Monitoring Report

Invasive Aquatic Plants

Candlewood Lake
Squantz Pond

2018
2019

Prepared for
The Candlewood Lake Authority

April 28, 2020

Gregory J. Bugbee

Summer E. Stebbins

Invasive Aquatic Plant Program
Department of Environmental Sciences
The Connecticut Agricultural
Experiment Station
123 Huntington Street
New Haven, CT 06511

www.ct.gov/caes-iapp

CAES

The Connecticut Agricultural Experiment Station

Putting Science to Work for Society since 1875

The Connecticut Agricultural Experiment Station was founded in 1875. It is chartered by the General Assembly to make scientific inquiries and conduct experiments regarding plants and their pests, insects, soil and water, and to perform analyses for state agencies. Station laboratories are in New Haven and Windsor, and research farms in Hamden and Griswold.

Table of Contents

Figure List

Figure List *(Continued)*

Table List

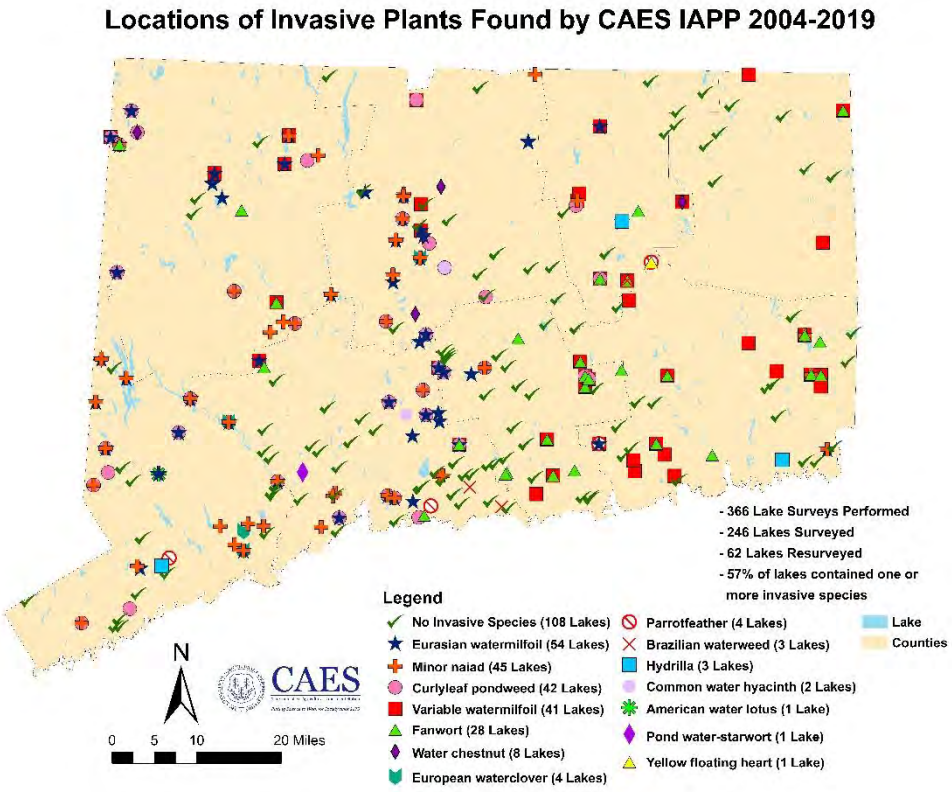


Figure 1. Locations of invasive aquatic plants found by CAES IAPP from 2004 to 2019.

Introduction

Candlewood Lake is Connecticut's largest lake, and the attached Squantz Pond is home to the area's premier state park. These bodies of freshwater offer exceptional opportunities for fishing, boating, and other outdoor activities as well as diverse freshwater ecosystems. Benefits to the local and state economy are great with high-value real estate and several large marinas bolstering local businesses and tax revenues. These impoundments are also the source of Connecticut's largest supply of renewable energy via hydroelectric facilities owned and operated by FirstLight Power Resources (FLPR). Invasive aquatic plants have become established in Candlewood Lake and Squantz Pond. Being non-native they have few natural enemies to limit their growth (Wilcove et al. 1998, Pimentel et al. 2000). They degrade native, aquatic ecosystems (Barrett 1989, Les and Mehrhoff 1999), discourage recreation, and reduce home values (Connecticut Aquatic Nuisance Species Working Group 2006, Fishman et al. 1998). Once invasive plants are established, long-term and costly management programs are often necessary.

Statewide surveys by The Connecticut Agricultural Experiment Station's (CAES) Invasive Aquatic Plant Program (IAPP) have found 13 invasive aquatic plant species inhabiting nearly 60 percent of Connecticut's lakes and ponds (Figure 1) (Bugbee et al. 2018, CAES IAPP 2020). In Candlewood Lake and Squantz Pond, Eurasian watermilfoil (*Myriophyllum spicatum*) has been the most common invasive plant and creates the greatest nuisance. This plant has been present in Candlewood Lake since at least the early 1980's (Siver et al. 1986), when it likely became established in Squantz Pond as well.

CAES IAPP has studied the aquatic plants in Candlewood Lake since 2005 and in Squantz Pond since 2011. The plant communities are similar because the waterbodies are attached via a culvert under Route 39, are subjected to similar winter water drawdown levels, and have comparable water chemistries (CAES IAPP 2020, Bugbee and Stebbins 2018). A total of 24 plant species occur in the waterbodies with Eurasian watermilfoil, minor naiad (*Najas minor*), and curlyleaf pondweed (*Potamogeton crispus*) being invasive. Eurasian watermilfoil typically covers the largest area followed by minor naiad and curlyleaf pondweed. Curlyleaf pondweed may be underestimated prior to the commencement of spring 2012 surveys, because it naturally died back before the summer-only surveys (Catling and Dobson 1985). Prior to 2015, invasive aquatic plant management in Candlewood Lake and Squantz Pond was accomplished primarily by winter drawdown (Bugbee and Stebbins 2018, Tarsi 2006). Deep winter drawdowns (3 m) with early onset and long exposure times have proven most effective. In 2008 and 2010, milfoil weevils (*Euhrychiopsis lecontei*) were introduced into Candlewood Lake to control Eurasian watermilfoil without success.

In 2015, 3868 12 - 15-inch grass carp (*Ctenopharyngodon idella*) were introduced into Candlewood Lake and 5035 more were introduced in 2017. In 2017, 585 grass carp were also stocked in Squantz Pond. Because Candlewood Lake and Squantz Pond are connected via the culvert under Route 39, grass carp can move freely between the waterbodies. As expected, the efficacy of the grass carp in Candlewood Lake was minimal in 2016 and 2017, likely because of their small size. As they grow, however, their plant consumption increases, and their feeding activities should become more noticeable. Based on a 15 fish per vegetated acre desired stocking

rate determined by the Connecticut Department of Energy and Environmental Protection (DEEP) and over 500 acres of watermilfoil in Candlewood Lake, approximately 7500 grass carp are necessary. The grass carp introduced in 2017 brought the total in Candlewood Lake to 8903, and barring mortality or offsite movement, vegetation control should be noticeable.

The following report describes the 12th and 13th years of CAES IAPP monitoring and mapping of invasive aquatic plants in Candlewood Lake and the fifth and sixth years in Squantz Pond. The report updates the CAES IAPP surveillance to the present and allows accurate comparisons of year to year data and precise adjustments to invasive aquatic plant management plans.

Objectives

- Survey and map invasive aquatic plants in Candlewood Lake and Squantz Pond in 2018 and 2019 using methods consistent with past CAES IAPP methodology.
- Document yearly changes in the plant community and relate to management activities.
- Provide the data necessary to manage invasive aquatic vegetation, enhance native species, provide overall protection of the waterbodies, and enhance The Candlewood Lake Authority's mission.

Materials and Methods

Our 2018 and 2019 aquatic vegetation surveys utilized methods established by CAES IAPP. These methods have provided a consistent record throughout the years. We recorded locations of all invasive plants with Trimble GeoXT® or R1® global positioning systems (GPS) with sub-meter accuracy. Since 2014 we used Lowrance® HDS 5 and Hook 5 sonar systems to determine patches near the bottom and to eliminate the need for most time-consuming grapple tosses. We circumnavigated the plant patches to form georeferenced polygons. Patches covering less than one square meter were recorded as a point and assigned an area of 0.0002 acres (1 m^2). We measured depth with a rake, drop line, or digital depth finder, and sediment type was estimated. Plant samples were obtained in shallow water with a rake and with a grapple in deeper water. We measured plant abundance using a visual scale of 1 to 5 (1 = single stem; 2 = few stems; 3 = common; 4 = abundant; 5 = extremely abundant and present at the surface). In Candlewood Lake we recorded each area where Eurasian watermilfoil was flowering at the surface

Table 1. List of aquatic plants considered invasive in Connecticut according to Connecticut General Statutes (Sec. 22a-381d).

#	Scientific Name	Common Name	Dispersal
1	*Butomus umbellatus*	Flowering rush	Water Gardening
2	*Cabomba caroliniana*	Fanwort	Aquariums, Boats/Trailers, Bait
3	*Callitriche stagnalis*	Pond water-starwort	Water Gardening
4	*Egeria densa*	Brazilian water-weed, Anacharis, Egeria	Aquariums, Boats/Trailers, Bait
5	*Eichhornia crassipes**	Common water hyacinth	Water Gardening
6	*Hydrilla verticillata*	Hydrilla	Aquariums, Boats/Trailers, Bait
7	*Iris pseudocorus*	Yellow iris, Yellow flag iris	Nursery Stock, Water Gardening
8	*Lythrum salicaria*	Purple loosestrife	Nursery Stock, Water Gardening
9	*Marsilia quadrifolia*	European waterclover, Water shamrock	Water Gardening, Boats/Trailers
10	*Myosotis scorpioides*	Forget-me-not, Water scorpion-grass	Water Gardening
11	*Myriophyllum aquaticum*	Parrotfeather	Aquariums, Boats/Trailers
12	*Myriophyllum heterophyllum*	Variable-leaf watermilfoil	Aquariums, Boats/Trailers
13	*Myriophyllum spicatum*	Eurasian watermilfoil	Aquariums, Boats/Trailers
14	*Najas minor*	Brittle water-nymph, Minor naiad	Boats/Trailers
15	*Nelumbo lutea*	American water lotus	Water Gardening
16	*Nymphoides peltata*	Yellow floating heart	Water Gardening
17	*Pistia stratiotes**	Water lettuce, Tropical duckweed	Water Gardening
18	*Potamogeton crispus*	Curlyleaf pondweed, Crispy-leaved pondweed	Boats/Trailers
19	*Rorippa microphylla*	Onerow yellowcress	Water Gardening
20	*Rorippa nasturtium-aquaticum*	Watercress	Water Gardening
21	*Salvinia molesta*	Giant salvinia	Water Gardening
22	*Trapa natans*	Water chestnut	Water Gardening, Boats/Trailers

*Plants that are not banned

with a polygon or point feature. We only considered invasive plant species listed in Connecticut Statute Sec 22.-33d (Table 1) or discovered in the state after the statute was put forth i.e. swollen bladderwort (*Utricularia inflata*). When field identifications of plants were questionable, we brought samples back to the lab for review using the taxonomy of Crow and Hellquist (2000*a*, 2000*b*). If we were still unsure of the plant species, we personally met with Dr. Barre Hellquist and reviewed the plants with him. A specimen of each plant species was cataloged in the CAES IAPP aquatic plant herbarium for future refence (https://portal.ct.gov/CAES/Invasive-Aquatic-Plant-Program/Herbarium/Herbarium-by-Species). We generally use common plant names in this report when referring to plant species, scientific names are listed in the frequency of occurrence tables. We post-processed the GPS data in Pathfinder® 5.85 (Trimble Navigation Limited, Sunnyvale, CA) and then imported it into ArcGIS® 10.6.1 (ESRI, Redlands, CA) where it was geo-corrected. Data were then overlaid onto 2010 United States Department of Agriculture National Agricultural Inventory Program aerial imagery with 1 m resolution.

We collected occurrence and abundance plant information from ten transects in Candlewood Lake and five transects in Squantz Pond. Transect points were positioned 0.5, 5, 10, 20, 30, 40, 50, 60, 70 and 80 m perpendicular from the shore. In Candlewood Lake, these transects were a subset of the 105 laid out in 2005 and contained at least one occurrence of each native and invasive plant species in that year (Bugbee et al. 2007). In Squantz Pond, we decreased the number of transects from the 14 laid out in 2011 to five (CAES IAPP 2020).

Significant differences in the frequency of occurrence of plant species between years along transects were determined using analysis of variance (ANOVA) followed by Tukey's post-hoc test ($p < 0.05$). Significant differences in species richness per transect point were determined by ± one standard error of the mean (SEM). We surveyed Candlewood Lake for curlyleaf pondweed on June 18th, 25th, and 26th in 2018 and on July 1st and 2nd in 2019 and for all invasive plants from July 31st to September 14th in 2018 and August 14th to September 11th in 2019. These were the fifth and sixth consecutive years we performed the spring curlyleaf pondweed surveys to provide more thorough documentation of this plant prior to its summer senescence. The Candlewood Lake transect data were obtained on August 28th and 29th in 2018 and on September 4th, 8th, and 11th in 2019, and the water samples were obtained on September 13th in 2018 and on September 10th in 2019. We surveyed Squantz Pond for curlyleaf pondweed on June 12th in 2018 and on July 2nd in 2019 and for all invasive plants from July 31st to August 9th in 2018 and on August 14th in 2019. The Squantz Pond transect data and water data were obtained on August 9th in 2018 and on August 14th in 2019. We used a Secchi disk to measure transparency. Because water clarity can affect our ability to see vegetation, we performed Secchi measurements most days we performed surveillance. We used an YSI® 58 meter (YSI Inc. Yellow Springs, Ohio) to measure water temperature and dissolved oxygen. Measurements occurred in the same deep areas of each waterbody as previous surveys at 0.5 m and at 1 m depth intervals until 0.5 meters from the bottom. We collected water samples from 0.5 m below the surface and 0.5 m from the bottom.

Grass carp feed from the top of aquatic vegetation downward (Pipalova 2006). Their effects, therefore, are first noticed by a reduction in surface vegetation. We mapped the

Table 2. Yearly frequency of occurrence of aquatic plants on transects in Candlewood Lake.

Common Name	Scientific Name	Frequency of Occurrence (percent *) 2005	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Water starwort	*Callitriche* species	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Coontail	*Ceratophyllum demersum*	3.1	33.3	11.3	22.7	29.9	22.7	21.7	22.0	27.0	34.0	39.0	24.7	24.7
Waterwort	*Elatine* species	0.0	1.0	3.1	2.1	0.0	4.1	0.0	1.0	2.0	1.0	0.0	0.0	4.1
Spikerush	*Eleocharis* species	0.0	0.0	3.1	1.0	1.0	3.1	0.0	1.0	3.0	3.0	3.0	4.1	13.4
Waterweed	*Elodea nuttallii*	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Duckweed	*Lemna minor*	2.1	6.3	1.0	4.1	7.2	4.1	0.0	3.0	0.0	0.0	1.0	3.1	1.0
Eurasian watermilfoil	***Myriophyllum spicatum***	**51.0**	**79.2**	**64.9**	**70.1**	**78.4**	**79.4**	**42.3**	**76.0**	**68.0**	**77.0**	**57.0**	**75.3**	**68.0**
Nodding waternymph	*Najas flexilis*	7.3	1.0	1.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Minor naiad	***Najas minor***	**12.5**	**6.3**	**8.2**	**11.3**	**15.5**	**12.4**	**19.6**	**24.0**	**16.0**	**10.0**	**10.0**	**0.0**	**2.1**
White water lily	*Nymphaea odorata*	1.0	1.0	0.0	1.0	1.0	1.0	1.0	2.0	1.0	1.0	1.0	1.0	2.1
Snailseed pondweed	*Potamogeton bicupulatus*	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Curlyleaf pondweed	***Potamogeton crispus***	**13.5**	**1.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Leafy pondweed	*Potamogeton foliosus*	3.1	0.0	0.0	0.0	2.1	1.0	5.2	1.0	0.0	0.0	0.0	2.1	0.0
Variable leaf pondweed	*Potamogeton gramineus*	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Clasping leaf pondweed	*Potamogeton perfoliatus*	1.0	2.1	1.0	0.0	0.0	2.1	0.0	1.0	1.0	0.0	0.0	0.0	0.0
Small pondweed	*Potamogeton pusillus*	3.1	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bur-reed	*Sparganium* species	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
Great duckweed	*Spirodela polyrhiza*	1.0	0.0	0.0	1.0	5.2	0.0	0.0	0.0	1.0	0.0	0.0	2.1	1.0
Sago pondweed	*Stuckenia pectinata*	6.3	1.0	0.0	4.1	0.0	3.1	2.1	2.0	1.0	11.0	0.0	0.0	0.0
Eel grass	*Vallisneria americana*	2.1	2.1	4.1	4.1	3.1	4.0	4.1	6.0	4.0	3.0	5.0	2.1	1.0
Spotless watermeal	*Wolffia* species	0.0	0.0	0.0	0.0	0.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Horned pondweed	*Zannichellia palistris*	11.5	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Invasive Species Richness		**3**	**3**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**1**	**2**
Total Native Species Richness		14	11	7	8	8	10	5	9	8	6	5	7	8
Total Species Richness		17	14	9	10	10	12	7	11	10	8	7	8	10

Invasive plant

* Percent occurrence on 97 points in 10 transects

Shaded columns indicate deep drawdown years

locations of Eurasian watermilfoil patches that reached the surface (abundance = 5) within patches of lesser abundance (abundance < 5) with separate point features. When combined with patches with an abundance of five, these data are expected to give quantitative year to year comparisons of the efficacy of the grass carp. In Candlewood Lake in 2018 and 2019, the location (via GPS) and approximate number of grass carp were recorded when observed.

Results and Discussion

Candlewood Lake

Our invasive aquatic plant surveys of Candlewood Lake found nine plant species comprised of seven natives and two invasives in 2018 and 10 plant species comprised of seven natives and two invasives in 2019 (Table 2). Minor naiad was not found on transects in 2018 but was noted as patches. Because these surveys are designed to monitor the invasive species and native species are only recorded when found on the reference transects, additional native species may be present. The number unreported, however, is likely small based on the

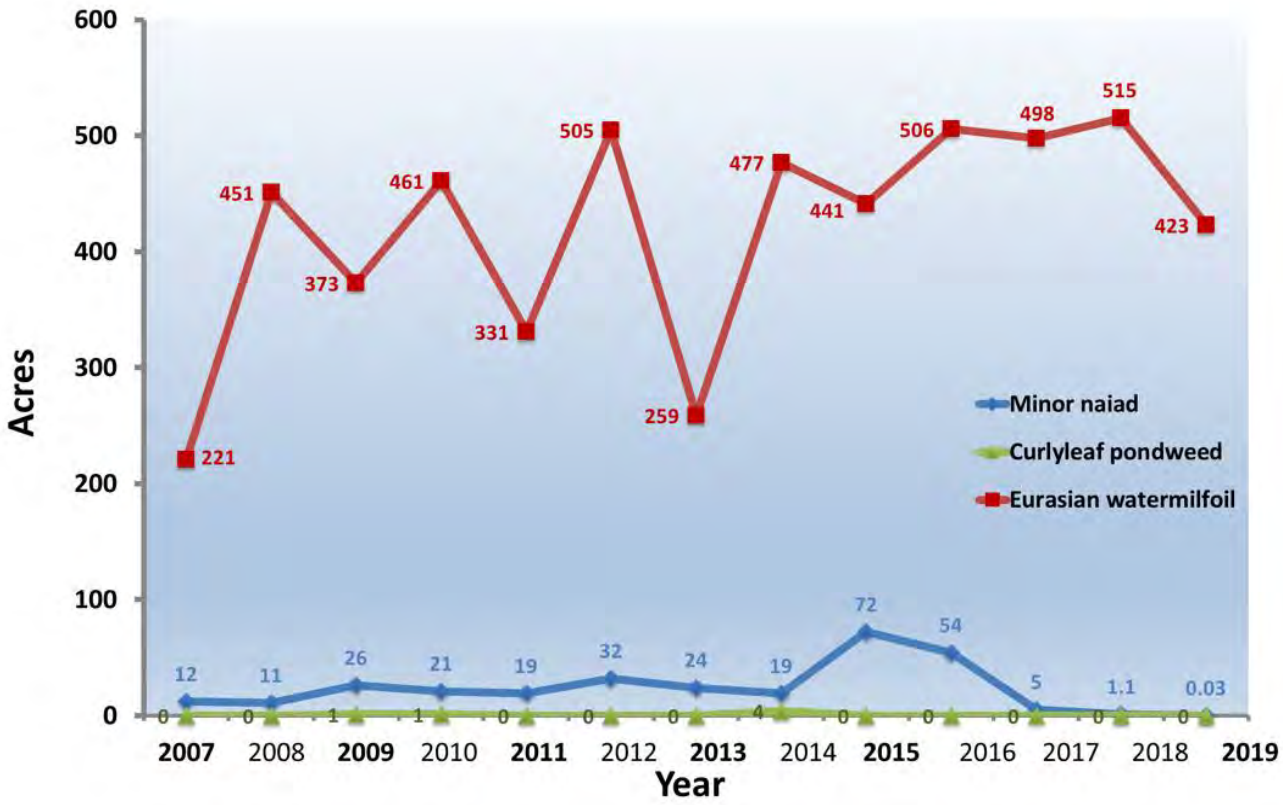


Figure 2. Yearly changes in in the acreage of invasive aquatic plants in Candlewood Lake (deep draw-down years in bold).

surveyor's observations. The invasive species found in 2018 and 2019 were Eurasian water-milfoil and minor naiad, which are the same as previous years. No curlyleaf pondweed was found in either year for the first time since 2013. Eurasian watermilfoil continued to be the most prevalent invasive aquatic plant covering 515 acres in 2018 and 423 acres in 2019 (Figure 2). The 2018 survey found the highest acreage of Eurasian watermilfoil to date. Minor naiad covered only 1.1 acres in 2018 and 0.03 acres in 2019 which reflects a substantial decrease from the 72 acre high in 2015. This plant tends to occur in shallow protected coves where drawdown efficacy and grass carp herbivory are likely greatest. The Candlewood Lake maps show the locations and extents on the invasive aquatic plant species in 2018 and 2019 (Figures 3 and 4). For close-up views of particular portions of the lake refer to the subset maps found in the appendix of this report.

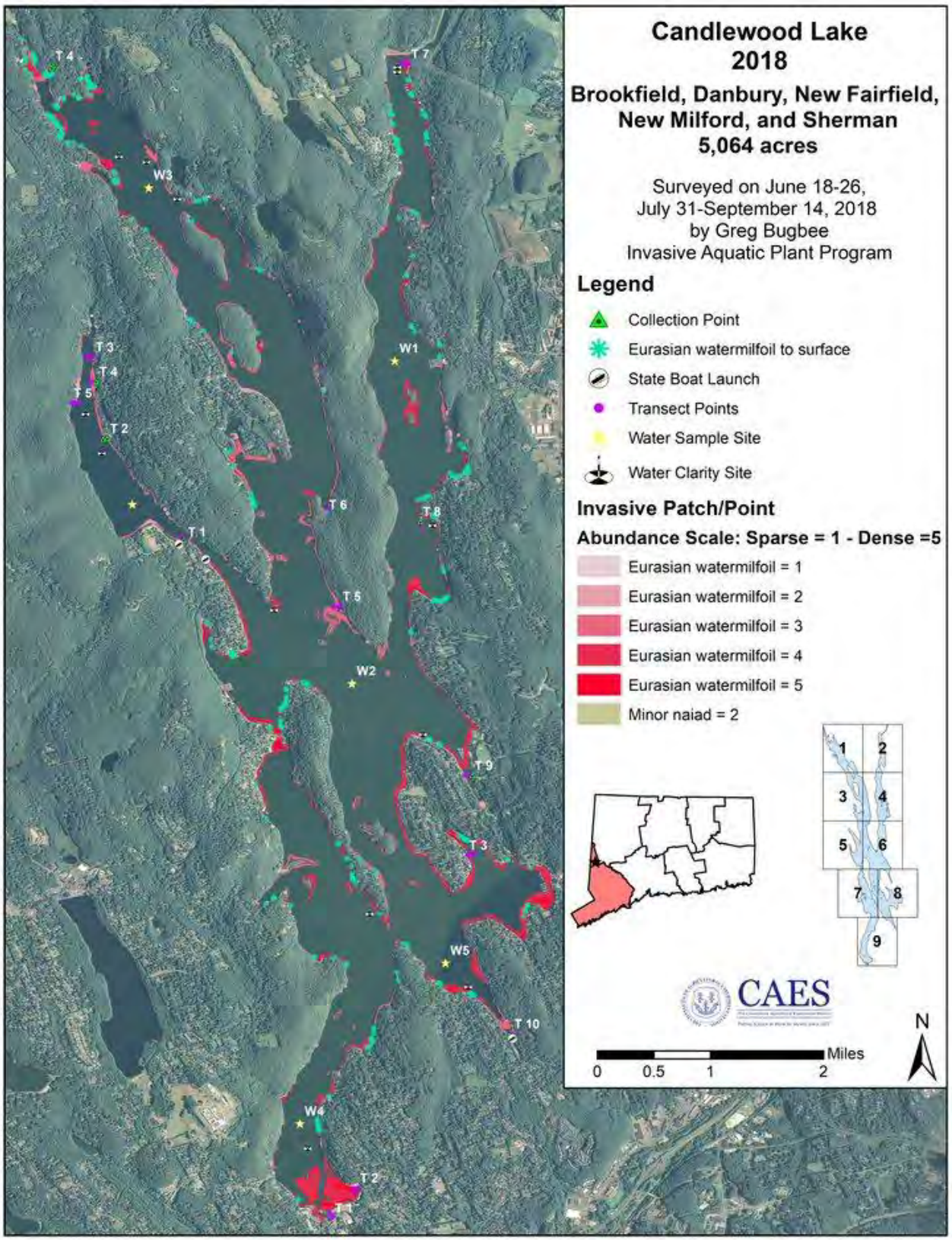


Figure 3. Locations of Candlewood Lake's invasive aquatic plant patches and points, transects, and water test sites in 2018 (see appendix the nine close-up maps shown in the legend).

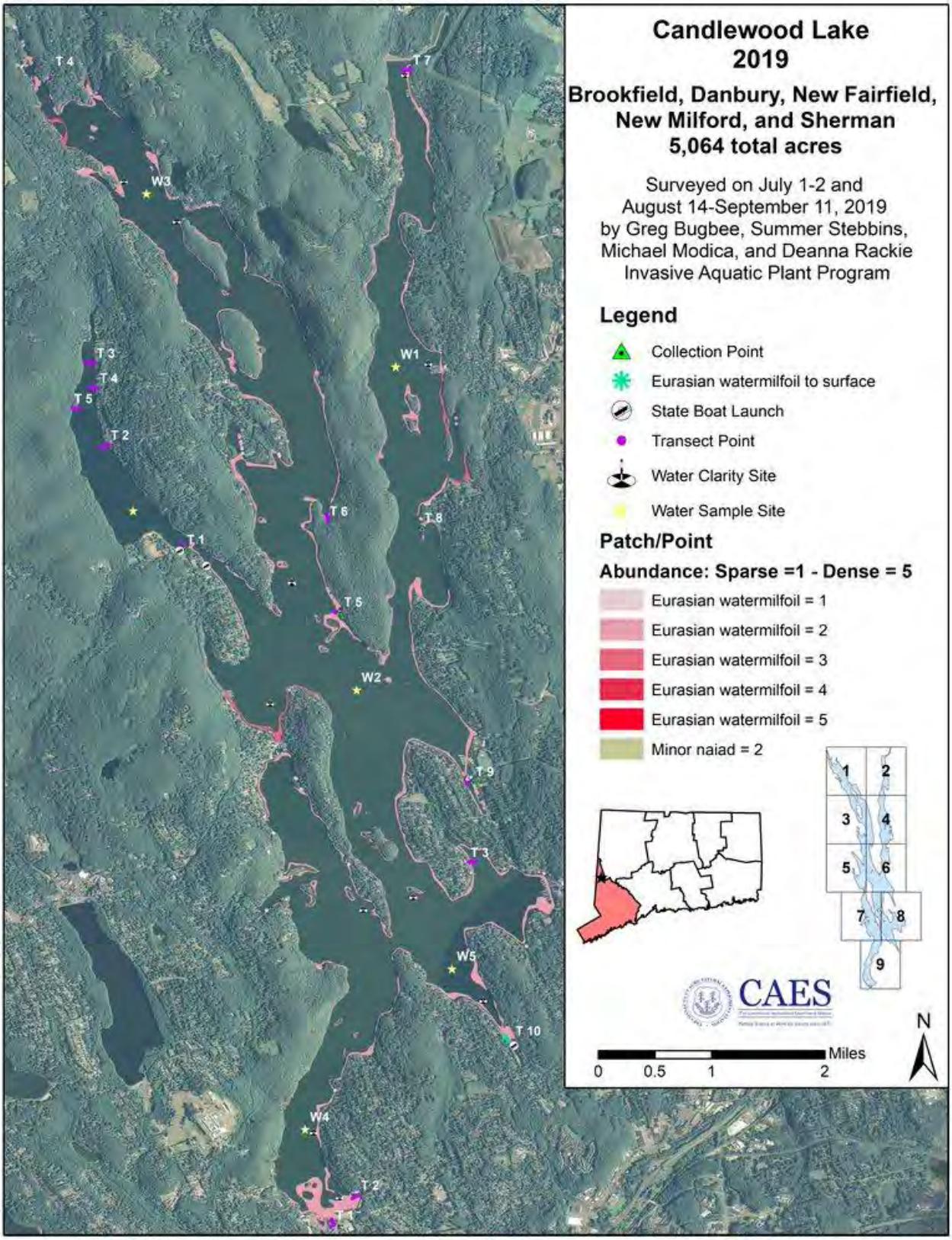


Figure 4. Locations of Candlewood Lake's invasive aquatic plant patches and points, transects, and water test sites in 2019 (see appendix the nine close-up maps shown in the legend).

Table 3. Yearly comparisons of the number and size of invasive species patches in Candlewood Lake.

	Patch Size (acres)											
	Eurasian watermilfoil				Minor naiad				Curlyleaf pondweed			
Year	Number	(min)	(max)	(mean)	Number	(min)	(max)	(mean)	Number	(min)	(max)	(mean)
2019	361	0.0002	41.2	1.2	1	0.0322	0.0322	0.0322	0	0	0	0
2018	456	0.0002	83.5	1.1	3	0.1725	0.5352	0.3815	0	0	0	0
2017	686	0.0002	52.5	0.7	9	0.0002	2.5	0.6	4	0.0002	0.0002	0.0002
2016	526	0.0002	67.4	1.0	77	0.0002	6.5	0.7	36	0.0002	0.4	0.03
2015	413	0.0002	21.3	1.1	125	0.0002	12.3	0.6	1	0.04	0.04	0.04
2014	485	0.0002	46.5	1.0	137	0.0002	1.9	0.1	41	0.0002	3.4	0.1
2013	432	0.0002	14.9	0.6	79	0.0002	2.7	0.3	0	0	0	0
2012	637	0.0002	29.8	0.8	83	0.0002	4.0	0.4	0	0	0	0
2011	485	0.0002	13.5	0.7	46	0.0002	4.4	0.4	1	0.0002	0.0002	0.0002
2010	324	0.0002	35.6	1.6	47	0.0170	6.6	0.4	1	1.0	1.0	1.0
2009	489	0.0002	39.6	0.8	50	0.0002	7.9	0.5	1	0.7	0.7	0.7
2008	469	0.0002	28.1	1.0	26	0.0006	5.5	0.4	5	0.0002	0.1	0.0
2007	489	0.0002	24.9	0.4	31	0.0003	5.0	0.4	1	0.1	0.1	0.1

*Shaded rows indicate deep drawdown years

Table 4. Yearly comparisons of the abundance of invasive species in Candlewood Lake.

