022 | 8.7 | Silt | Charaphyte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 7 | 50 | Greg Bugbee | 41.88091 | -73.04292 | 9/16/2022 | 10.3 | Silt | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 8 | 60 | Greg Bugbee | 41.88094 | -73.04279 | 9/16/2022 | 12.0 | Silt | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 9 | 70 | Greg Bugbee | 41.88098 | -73.04269 | 9/16/2022 | 11.6 | Silt | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 10 | 80 | Greg Bugbee | 41.88104 | -73.04257 | 9/16/2022 | 11.6 | Silt | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10 | 1 | 0.5 | Greg Bugbee | 41.87755 | -73.04549 | 9/18/2022 | 0.2 | Gravel | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10 | 2 | 5 | Greg Bugbee | 41.87756 | -73.04544 | 9/18/2022 | 1.8 | Sand | | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10 | 3 | 10 | Greg Bugbee | 41.87758 | -73.04537 | 9/18/2022 | 2.5 | Gravel | Charaphyte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10 | 4 | 20 | Greg Bugbee | 41.87762 | -73.04524 | 9/18/2022 | 3.1 | Gravel | Charaphyte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10 | 5 | 30 | Greg Bugbee | 41.87764 | -73.04515 | 9/18/2022 | 5.1 | Silt | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10 | 6 | 40 | Greg Bugbee | 41.87766 | -73.04501 | 9/18/2022 | 10.0 | Silt | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10 | 7 | 50 | Greg Bugbee | 41.87771 | -73.04489 | 9/18/2022 | 13.0 | Silt | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10 | 8 | 60 | Greg Bugbee | 41.87775 | -73.04477 | 9/18/2022 | 13.4 | Silt | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10 | 9 | 70 | Greg Bugbee | 41.87776 | -73.04466 | 9/18/2022 | 13.5 | Silt | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10 | 10 | 80 | Greg Bugbee | 41.87779 | -73.04455 | 9/18/2022 | 13.8 | Silt | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Appendix West Hill Pond Transect Data (3 of 4)

| Transect | Point | Distance from Shore (m) | Surveyor | Latitude | Longitude | Date | Depth (m) | Substrate | Notes | Brasch | ElaSpp | EleSpp | EloNut | GloCle | IsoSpp | LobDor | MyrTen | NajFle | NupVar | PotAmp | PotBic | PotEpi | PotPus | PotRob | SagSpp | SpaSpp | TyphaSp | ValAme |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 | 1 | 0.5 | Greg Bugbee | 41.87621 | -73.04462 | 9/18/2022 | 0.2 | Gravel | | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11 | 2 | 5 | Greg Bugbee | 41.87622 | -73.04456 | 9/18/2022 | 1.5 | Sand | | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 11 | 3 | 10 | Greg Bugbee | 41.87626 | -73.04443 | 9/18/2022 | 2.3 | Sand | Charaphyte | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 11 | 4 | 20 | Greg Bugbee | 41.87630 | -73.04436 | 9/18/2022 | 3.0 | Sand | Charaphyte | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11 | 5 | 30 | Greg Bugbee | 41.87632 | -73.04426 | 9/18/2022 | 4.2 | Sand | Charaphyte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11 | 6 | 40 | Greg Bugbee | 41.87636 | -73.04418 | 9/18/2022 | 7.4 | Silt | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11 | 7 | 50 | Greg Bugbee | 41.87638 | -73.04411 | 9/18/2022 | 10.0 | Silt | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11 | 8 | 60 | Greg Bugbee | 41.87642 | -73.04395 | 9/18/2022 | 13.3 | Silt | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11 | 9 | 70 | Greg Bugbee | 41.87642 | -73.04382 | 9/18/2022 | 15.2 | Silt | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11 | 10 | 80 | Greg Bugbee | 41.87644 | -73.04369 | 9/18/2022 | 16.6 | Silt | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | 1 | 0.5 | Greg Bugbee | 41.87377 | -73.04313 | 9/18/2022 | 0.5 | Bedrock | Sandy Spots | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| 12 | 2 | 5 | Greg Bugbee | 41.87382 | -73.04311 | 9/18/2022 | 1.8 | Sand | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 3 |