	Patch Abundance (1 = sparse - 5 = dense)								
	Eurasian watermilfoil			Minor naiad			Curlyleaf pondweed		
Year	(min)	(max)	(mean)	(min)	(max)	(mean)	(min)	(max)	(mean)
2019	1	5	1.9	2	2	2	0	0	0
2018	1	5	3.1	2	2	2	0	0	0
2017	1	5	2.8	2	3	2.3	1	1	1.0
2016	2	5	3.0	2	4	2.3	1	5	3.0
2015	1	5	3.2	1	4	3.2	2	2	2.0
2014	1	5	3.1	1	4	2.1	1	5	2.9
2013	1	5	2.4	1	4	2.4	0	0	0.0
2012	1	5	3.1	2	5	2.6	0	0	0.0
2011	1	5	2.3	1	4	2.1	2	2	2.0
2010	1	5	3.3	2	3	2.1	1	1	1.0
2009	1	5	2.1	1	4	1.9	1	1	1.0
2008	1	5	3.0	2	4	1.5	1	1	1.0
2007	1	5	2.9	1	4	2.1	2	2	2.0

*Shaded rows indicate deep drawdown years

There were 456 patches of Eurasian watermilfoil in 2018 and 361 in 2019 (Table 3). The largest patch of Eurasian watermilfoil in 2018 was a narrow, 83-acre patch stretching from Echo Bay to Brookfield Bay (Figure 3, Maps 6 & 8 in Appendix). The largest patch in 2019 was 41 acres located in Danbury Cove (Figure 4, Map 9 in Appendix). These are generally the same sites as in previous years. The mean abundance of Eurasian watermilfoil patches in Candlewood Lake was 3.1 in 2018, which was like all previous years (range 2.1 – 3.3) (Table 4). In 2019, however, the average abundance dropped to 1.9 which was the lowest to date. We found only three minor naiad patches in 2018 and only one in 2019. This continued the major decrease begun in 2017. Mean minor naiad patch size also continued to decrease to 0.4 acres

in 2018, and the only patch found in 2019 had an area of 0.03 acres. The largest patch in 2018 was near Lynn Deming Park in New Milford (Figure 3, Map 2 in Appendix). The one patch in 2019 was found off Oak Point in New Milford (Figure 4, Map 6 in appendix). Mean patch abundance of minor naiad was 2.0 in both 2018 and 2019 (Table 4). Minor naiad is likely less affected by drawdown than Eurasian watermilfoil because it propagates from potentially drawdown resistant seeds.

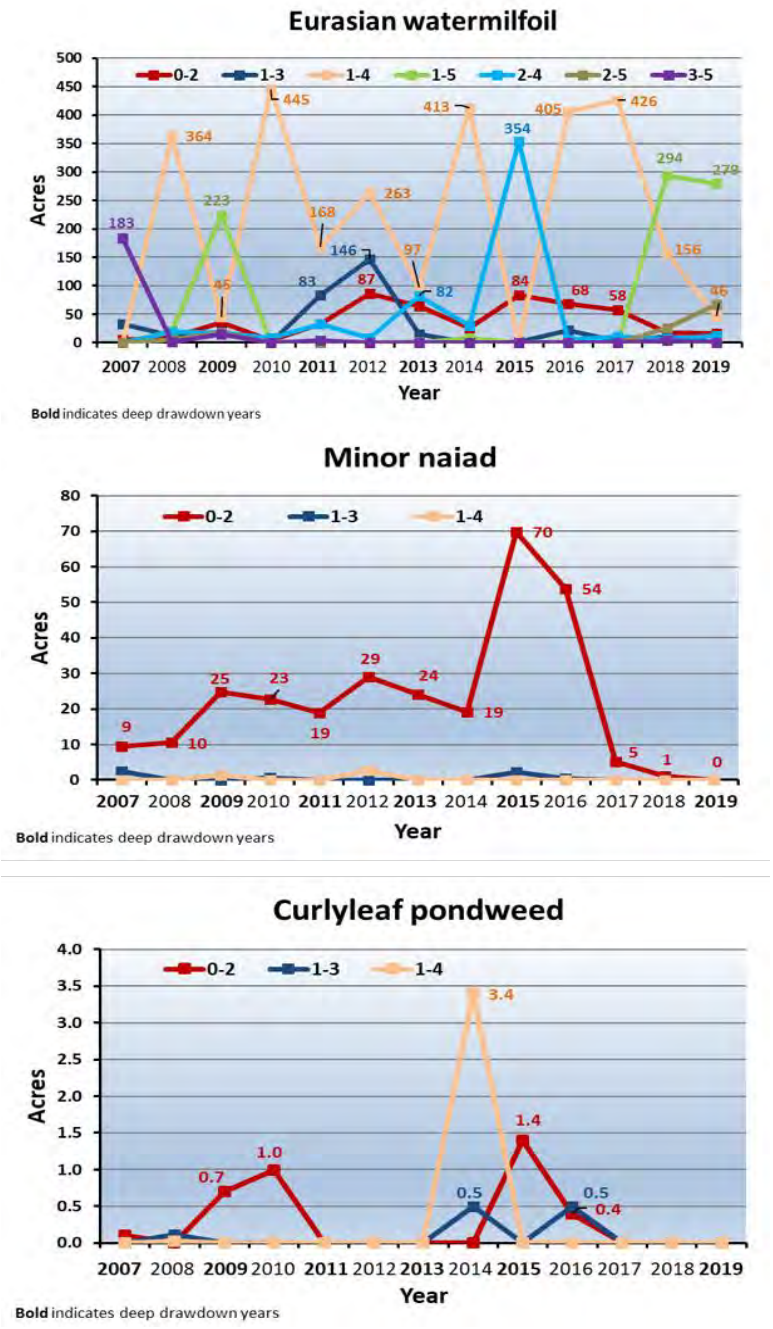


Figure 5. Depth preferences (meters) of invasive aquatic plants in Candlewood Lake 2007 - 2019.

Drawdowns, fluctuating water levels, natural variation, and grass carp feeding may change the depth preferences of invasive species from year to year. In 2018 and 2019, we found most Eurasian watermilfoil at the 1 - 5 m depth (Figure 5). Except for 2009, little Eurasian watermilfoil was found at depths greater than 4 m. Improvements in water clarity and associated light transmission combined with generally high summer water levels is likely the cause (Figure 23, Page 34). As in past years, minor naiad was found at depths from 0 - 2 m.

The frequency of occurrence (FO) of Eurasian watermilfoil on transects was 75% in 2018 and 68% in 2019 (Figure 6). These FO's are not statistically ($p \leq 0.05$) less than any previous year. Yearly variability caused by the winter drawdowns will decrease the sensitivity of this measure when looking for the effects of grass carp. In addition, FO only determines if a species is present or absent and therefore will be a lagging indicator of grass carp efficacy. The FO of minor naiad was near zero in 2018 and 2019 which continued a decline started in 2015. Given that the first grass carp introduction occurred in 2015 and minor naiad had not seemed sensitive to the previous drawdown regimes, grass carp could be a major factor in its decline. Curlyleaf pondweed disappeared from transects in 2009 and the overall survey in 2018. Declines in both minor naiad and curlyleaf pondweed could be related to a preference by grass carp to the ubiquitous Eurasian watermilfoil. Coontail is a plant thought to be least preferred by grass carp particularly in nearby Ball Pond (June-Wells et al. 2017). Upward trends in this plant on transects from 2014 – 2017, although not statistically

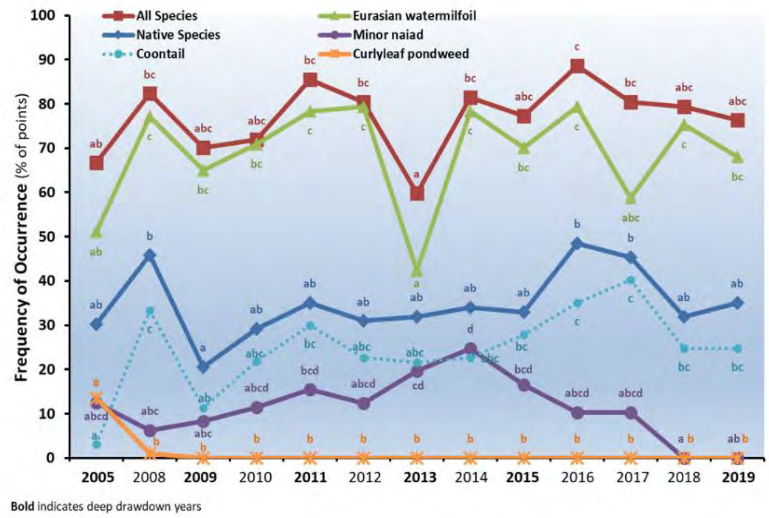


Figure 6. Yearly frequency of occurrence of aquatic vegetation on transects in Candlewood Lake. Points with the same letter within a species are not statistically different.

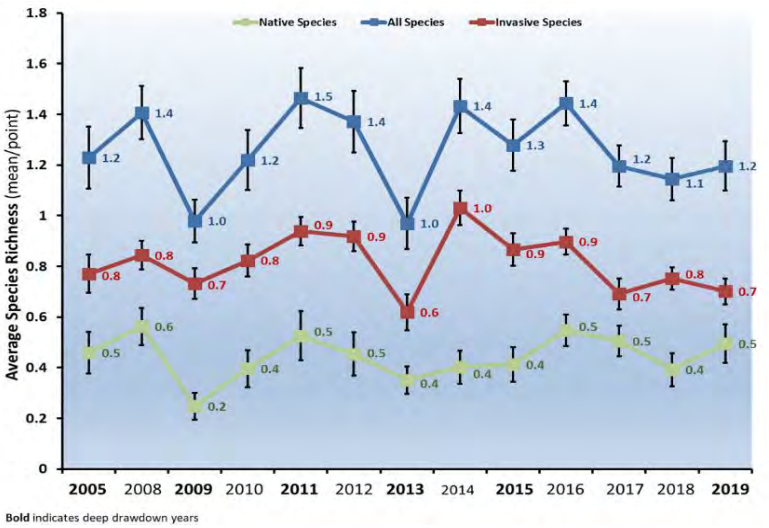


Figure 7. Yearly comparisons of average number of plant species per transect point in Candlewood Lake. Error bars equal +/- one standard error of the mean (SEM).

significant, yielded concern that Eurasian watermilfoil was being replaced with coontail which could become a similar nuisance. Our 2018 and 2019 data showed a reversal in this trend that could be related more to deeper winter drawdowns than grass carp. The mean invasive species richness (number of plant species) per transect point was 0.8 in 2018 and 0.7 in 2019 which continued the statistically significant decline (± one SEM) from 2014, 2015 and 2016 (Figure 7).

A healthy aquatic plant ecosystem generally has diverse and abundant native species. Native plant coverage may decrease the establishment and spread of invasive species (Capers et al. 2007). Overall native species richness on transects increased from five in 2017 to seven in 2018 and eight in 2019. Still, this is considerably lower than the all-time high of 14 found in 2005 (Table 2, Page 12). We found one new native species in 2019, bur-reed (*Sparganium* species). Many species that were present in 2005 have not been found in recent years, including water starwort, waterweed, nodding waternymph, variable leaf pondweed, clasping leaf pondweed, small pondweed, sago pondweed, and horned pondweed. It is possible these plants have suffered because of the drawdowns and grass carp. It is also possible the plants may be in the lake but no longer on transects. Clasping leaf pondweed and sago pondweed are particularly notable as they were present on transects in most years until 2016 and 2017 respectively. These plants were also commonly viewed by surveyors in other parts of the lake. The surveyor in 2019 did not observe clasping leaf pondweed or sago pondweed anywhere in Candlewood Lake. This may be a result of grass carp herbivory. Some species-rich Connecticut lakes contain over 30 native plant species (CAES IAPP 2020) and for a large lake like Candlewood to have so few is unusual. This is probably because of Candlewood Lake being relatively young, winter drawdowns, and possibly grass carp.

Biodiversity in considered optimal when FO and species richness is high. The FO of all species (native + invasive) on transect points was 79% in 2018 and 76% in 2019. This was statistically similar to all previous years (Figure 6). Native species FO was 32% in 2018 and 35% in 2019 and was also statistically similar to all previous years. The average native

species richness on transect points was 0.4 in 2018 and 0.5 in 2019 which are only statistically greater than the low of 0.2 in 2009 (Figure 7).

Many fish and other aquatic organisms need aquatic vegetation for habitat, food production and spawning. Optimal littoral zone coverage ranges from 20% to 40% in Connecticut lakes (Jacobs and O'Donnell 2002). We used a depth of 5 m (16 feet) as the littoral zone limit in Candlewood Lake because it corresponds to the maximum depth where plants have been found. Candlewood Lake has a littoral zone of 810 acres or 16% of the total lake area (Bugbee 2011).

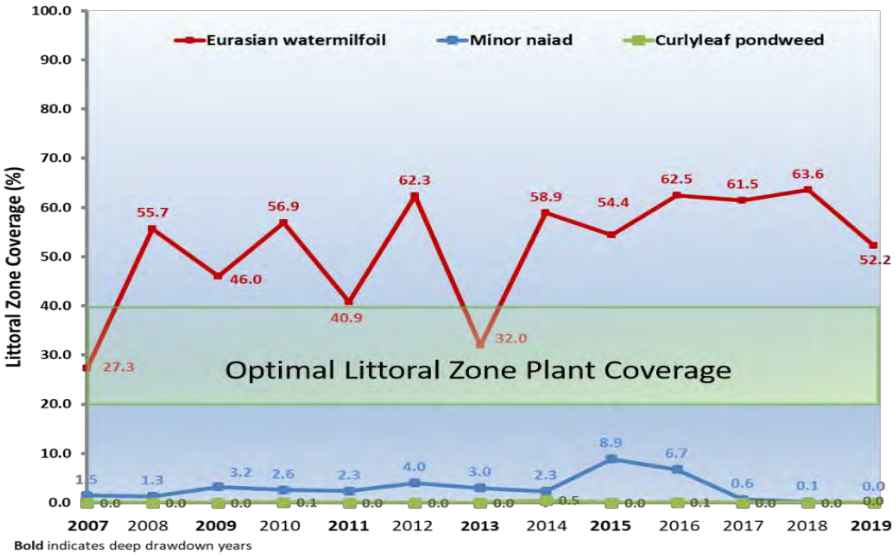


Figure 8. Yearly comparison of the coverage of invasive aquatic plants in Candlewood Lake's littoral zone (0-5m).

Eurasian watermilfoil occupied 64% of the littoral zone in 2018 and 52% of the littoral zone in 2019 (Figure 8). The 2018 coverage was similar to the other shallow drawdown years which ranged from 56% - 62%, but the 2019 coverage was greater than all other deep drawdown years. Minor naiad covered 0.1% of the littoral zone in 2018 and near 0% in 2019. This continued the decrease seen in 2017 and showed little response to either a shallow (range = 1 - 7%) or deep drawdown (range = 2 - 9%). Curlyleaf pondweed was not found in 2018 or 2019. The total coverage of Candlewood Lake's littoral zone cannot be inferred by adding the acreage of various species as they often occur together. Eurasian watermilfoil alone, however, has exceeded the optimal littoral zone coverage in all years except the deep drawdown years of 2007 and 2013 when it fell within the optimal range.

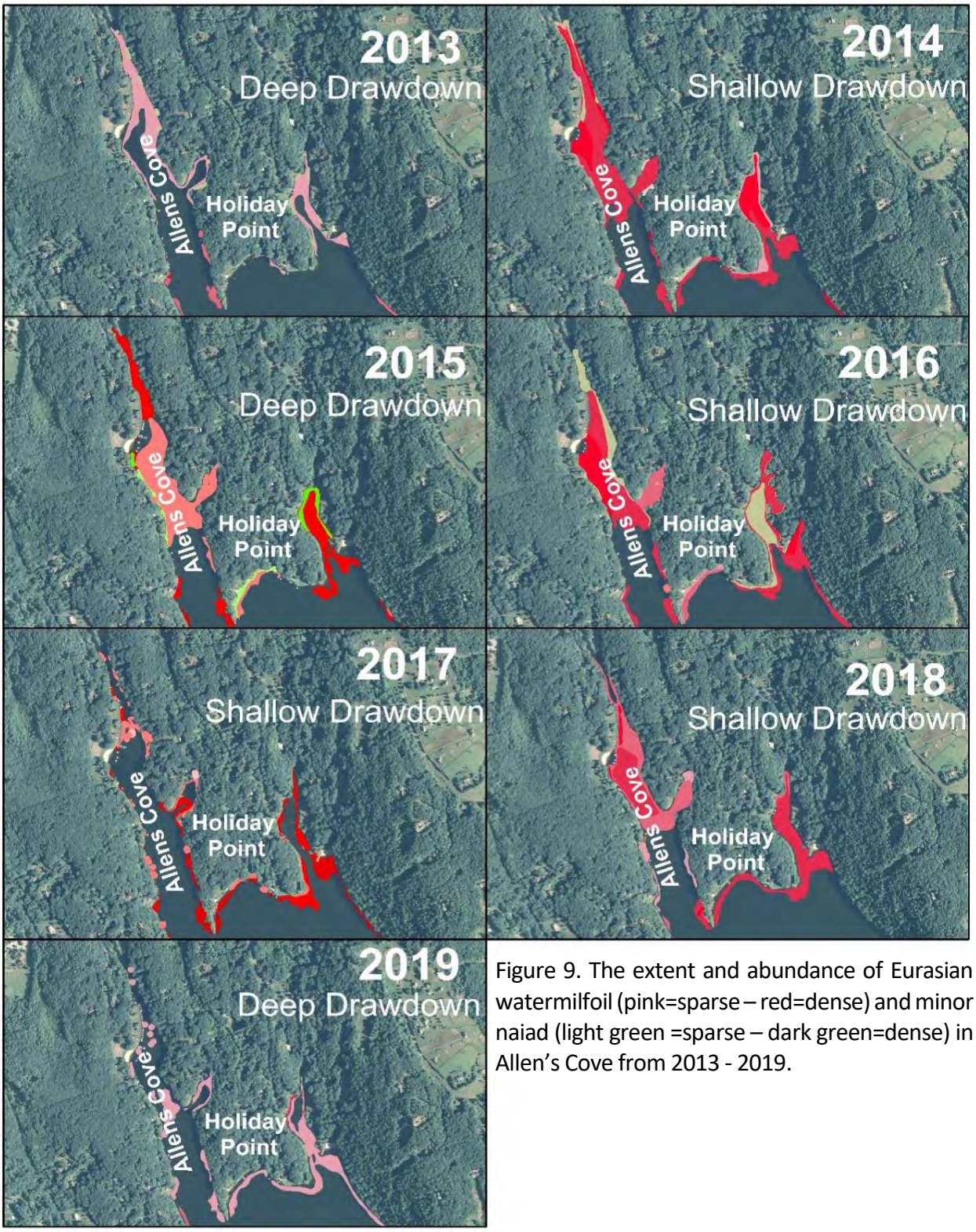


Figure 9. The extent and abundance of Eurasian watermilfoil (pink=sparse – red=dense) and minor naiad (light green =sparse – dark green=dense) in Allen's Cove from 2013 - 2019.

2018/19 Drawdown

The winter drawdown of 2018 was unusual in that it nearly met the deep drawdown target depth in January but then steadily refilled until reaching the normal lake level in mid-March (Figure 10). Thus the 2018 drawdown could be considered a hybrid between deep and shallow. If considered a shallow drawdown, 2018 would be third consecutive year without a deep drawdown. The winter drawdown of 2019 featured the first true deep drawdown in four years. Water levels were lowered in mid-January and raised in late-February like 2013 and 2011 (Figure 11). Eurasian watermilfoil coverage ranges from 221 - 441 acres in deep drawdown years and from 451 – 515 acres in shallow drawdown years. These differences in the coverage are shown in Allen's Cove (Figure 9). The rapid regrowth in the shallow drawdown years is typical throughout Candlewood Lake and has become reasonably predictable (Bugbee and Stebbins 2018).

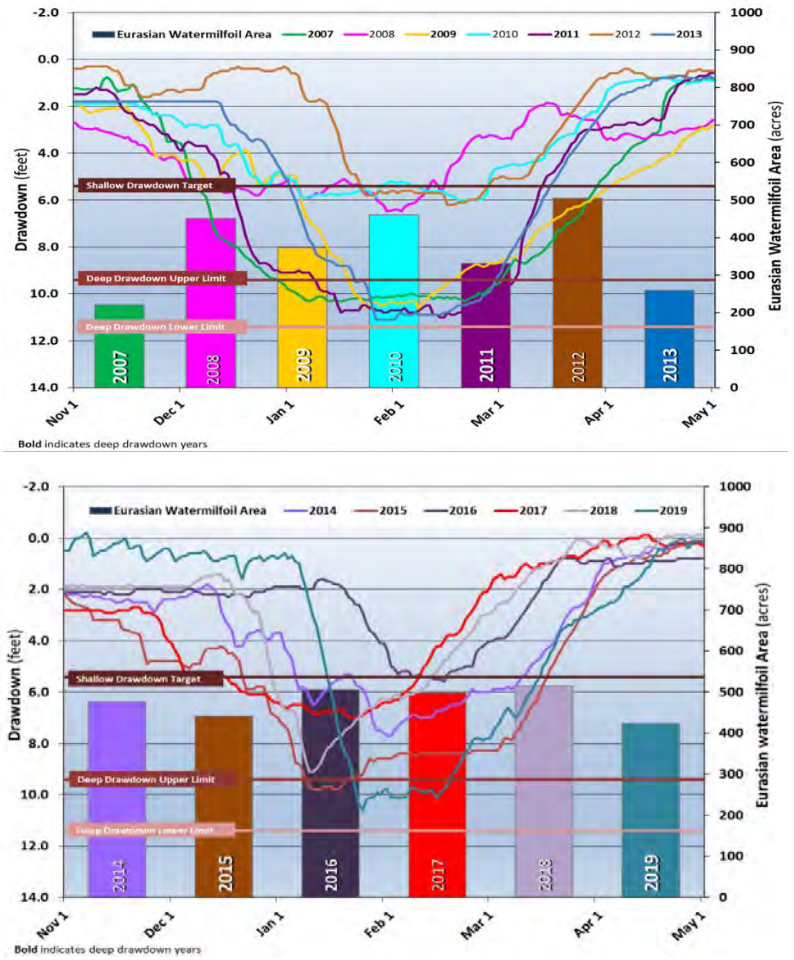


Figure 10. Candlewood Lake's drawdown depths and duration and Eurasian watermilfoil coverage from 2007 - 2019. Bars with years in bold are deep drawdown years.

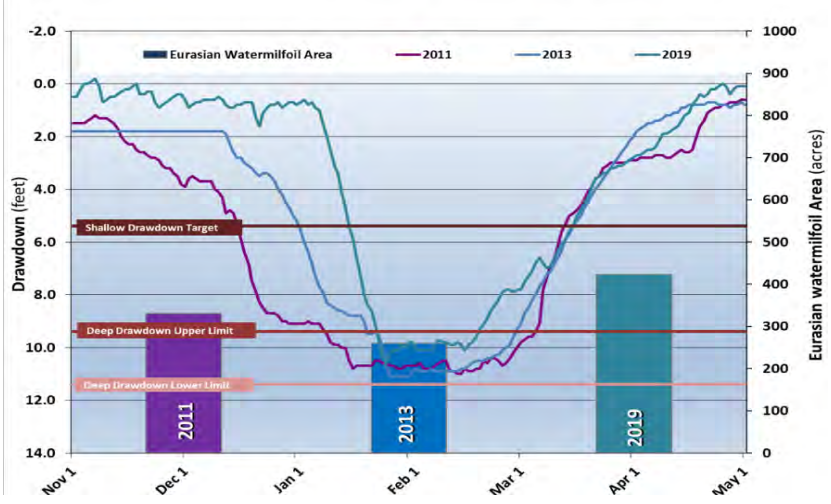


Figure 11. Comparison of the 2011, 2013, and 2019 deep winter drawdowns.

Squantz Pond

Our 2018 survey of Squantz Pond confirmed the presence of the invasive species Eurasian watermilfoil and minor naiad, along with three native species (Table 5). In 2019, both Eurasian watermilfoil and minor naiad were not observed and only one native species was recorded. Eurasian watermilfoil coverage has shown a marked decline since the 39 acres found in 2016. In 2018, we mapped 21 acres of Eurasian watermilfoil while in 2019 it dropped to 0 acres (Figure 12). Minor naiad coverage has also shown a steady decline since the 13 acres found in 2016 to only 0.3 acres in 2018 and none in 2019. Curlyleaf pondweed coverage was negligible in Squantz Pond prior to 2016 and has not been found since. The 2019 survey found a remarkable decrease in aquatic plants in Squantz Pond. No invasive species were found, and the only native species found was waterwort (*Elatine* species). Squantz Pond show the locations and extents on the invasive aquatic plant species in 2018 and 2019 (Figures 13 and 14). For close-up views of portions of the lake refer to the subset maps found in the appendix of this report.

Table 5. Yearly comparisons of the frequency of occurrence of all plants on transects and total area of invasive plants in Squantz Pond.

Common Name	Scientific Name	Frequency of Occurrence (percent*) 2011	2015	2016	2017	2018	2019
Coontail	*Ceratophyllum demersum*	8	0	4	8	6	0
Waterwort	*Elatine* species	3	8	8	8	4	4
Spikerush	*Eleocharis* species	3	6	2	2	4	0
Western waterweed	*Elodea nuttallii*	2	0	4	2	0	0
Primrose-willow	*Ludwigia* species	0	0	0	2	0	0
Eurasian watermilfoil	***Myriophyllum spicatum***	**8**	**62**	**78**	**68**	**54**	**0**
Slender naiad	*Najas flexilis*	14	12	4	0	0	0
Minor naiad	***Najas minor***	**22**	**40**	**22**	**30**	**2**	**0**
Pickerelweed	*Pontederia cordata*	0	4	0	0	0	0
Snailseed pondweed	*Potamogeton bicupulatus*	9	20	12	14	0	0
Curlyleaf pondweed	***Potamogeton crispus***	**0**	**0**	**0**	**0**	**0**	**0**
Leafy pondweed	*Potamogeton foliosus*	0	0	2	0	0	0
Small pondweed	*Potamogeton pusillus*	0	4	0	0	0	0
Bur-reed	*Sparganium* species	1	0	0	8	0	0
Total Invasive Species Richness		**2**	**2**	**2**	**2**	**2**	**0**
Total Native Species Richness		7	6	7	7	3	1
Total Species Richness		9	8	9	9	5	1

Invasive species in bold
* Percent occurrence on 50 points in 5 transects
**Not Determined
Shaded columns are deep drawdown years

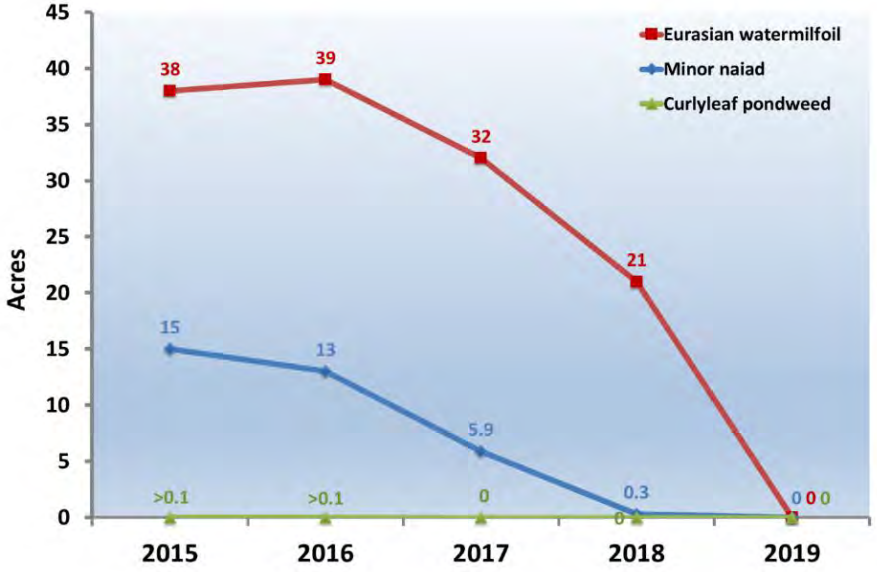


Figure 12. Yearly changes in in the acreage of invasive aquatic plants in Squantz Pond from 2015 – 2019.

Table 6. Yearly comparisons of the number and size of invasive patches in Squantz Pond.

Patch Size (acres)												
	Eurasian watermilfoil				Minor naiad				Curlyleaf pondweed			
Year	Number	(min)	(max)	(mean)	Number	(min)	(max)	(mean)	Number	(min)	(max)	(mean)
2019	**0**	**0**	**0.0**	**0.0**	**0**	**0**	**0.0**	**0.0**	**0**	**0.0**	**0.0**	**0.0**
2018	47	0.0002	3.5	0.4	3	0.0002	0.2	0.1	0	0.0	0.0	0.0
2017	39	0.0002	5.5	0.8	16	0.0002	1.4	0.4	0	0.0	0.0	0.0
2016	100	0.0002	11.9	0.4	20	0.0589	2.0	0.6	3	0.0002	0.0002	0.0002
2015	**46**	**0.0002**	**10.2**	**0.8**	**13**	**0.2**	**4.1**	**1.2**	**1**	**0.004**	**0.004**	**0.004**

* shaded rows are deep drawdown years

Table 7. Yearly comparisons of the abundance of invasive plants in patches in Squantz Pond.

Patch Abundance (1 = sparse - 5 = dense)									
	Eurasian watermilfoil			Minor naiad			Curlyleaf pondweed		
Year	(min)	(max)	(mean)	(min)	(max)	(mean)	(min)	(max)	(mean)
2019	**0**	**0**	**0.0**	**0**	**0**	**0.0**	**0**	**0**	**0.0**
2018	1	4	2.6	2	2	2.0	0	0	0.0
2017	1	5	2.6	2	3	2.1	0	0	0.0
2016	1	5	2.7	1	5	2.9	1	2	1.7
2015	**1**	**4**	**2.6**	**2**	**5**	**3.5**	**3**	**3**	**3.0**

* shaded rows are deep drawdown years

We found 47 patches of Eurasian watermilfoil in our 2018 survey (Table 6). The largest patch covered 3.5 acres in the northern portion of the lake along the eastern shoreline by transect 4 (Figure 13, Map 1 in Appendix). The average 2018 patch size of Eurasian watermilfoil was 0.4 acres, a decrease from the 0.8 acres found in 2017. The mean patch abundance in 2018 was 2.6, the same as 2017. No Eurasian watermilfoil was found to the surface in 2018, the highest abundance was four which has not occurred since 2015. We only found three patches of minor naiad in 2018, continuing the decrease from 2017. The largest patch in 2018 was 0.2 acres located along the western shoreline in the southern part of the pond just south of the jetty (Figure 13, Map 3 in Appendix). Minor naiad had a mean patch size of 0.1 acres in 2018. The mean patch abundance of minor naiad decreased from 2.1 in 2017 to 2.0 in 2018. Curlyleaf pondweed was not found in 2018. No invasive species were found in 2019. The drastic reduction in both invasive and native vegetation in 2019 has not been observed during our previous surveys and the presence of grass carp is the only apparent difference. This will be discussed further in the "Grass Carp" section of this report.

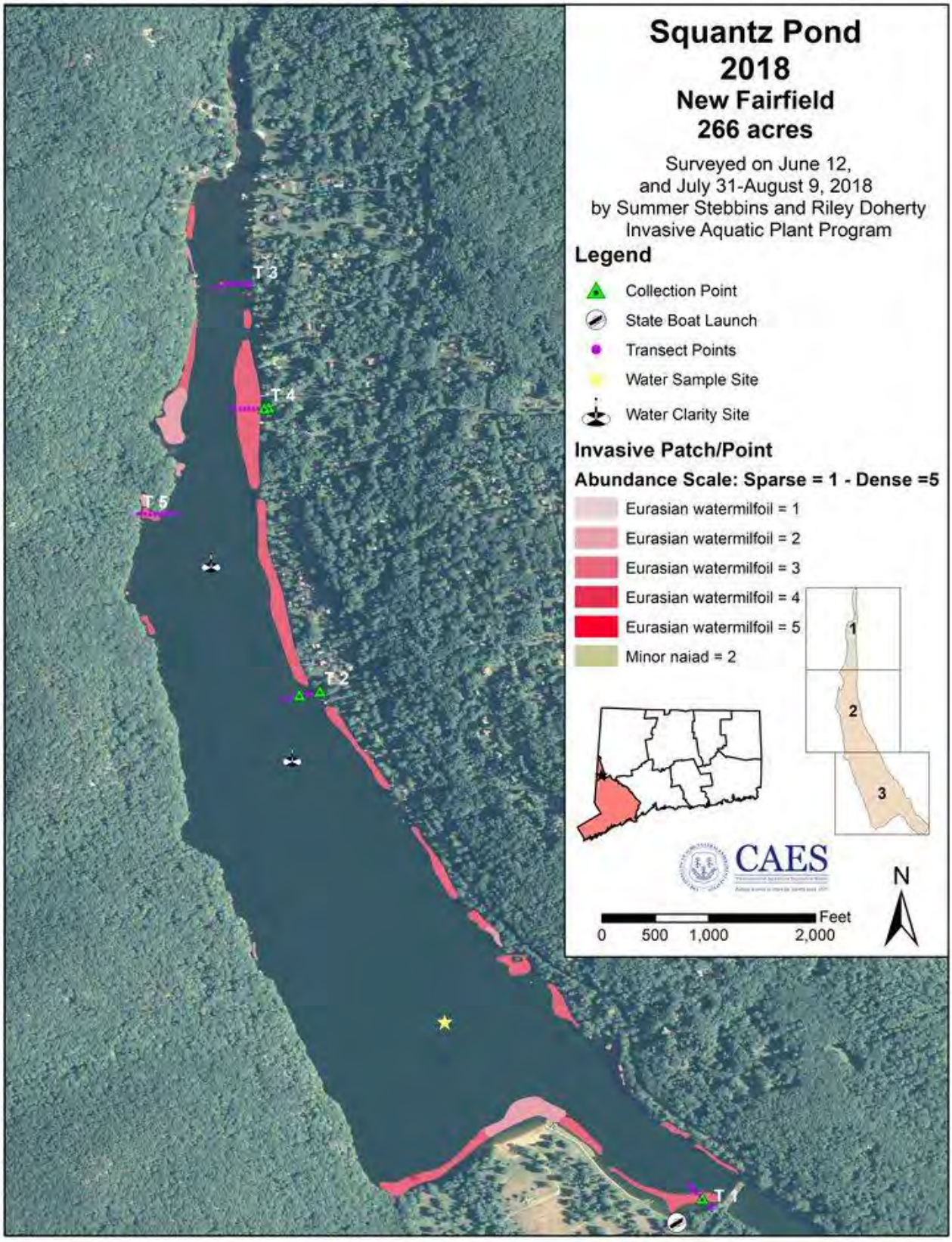


Figure 13. Locations of Squantz Pond's invasive aquatic plant patches and points, transects, and water test sites in 2018 (See appendix the three close-up maps shown in the legend).

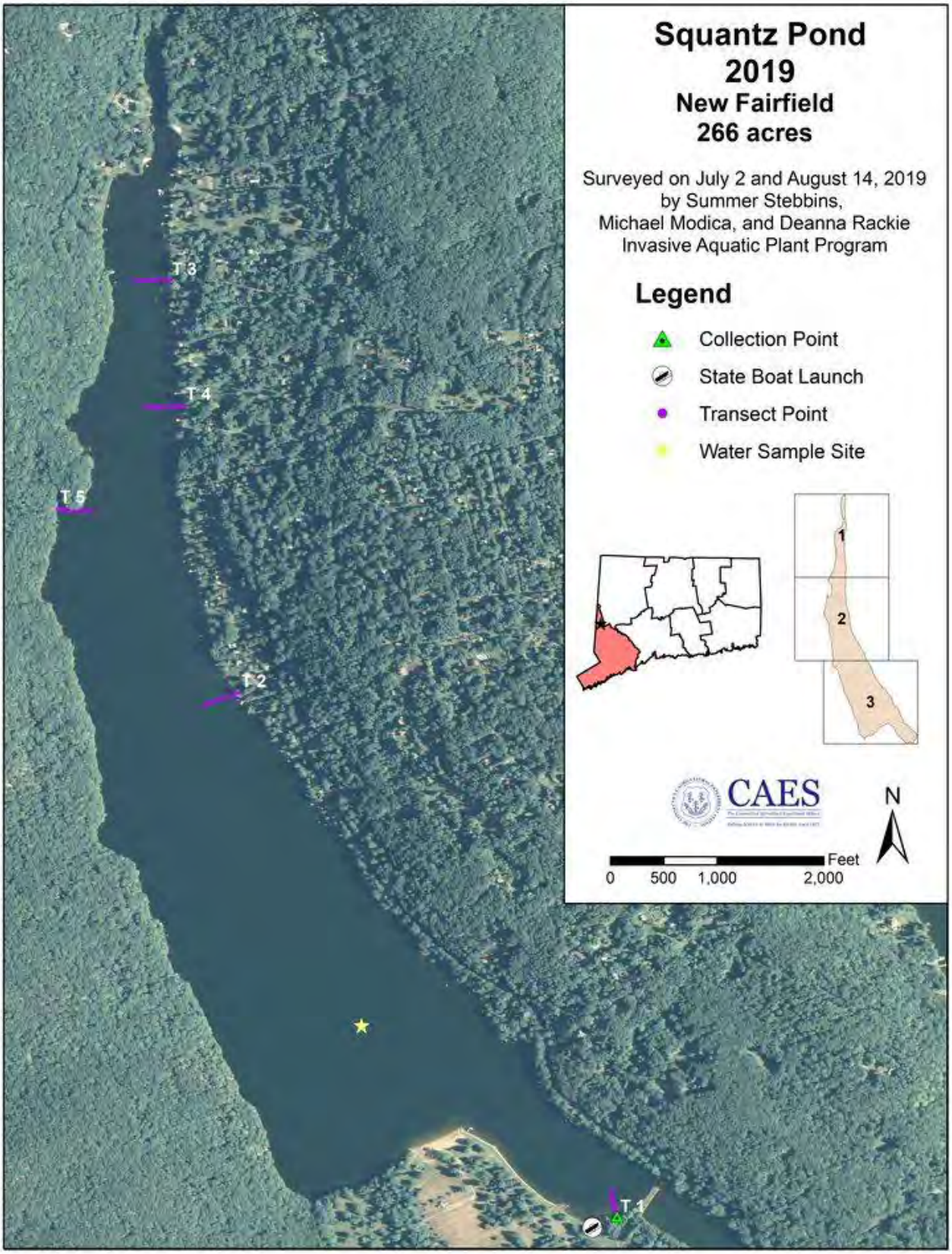


Figure 14. Locations of Squantz Pond's transects and water test site in 2019 (see appendix the three close-up maps shown in the legend).

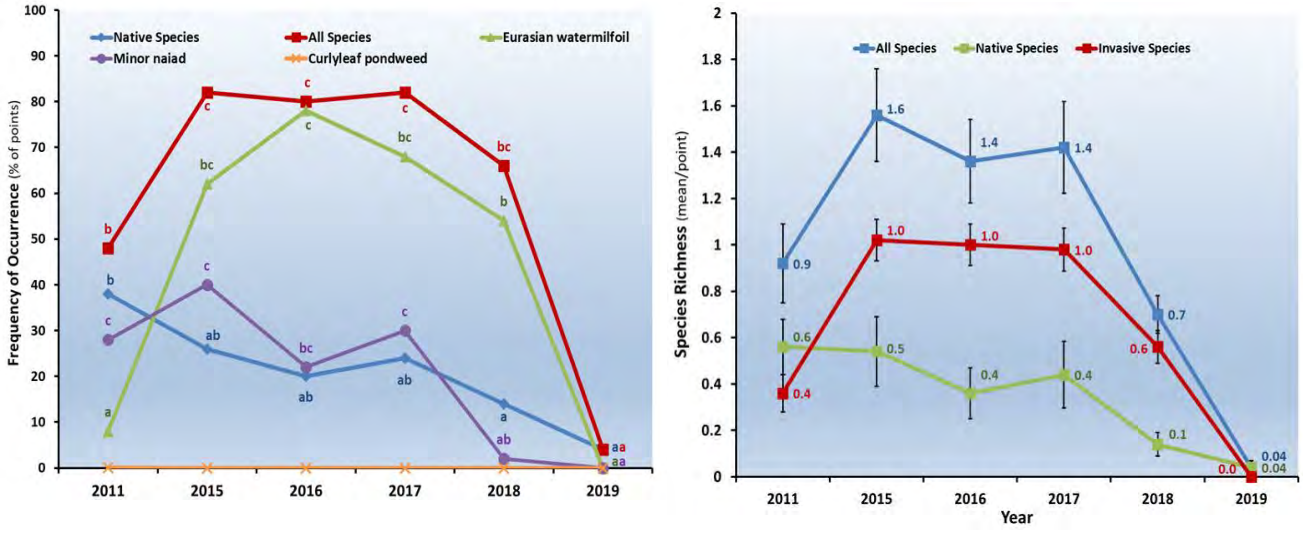


Figure 15. Yearly comparison of the frequency of occurrence of native and invasive species (left) and species richness (right) on transects in Squantz Pond from 2011 to 2019. Points with the same letter are not significantly different. Error bars +/- one standard error of the mean.

The 2018 frequency of occurrence (FO) of Eurasian watermilfoil on transects declined from a high of 78% in 2016 to zero in 2019 (Figure 15, left). Likewise, the FO of minor naiad declined from a high of 40% in 2015 to zero in 2019. No curlyleaf pondweed was found in any years on transects. The FO of all species (native + invasive) declined from highs near 80% from 2015 to 2017 to 4% in 2019 while native species FO declined from a high of 38% in 2011 to 4% in 2019. Vegetative species richness of all species, invasive species, and native species follow trends like FO with highs from 2015 – 2017 and a sharp decline to near zero in 2019 (Figure 15, right). These findings are consistent with the absence of all species except for native waterwort.

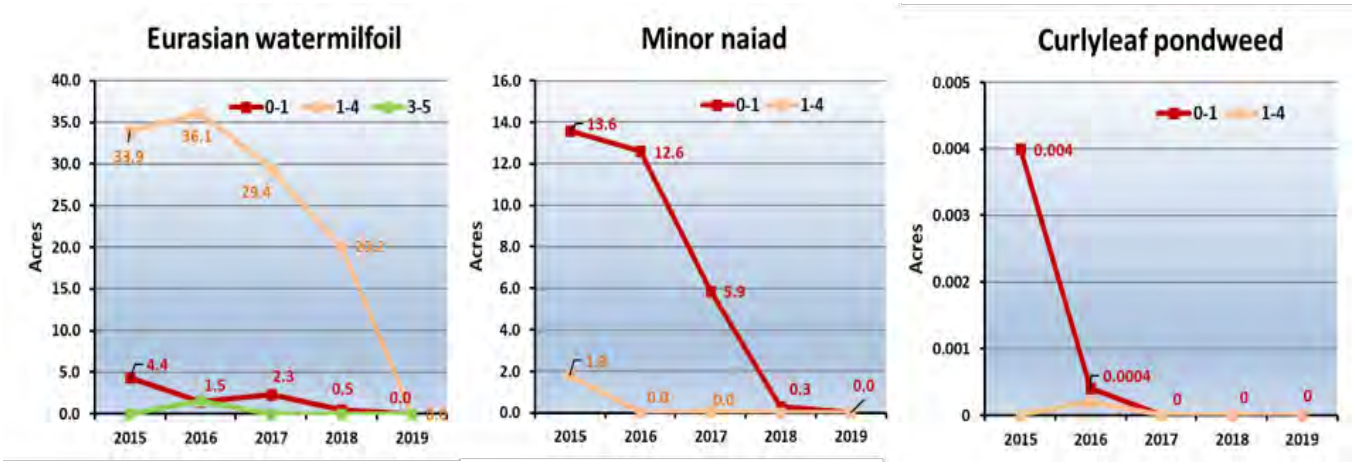


Figure 16. Depth preferences (meters) of invasive plants in Squantz Pond from 2015 - 2019.

Most Eurasian watermilfoil in Squantz Pond in 2018 (20 acres) was located at a depth of 1 – 4 m with a small amount at a depth of 0 - 1 m (<1 acres) (Figure 16). We found most minor naiad (0.3 acres) at a depth between 0 - 1 m in 2018. This showed little change from previous years.

Squantz Pond has a littoral zone of 111 acres or 42% of its total area. Eurasian watermilfoil covered 19% of the littoral zone in 2018, a decrease from 29% coverage found in 2017 (Figure 17). Minor naiad littoral zone coverage decreased to <1% in 2018 from 5% in 2017. Curlyleaf pondweed was not found in 2018, so it did not impact littoral zone coverage. Prior to 2018 the optimal littoral zone plant coverage of 20 - 40% was satisfied by Eurasian watermilfoil alone. By 2019, however, total plant coverage was nearly nonexistent and resulted in the littoral zone plant coverage falling well below optimum (Jacobs and O'Donnell 2002).

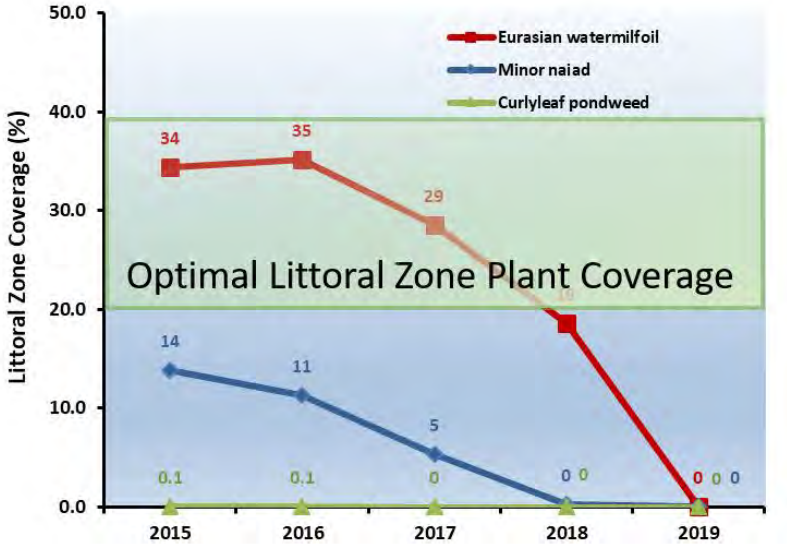


Figure 17. Littoral zone coverage of invasive aquatic plants in Squantz Pond from 2015 - 2019.

Grass Carp

In 2015, 3868 12 - 15-inch grass carp were introduced into Candlewood Lake. In 2017, 5035 additional grass carp were introduced into Candlewood Lake and 585 were stocked in Squantz Pond. Because Candlewood Lake and Squantz Pond are connected via the conduit under Route 39, grass carp can move freely between the waterbodies. Grass carp tend to graze on the terminal shoots of vegetation, and vegetation control would likely be first noticed by a reduction in the plants reaching the surface and flowering (Pipalova 2006). Since

Figure 18. Surface Eurasian watermilfoil in 2018. Nina's Marina, Danbury (left) and looking north from the New Milford Town Beach (right).

2012, we have recorded the points and patches where surface watermilfoil has occurred in Candlewood Lake (Figure 18). A reduction in surface flowering points may be the first indication of the grass carp effect.

The shallow drawdown years of 2012, 2014, 2016 and 2018 showed the highest acreage of surface patches and points with 110, 22, 31 and 34 acres respectively (Figure 19). The deep drawdown years of 2013, 2015, and 2019 featured only 0.4, 0.4, and 0.04 acres, respectively. The 2017 season had a remarkably low amount of surface patches and points for a shallow drawdown year with only 2.8 acres. Attributing this low level to grass carp efficacy

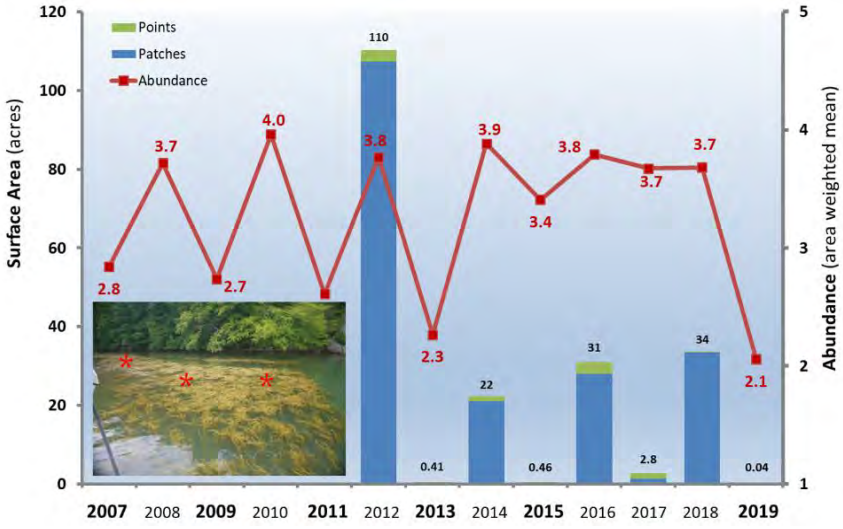


Figure 19. Number of points where Eurasian watermilfoil was flowering at the surface and area weighted abundance in Candlewood Lake. Insert shows how surface points were marked (*). Deep drawdown years in bold.

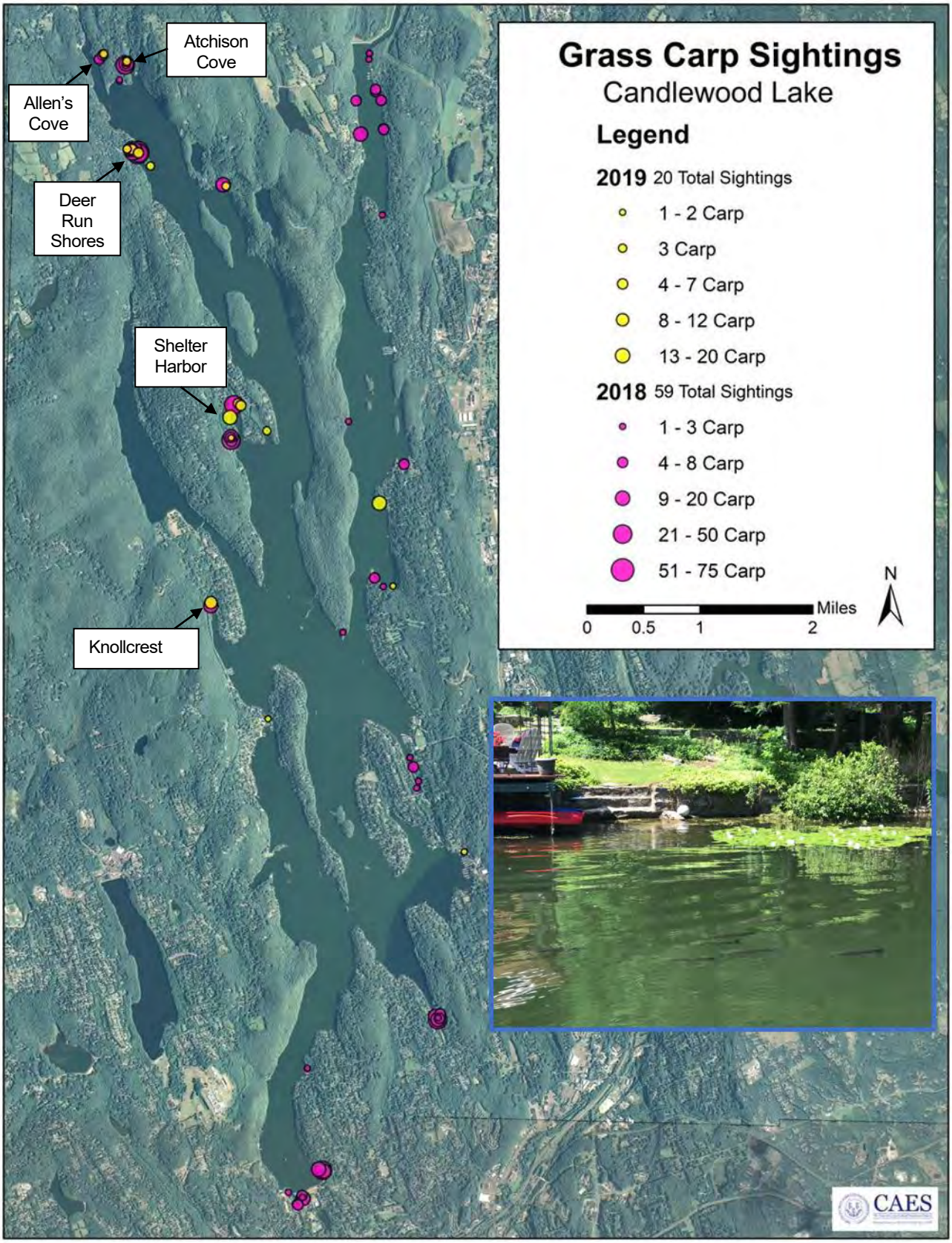


Figure 20. Locations of grass carp sightings and approximate numbers in 2018 and 2019.

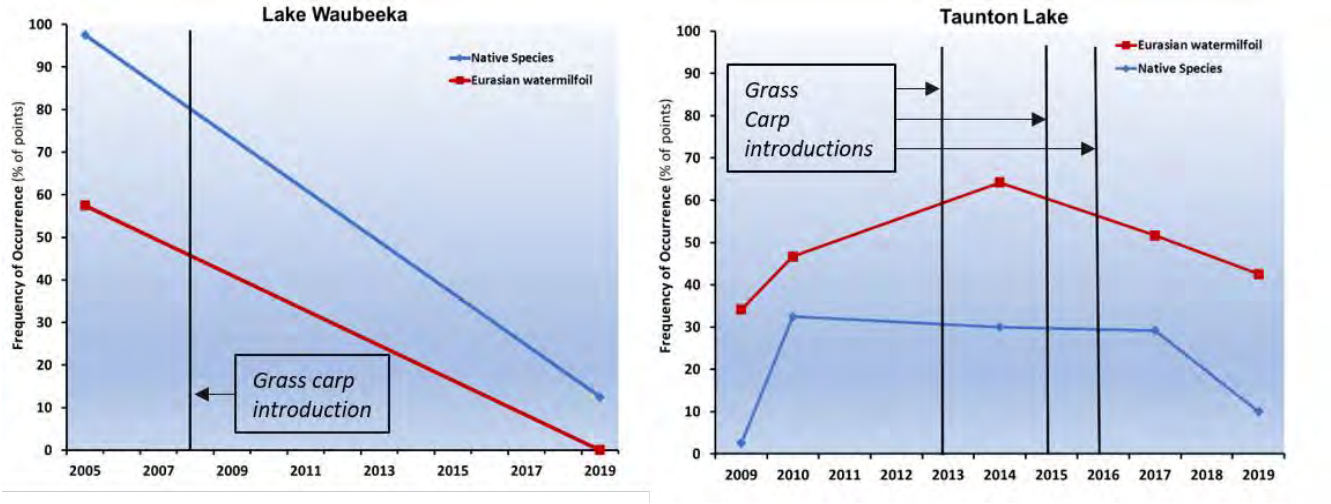


Figure 21. Comparisons of the effects grass carp introductions on Eurasian watermilfoil and native species in four Connecticut Lakes. Vertical lines indicate times of grass carp introductions.

is plausible particularly if this trend continued into future years. Unfortunately, a resurgence in surface watermilfoil occurred in 2018 confounding the claim (Figure 15).

We routinely saw individual or schools of grass carp during our survey and recorded the location and approximate number of fish. Generally, grass carp were seen in coves 1 - 2 m deep when boat traffic was minimal. Certain coves seemed preferred. Coves such as the eastern section of Allen's, Atchison, Deer Run Shores, Shelter Harbor, and Knollcrest almost always contained viewable grass carp (Figure 20). In 2018 we had 59 sightings and in 2019 we had only 20. Whether or not this is an indication of a decrease in the number of grass carp in Candlewood Lake cannot be determined. Our surveys suggest grass carp may be having the greatest effects in coves and less along the main body of the lake. A possible initial grass carp effect in the main body of the lake could be 2019's overall area weighted abundance of Eurasian watermilfoil of 2.1 which was the lowest to date (Figure 13).

The near elimination of aquatic vegetation in Squantz Pond is both interesting and a concern. Because the connection to Candlewood Lake under the Route 39 causeway offers no barriers to migration of the fish between waterbodies, Squantz Pond could be accumulating grass carp from Candlewood Lake. This could be a result of the quieter conditions in the pond.

Table 8. Water chemistry of Candlewood Lake and Squantz Pond in 2018.

Lake	Site	Date	Latitude	Longitude	Depth (m)	Transparency Secchi (m)	Conductivity (µs/cm)	pH	Alkalinity (mg/L $CaCO_3$)	Total P (ug/L)
Candlewood	W1	9/13/2018	41.53344	-73.44455	0.5	3.0	187.0	7.6	49.5	12.0
					14.0		211.0	7.0	27.8	42.0
	W2	9/13/2018	41.49215	-73.45003	0.5	3.0	194.0	7.8	48.8	9.0
					13.0		208.0	6.8	61.5	87.0
	W3	9/13/2018	41.55560	-73.47605	0.5	3.0	191.0	7.7	48.0	15.0
					13.0		225.0	6.8	71.3	403.0
	W4	9/13/2018	41.43580	-73.45669	0.5	3.1	192.0	7.9	49.5	13.0
					11.0		220.0	7.0	66.0	202.0
	W5	9/13/2018	41.45637	-73.43804	0.5	3.1	195.0	7.9	48.8	15.0
					11.0		204.0	6.9	66.0	143.0
Squantz	W1	8/9/2018	41.51508	-73.47816	0.5	2.3	139.0	8.2	45.8	7.0
					13.0		144.0	6.1	41.3	23.0

Table 9. Water chemistry of Candlewood Lake and Squantz Pond in 2019.

Lake	Site	Date	Latitude	Longitude	Depth (m)	Transparency Secchi (m)	Conductivity (µs/cm)	pH	Alkalinity (mg/L $CaCO_3$)	Total P (ug/L)
Candlewood	W1	9/10/2019	41.53348	-73.44457	0.5	3.2	195.0	7.5	53.3	14.0
					14.0		210.0	7.7	61.5	200.4
	W2	9/10/2019	41.49215	-73.44955	0.5	3.0	194.0	7.5	52.5	18.0
					13.0		214.0	7.4	54.0	259.0
	W3	9/10/2019	41.55558	-73.47642	0.5	2.0	199.0	7.6	51.0	25.4
					13.0		227.0	7.5	73.5	784.9
	W4	9/10/2019	41.43599	-73.45615	0.5	2.5	206.0	7.6	46.5	16.8
					11.0		207.0	6.9	60.0	57.4
	W5	9/10/2019	41.45652	-73.43738	0.5	2.7	204.0	7.6	48.0	15.7
					11.0		217.0	7.5	63.8	215.6
Squantz	W1	8/14/2019	41.51507	-73.47814	0.5	3.0	123.0	8.0	26.3	12.2
					13.0		137.0	6.6	36.8	322.4

It would be expected that as vegetation becomes scare in Squantz Pond the grass carp will have to move back into Candlewood. Currently it appears that Squantz Pond may be experiencing a condition like nearby Waubeeka and Taunton Lakes where grass carp may have reduced vegetation to less than optimal levels (Figure 21).

Water Chemistry

Water chemistry affects the occurrence of invasive plants in lakes. CAES IAPP has found lakes with higher alkalinities and conductivities are more likely to support Eurasian watermilfoil, minor naiad, and curlyleaf pondweed while lakes with lower values support fanwort (*Cabomba caroliniana*) and variable watermilfoil (*Myriophyllum heterophyllum*) (June-Wells et al. 2013). Candlewood Lake and Squantz Pond fall into the former category. Zebra mussels also prefer water with higher alkalinities and conductivities. Water chemistry may be altered

when nutrients are utilized by plants, and nutrients not used by plants may promote harmful algal blooms. At the conclusion of each waterbody's survey we perform water testing on each lake. Because these water tests are performed only once a year, they may not be indicative of conditions at other times. In Candlewood Lake we obtain water clarity measurements most days we are surveying and thus can show changes over the course of our surveys (Figure 22). During 2018 and 2019 water clarity varied between 2.5 and 3.8 m (Figure 22). Except for 2014, these years had the clearest water since we started the measurements in 2013. Squantz Pond had a water clarity of 2.3 m in 2018 and 3.0 m in 2019 (Tables 8 and 9). In our 2015 report we suggested that summer water clarity is nearly 1 m less in deep drawdown years than in the shallow drawdown years, and this could be related to the filtering action of increased vegetation (Bugbee and Fanzutti 2016). Our 2018 and 2019 data no longer support this idea. Water clarities in Connecticut's lakes ranged from 0.3 - 10 m with an average of 2.3 m (CAES IAPP 2020). Thus, the water clarities of Candlewood Lake and Squantz Pond are near Connecticut's average.

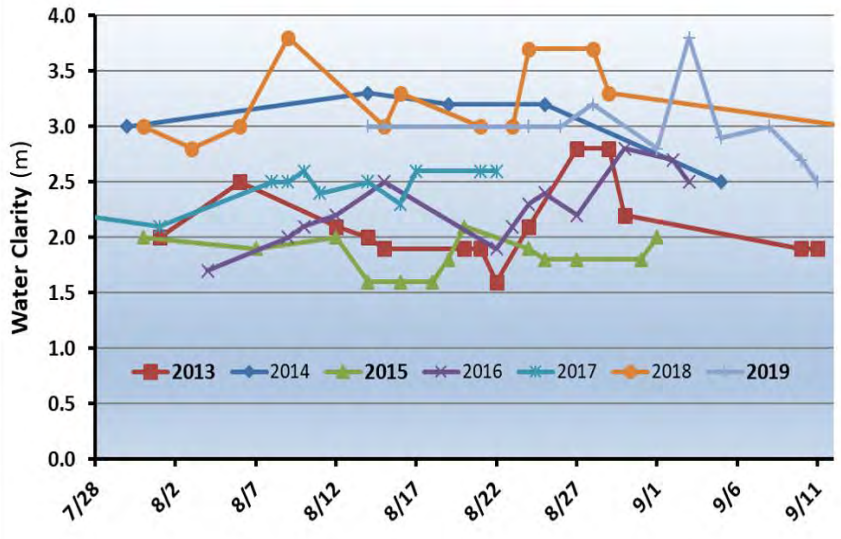


Figure 22. Water transparency in Candlewood Lake during our 2013-2019 CAES IAPP surveys. Deep drawdown years in bold.