| 12 | 3 | 10 | Greg Bugbee | 41.87383 | -73.04303 | 9/18/2022 | 2.5 | Organic | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 12 | 4 | 20 | Greg Bugbee | 41.87387 | -73.04291 | 9/18/2022 | 2.5 | Organic | Charaphyte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| 12 | 5 | 30 | Greg Bugbee | 41.87388 | -73.04279 | 9/18/2022 | 2.6 | Organic | Charaphyte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 0 | 2 |
| 12 | 6 | 40 | Greg Bugbee | 41.87390 | -73.04267 | 9/18/2022 | 3.0 | Organic | Charaphyte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | 7 | 50 | Greg Bugbee | 41.87389 | -73.04255 | 9/18/2022 | 3.0 | Organic | Charaphyte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | 8 | 60 | Greg Bugbee | 41.87394 | -73.04243 | 9/18/2022 | 3.8 | Organic | Charaphyte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | 9 | 70 | Greg Bugbee | 41.87395 | -73.04234 | 9/18/2022 | 4.9 | Organic | Charaphyte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | 10 | 80 | Greg Bugbee | 41.87400 | -73.04219 | 9/18/2022 | 5.3 | Organic | Charaphyte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 |
| 13 | 1 | 0.5 | Greg Bugbee | 41.87617 | -73.03905 | 9/18/2022 | 0.5 | Bedrock | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13 | 2 | 10 | Greg Bugbee | 41.87619 | -73.03911 | 9/18/2022 | 1.5 | Bedrock | | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13 | 3 | 10 | Greg Bugbee | 41.87622 | -73.03918 | 9/18/2022 | 2.1 | Sand | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13 | 4 | 20 | Greg Bugbee | 41.87626 | -73.03925 | 9/18/2022 | 3.0 | Sand | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 |
| 13 | 5 | 30 | Greg Bugbee | 41.87629 | -73.03937 | 9/18/2022 | 5.6 | Silt | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13 | 6 | 40 | Greg Bugbee | 41.87630 | -73.03949 | 9/18/2022 | 9.4 | Silt | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13 | 7 | 50 | Greg Bugbee | 41.87632 | -73.03960 | 9/18/2022 | 13.5 | Silt | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13 | 8 | 60 | Greg Bugbee | 41.87632 | -73.03975 | 9/18/2022 | 15.6 | Silt | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13 | 9 | 70 | Greg Bugbee | 41.87632 | -73.03986 | 9/18/2022 | 15.9 | Silt | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13 | 10 | 80 | Greg Bugbee | 41.87631 | -73.03998 | 9/18/2022 | 16.1 | Silt | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 14 | 1 | 0.5 | Greg Bugbee | 41.87910 | -73.03597 | 9/18/2022 | 0.5 | Bedrock | Fontanalis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 14 | 2 | 5 | Greg Bugbee | 41.87909 | -73.03602 | 9/18/2022 | 1.5 | Bedrock | Sandy Patches | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 14 | 3 | 10 | Greg Bugbee | 41.87911 | -73.03606 | 9/18/2022 | 2.5 | Silt | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 14 | 4 | 20 | Greg Bugbee | 41.87914 | -73.03621 | 9/18/2022 | 3.0 | Silt | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 14 | 5 | 30 | Greg Bugbee | 41.87915 | -73.03636 | 9/18/2022 | 3.0 | Silt | Charaphyte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 14 | 6 | 40 | Greg Bugbee | 41.87915 | -73.03648 | 9/18/2022 | 3.2 | Silt | Charaphyte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 14 | 7 | 50 | Greg Bugbee | 41.87916 | -73.03660 | 9/18/2022 | 3.7 | Silt | Charaphyte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 14 | 8 | 60 | Greg Bugbee | 41.87915 | -73.03669 | 9/18/2022 | 4.7 | Bedrock | Charaphyte, boulders | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 14 | 9 | 70 | Greg Bugbee | 41.87914 | -73.03681 | 9/18/2022 | 5.4 | Silt | Charaphyte, boulders | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 14 | 10 | 80 | Greg Bugbee | 41.87915 | -73.03694 | 9/18/2022 | 6.5 | Silt | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15 | 1 | 0.5 | Greg Bugbee | 41.88476 | -73.03485 | 9/18/2022 | 0.4 | Bedrock | Fontanalis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 |
| 15 | 2 | 5 | Greg Bugbee | 41.88471 | -73.03487 | 9/18/2022 | 1.0 | Bedrock | Fontanalis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| 15 | 3 | 10 | Greg Bugbee | 41.88470 | -73.03496 | 9/18/2022 | 1.1 | Bedrock | Fontanalis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15 | 4 | 20 | Greg Bugbee | 41.88464 | -73.03504 | 9/18/2022 | 1.5 | Bedrock | Fontanalis | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15 | 5 | 30 | Greg Bugbee | 41.88457 | -73.03517 | 9/18/2022 | 2.8 | Bedrock | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 |