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.). The 2018 and 2019 conductivities of Candlewood Lake ranged from 187 - 220 µS/cm with the highest levels in the bottom water (Tables 8 and 9). This is higher than in the early 1990's when the lake's conductivity ranged from 176 - 184 µS/cm (Canavan and Siver 1995). Squantz Pond's 2018 conductivity was 139 µS/cm at the surface and 144 µS/cm at the bottom, and the 2019 conductivity was 123 µS/cm at the surface and 137 µS/cm at the

bottom. A trend toward increasing conductivity from the head waters at Squantz Pond through Candlewood Lake is evident.

The pH of Candlewood Lake ranged from 6.8 – 7.9 in 2018 and 6.9 – 7.7 in 2019 (Tables 8 and 9). Higher surface water pH is consistent with removal of carbon dioxide by algae and aquatic plants during the daytime particularly in bright sun. The pH of Squantz Pond in 2018 was 8.2 at the surface and 6.1 near the bottom and in 2019 it was 8.0 at the surface and 6.6 near the bottom.

Alkalinities in Connecticut's lakes range from near 0 to over 170 mg/L $CaCO_3$ (CAES IAPP 2020, Canavan and Siver 1995, Frink and Norvell 1984). Candlewood Lake's surface alkalinity ranged from 48 - 50 mg/L in 2018 and 47 – 53 mg/L in 2019. The lake's bottom water ranged from 28 – 71 mg/L in 2018 and 54 – 74 mg/L in 2019. The alkalinity of Squantz Pond was 46 mg/L at the surface and 41 mg/L near the bottom in 2018 and 26 mg/L at the surface and 37 mg/L near the bottom in 2019. As with conductivity, alkalinity tended to increase downstream throughout the lake system.

A key parameter used to categorize a lake's trophic state is the concentration of phosphorus (P) in the water column. High levels of P can lead to nuisance or toxic algal blooms (Frink and Norvell 1984, Wetzel 2001). 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 over 50 µg/L are categorized as extremely fertile of hypereutrophic. The P concentration in Candlewood Lake ranged from 9 - 15 µg/L at the surface to 42 - 403 µg/L at the bottom in 2018 and from 14 - 25 µg/L at the surface to 57 - 785 µg/L at the bottom in 2019 (Tables 8 and 9). This partitioning of P between the surface and bottom water is common in the summer as anoxic conditions release P from the sediment (Norvell 1974) and temperature stratification prevents vertical mixing. We found the highest P levels in Candlewood Lake's bottom water at the deepest sites W2 (Map 5, in Appendix) and site W3 (Map 1, in Appendix). Squantz Pond had a surface P of 7 µg/L and a bottom P of 23 µg/L in 2018 and a surface P of 12 µg/L and a bottom P of 322 µg/L in 2019.

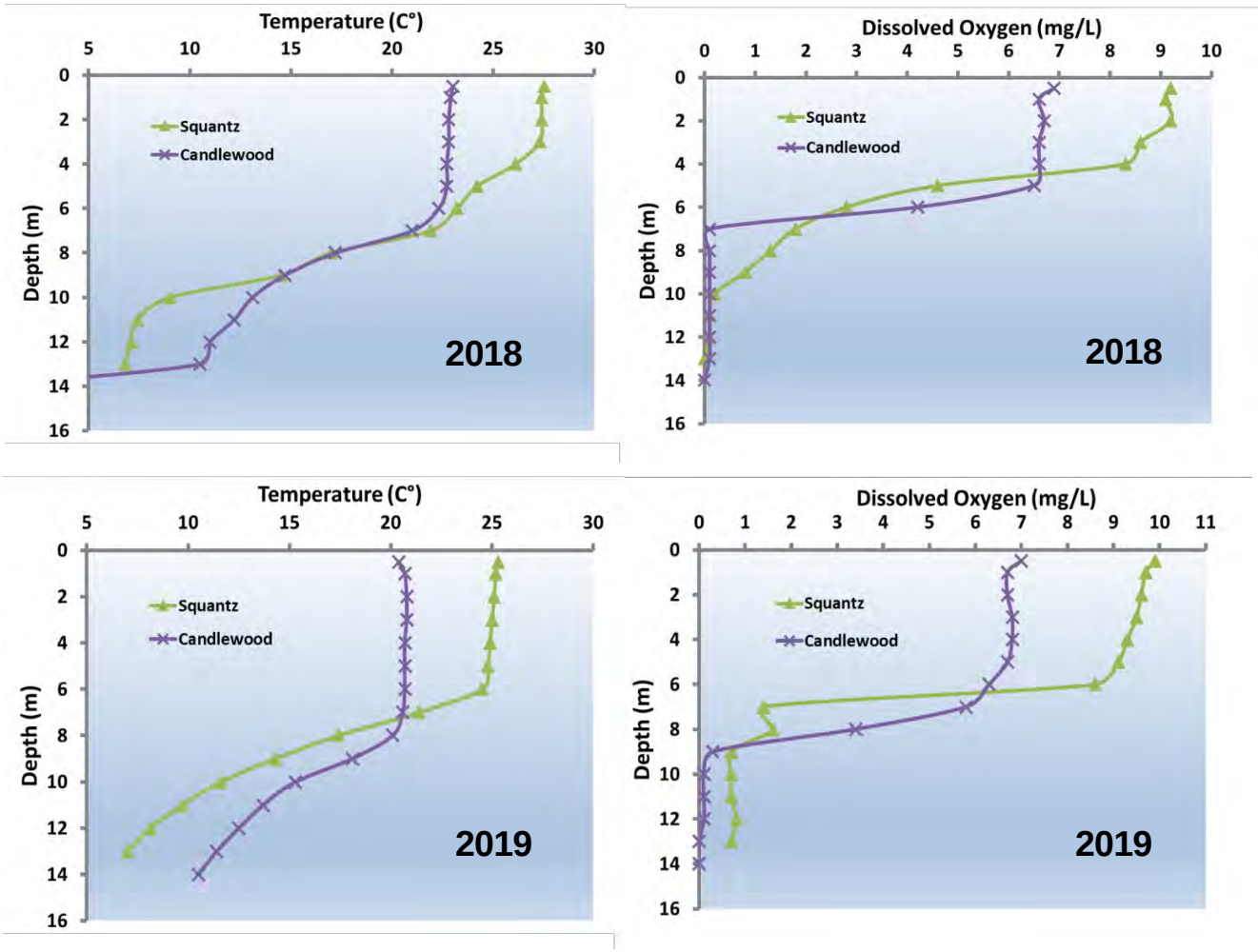


Figure 23. Temperature and dissolved oxygen profiles in lakes Candlewood and Squantz Pond in 2018 and 2019.

Rooted macrophytes are less dependent on P from the water column as they obtain most of their nutrients from the hydrosoil (Bristow and Whitcombe 1971).

The 2018 and 2019 temperature and dissolved oxygen (DO) profiles differed in Candlewood Lake and Squantz Pond likely because the former lake's samples were taken nearly a month after the latter. Candlewood Lake's surface temperature was nearly 5°C warmer than Squantz Pond's. The thermocline began in both lakes at about eight meters in both years when bottom temperatures fell to about 14°C (Figure 23, left). DO profiles also differed between the lakes with surface DO higher in Candlewood Lake by about 2.5 mg/L in both years. Both waterbodies showed similar trends with well oxygenated conditions to a depth of approximately six meters followed by a decline to near zero near the bottom (Figure 23, right). In 2018 Candlewood Lake and Squantz Pond had occasional filamentous algal mats primarily in

Figure 24. Filamentous algae on cove south of the causeway in New Milford in 2018 (left) and mixed with one of the few patches of surface Eurasian watermilfoil in a cove in the northern Sherman arm in 2019 (right).

a few protected coves (Figure 24). In 2019 the algal mats were only in sparsely present in Candlewood Lake. Often the algal mats overlaid Eurasian watermilfoil beds. The mass balance of nutrients between rooted aquatic plants and algae is complex and likely varies throughout the season. When rooted aquatic plants are controlled by drawdown, grass carp, herbicides, etc. nutrients might be released, and algal blooms may be favored.

Conclusions/Executive Summary

This report provides a comprehensive update of the aquatic plant communities in Candlewood Lake and Squantz Pond, with the emphasis on the invasive species. For decades, both lakes have experienced excessive growth of Eurasian watermilfoil and the potential degradation to the ecological, recreational, and financial aspects of the waterbodies. CAES IAPP monitoring since 2005 has provided a consistent assessment on the plant communities to enhance aquatic plant management. Decades of deep and shallow winter drawdowns have been the primary method of plant management. Since 2015, these have been supplemented with grass carp introductions. Because Candlewood Lake and Squantz Pond are attached via a deep-water culvert, drawdowns effect both waterbodies in the same manner while grass carp migration could create differences. Typically, the deep and shallow drawdowns are alternated yearly, however, from 2016 – 2019 only 2019 had a deep drawdown. Eurasian watermilfoil acreage increases after most shallow drawdowns and decreases after deep

drawdowns. The deep drawdown performed in 2019 resulted in a decrease in Eurasian watermilfoil coverage in Candlewood Lake from an all-time high of 515 acres in 2018 to 423 acres in 2019. In Squantz Pond Eurasian watermilfoil acreage dropped from 21 acres in 2018 to 0 acres in 2019. Invasive minor naiad was present at negligible levels in both lakes in 2018 but was not found in Squantz Pond in 2019. Curlyleaf pondweed was not found in either waterbody in 2018 or 2019. Our transect data continues to show a substantial decline in native species from the start of our monitoring. Reductions since the grass carp introductions may be related to the fish, particularly in Squantz Pond. Our results suggest that some of the grass carp introduced into Candlewood Lake may have migrated into Squantz Pond and accentuated the aquatic plant reduction. Reduction in aquatic plant biomass in Candlewood Lake still seems better related to the winter drawdown than grass carp. Similarities in the aquatic vegetation after the 2019 deep drawdown and the 2011 and 2013 deep drawdowns are evident. Grass carp may be reducing vegetation in certain coves more than main body of Candlewood Lake. Future years could see a rapid increase in the grass carp efficacy as has been noted in nearby Taunton Lake and Lake Waubeeka where there is now a concern that excessive vegetation has been removed. Water clarity improved in 2018 and 2019 suggesting current management practices are not resulting in increased harmful algal blooms.

Funding

Funding from the Candlewood Lake Authority supported this work and is deeply appreciated.

Acknowledgments

The assistance of the following individuals throughout the many years of this work is gratefully acknowledged.

Martha Balfour, Invasive Aquatic Plant Program, CAES

Marc Bellaud, Aquatic Control Technologies, Sutton, MA

Sara Benson, Invasive Aquatic Plant Program, CAES

Robert Capers, Invasive Aquatic Plant Program, CAES

Michael Cavadini, Invasive Aquatic Plant Program, CAES

Andrea Ellision, Invasive Aquatic Plant Program, CAES

Jennifer Fanzutti, Invasive Aquatic Plant Program, CAES

Robert Gates, FirstLight Power Resources LLC, New Milford, CT

Robin Gent, Invasive Aquatic Plant Program, CAES

Jordan Gibbons, Invasive Aquatic Plant Program, CAES

Brian Hart, Invasive Aquatic Plant Program, CAES

Adam Hawkes, Invasive Aquatic Plant Program, CAES

Mark Howarth, Candlewood Lake Authority

Mark June-Wells, Invasive Aquatic Plant Program, CAES

Chuck Lee, Bureau of Planning and Standards, CT DEEP

Larry Marsicano, Candlewood Lake Authority

Amanda Massa, Invasive Aquatic Plant Program, CAES

Michael Modica, Invasive Aquatic Plant Program, CAES

Olivia O'Connor, Invasive Aquatic Plant Program, CAES

Julius Pasay, Invasive Aquatic Plant Program, CAES

Deanna Rackie, Invasive Aquatic Plant Program, CAES

Roslyn Reeps, Invasive Aquatic Plant Program, CAES

Phyllis Schear, Candlewood Lake Authority

Jesse Schock, Invasive Aquatic Plant Program, CAES

Mieke Schuyler, Invasive Aquatic Plant Program, CAES

J. Neil Stalter, Candlewood Lake Authority

Robert Stira, FirstLight Power Resources LLC, New Milford, CT

Rachel Soufrine, Invasive Aquatic Plant Program, CAES

Abigail Wiegand, Invasive Aquatic Plant Program, CAES

Brian Wood, FirstLight Power Resources LLC, New Milford, CT

Samantha Wysocki, Invasive Aquatic Plant Program, CAES

References

American Public Health Association. 1995. Standard methods for the examination of water and wastewater. 19th ed. American Public Health Association, 1015 Fifteenth St. NW Washington, DC 2005. 4:108-116.

Barrett SC. 1989. Waterweed Invasions. Scientific American. 261:90-97.

Bristow JM, Whitcombe M. 1971. The role of roots in the nutrition of aquatic vascular plants. Amer. J. Bot. 58:8-13.

Bugbee GJ, Barton ME, Gibbons JA, Stebbins SE. 2018. Connecticut's Invasive Aquatic Plant, Clam, and Mussel Identification Guide 3rd Ed. Conn. Agric. Exp. Sta. Bull. 1056. Retrieved April 20, 2020. https://portal.ct.gov/-/media/CAES/Invasive-Aquatic-Plant-Program/Publications/Plant-Identification/B1056.pdf?la=en.

Bugbee GJ, Fanzutti JM. 2016. Invasive Aquatic Plants, Candlewood Lake, Squantz Pond, Lake Lillinonah, Lake Zoar 2016. Conn. Agric. Exp. Sta. Bull. 1046. Retrieved April 20, 2020. https://portal.ct.gov/-/media/CAES/DOCUMENTS/Publications/Bulletins/B1046pdf.pdf?la=en.

Bugbee GJ, Stebbins SE. 2018. Invasive Aquatic Plants, Candlewood Lake, Squantz Pond, Lake Zoar, Lake Lillinonah 2017. Conn. Agric. Exp. Sta. Bull. Retrieved April 20, 2020. https://portal.ct.gov/-/media/CAES/Invasive-Aquatic-Plant-Program/Publications/Survey-Information/FirstLightBulletin2017Finalpdf.pdf?la=en.

Bugbee GJ. 2011. Invasive aquatic plants in Lakes Candlewood, Lillinonah and Zoar 2010. Conn. Agric. Exp. Sta. Bull. 1034. Retrieved January 30, 2016. http://www.ct.gov/caes/lib/caes/invasive_aquatic_plant_program/pdf_reports/firstlightbulletinfinal2011_3_31.pdf.

Bugbee GJ, Selsky R, Marko M. 2007. Invasive Aquatic Plants, Lakes Candlewood, Lillinonah and Zoar 2007. Conn. Agric. Exp. Sta. Bull. 1017. Retrieved April 20, 2020.

https://portal.ct.gov/-/media/CAES/DOCUMENTS/Publications/Bulletins/b1017pdf.pdf?la=en.

CAES IAPP. 2020. The Connecticut Agricultural Experiment Station Invasive Aquatic Plant Program (CAES IAPP). Retrieved April 20, 2020. http://www.ct.gov/caes-iapp.

Canavan IV RW, Siver PA. 1995. Connecticut Lakes: A study of the chemical and physical properties of fifty-six Connecticut Lakes. Connecticut College Arboretum. New London, CT.

Capers RS, Selsky R, Bugbee GJ, White JC. 2007. Aquatic plant community invisibility and scale-dependent patterns in native and invasive species richness. Ecology. 88(12):3135-3143.

Catling PM, Dobson I. 1985. The biology of Canadian weeds. *Potamogeton crispus L.* Canadian Journal of Plant Science 65:655-668.

Connecticut Aquatic Nuisance Species Working Group. 2006. Connecticut aquatic nuisance species management plan. Retrieved December 17, 2007. http://www.ctiwr.uconn.edu/ProjANS/SubmittedMaterial2005/Material200601/ANS%20Plan%20Final%20Draft121905.pdf

Crow GE, Hellquist CB. 2000a. Aquatic and Wetland Plants of Northeastern North America. Vol. 1. Pteridophytes, Gymnosperms and Angiosperms: Dicotyledons. University of Wisconsin Press, Madison.

Crow GE, Hellquist CB. 2000b. Aquatic and Wetland Plants of Northeastern North America. Vol. 2. Angiosperms: Monocotyledons. University of Wisconsin Press, Madison.

Frink CR, Norvell WA. 1984. Chemical and physical properties of Connecticut lakes. Conn. Agric. Exp. Sta. Bull. 817.

Fishman KJ, Leonard RL, Shah FA. 1998. Economic evaluation of Connecticut lakes with alternative water quality levels. Connecticut Department of Environmental Protection. 79 Elm St. Hartford CT

Jacobs RP, O'Donnell EB. 2002. A fisheries guide to lakes and ponds of Connecticut. Including the Connecticut River and its coves. CT DEP Bull. 35.

June-Wells M, Simpkins T, Coleman MA, Henley W, Jacobs R, Aarrestad P, Buck G, Stevens C, Benson G. 2017. Seventeen years of grass carp: an examination of vegetation management and collateral impacts in Ball Pond, New Fairfield, Connecticut. Lake and Reservoir Management. 33:84-100.

June-Wells MF, Gallagher J, Gibbons JA, Bugbee GJ. 2013. Water chemistry preferences of five nonnative aquatic macrophyte species in Connecticut: A preliminary risk assessment tool. Lake and Reservoir Management. 29:303-316.

Les DH, Mehrhoff LJ. 1999. Introduction of nonindigenous aquatic vascular plants in southern New England: a historical perspective. Biological Invasions 1:281-300.

Norvell WA. 1974. Insolubilization of inorganic phosphorus by anoxic lake sediment. Soil Sci. Soc. Amer. Proc. 38:441-445.

Pimentel D, Lach L, Zuniga R, Morrison D. 2000. Environmental and economic costs of nonindigenous species in the United States. Bioscience 53:53-65.

Pipalova. 2006. A review of grass carp use for aquatic weed control and its impact on water bodies. J. Aquat. Plant Manage. 44:1-12.

Siver PA, Coleman AM, Benson GA, Simpson JT. 1986. The effects of winter drawdown on macrophytes in Lake Candlewood, Connecticut. Lake and Reservoir Management. 2:69-73.

Tarsi M. 2006. Eurasian watermilfoil on Lake Candlewood: Management considerations and possible alternatives to the deep drawdown.

Wetzel RG. 2001. Limnology: Lake and River Ecosystems 3rd ed. Academic Press, San Diego, CA. http://www.academicpress.com.

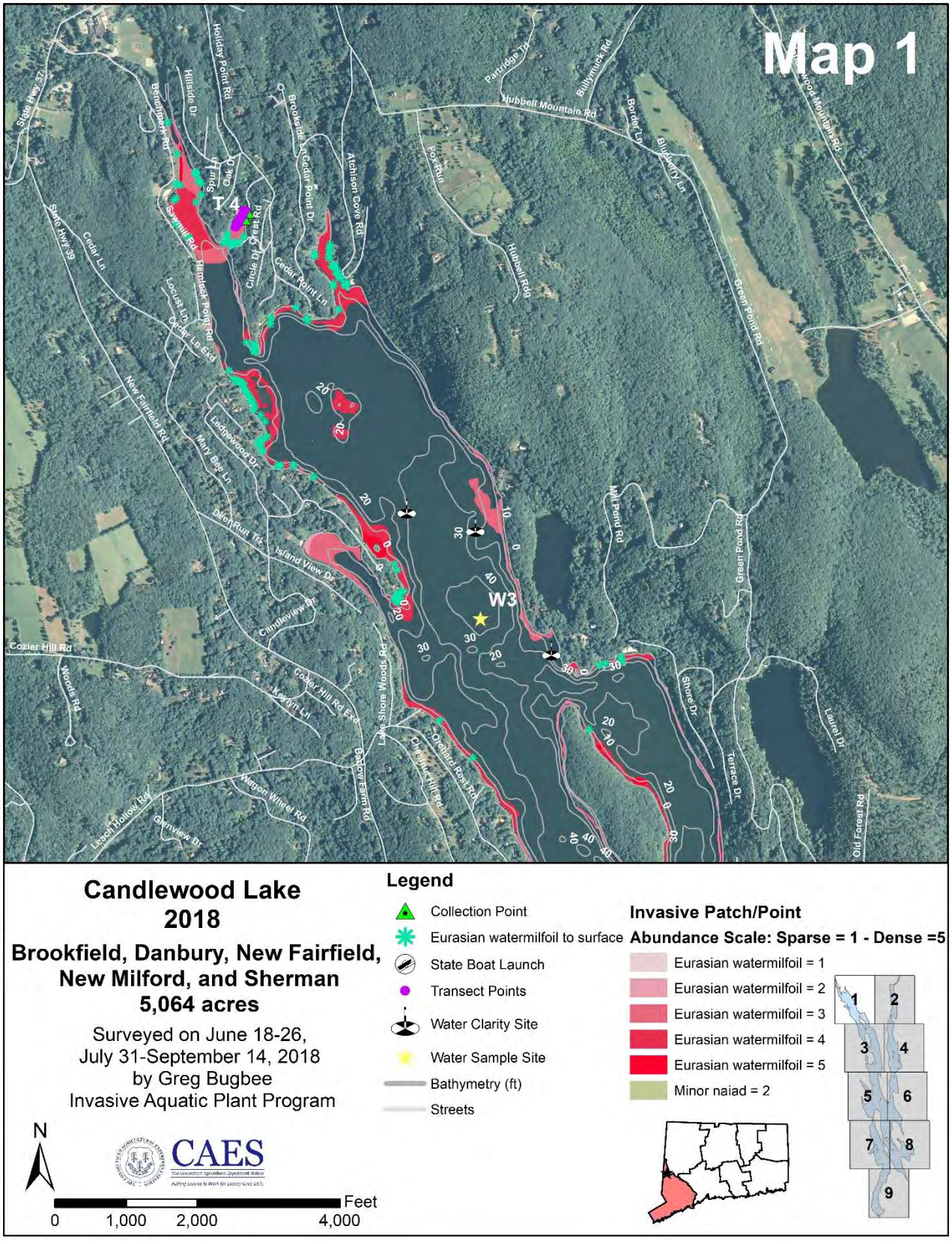
Wilcove DS, Rothstien D, Dubow J, Phillips A, Losos E. 1998. Quantifying threats to imperiled species in the United States. BioScience 48:607-615.

Appendix

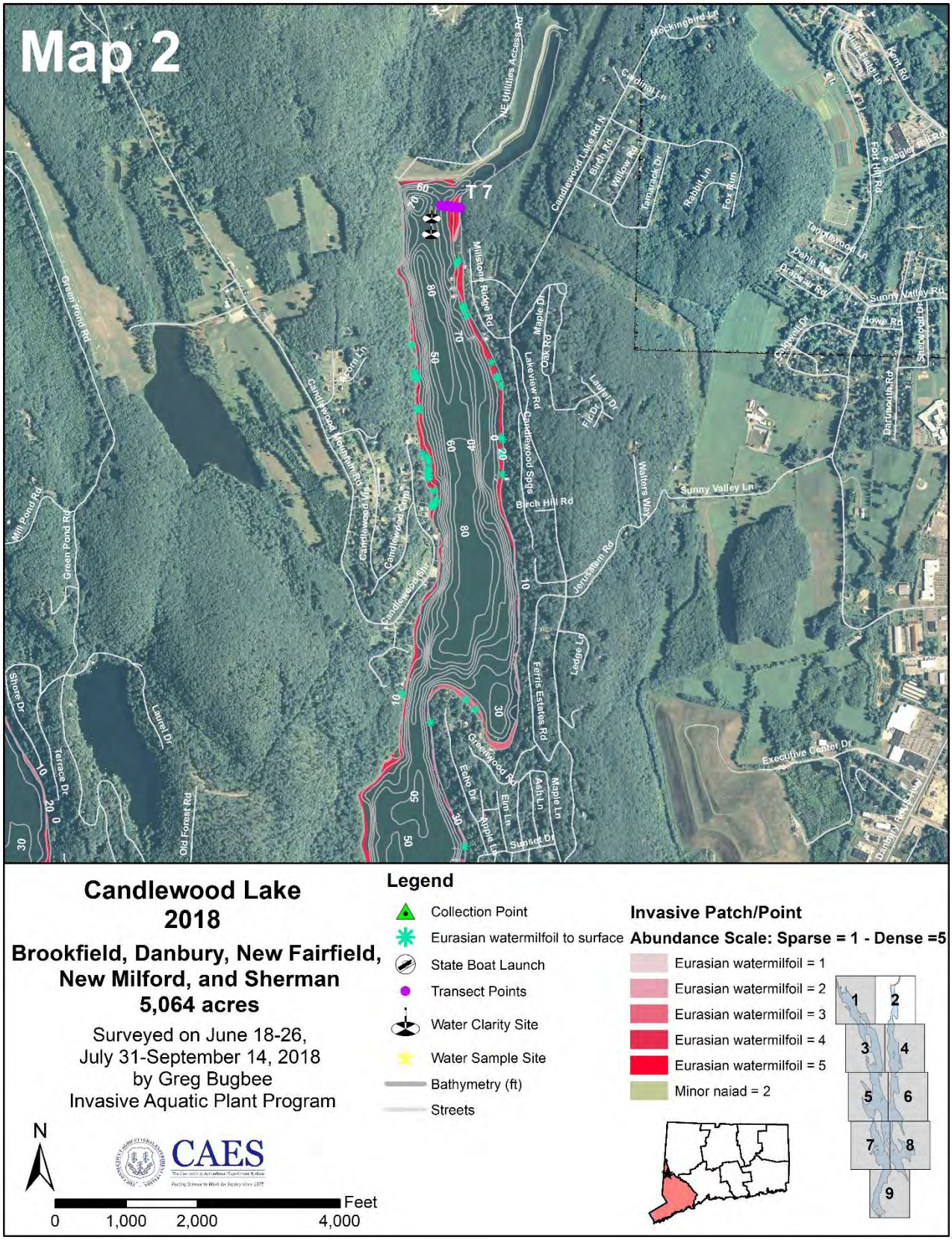
Subset Maps

Candlewood Lake

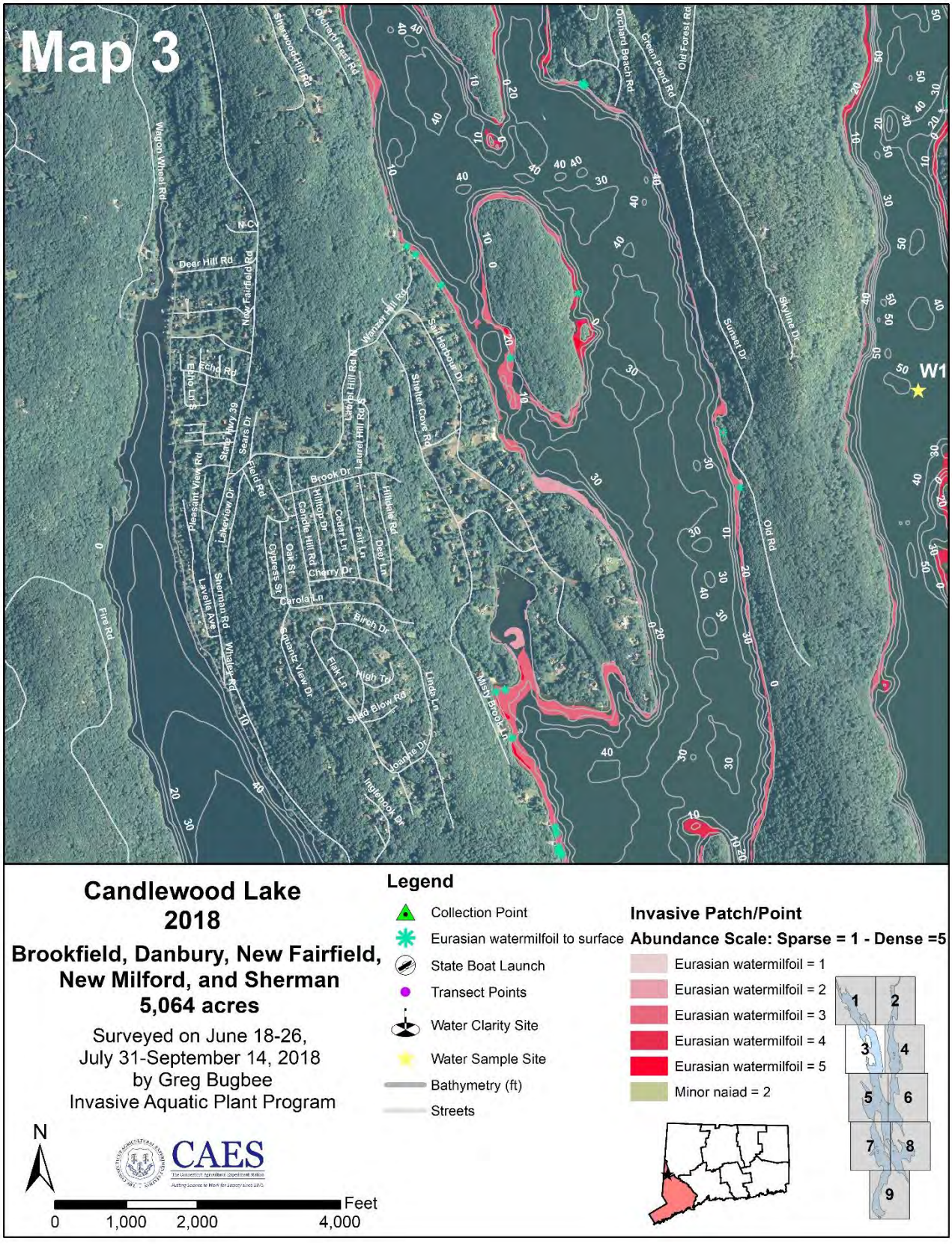
Candlewood Lake 2018



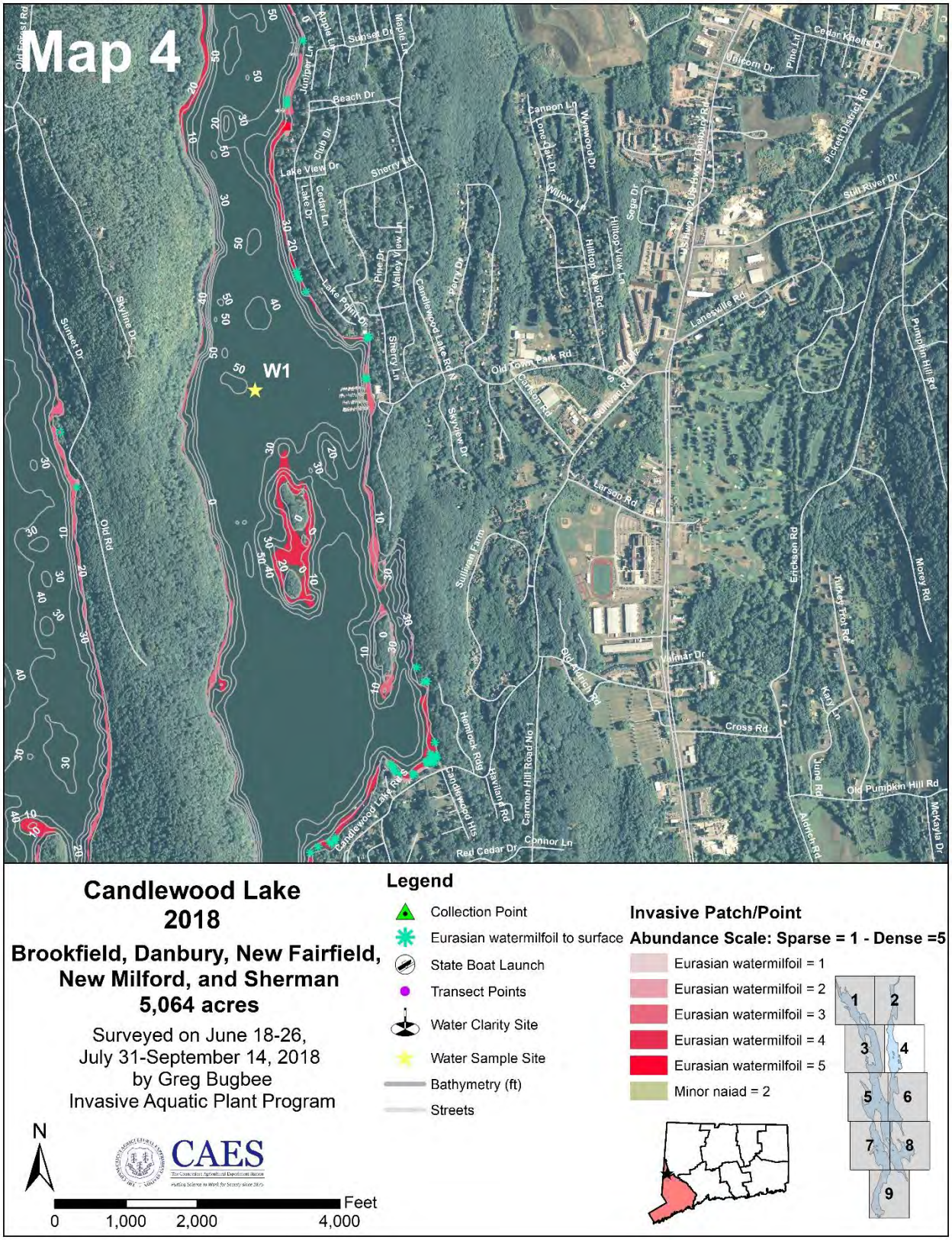
Candlewood Lake 2018



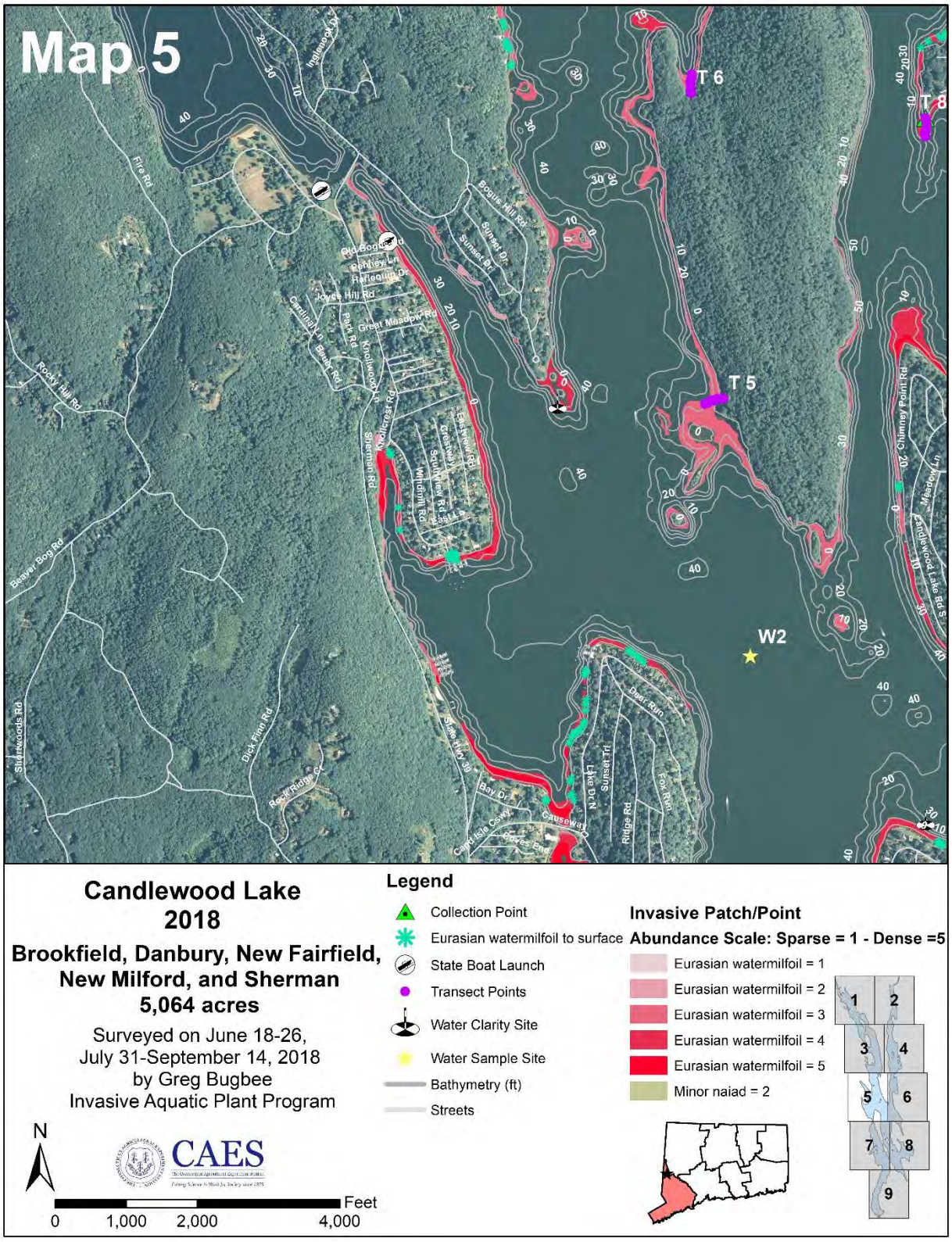
Candlewood Lake 2018



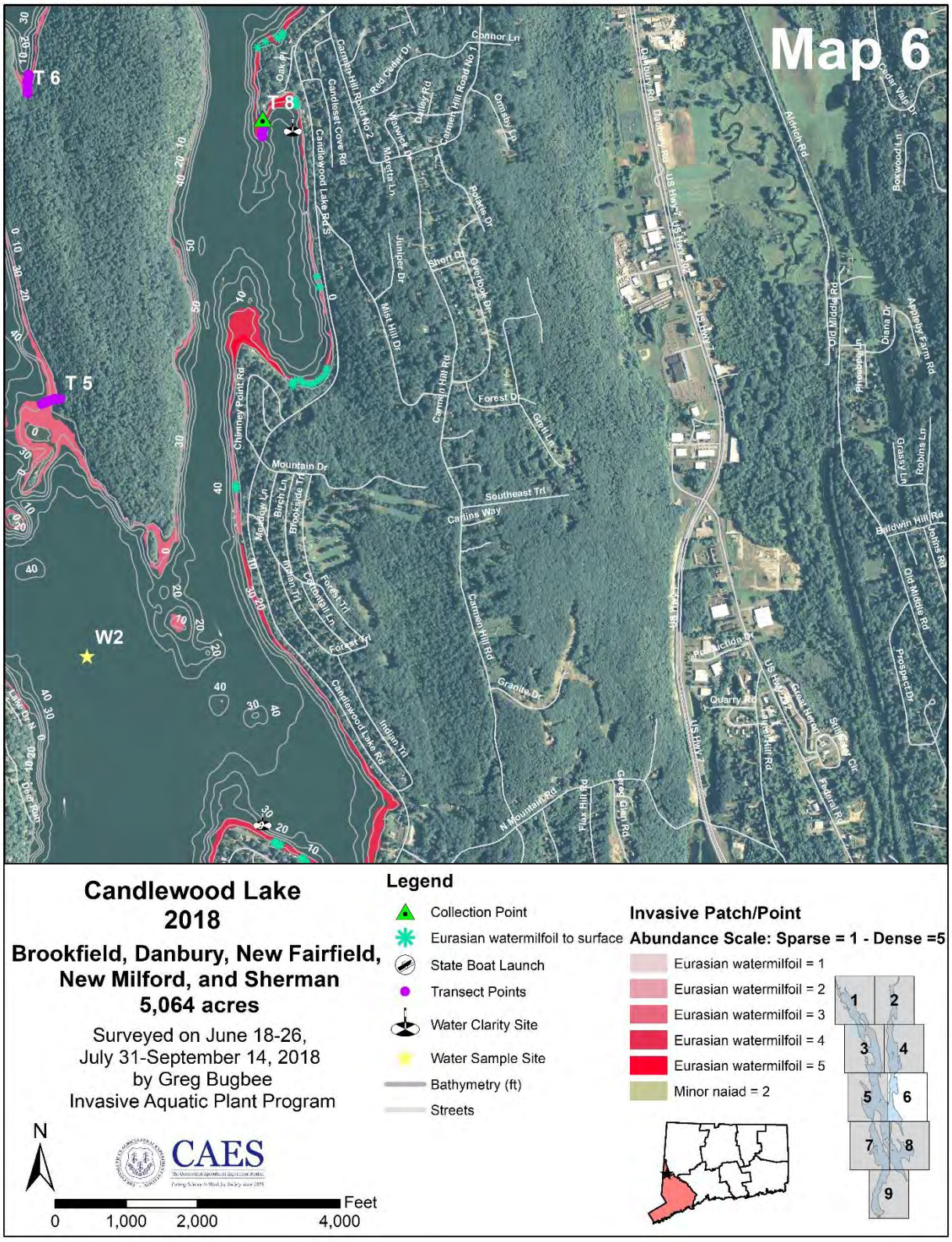
Candlewood Lake 2018



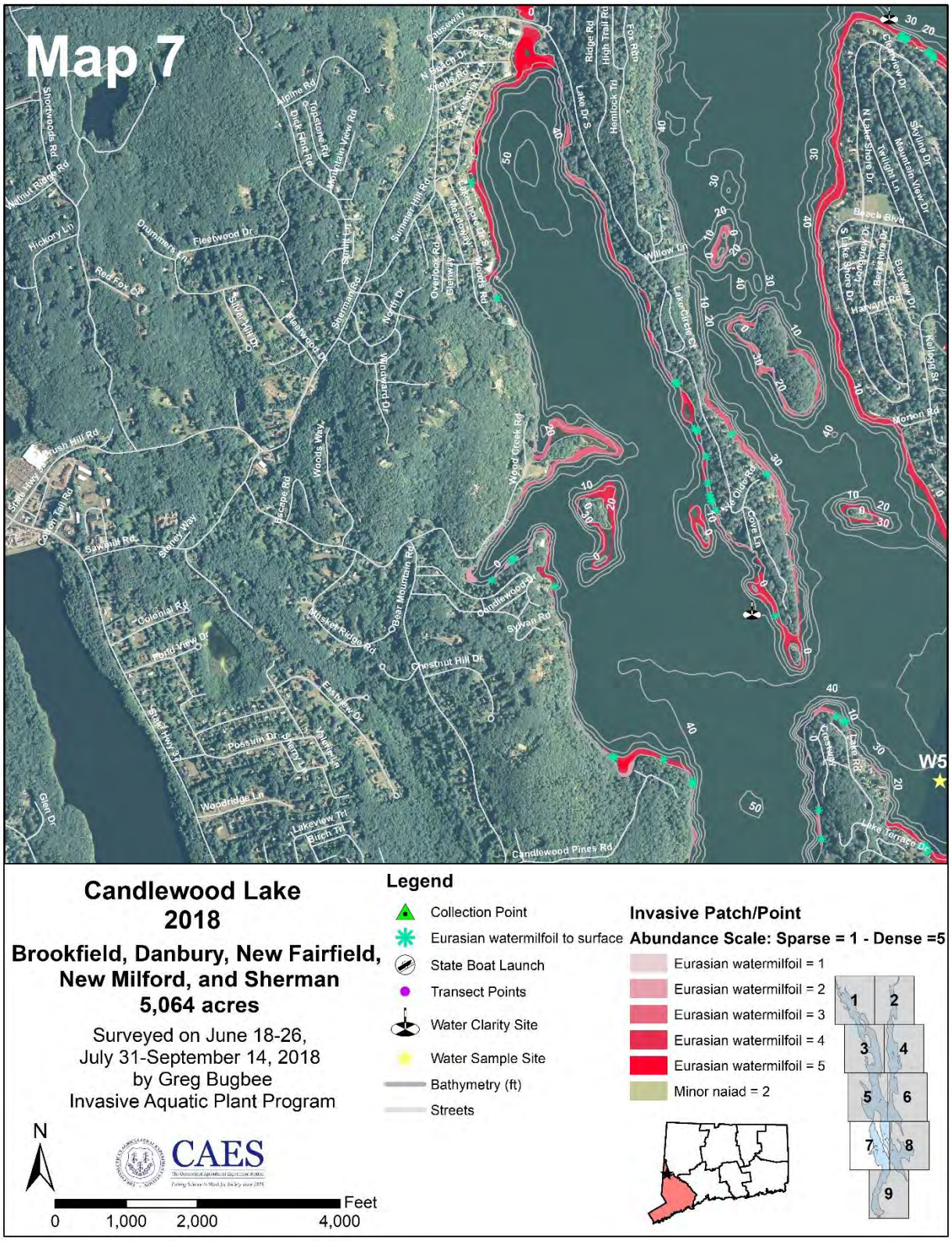
Candlewood Lake 2018



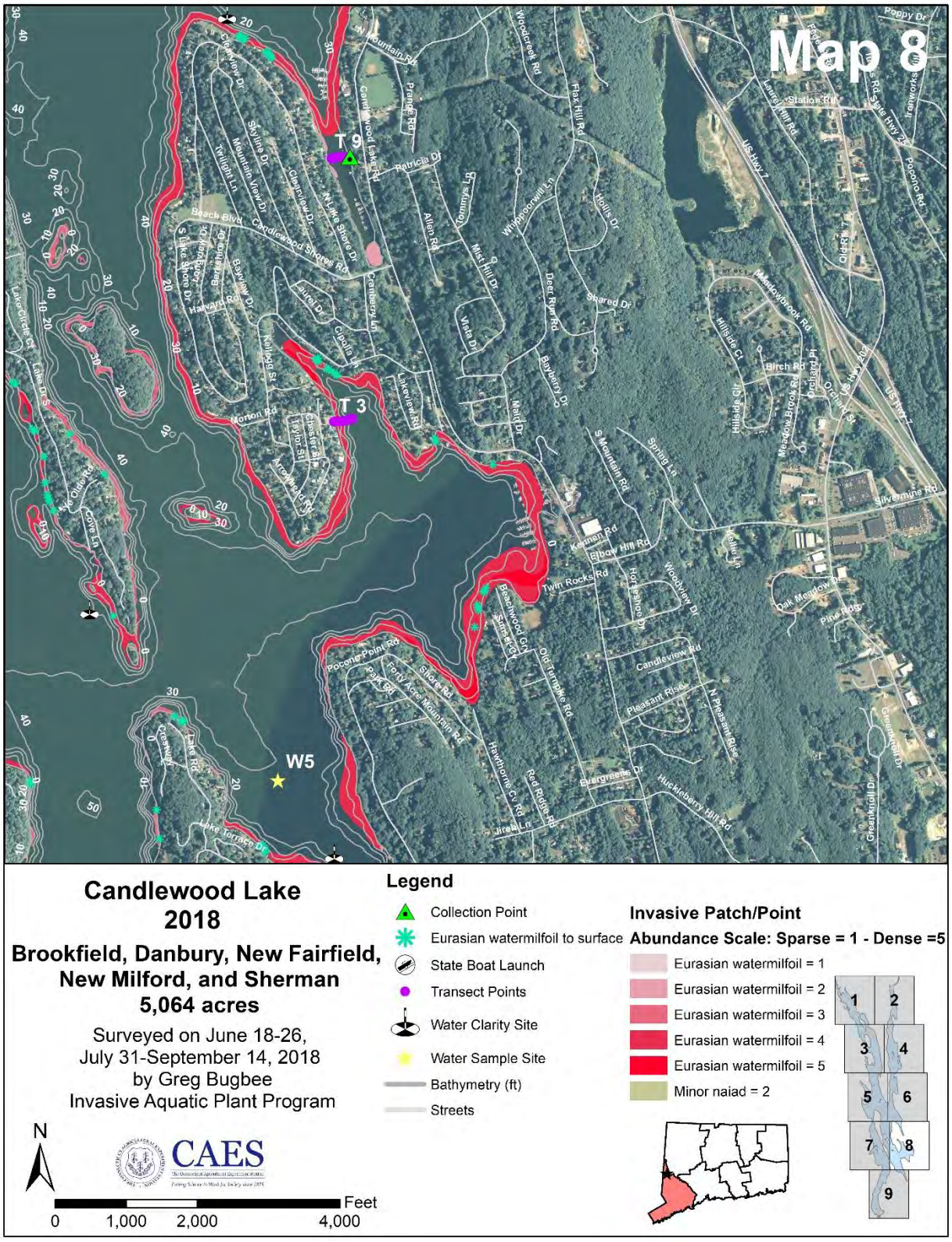
Candlewood Lake 2018



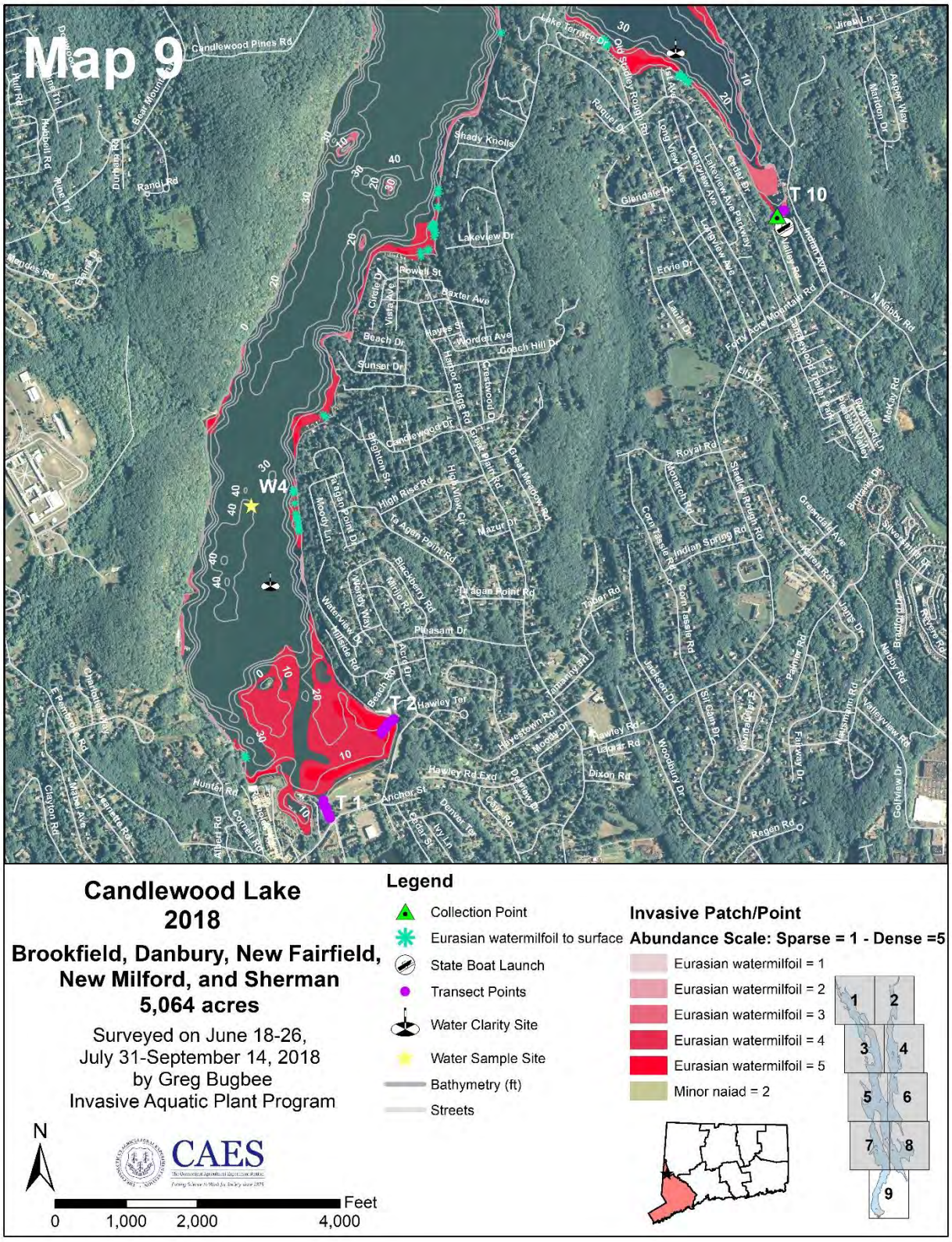
Candlewood Lake 2018



Candlewood Lake 2018



Candlewood Lake 2018



Candlewood Lake 2018

Brookfield, Danbury, New Fairfield, New Milford, and Sherman
5,064 acres

Surveyed on June 18-26,
July 31-September 14, 2018
by Greg Bugbee
Invasive Aquatic Plant Program

CAES

N

0 1,000 2,000 4,000 Feet

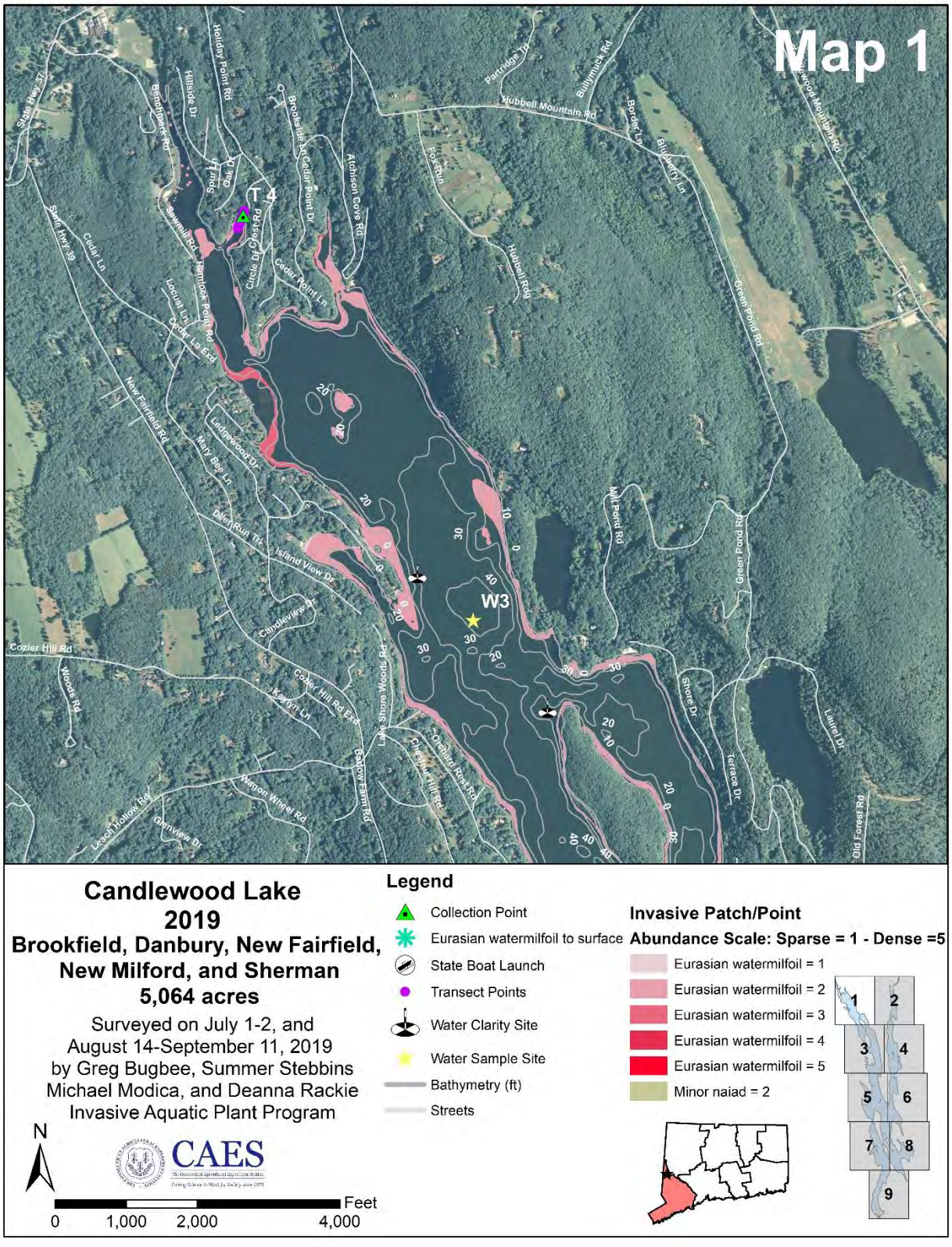
Legend

- Collection Point
- Eurasian watermilfoil to surface
- State Boat Launch
- Transect Points
- Water Clarity Site
- Water Sample Site
- Bathymetry (ft)
- Streets

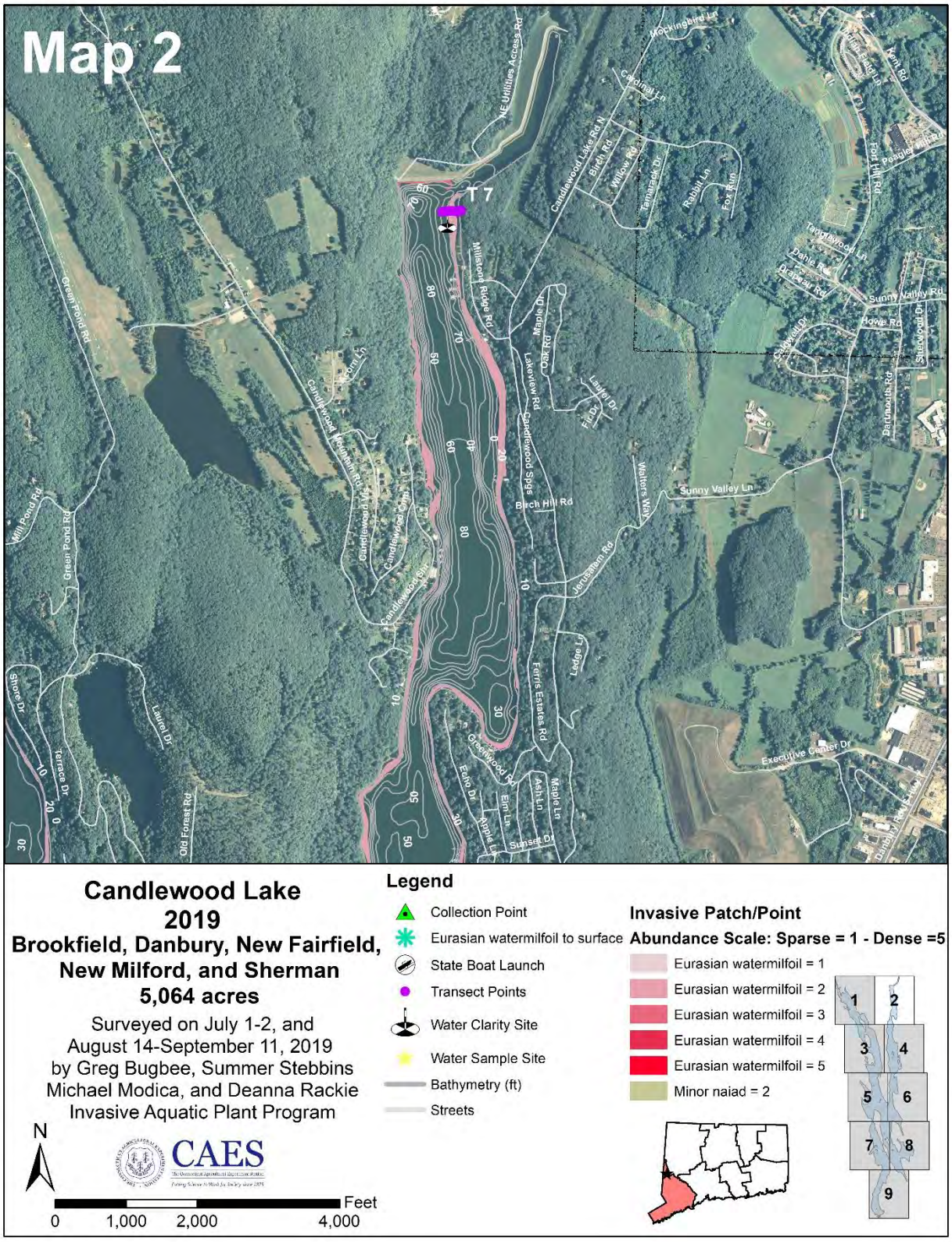
Invasive Patch/Point
Abundance Scale: Sparse = 1 - Dense =5

- Eurasian watermilfoil = 1
- Eurasian watermilfoil = 2
- Eurasian watermilfoil = 3
- Eurasian watermilfoil = 4
- Eurasian watermilfoil = 5
- Minor naiad = 2

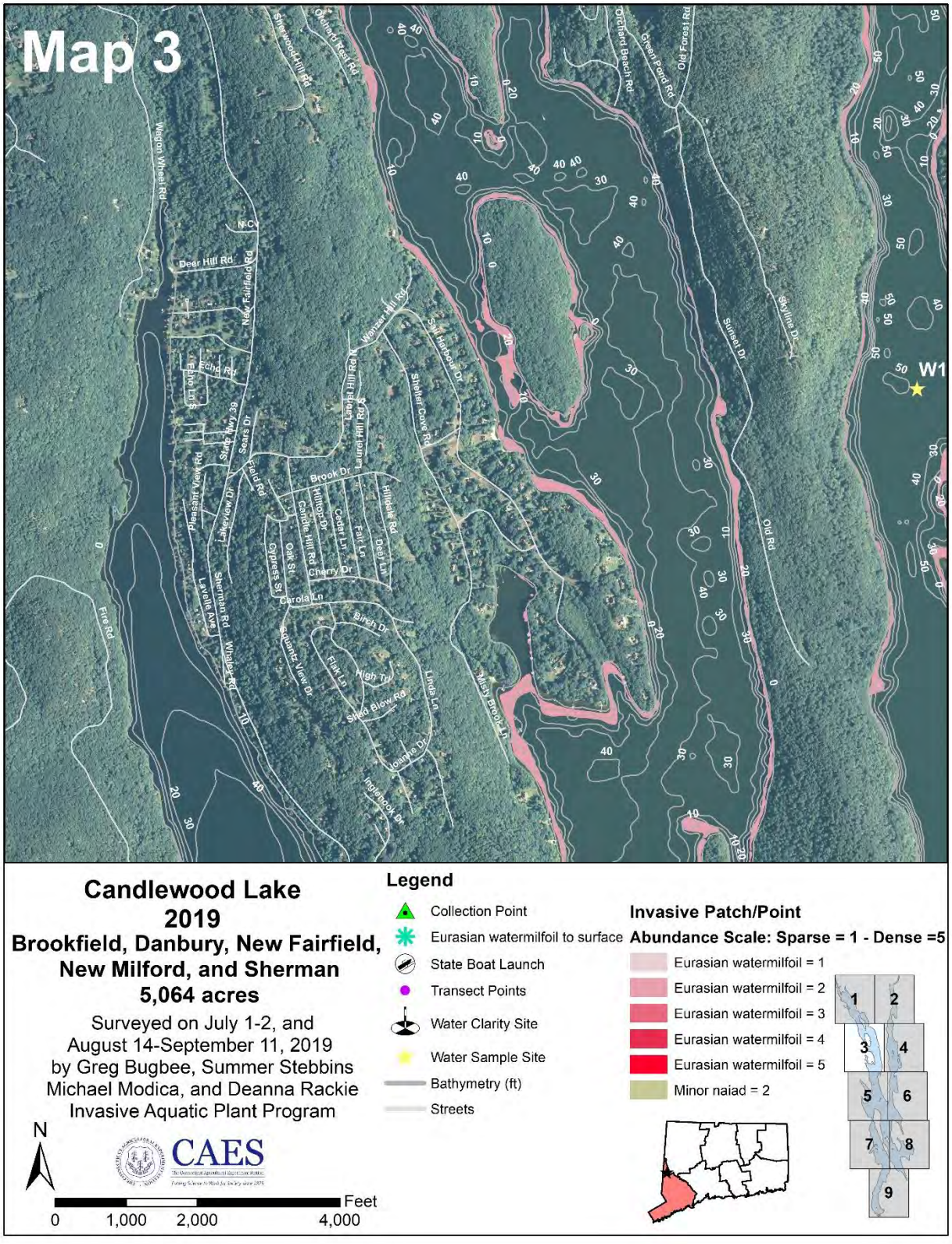
Candlewood Lake 2019



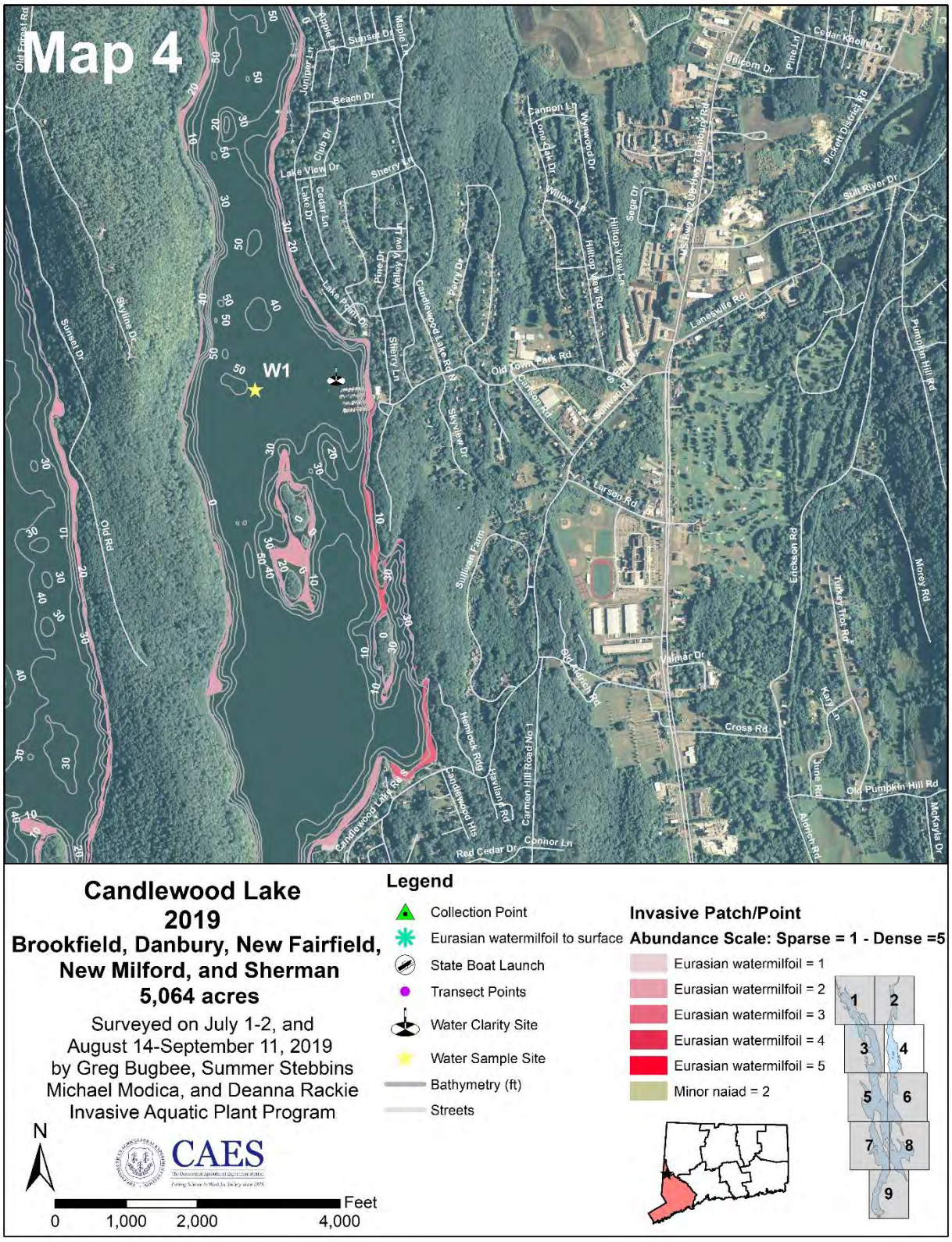
Candlewood Lake 2019



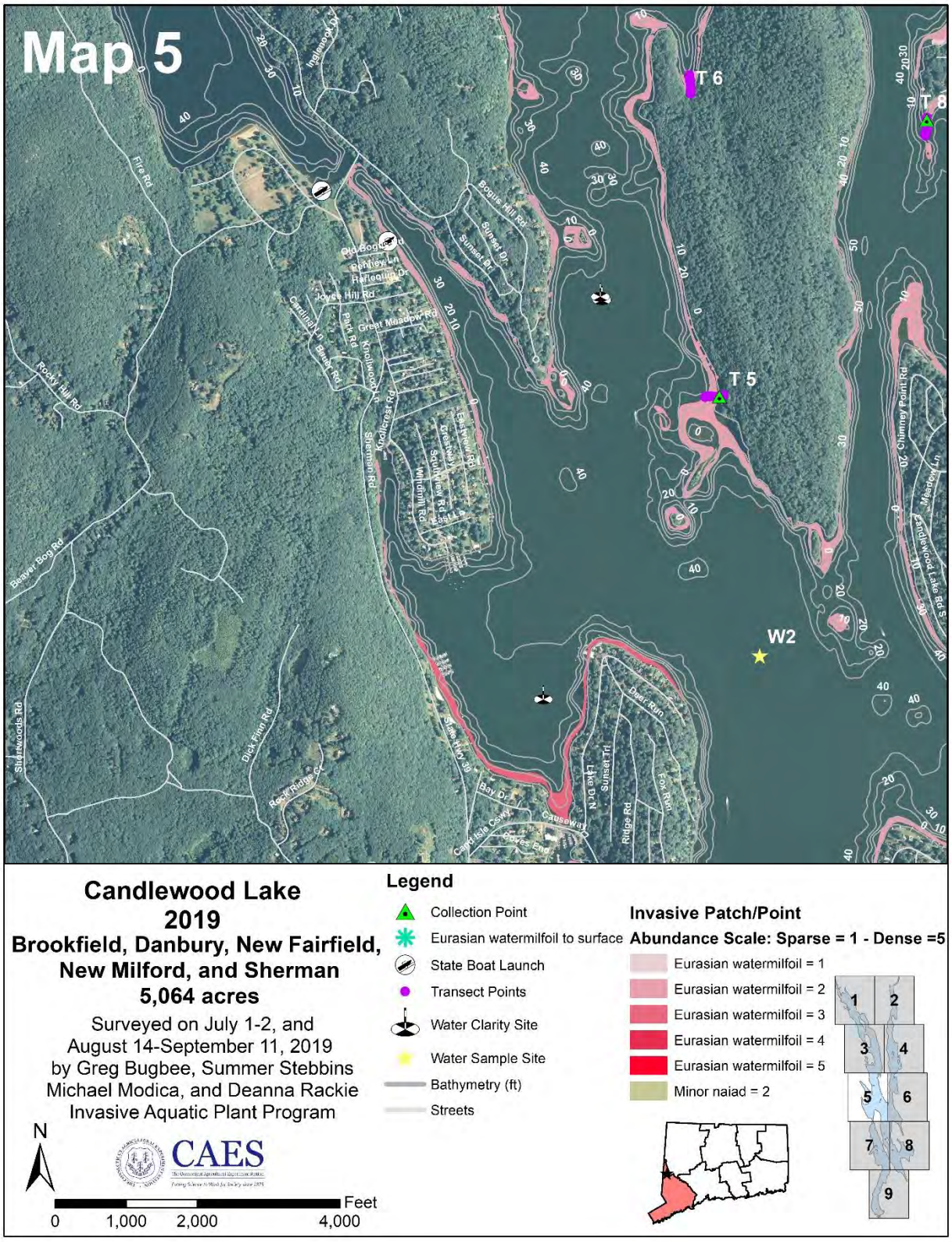
Candlewood Lake 2019



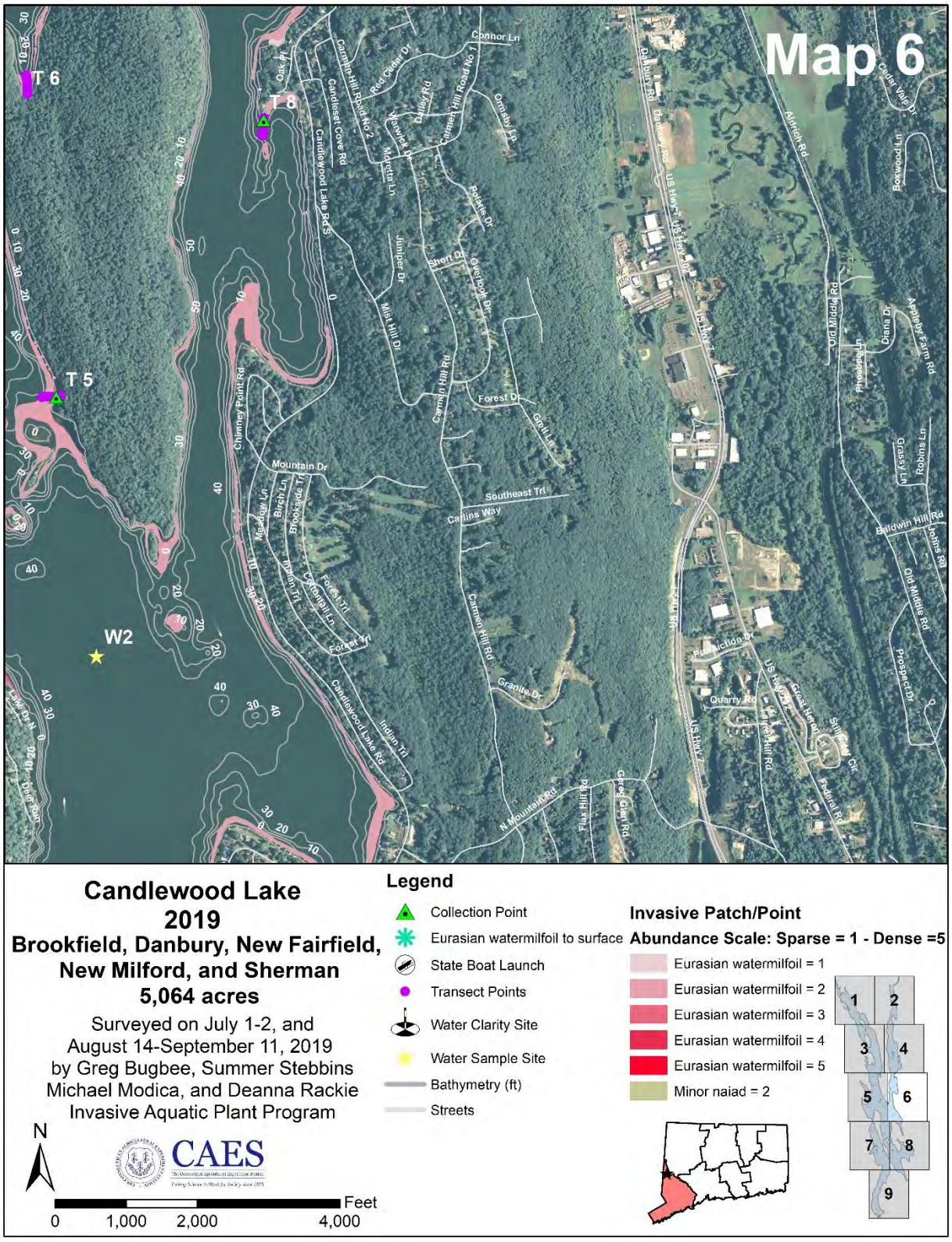
Candlewood Lake 2019



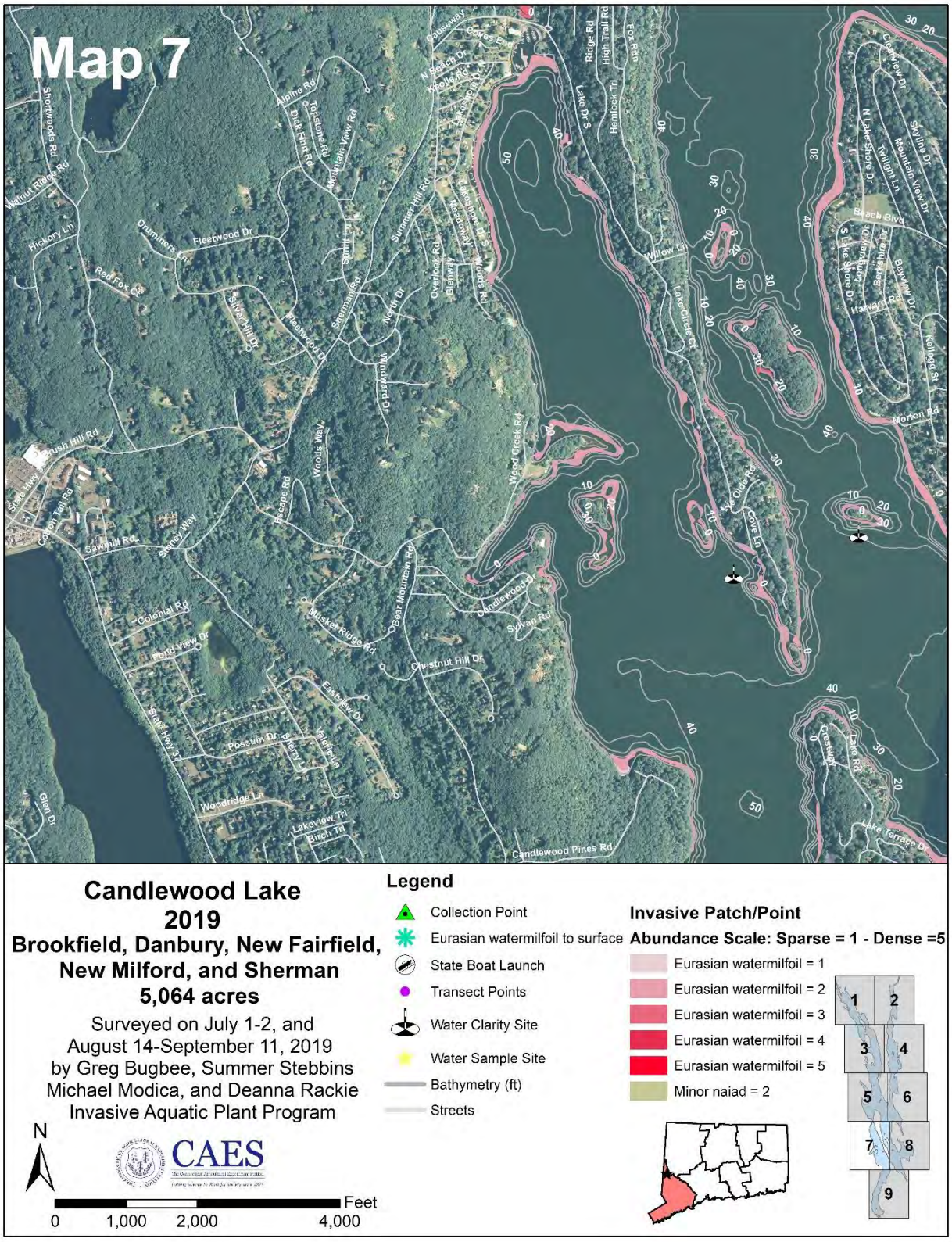
Candlewood Lake 2019



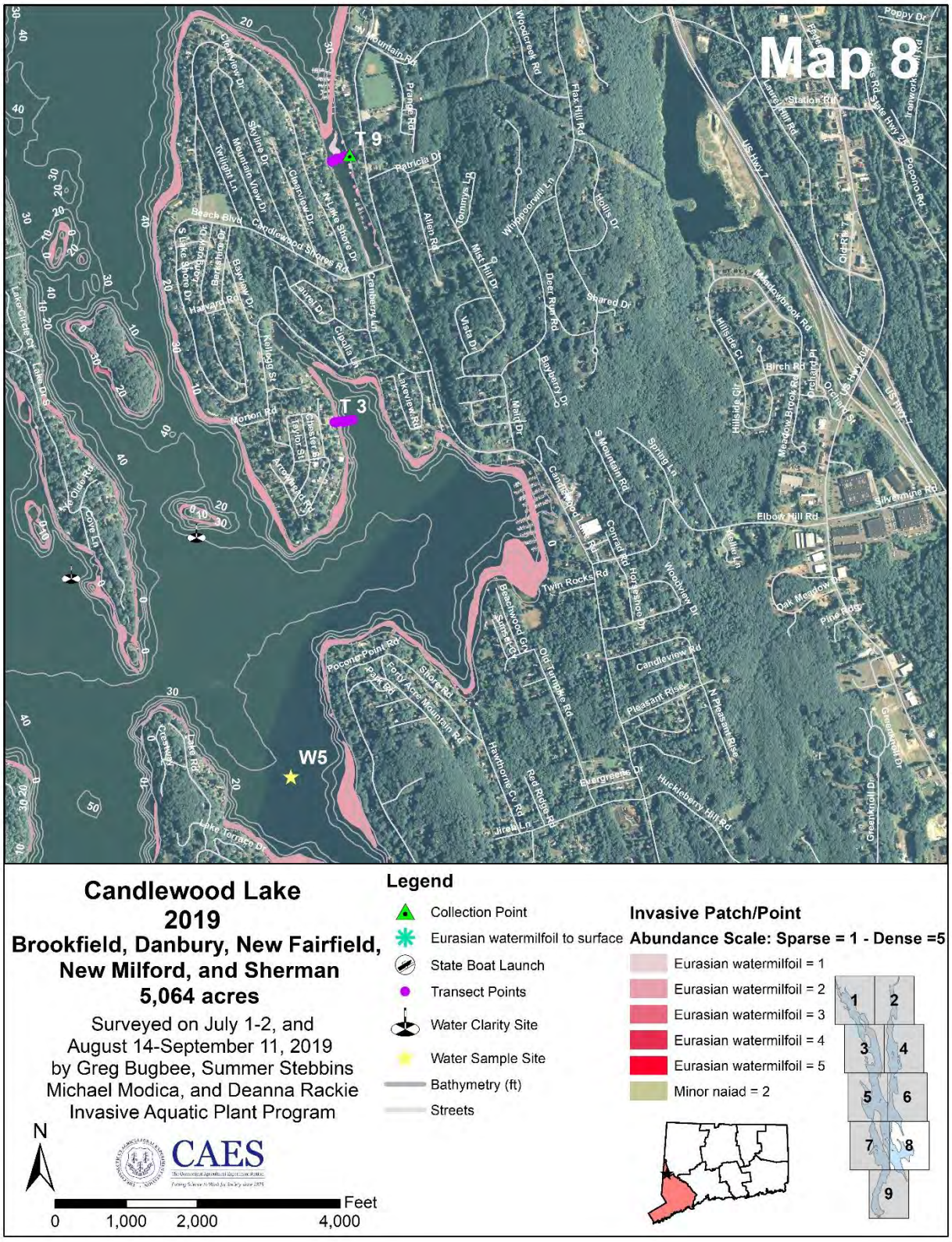
Candlewood Lake 2019



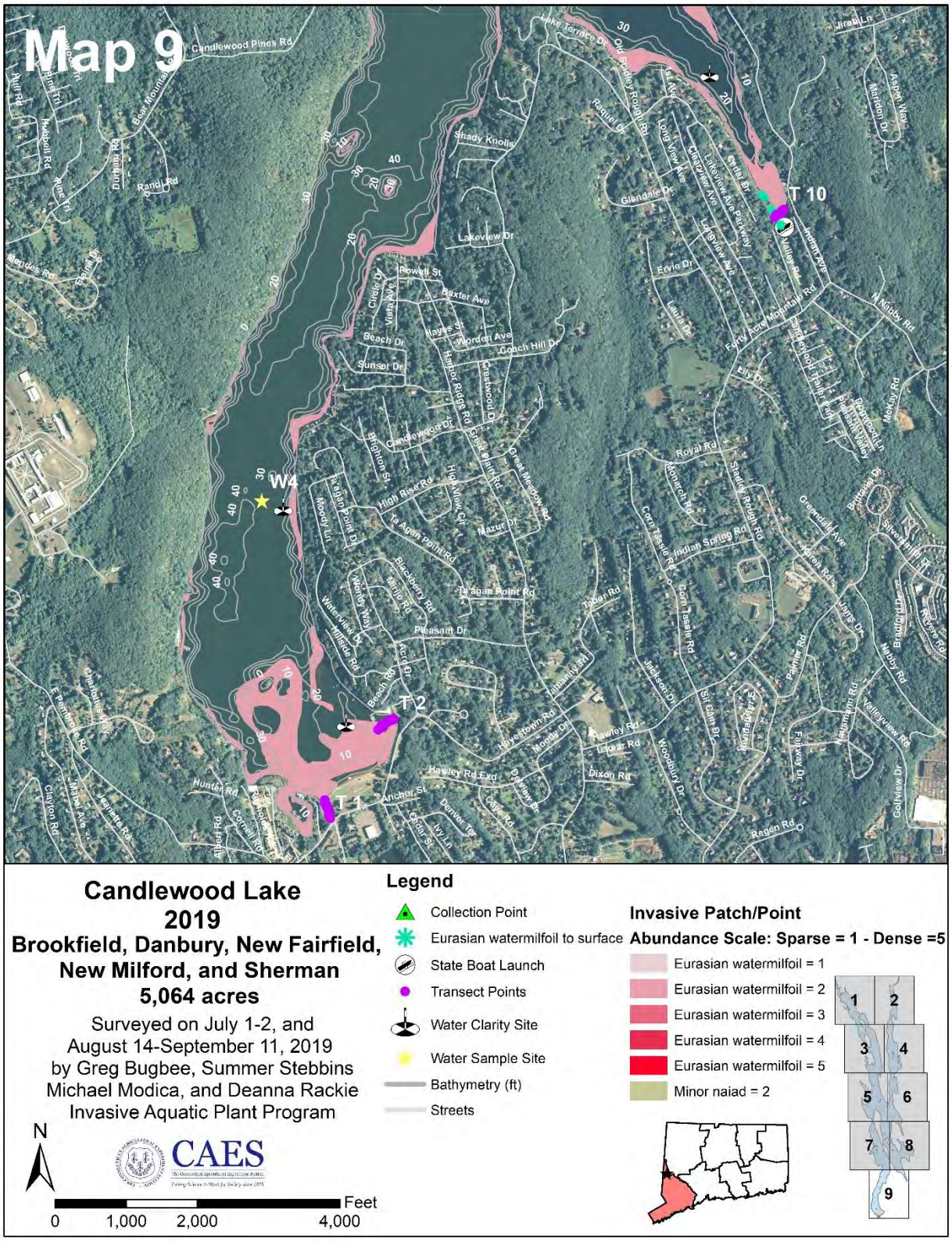
Candlewood Lake 2019



Candlewood Lake 2019



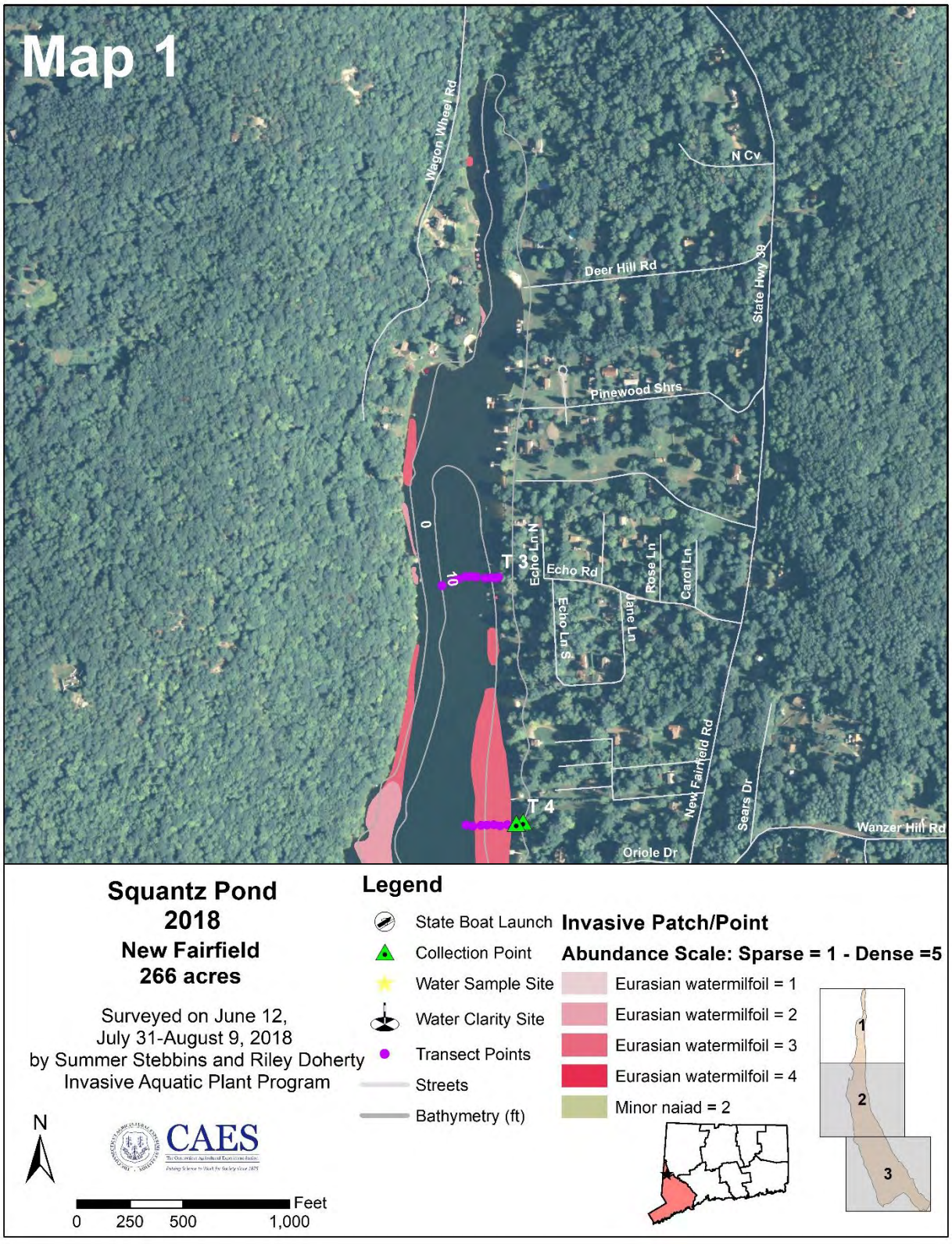
Candlewood Lake 2019



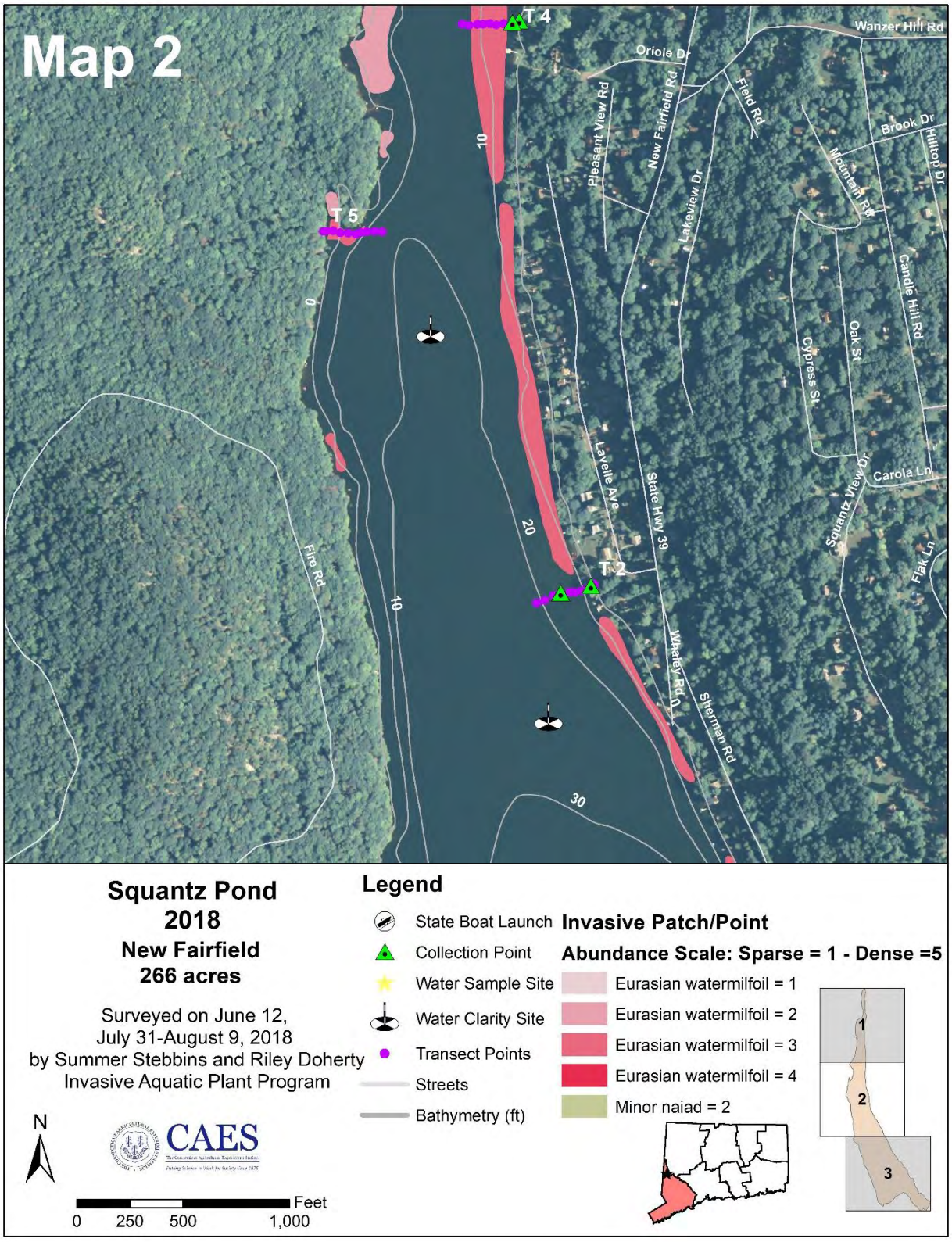
Subset Maps

Squantz Pond

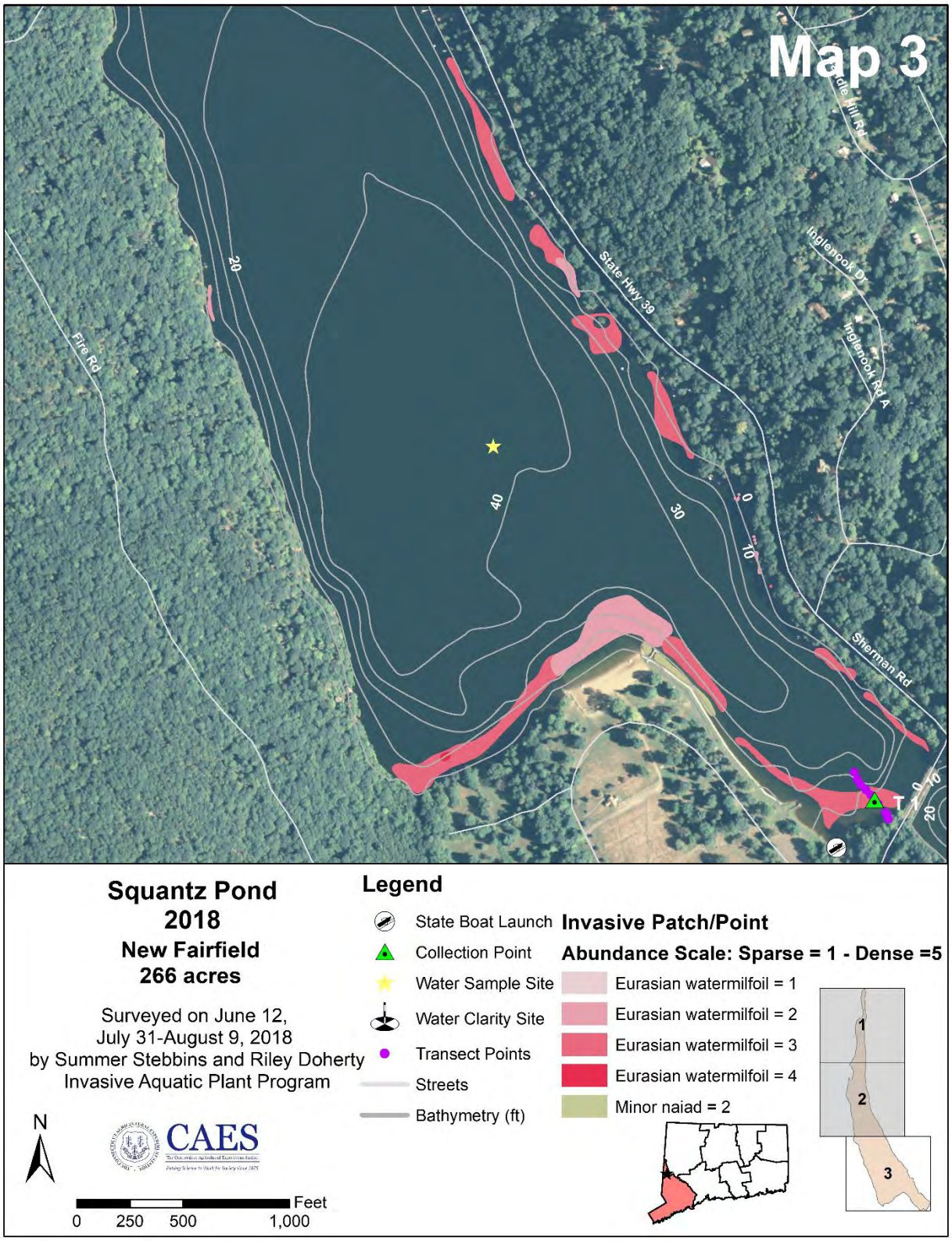
Squantz Pond 2018



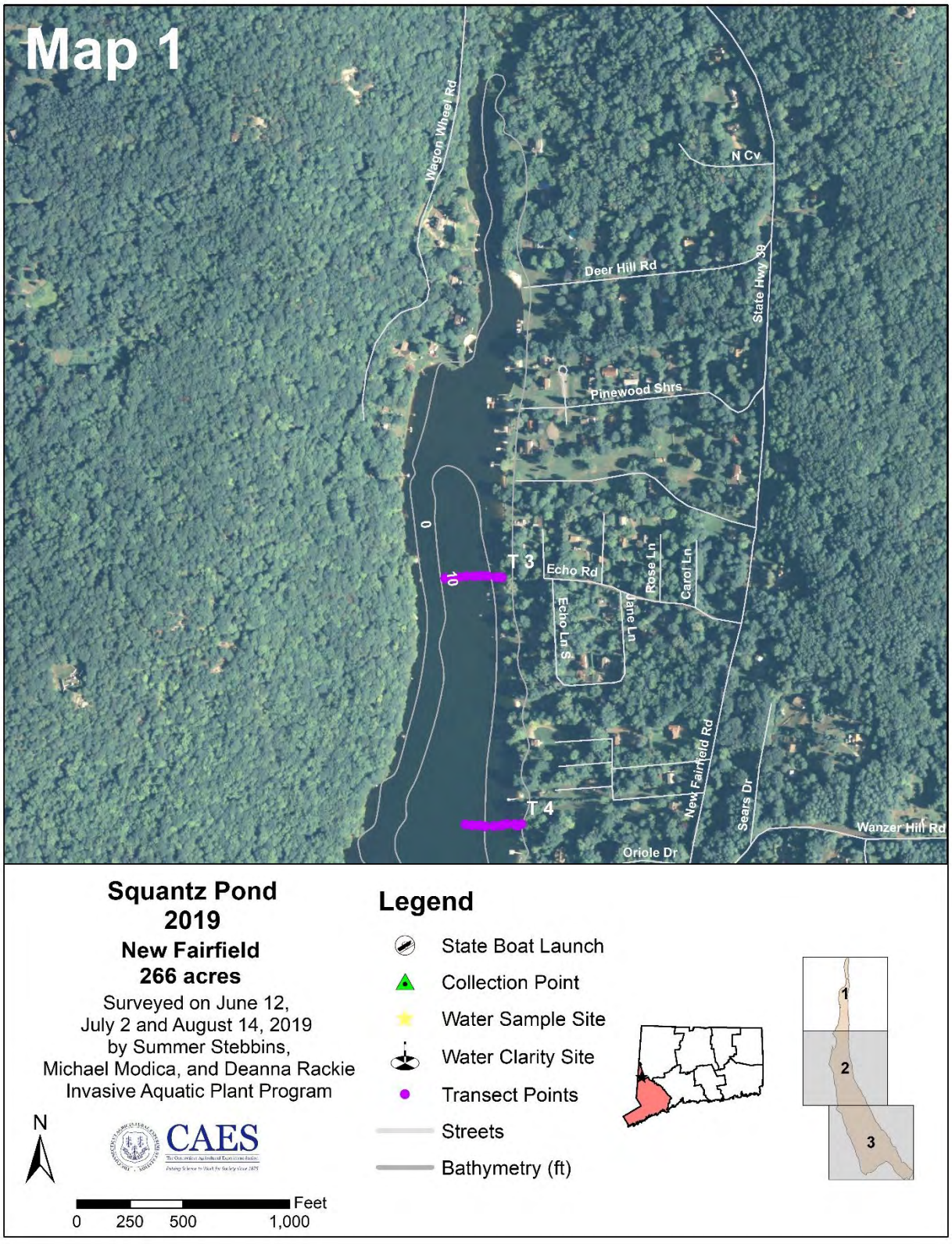
Squantz Pond 2018



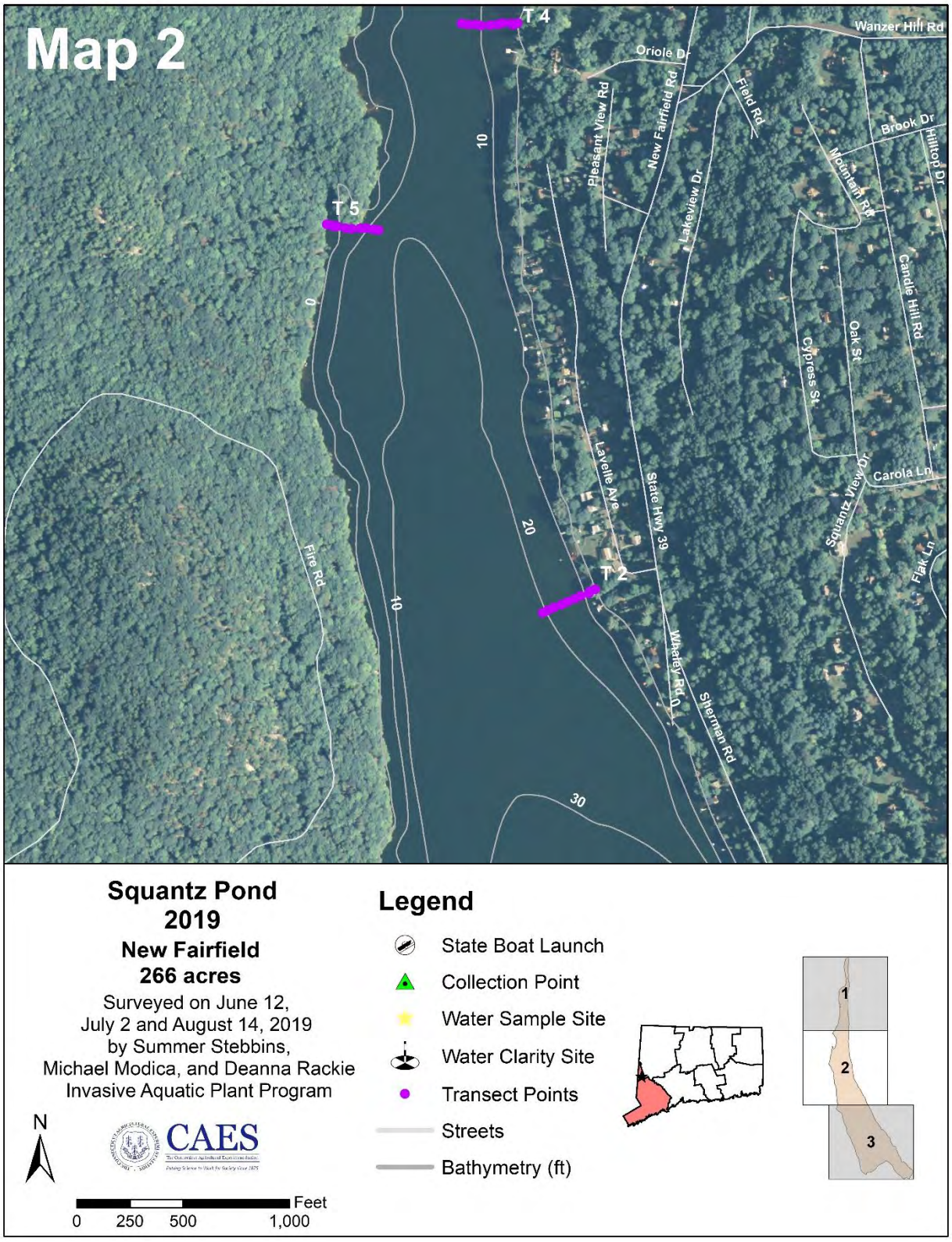
Squantz Pond 2018



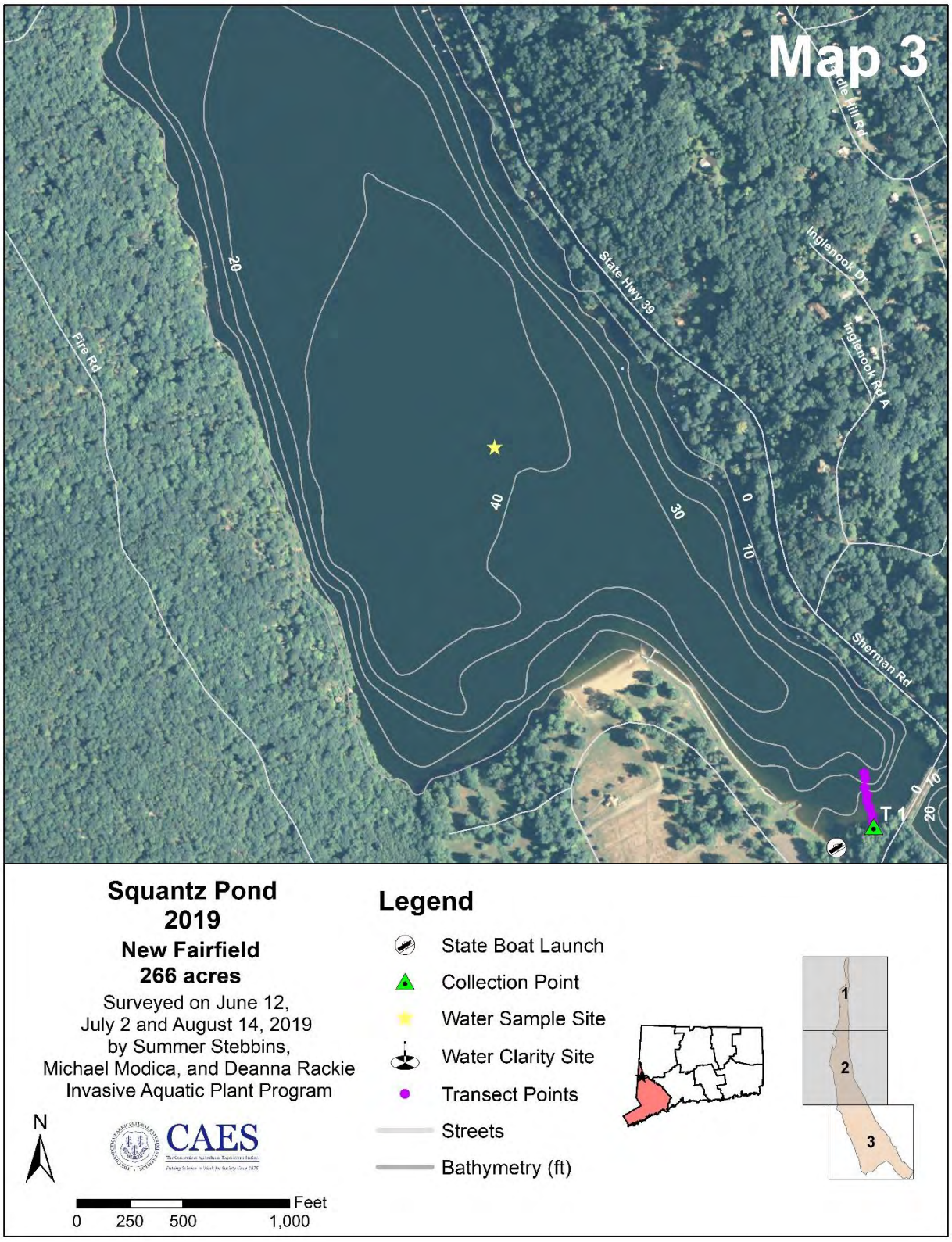
Squantz Pond 2019



Squantz Pond 2019



Squantz Pond 2019



Invasive Plant Descriptions

Myriophyllum spicatum


Photo by CAES IAPP

Common name:
Eurasian watermilfoil

Origin:
Europe and Asia

Key features:
Plants are submersed

Stems: Stem diameter below the inflorescence is greater with reddish stem tips

Leaves: Leaves are rectangular with ≥ 12 pairs of leaflets per leaf and are dissected giving a feathery appearance, arranged in a whorl, whorls are 1 inch (2.5 cm) apart

Flowers: Small pinkish male flowers that occur on reddish spikes, female flowers lack petals and sepals and have 4 lobed pistil

Fruits/Seeds: Fruit are round 0.08-0.12 inches (2-3 mm) and contain 4 seeds

Reproduction: Fragmentation and seeds


Copyright 1991 Univ. of Florida
Center forAquatic and Invasive Plants

Easily confused species:
Variable-leaf watermilfoil: *Myriophyllum heterophyllum*
Low watermilfoil: *Myriophyllum humile*
Northern watermilfoil: *Myriophyllum sibiricum*
Whorled watermilfoil: *Myriophyllum verticillatum*


Photo by
CAES IAPP


Photo by CAES IAPP


Photo by
CAES IAPP

Najas minor

Common names:
Minor naiad
Brittle waternymph
Spiny leaf naiad
Eutrophic waternymph

Origin:
Europe

Key features:
Plants are submersed

Stems: Branched stems can grow up to 4-8 inches (10-20 cm) long

Leaves: Opposite and lance shaped on branched stems with easily visible toothed leaf edges and leaves appear curled under, basal lobes of leaf are also serrated, 0.01-0.02 inches (0.3-0.5 mm)

Flowers: Monoecious (male and female flowers on same plant)

Fruits/Seeds: Fruits are purple-tinged and seeds measure 0.03-0.06 inches (1.5-3 mm)

Reproduction: Seeds and fragmentation

Easily confused species:
Other naiads (native): *Najas* spp.

Potamogeton crispus

Common names:
Curly leaf pondweed
Crispy-leaved pondweed
Crisped pondweed

Origin:
Asia, Africa, and Europe

Key features:
Plants are submersed

Stems: Stems are flattened, can form dense stands in water up to 15 feet (5 m) deep

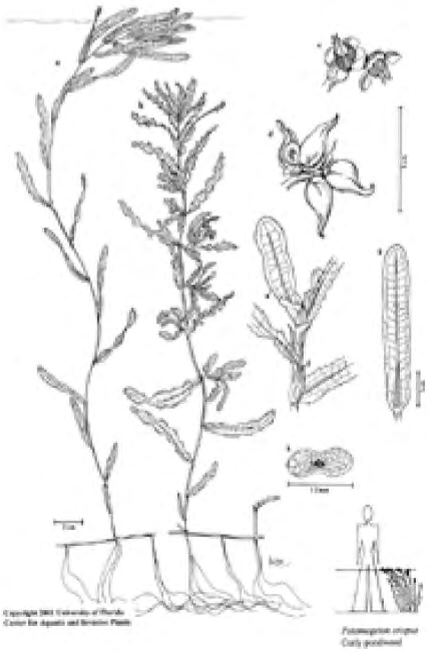
Leaves: Alternate leaves 0.3-1 inches (3-8 cm) wide with wavy edges (similar to lasagna) with a prominent mid-vein

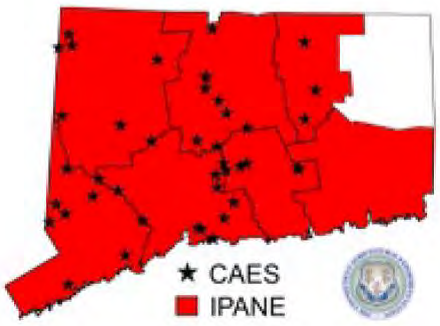
Flowers: Brown and inconspicuous

Fruits/Seeds: Fruit is oval 0.1 inches (3 mm) long

Reproduction: Turions (right) and seeds

Easily confused species:
None





Metadata

Metadata is data about data. This metadata gives background information on the content, quality, condition, legal liability, and other appropriate characteristics of the data.

Metadata

Polygons and Points of Invasive Plants

Abstract This polygon and point data is of the invasive aquatic plant locations in Candlewood Lake and Squantz Pond found during the 2018 and 2019 aquatic plant surveys. The invasive aquatic plants found during the survey were *Najas minor* (minor naiad) and *Myriophyllum spicatum* (Eurasian watermilfoil). Survey boats with Trimble GPS units traveled along the outside of each invasive patch to obtain the polygons. If invasive aquatic plants species co-occurred, two separate polygons would be made, or the occurrence would be noted in the notes field. If plants covered an area of less than 1 meter in diameter a point feature was recorded. Depth was at three different locations in patches and the average depth range was assigned. For points, one depth measurement was recorded. Abundance of each species in the patch or point was ranked on a scale of 1-5 (1 = rare, a single stem; 2 = uncommon, few stems; 3 = common; 4 = abundant; 5 = extremely abundant or present at the surface).

Purpose To document and assess the invasive aquatic plant infestation on Candlewood Lake and Squantz Pond during 2018 and 2019. This data will also be available to compare with future invasive aquatic plant survey data.

Access Constraints This data is public access data and can be freely distributed. The Connecticut Agricultural Experiment Station Invasive Aquatic Plant Program (CAES IAPP) should be clearly cited as the author in any published works. The State of Connecticut shall not be held liable for improper or incorrect use of the data described and/or contained within this web site. These data and related graphics are not legal documents and are not intended to be used as such. The information contained in these data is dynamic and will change over time. The State of Connecticut gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data. It is the responsibility of the data user to use the data appropriately and consistent within these limitations. Although these data have been processed successfully on a computer system at the State of Connecticut, no warranty expressed or implied is made regarding the utility of the data on another system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data and aggregate use with other data.

Use Constraints No restrictions or legal prerequisites for using the data. The data is suitable for use at appropriate scale and is not intended for maps printed at scales greater or more detailed than 1:24,000 scale (1 inch = 2,000 feet). Although this data set has been used by the State of Connecticut, The Connecticut Agricultural Experiment Station, no warranty, expressed or implied, is made by the State of Connecticut, Connecticut Agricultural Experiment Station as to the accuracy of the data and or related materials. The act of distribution shall not constitute any such warranty, and no responsibility is assumed by the State of Connecticut, Connecticut Agricultural Experiment Station in the use of these data or related materials. The user assumes the entire risk related to the

use of these data. Once the data is distributed to the user, modifications made to the data by the user should be noted in the metadata. When printing this data on a map or using it in a software application, analysis, or report, please acknowledge the Connecticut Agricultural Experiment Station Invasive Aquatic Plant Program (CAES IAPP) as the source for this information.

Credit Gregory J. Bugbee and Summer E. Stebbins, The Connecticut Agricultural Experiment Station Invasive Aquatic Plant Program (CAES IAPP)

Accuracy Report All aquatic plants noted in this feature were confirmed in the lab using a dichotomous key and, when possible, molecular techniques. Collection specimens of each plant can be found at The Connecticut Agricultural Experiment Station herbarium. Abundance determinations were made by the surveyor based on the abundance guidelines listed in the abstract of this metadata.

GPS Accuracy Positions were acquired by using a Trimble GeoXT® or Trimble R1 GNSS® with TerraSync 5.02 (WAAS enabled). Data was post-processed in the lab with Pathfinder Office 5.85 with data from local base stations. Therefore, the average accuracy of the data is less than 1m.

Process Position data was obtained in the field using a Trimble GeoXT® or Trimble R1 GNSS® with TerraSync 5.02 (WAAS enabled). Data was post-processed in the lab with Pathfinder Office 5.85 with data from local base stations and then imported into ESRI ArcMap 10.6.1 for display and analysis.

Metadata

Transcects

Abstract Quantitative abundance information on native and invasive aquatic plants were obtained by using the CAES IAPP transect method. We positioned transects perpendicular to the shoreline and recorded GPS location and the abundance of each plant species found within a 2 m² area at 0.5, 5, 10, 20, 30, 40, 50, 60, 70 and 80 m from the shore (a total of 10 samples on each transect unless impaired by rocks, land etc.). Ten transects were established for Candlewood Lake and five transects were established for Squantz Pond. In Candlewood Lake, transects were chosen that included at least one occurrence of each native and invasive plant species found by a more thorough set of transects done by CAES IAPP in 2005. Candlewood Lake transects T2, T22, T25, T57, T52, T58, T62, T74, T86, and T105 from the CAES IAPP 2005 survey were chosen and renamed T1 - T10, respectively. These transects do not represent the overall conditions of Candlewood Lake as the frequency of native species will be over-estimated. We used the same method when selecting transects on Squantz Pond by selecting 5 of the 14 transects established in 2011. Squantz Pond transects, T1, T11, T9, T8, and T5 were chosen and renamed T1 – T5 respectively. We ranked abundance of each species, at each transect point, on a scale of 1–5 (1 = rare, a single stem; 2 = uncommon, few stems; 3 = common; 4 = abundant; 5 = extremely abundant or present at the surface). Depth was measured at each transect point.

Purpose To document and assess the native and invasive aquatic plant community in Candlewood Lake and Squantz Pond during 2018 and 2019. This data will also be available to compare with future aquatic plant survey data.

Access Constraints This data is public access data and can be freely distributed. The Connecticut Agricultural Experiment Station Invasive Aquatic Plant Program (CAES IAPP) should be clearly cited as the author in any published works. The State of Connecticut shall not be held liable for improper or incorrect use of the data described and/or contained within this web site. These data and related graphics are not legal documents and are not intended to be used as such. The information contained in these data is dynamic and will change over time. The State of Connecticut gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data. It is the responsibility of the data user to use the data appropriately and consistent within these limitations. Although these data have been processed successfully on a computer system at the State of Connecticut, no warranty expressed or implied is made regarding the utility of the data on another system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data and aggregate use with other data.

Use Constraints No restrictions or legal prerequisites for using the data. The data is suitable for use at appropriate scale and is not intended for maps printed at scales greater or more detailed than 1:24,000 scale (1 inch = 2,000 feet). Although this data set has been used

by the State of Connecticut, The Connecticut Agricultural Experiment Station, no warranty, expressed or implied, is made by the State of Connecticut, Connecticut Agricultural Experiment Station as to the accuracy of the data and or related materials. The act of distribution shall not constitute any such warranty, and no responsibility is assumed by the State of Connecticut, Connecticut Agricultural Experiment Station in the use of these data or related materials. The user assumes the entire risk related to the use of these data. Once the data is distributed to the user, modifications made to the data by the user should be noted in the metadata. When printing this data on a map or using it in a software application, analysis, or report, please acknowledge the Connecticut Agricultural Experiment Station Invasive Aquatic Plant Program (CAES IAPP) as the source for this information.

Credit Gregory J. Bugbee and Summer E. Stebbins, The Connecticut Agricultural Experiment Station Invasive Aquatic Plant Program (CAES IAPP)

Accuracy Report All aquatic plants noted in this feature were confirmed in the lab using a dichotomous key and, when possible, molecular techniques. Abundance determinations were made by the surveyor based on the abundance guidelines listed in the abstract of this metadata.

GPS Accuracy Positions were acquired by using a Trimble GeoXT® or Trimble R1 GNSS® with TerraSync 2.40 or 5.02 (WAAS enabled). Data was post-processed in the lab with Pathfinder Office 5.85 with data from local base stations. Therefore, the average accuracy of the data is less than 1m.

Process Position data was obtained in the field using a Trimble GeoXT® or Trimble R1 GNSS® with TerraSync 2.40 or 5.02 (WAAS enabled). Data was post-processed in the lab with Pathfinder Office 5.85 with data from local base stations and then imported into ESRI ArcMap 10.6.1 for display and analysis.

Metadata

Water Testing

Abstract Water data is taken by The Connecticut Agricultural Experiment Station Invasive Aquatic Plant Program (CAES IAPP) in order to document and analyze the water conditions of surveyed aquatic plants in Candlewood Lake and Squantz Pond. Five sample locations were chosen in Candlewood Lake and one location in Squantz Pond. At least one sample location is chosen in the deepest part of the lake and the other are spread out to account for diverse conditions. The depth (meters) and Secchi measurement (transparency; meters) are taken at each location, along with dissolved oxygen (mg/L) and temperature (◦C) at 0.5 meters from the surface and one-meter intervals to the bottom. Water samples are also taken at the sample location at 0.5-meter from the surface and near the water-body bottom. Water samples are assessed in the lab for conductivity (µs/cm), pH, alkalinity (expressed as mg/L $CaCO_3$) and phosphorous (µg/L).

Purpose Water data was taken by The Connecticut Agricultural Experiment Station Invasive Aquatic Plant Program (CAES IAPP) in order to document and analyze the water conditions in Candlewood Lake and Squantz Pond and correlate with surveyed aquatic plants.

Access Constraints This data is public access data and can be freely distributed. The Connecticut Agricultural Experiment Station Invasive Aquatic Plant Program (CAES IAPP) should be clearly cited as the author in any published works. The State of Connecticut shall not be held liable for improper or incorrect use of the data described and/or contained within this web site. These data and related graphics are not legal documents and are not for use as such. The information contained in these data is dynamic and will change over time. The State of Connecticut gives no warranty, expressed or implied, as to the accuracy, reliability, or completeness of these data. It is the responsibility of the data user to use the data appropriately and consistent within these limitations. Although these data have been processed successfully on a computer system used by the State of Connecticut, no warranty expressed or implied is made regarding the utility of the data on another system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data and aggregate use with other data.

Use Constraints No restrictions or legal prerequisites for using the data. The data is suitable for use at appropriate scale and is not intended for maps printed at scales greater or more detailed than 1:24,000 scale (1 inch = 2,000 feet). Although this data set has been used by the State of Connecticut, The Connecticut Agricultural Experiment Station, no warranty, expressed or implied, is made by the State of Connecticut, Connecticut Agricultural Experiment Station as to the accuracy of the data and or related materials. The act of distribution shall not constitute any such warranty, and no responsibility is assumed by the State of Connecticut, Connecticut Agricultural Experiment Station in the

use of these data or related materials. The user assumes the entire risk related to the use of these data. Once the data is distributed to the user, modifications made to the data by the user should be noted in the metadata. When printing this data on a map or using it in a software application, analysis, or report, please acknowledge the Connecticut Agricultural Experiment Station Invasive Aquatic Plant Program (CAES IAPP) as the source for this information.

Credit Gregory J. Bugbee and Summer E. Stebbins, The Connecticut Agricultural Experiment Station Invasive Aquatic Plant Program (CAES IAPP)

Accuracy Report Secchi measurements were taken in the field with a Secchi disk with measurement markers (meters), using the same method each time. Dissolved oxygen and temperature were taken in the field with a YSI 58 meter (YSI Incorporated, Yellow Springs, Ohio, USA) that was calibrated every time it was used. Water samples were stored at 3˚ C until analyzed for pH, alkalinity, conductivity, and total phosphorus. Conductivity and pH were measured with a Fisher-Accumet AR20 meter (Fisher Scientific International Incorporated, Hampton, New Hampshire, USA), which was calibrated each time it was used. Alkalinity was quantified by titration and expressed as milligrams of $CaCO_3$ per liter (titrant was 0.08 mol/L H_2SO_4 with an end point of pH 4.5). The total phosphorus analysis was conducted on samples that were acidified with three drops of concentrated H_2SO_4, and consisted of the ascorbic acid method and potassium persulfate digestion outlined by the American Public Health Association (Standard Methods of the Examination of Water and Waste Water, 1995).

GPS Accuracy Positions were acquired by using a Trimble GeoXT® or Trimble R1 GNSS® with TerraSync 2.40 or 5.02 (WAAS enabled). Data was post-processed in the lab with Pathfinder Office 5.85 with data from local base stations. Therefore, the average accuracy of the data is less than 1m.

Process Description Position data was obtained in the field using a Trimble GeoXT® or Trimble R1 GNSS®with TerraSync 2.40 or 5.02 (WAAS enabled). Data was post-processed in the lab with Pathfinder Office 5.85 with data from local base stations and then imported into ESRI ArcMap 10.6.1 for display and analysis.

Invasive Aquatic Plant Location Data

Candlewood Lake 2018

Appendix Candlewood Lake Invasive Plant Location Data 2018 (1 of 10)

FID	Invasive Plant Name	Notes	Type	Date	Latitude	Longitude	Depth (m)	Abundance	Area (acres)
1	MyrSpi		Patch	8/29/2018	41.44763	-73.42980	1-3	1	0.8218
2	MyrSpi		Patch	7/31/2018	41.45817	-73.44502	2-4	2	0.0616
3	MyrSpi		Patch	7/31/2018	41.45730	-73.44476	2-4	2	0.1400
4	MyrSpi		Patch	7/31/2018	41.43328	-73.45402	1-4	2	0.4309
5	MyrSpi		Point	7/31/2018	41.44218	-73.45170	0-1	2	0.0002
6	MyrSpi		Point	7/31/2018	41.44216	-73.45170	0-1	2	0.0002
7	MyrSpi		Point	7/31/2018	41.43885	-73.45293	0-1	2	0.0002
8	MyrSpi		Patch	8/2/2018	41.42420	-73.45280	1-4	2	0.4665
9	MyrSpi		Patch	8/2/2018	41.42727	-73.45823	1-4	2	0.3055
10	MyrSpi		Patch	8/2/2018	41.42805	-73.45901	1-4	2	0.0661
11	MyrSpi		Patch	8/2/2018	41.43446	-73.45915	1-4	2	0.0736
12	MyrSpi		Patch	8/2/2018	41.46526	-73.45910	1-4	2	0.2017
13	MyrSpi		Patch	8/2/2018	41.46461	-73.46015	1-4	2	0.3050
14	MyrSpi		Patch	8/2/2018	41.46411	-73.46218	1-4	2	0.4852
15	MyrSpi		Patch	8/2/2018	41.45669	-73.45401	0-1	2	0.4777
16	MyrSpi		Patch	8/2/2018	41.42781	-73.44999	0-1	2	0.3215
17	MyrSpi		Point	8/2/2018	41.42951	-73.46005	1-3	2	0.0002
18	MyrSpi		Point	8/2/2018	41.43585	-73.45886	1-3	2	0.0002
19	MyrSpi		Point	8/2/2018	41.44580	-73.45460	1-3	2	0.0002
20	MyrSpi		Point	8/2/2018	41.44583	-73.45453	1-3	2	0.0002
21	MyrSpi		Point	8/2/2018	41.45273	-73.45143	1-3	2	0.0002
22	MyrSpi		Point	8/2/2018	41.45334	-73.45091	1-3	2	0.0002
23	MyrSpi		Point	8/2/2018	41.46291	-73.45798	1-3	2	0.0002
24	MyrSpi		Point	8/2/2018	41.46410	-73.46090	1-3	2	0.0002
25	MyrSpi		Patch	8/3/2018	41.46506	-73.46146	1-4	2	0.1351
26	MyrSpi		Patch	8/3/2018	41.46906	-73.45890	1-4	2	0.0862
27	MyrSpi		Patch	8/3/2018	41.47502	-73.46102	1-4	2	0.0838
28	MyrSpi		Patch	8/3/2018	41.48077	-73.45723	0-1	2	0.0172
29	MyrSpi		Patch	8/6/2018	41.49642	-73.44198	0-1	2	0.0055
30	MyrSpi		Patch	8/6/2018	41.47666	-73.43332	0-2	2	1.3119
31	MyrSpi		Patch	8/6/2018	41.47984	-73.43544	0-2	2	0.2202
32	MyrSpi		Patch	8/6/2018	41.48223	-73.43681	0-1	2	1.0050
33	MyrSpi		Point	8/6/2018	41.47307	-73.45072	2-3	2	0.0002
34	MyrSpi		Patch	8/9/2018	41.47216	-73.44675	0-1	2	0.0421
35	MyrSpi		Patch	8/9/2018	41.48611	-73.45909	0-1	2	0.0316
36	MyrSpi		Patch	8/9/2018	41.49324	-73.46740	2-5	2	0.0566
37	MyrSpi		Patch	8/9/2018	41.49361	-73.46771	2-5	2	0.0234
38	MyrSpi		Patch	8/9/2018	41.49402	-73.46801	2-5	2	0.0562
39	MyrSpi		Patch	8/9/2018	41.49480	-73.46855	2-5	2	0.2527
40	MyrSpi		Patch	8/9/2018	41.49623	-73.46887	2-5	2	0.2325
41	MyrSpi		Patch	8/9/2018	41.51030	-73.46928	0-1	2	0.1175
42	MyrSpi		Patch	8/9/2018	41.50676	-73.46476	2-5	2	0.5664
43	MyrSpi		Patch	8/9/2018	41.50529	-73.46319	2-5	2	0.4676
44	MyrSpi		Patch	8/9/2018	41.50998	-73.47055	0-2	2	0.1338
45	MyrSpi		Patch	8/9/2018	41.49706	-73.46795	0-2	2	0.1725
46	MyrSpi		Patch	8/9/2018	41.49793	-73.46921	0-2	2	0.0250
47	MyrSpi		Patch	8/9/2018	41.49994	-73.46928	0-2	2	0.1389
48	MyrSpi		Patch	8/9/2018	41.50037	-73.46919	0-2	2	0.2951
49	MyrSpi		Patch	8/9/2018	41.49897	-73.46821	0-2	2	0.2910

Appendix Candlewood Lake Invasive Plant Location Data 2018 (2 of 10)

FID	Invasive Plant Name	Notes	Type	Date	Latitude	Longitude	Depth (m)	Abundance	Area (acres)
50	MyrSpi		Patch	8/9/2018	41.49593	-73.46553	0-2	2	0.2182
51	MyrSpi		Patch	8/9/2018	41.50710	-73.46796	0-2	2	0.4209
52	MyrSpi		Patch	8/9/2018	41.50892	-73.46941	0-2	2	0.0570
53	MyrSpi		Patch	8/9/2018	41.50921	-73.46955	0-2	2	0.0405
54	MyrSpi		Patch	8/15/2018	41.50482	-73.46053	2-5	2	0.0166
55	MyrSpi		Patch	8/15/2018	41.50558	-73.46053	2-5	2	0.0565
56	MyrSpi		Patch	8/15/2018	41.50602	-73.46050	2-5	2	0.0397
57	MyrSpi		Patch	8/15/2018	41.51293	-73.46259	1-4	2	0.0159
58	MyrSpi		Patch	8/15/2018	41.51356	-73.46250	1-4	2	0.1273
59	MyrSpi		Patch	8/15/2018	41.51414	-73.46266	1-4	2	0.0697
60	MyrSpi		Patch	8/15/2018	41.52380	-73.46506	1-3	2	1.1612
61	MyrSpi		Patch	8/15/2018	41.52381	-73.45836	1-3	2	0.0242
62	MyrSpi		Patch	8/15/2018	41.52869	-73.46182	1-5	2	4.4019
63	MyrSpi		Patch	8/15/2018	41.54291	-73.47259	1-3	2	0.0403
64	MyrSpi		Patch	8/15/2018	41.54177	-73.47227	1-3	2	0.0133
65	MyrSpi		Patch	8/15/2018	41.55391	-73.48011	1-4	2	0.0549
66	MyrSpi		Patch	8/15/2018	41.55750	-73.48179	1-4	2	0.0350
67	MyrSpi	Harvesting	Patch	8/15/2018	41.55706	-73.48138	1-4	2	0.0215
68	MyrSpi	Harvesting	Patch	8/15/2018	41.55669	-73.48037	0-1	2	0.0757
69	MyrSpi		Patch	8/15/2018	41.55848	-73.48482	0-1	2	0.5194
70	MyrSpi		Patch	8/15/2018	41.52002	-73.46529	0-1	2	0.0139
71	MyrSpi		Patch	8/15/2018	41.52106	-73.46591	0-1	2	0.1293
72	MyrSpi		Patch	8/15/2018	41.52325	-73.46533	0-1	2	0.2177
73	MyrSpi		Patch	8/15/2018	41.52378	-73.46614	0-1	2	0.1356
74	MyrSpi		Patch	8/15/2018	41.52547	-73.46602	0-1	2	0.0774
75	MyrSpi		Patch	8/15/2018	41.52468	-73.46457	0-1	2	0.1066
76	MyrSpi		Patch	8/15/2018	41.52197	-73.46398	0-1	2	0.2200
77	MyrSpi		Patch	8/15/2018	41.52277	-73.46041	0-1	2	0.1232
78	MyrSpi		Patch	8/15/2018	41.52227	-73.45948	0-1	2	0.0529
79	MyrSpi		Point	8/15/2018	41.52245	-73.45808	2-4	2	0.0002
80	MyrSpi		Point	8/15/2018	41.52328	-73.45824	2-4	2	0.0002
81	MyrSpi		Point	8/15/2018	41.53994	-73.47142	2-4	2	0.0002
82	MyrSpi		Point	8/15/2018	41.53985	-73.47139	2-4	2	0.0002
83	MyrSpi		Point	8/15/2018	41.54017	-73.47163	2-4	2	0.0002
84	MyrSpi		Point	8/15/2018	41.54022	-73.47167	2-4	2	0.0002
85	MyrSpi		Patch	8/16/2018	41.53118	-73.45417	0-1	2	0.0131
86	MyrSpi		Patch	8/16/2018	41.55340	-73.46692	1-4	2	0.1698
87	MyrSpi		Patch	8/16/2018	41.55428	-73.46736	0-1	2	0.0269
88	MyrSpi		Point	8/16/2018	41.49745	-73.44805	2-3	2	0.0002
89	MyrSpi		Point	8/16/2018	41.52990	-73.45360	0-1	2	0.0002
90	MyrSpi		Point	8/16/2018	41.52986	-73.45360	0-1	2	0.0002
91	MyrSpi		Point	8/16/2018	41.52985	-73.45359	0-1	2	0.0002
92	MyrSpi		Point	8/16/2018	41.52983	-73.45358	0-1	2	0.0002
93	MyrSpi		Point	8/16/2018	41.52980	-73.45357	0-1	2	0.0002
94	MyrSpi		Point	8/16/2018	41.55296	-73.46648	1-3	2	0.0002
95	MyrSpi		Point	8/16/2018	41.55293	-73.46647	1-3	2	0.0002
96	MyrSpi		Patch	8/21/2018	41.56700	-73.49007	1-5	2	0.3241
97	MyrSpi		Patch	8/21/2018	41.56787	-73.48858	1-5	2	0.4074
98	MyrSpi		Patch	8/21/2018	41.57112	-73.48853	0-1	2	0.3420

Appendix Candlewood Lake Invasive Plant Location Data 2018 (3 of 10)

FID	Invasive Plant Name	Notes	Type	Date	Latitude	Longitude	Depth (m)	Abundance	Area (acres)
99	MyrSpi		Patch	8/21/2018	41.56603	-73.48780	0-1	2	0.0334
100	MyrSpi		Patch	8/21/2018	41.56214	-73.48747	0-1	2	0.2000
101	MyrSpi		Point	8/21/2018	41.55196	-73.47096	1-3	2	0.0002
102	MyrSpi		Point	8/21/2018	41.56823	-73.49053	0-1	2	0.0002
103	MyrSpi		Point	8/21/2018	41.56833	-73.49051	0-1	2	0.0002
104	MyrSpi		Point	8/21/2018	41.56851	-73.49062	1-3	2	0.0002
105	MyrSpi		Point	8/21/2018	41.56863	-73.49071	1-3	2	0.0002
106	MyrSpi		Point	8/21/2018	41.56864	-73.49073	0-1	2	0.0002
107	MyrSpi		Point	8/21/2018	41.56865	-73.49067	0-1	2	0.0002
108	MyrSpi		Point	8/21/2018	41.56868	-73.49068	0-1	2	0.0002
109	MyrSpi		Patch	8/23/2018	41.45342	-73.43231	1-5	2	0.0380
110	MyrSpi		Patch	8/23/2018	41.45378	-73.43269	1-5	2	0.0717
111	MyrSpi		Patch	8/23/2018	41.51371	-73.43988	0-1	2	0.2786
112	MyrSpi		Point	8/23/2018	41.50022	-73.44515	1-4	2	0.0002
113	MyrSpi		Point	8/23/2018	41.50143	-73.44503	1-4	2	0.0002
114	MyrSpi		Point	8/23/2018	41.50678	-73.44518	1-3	2	0.0002
115	MyrSpi		Point	8/23/2018	41.50671	-73.44512	1-3	2	0.0002
116	MyrSpi		Point	8/23/2018	41.50935	-73.44588	1-3	2	0.0002
117	MyrSpi		Point	8/23/2018	41.50927	-73.44588	1-3	2	0.0002
118	MyrSpi		Point	8/23/2018	41.51466	-73.44427	1-3	2	0.0002
119	MyrSpi		Point	8/23/2018	41.52053	-73.44626	1-3	2	0.0002
120	MyrSpi		Patch	8/24/2018	41.52384	-73.43731	2-5	2	0.0341
121	MyrSpi		Patch	8/24/2018	41.52768	-73.43700	2-5	2	0.0117
122	MyrSpi		Patch	8/24/2018	41.55345	-73.43962	1-5	2	0.4044
123	MyrSpi		Patch	8/24/2018	41.55479	-73.43958	1-5	2	0.0294
124	MyrSpi		Patch	8/24/2018	41.55718	-73.43968	1-5	2	0.1421
125	MyrSpi		Patch	8/24/2018	41.55776	-73.43974	1-5	2	0.0125
126	MyrSpi		Patch	8/24/2018	41.57095	-73.44284	0-1	2	0.5352
127	MyrSpi		Patch	8/24/2018	41.51875	-73.43622	0-1	2	0.4369
128	MyrSpi		Patch	8/24/2018	41.54332	-73.44303	0-1	2	0.1267
129	MyrSpi		Point	8/24/2018	41.52441	-73.43748	2-3	2	0.0002
130	MyrSpi		Point	8/24/2018	41.52425	-73.43742	2-3	2	0.0002
131	MyrSpi		Point	8/24/2018	41.52395	-73.43736	2-3	2	0.0002
132	MyrSpi		Point	8/24/2018	41.52341	-73.43738	2-3	2	0.0002
133	MyrSpi		Point	8/24/2018	41.52334	-73.43737	2-3	2	0.0002
134	MyrSpi		Point	8/24/2018	41.52393	-73.43640	2-3	2	0.0002
135	MyrSpi		Point	8/24/2018	41.52686	-73.43784	2-3	2	0.0002
136	MyrSpi		Point	8/24/2018	41.52678	-73.43786	2-3	2	0.0002
137	MyrSpi		Point	8/24/2018	41.54789	-73.44270	2-3	2	0.0002
138	MyrSpi		Point	8/24/2018	41.54790	-73.44273	2-3	2	0.0002
139	MyrSpi		Point	8/24/2018	41.55431	-73.43966	2-3	2	0.0002
140	MyrSpi		Point	8/24/2018	41.55427	-73.43968	2-3	2	0.0002
141	MyrSpi		Patch	8/28/2018	41.52810	-73.44679	2-4	2	0.0685
142	MyrSpi		Patch	8/28/2018	41.52925	-73.44711	1-4	2	0.2560
143	MyrSpi		Patch	8/28/2018	41.54115	-73.44709	1-5	2	0.0547
144	MyrSpi		Patch	8/28/2018	41.56938	-73.44564	1-4	2	0.0856
145	MyrSpi		Patch	8/28/2018	41.57161	-73.44568	1-4	2	0.0060
146	MyrSpi		Patch	8/28/2018	41.55021	-73.44622	0-1	2	0.1798
147	MyrSpi		Patch	8/28/2018	41.55277	-73.44550	0-1	2	0.0357

Appendix Candlewood Lake Invasive Plant Location Data 2018 (4 of 10)

FID	Invasive Plant Name	Notes	Type	Date	Latitude	Longitude	Depth (m)	Abundance	Area (acres)
148	MyrSpi		Patch	8/28/2018	41.55974	-73.44421	0-1	2	0.0920
149	MyrSpi		Patch	8/28/2018	41.56110	-73.44440	0-1	2	0.0774
150	MyrSpi		Point	8/28/2018	41.57074	-73.44565	2-4	2	0.0002
151	MyrSpi		Point	8/28/2018	41.57233	-73.44587	2-4	2	0.0002
152	MyrSpi		Point	8/28/2018	41.57234	-73.44588	2-4	2	0.0002
153	MyrSpi		Patch	8/29/2018	41.44717	-73.42992	0-1	2	0.0624
154	MyrSpi		Patch	8/29/2018	41.44722	-73.42957	0-1	2	0.0985
155	MyrSpi		Patch	8/29/2018	41.44781	-73.42944	0-1	2	0.0845
156	MyrSpi		Patch	8/29/2018	41.44902	-73.43023	0-1	2	0.2023
157	MyrSpi		Patch	8/15/2019	41.52517	-73.46445	0-1	2	0.0442
158	MyrSpi		Patch	7/31/2018	41.45569	-73.44067	1-4	3	0.0768
159	MyrSpi		Patch	7/31/2018	41.45672	-73.44130	1-4	3	0.2091
160	MyrSpi		Patch	7/31/2018	41.45882	-73.44358	1-4	3	0.8004
161	MyrSpi		Patch	7/31/2018	41.45461	-73.44423	2-4	3	0.6879
162	MyrSpi		Patch	7/31/2018	41.45075	-73.44594	2-4	3	2.0998
163	MyrSpi		Patch	7/31/2018	41.44235	-73.45232	1-4	3	0.6408
164	MyrSpi		Patch	8/2/2018	41.44978	-73.45186	1-4	3	0.8005
165	MyrSpi		Patch	8/2/2018	41.44814	-73.44973	2-4	3	0.3631
166	MyrSpi		Patch	8/2/2018	41.44594	-73.45109	1-4	3	0.2834
167	MyrSpi		Patch	8/2/2018	41.43078	-73.46016	1-4	3	0.5975
168	MyrSpi		Patch	8/2/2018	41.43262	-73.45975	1-4	3	0.5292
169	MyrSpi		Patch	8/2/2018	41.44133	-73.45727	1-4	3	0.2788
170	MyrSpi		Patch	8/2/2018	41.44346	-73.45580	2-4	3	0.0203
171	MyrSpi		Patch	8/2/2018	41.44381	-73.45551	2-4	3	0.0375
172	MyrSpi		Patch	8/2/2018	41.44450	-73.45527	2-4	3	0.0256
173	MyrSpi		Patch	8/2/2018	41.44506	-73.45501	2-4	3	0.0282
174	MyrSpi		Patch	8/2/2018	41.44530	-73.45487	2-4	3	0.0044
175	MyrSpi		Patch	8/2/2018	41.45414	-73.45060	2-4	3	0.1965
176	MyrSpi		Patch	8/2/2018	41.45543	-73.45080	2-4	3	0.0275
177	MyrSpi		Patch	8/2/2018	41.45587	-73.45069	2-4	3	0.0284
178	MyrSpi		Patch	8/2/2018	41.46304	-73.45800	1-4	3	0.0148
179	MyrSpi		Patch	8/2/2018	41.46396	-73.46113	0-1	3	0.0087
180	MyrSpi		Patch	8/3/2018	41.46577	-73.46078	1-4	3	0.1342
181	MyrSpi		Patch	8/3/2018	41.46901	-73.45703	1-4	3	6.2864
182	MyrSpi		Patch	8/3/2018	41.48310	-73.45780	1-4	3	0.0956
183	MyrSpi		Patch	8/3/2018	41.48099	-73.45747	1-4	3	0.4552
184	MyrSpi		Patch	8/3/2018	41.47951	-73.45709	1-4	3	0.6432
185	MyrSpi		Patch	8/3/2018	41.48527	-73.45942	0-1	3	0.2329
186	MyrSpi		Patch	8/6/2018	41.46391	-73.44549	1-4	3	0.3479
187	MyrSpi		Patch	8/6/2018	41.46502	-73.44581	1-4	3	0.1455
188	MyrSpi		Patch	8/6/2018	41.46845	-73.44753	1-4	3	4.1413
189	MyrSpi		Patch	8/6/2018	41.48650	-73.43378	0-1	3	0.0115
190	MyrSpi		Patch	8/9/2018	41.47152	-73.44529	1-5	3	1.8120
191	MyrSpi		Patch	8/9/2018	41.47213	-73.44721	1-5	3	0.5145
192	MyrSpi		Patch	8/9/2018	41.47355	-73.44827	2-5	3	1.3404
193	MyrSpi		Patch	8/9/2018	41.47453	-73.44736	2-5	3	0.0916
194	MyrSpi		Patch	8/9/2018	41.47636	-73.44833	2-5	3	0.1388
195	MyrSpi		Patch	8/9/2018	41.47688	-73.44954	2-5	3	1.5222
196	MyrSpi		Patch	8/9/2018	41.48775	-73.45921	0-1	3	0.0095

Appendix Candlewood Lake Invasive Plant Location Data 2018 (5 of 10)

FID	Invasive Plant Name	Notes	Type	Date	Latitude	Longitude	Depth (m)	Abundance	Area (acres)
197	MyrSpi		Patch	8/9/2018	41.48647	-73.45900	0-1	3	0.0578
198	MyrSpi		Patch	8/9/2018	41.48654	-73.46041	0-2	3	0.0577
199	MyrSpi		Patch	8/9/2018	41.49173	-73.46637	2-5	3	0.7821
200	MyrSpi		Patch	8/9/2018	41.49820	-73.46925	0-2	3	0.0497
201	MyrSpi		Patch	8/9/2018	41.50998	-73.47040	2-5	3	0.4115
202	MyrSpi		Patch	8/9/2018	41.51094	-73.47038	1-5	3	0.0327
203	MyrSpi		Patch	8/9/2018	41.50852	-73.46639	0-1	3	0.0838
204	MyrSpi		Patch	8/9/2018	41.50821	-73.46634	2-5	3	0.4012
205	MyrSpi		Patch	8/9/2018	41.50747	-73.46580	2-5	3	0.1225
206	MyrSpi		Patch	8/9/2018	41.50423	-73.46219	2-5	3	0.0645
207	MyrSpi		Patch	8/9/2018	41.49875	-73.46913	0-2	3	0.0686
208	MyrSpi		Patch	8/9/2018	41.49934	-73.46923	0-2	3	0.0956
209	MyrSpi		Patch	8/9/2018	41.50825	-73.46897	0-2	3	0.0511
210	MyrSpi		Patch	8/9/2018	41.50849	-73.46924	0-2	3	0.0344
211	MyrSpi		Patch	8/15/2018	41.50693	-73.46040	1-5	3	0.4480
212	MyrSpi		Patch	8/15/2018	41.50865	-73.46064	1-5	3	1.6547
213	MyrSpi		Patch	8/15/2018	41.50818	-73.45912	1-5	3	1.8075
214	MyrSpi		Patch	8/15/2018	41.51011	-73.46183	2-5	3	0.0546
215	MyrSpi		Patch	8/15/2018	41.51066	-73.46226	2-5	3	0.0793
216	MyrSpi		Patch	8/15/2018	41.52034	-73.46316	1-5	3	17.1073
217	MyrSpi		Patch	8/15/2018	41.51380	-73.46169	1-5	3	1.0509
218	MyrSpi		Patch	8/15/2018	41.51441	-73.45926	2-5	3	0.0592
219	MyrSpi		Patch	8/15/2018	41.53114	-73.46531	1-5	3	0.9939
220	MyrSpi		Patch	8/15/2018	41.53642	-73.46857	1-5	3	3.3344
221	MyrSpi		Patch	8/15/2018	41.54034	-73.47170	1-3	3	0.0435
222	MyrSpi	Harvesting	Patch	8/15/2018	41.54093	-73.47190	1-3	3	0.0910
223	MyrSpi	Harvesting	Patch	8/15/2018	41.54531	-73.47286	1-4	3	2.2351
224	MyrSpi		Patch	8/15/2018	41.55499	-73.48080	1-4	3	0.0336
225	MyrSpi		Patch	8/15/2018	41.55557	-73.48098	1-4	3	0.0704
226	MyrSpi		Patch	8/15/2018	41.55802	-73.48357	1-4	3	5.1491
227	MyrSpi		Patch	8/15/2018	41.55670	-73.48104	1-4	3	0.0146
228	MyrSpi		Patch	8/15/2018	41.52171	-73.46613	0-1	3	0.1259
229	MyrSpi		Patch	8/15/2018	41.52266	-73.46493	0-1	3	0.0441
230	MyrSpi		Patch	8/16/2018	41.49646	-73.44626	1-5	3	3.1550
231	MyrSpi		Patch	8/16/2018	41.50404	-73.45314	1-5	3	20.0810
232	MyrSpi		Patch	8/16/2018	41.50118	-73.45452	1-5	3	0.6461
233	MyrSpi		Patch	8/16/2018	41.52290	-73.45314	1-5	3	6.5864
234	MyrSpi		Patch	8/16/2018	41.53284	-73.45470	1-5	3	0.9503
235	MyrSpi		Patch	8/16/2018	41.53425	-73.45511	1-4	3	0.0558
236	MyrSpi		Patch	8/16/2018	41.53486	-73.45552	1-4	3	0.0771
237	MyrSpi		Patch	8/16/2018	41.53696	-73.45618	1-4	3	0.2217
238	MyrSpi		Patch	8/16/2018	41.53904	-73.45691	1-4	3	0.0343
239	MyrSpi		Patch	8/16/2018	41.53978	-73.45715	1-4	3	0.0832
240	MyrSpi		Patch	8/16/2018	41.54089	-73.45762	1-4	3	0.2416
241	MyrSpi		Patch	8/16/2018	41.54284	-73.45865	1-4	3	0.3514
242	MyrSpi		Patch	8/16/2018	41.54473	-73.46150	1-4	3	1.2956
243	MyrSpi		Patch	8/16/2018	41.54940	-73.46425	1-5	3	0.6900
244	MyrSpi		Patch	8/16/2018	41.55173	-73.46591	1-4	3	0.4114
245	MyrSpi		Patch	8/16/2018	41.55852	-73.47502	1-5	3	5.2776

Appendix Candlewood Lake Invasive Plant Location Data 2018 (6 of 10)

FID	Invasive Plant Name	Notes	Type	Date	Latitude	Longitude	Depth (m)	Abundance	Area (acres)
246	MyrSpi		Patch	8/16/2018	41.49742	-73.45389	1-5	3	0.7523
247	MyrSpi		Point	8/16/2018	41.53174	-73.45453	0-1	3	0.0002
248	MyrSpi		Point	8/16/2018	41.53847	-73.45679	3-4	3	0.0002
249	MyrSpi		Point	8/16/2018	41.54181	-73.45807	3-4	3	0.0002
250	MyrSpi		Patch	8/21/2018	41.53245	-73.46303	1-5	3	1.7986
251	MyrSpi		Patch	8/21/2018	41.53644	-73.46579	1-5	3	7.3737
252	MyrSpi		Patch	8/21/2018	41.53586	-73.46719	1-5	3	0.1691
253	MyrSpi		Patch	8/21/2018	41.55100	-73.47171	1-5	3	1.1405
254	MyrSpi		Patch	8/21/2018	41.54750	-73.46997	1-5	3	0.6862
255	MyrSpi		Patch	8/21/2018	41.54603	-73.46831	1-5	3	0.0684
256	MyrSpi		Patch	8/21/2018	41.54559	-73.46787	1-5	3	0.0645
257	MyrSpi		Patch	8/21/2018	41.54505	-73.46774	1-5	3	0.1027
258	MyrSpi		Patch	8/21/2018	41.54456	-73.46739	1-5	3	0.0775
259	MyrSpi		Patch	8/21/2018	41.56123	-73.48524	1-5	3	0.1017
260	MyrSpi		Patch	8/21/2018	41.56590	-73.48964	1-5	3	0.1563
261	MyrSpi		Patch	8/21/2018	41.56885	-73.49060	1-5	3	0.0539
262	MyrSpi		Patch	8/21/2018	41.57121	-73.49043	1-5	3	7.9445
263	MyrSpi		Patch	8/21/2018	41.56352	-73.47827	1-5	3	0.0988
264	MyrSpi		Patch	8/21/2018	41.56276	-73.47745	1-5	3	0.0497
265	MyrSpi		Patch	8/21/2018	41.56166	-73.47605	1-5	3	0.4689
266	MyrSpi		Patch	8/21/2018	41.56045	-73.47525	1-5	3	0.0298
267	MyrSpi		Patch	8/21/2018	41.57070	-73.48413	0-1	3	0.4246
268	MyrSpi		Patch	8/23/2018	41.49821	-73.44540	2-5	3	0.0676
269	MyrSpi		Patch	8/23/2018	41.49877	-73.44537	2-5	3	0.0208
270	MyrSpi		Patch	8/23/2018	41.49974	-73.44517	2-5	3	0.0238
271	MyrSpi		Patch	8/23/2018	41.50044	-73.44507	2-5	3	0.0171
272	MyrSpi		Patch	8/23/2018	41.50226	-73.44503	2-5	3	0.2792
273	MyrSpi		Patch	8/23/2018	41.50461	-73.44506	1-5	3	0.9101
274	MyrSpi		Patch	8/23/2018	41.50767	-73.44553	1-5	3	0.2804
275	MyrSpi		Patch	8/23/2018	41.50958	-73.44574	1-5	3	0.0440
276	MyrSpi		Patch	8/23/2018	41.51062	-73.44538	1-5	3	0.0869
277	MyrSpi		Patch	8/23/2018	41.51179	-73.44486	1-5	3	0.1835
278	MyrSpi		Patch	8/23/2018	41.51845	-73.44538	1-5	3	0.0418
279	MyrSpi		Patch	8/23/2018	41.51971	-73.44585	1-5	3	0.0237
280	MyrSpi		Patch	8/23/2018	41.52094	-73.44656	1-5	3	0.0355
281	MyrSpi		Patch	8/23/2018	41.52362	-73.44618	1-5	3	1.9144
282	MyrSpi		Patch	8/23/2018	41.45014	-73.43110	1-5	3	0.6269
283	MyrSpi		Patch	8/23/2018	41.45143	-73.43178	1-5	3	0.2871
284	MyrSpi		Patch	8/23/2018	41.45261	-73.43210	1-5	3	0.1661
285	MyrSpi		Patch	8/23/2018	41.46002	-73.43559	1-5	3	0.3384
286	MyrSpi		Patch	8/23/2018	41.49345	-73.44544	3-5	3	0.8242
287	MyrSpi		Patch	8/23/2018	41.49868	-73.44248	1-5	3	1.8238
288	MyrSpi		Patch	8/23/2018	41.50697	-73.43840	1-5	3	1.2231
289	MyrSpi		Patch	8/24/2018	41.52494	-73.43795	1-5	3	0.3610
290	MyrSpi		Patch	8/24/2018	41.52215	-73.43764	1-5	3	1.0137
291	MyrSpi		Patch	8/24/2018	41.52364	-73.43645	1-5	3	0.0353
292	MyrSpi		Patch	8/24/2018	41.52404	-73.43643	1-5	3	0.0155
293	MyrSpi		Patch	8/24/2018	41.52627	-73.43782	2-5	3	0.0147
294	MyrSpi		Patch	8/24/2018	41.52790	-73.43846	1-5	3	2.6869

Appendix Candlewood Lake Invasive Plant Location Data 2018 (7 of 10)

FID	Invasive Plant Name	Notes	Type	Date	Latitude	Longitude	Depth (m)	Abundance	Area (acres)
295	MyrSpi		Patch	8/24/2018	41.53339	-73.43871	1-5	3	1.3094
296	MyrSpi		Patch	8/24/2018	41.54505	-73.44278	1-5	3	1.8531
297	MyrSpi		Patch	8/24/2018	41.54715	-73.44234	1-5	3	0.3032
298	MyrSpi		Patch	8/24/2018	41.54942	-73.44360	1-5	3	0.0694
299	MyrSpi		Patch	8/24/2018	41.55097	-73.44398	1-5	3	0.6636
300	MyrSpi	Harvesting in Cove	Patch	8/24/2018	41.55192	-73.44162	1-5	3	2.6951
301	MyrSpi		Patch	8/24/2018	41.55598	-73.43958	1-5	3	0.2958
302	MyrSpi		Patch	8/24/2018	41.52223	-73.43582	0-1	3	0.0360
303	MyrSpi		Patch	8/28/2018	41.52732	-73.44638	1-5	3	0.0508
304	MyrSpi		Patch	8/28/2018	41.53060	-73.44785	1-4	3	0.1502
305	MyrSpi		Patch	8/28/