| 15 | 6 | 40 | Greg Bugbee | 41.88455 | -73.03526 | 9/18/2022 | 2.8 | Silt | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 |
| 15 | 7 | 50 | Greg Bugbee | 41.88451 | -73.03537 | 9/18/2022 | 5.3 | Silt | Charaphyte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15 | 8 | 60 | Greg Bugbee | 41.88448 | -73.03549 | 9/18/2022 | 6.5 | Silt | Charaphyte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15 | 9 | 70 | Greg Bugbee | 41.88440 | -73.03557 | 9/18/2022 | 9.2 | Silt | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15 | 10 | 80 | Greg Bugbee | 41.88437 | -73.03564 | 9/18/2022 | 11.4 | Silt | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Appendix West Hill Pond Transect Data (4 of 4)

| Transect | Point | Distance from Shore (m) | Surveyor | Latitude | Longitude | Date | Depth (m) | Substrate | Notes | Brasch | ElaSpp | EleSpp | EloNut | GloCle | IsoSpp | LobDor | MyrTen | NajFle | NupVar | PotAmp | PotBic | PotEpi | PotPus | PotRob | SagSpp | SpaSpp | TyphaSp | ValAme |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 16 | 1 | 0.5 | Summer Stebbins | 41.88619 | -73.03581 | 9/19/2022 | 0.3 | Bedrock | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16 | 2 | 5 | Summer Stebbins | 41.88619 | -73.03588 | 9/19/2022 | 11.3 | Bedrock | | 0 | 2 | 2 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16 | 3 | 10 | Summer Stebbins | 41.88620 | -73.03594 | 9/19/2022 | 2.1 | Bedrock | | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16 | 4 | 20 | Summer Stebbins | 41.88619 | -73.03605 | 9/19/2022 | 4.0 | Bedrock | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16 | 5 | 30 | Summer Stebbins | 41.88618 | -73.03617 | 9/19/2022 | 10.0 | Silt | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16 | 6 | 40 | Summer Stebbins | 41.88622 | -73.03632 | 9/19/2022 | 12.0 | Silt | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16 | 7 | 50 | Summer Stebbins | 41.88623 | -73.03642 | 9/19/2022 | 13.4 | Silt | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16 | 8 | 60 | Summer Stebbins | 41.88620 | -73.03652 | 9/19/2022 | 13.8 | Silt | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16 | 9 | 70 | Summer Stebbins | 41.88621 | -73.03663 | 9/19/2022 | 13.8 | Silt | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16 | 10 | 80 | Summer Stebbins | 41.88623 | -73.03674 | 9/19/2022 | 13.8 | Silt | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17 | 1 | 0.5 | Summer Stebbins | 41.88814 | -73.03638 | 9/19/2022 | 0.5 | Bedrock | | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 |
| 17 | 2 | 5 | Summer Stebbins | 41.88815 | -73.03645 | 9/19/2022 | 1.8 | Bedrock | | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17 | 3 | 10 | Summer Stebbins | 41.88817 | -73.03650 | 9/19/2022 | 2.4 | Bedrock | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17 | 4 | 20 | Summer Stebbins | 41.88818 | -73.03661 | 9/19/2022 | 2.9 | Bedrock | Charaphyte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17 | 5 | 30 | Summer Stebbins | 41.88818 | -73.03674 | 9/19/2022 | 4.2 | Bedrock | Charaphyte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17 | 6 | 40 | Summer Stebbins | 41.88821 | -73.03687 | 9/19/2022 | 7.1 | Bedrock | Charaphyte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17 | 7 | 50 | Summer Stebbins | 41.88816 | -73.03700 | 9/19/2022 | 8.1 | Silt | Charaphyte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17 | 8 | 60 | Summer Stebbins | 41.88813 | -73.03711 | 9/19/2022 | 8.4 | Silt | Charaphyte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17 | 9 | 70 | Summer Stebbins | 41.88812 | -73.03722 | 9/19/2022 | 8.3 | Silt | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17 | 10 | 80 | Summer Stebbins | 41.88807 | -73.03736 | 9/19/2022 | 7.6 | Silt | Nothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |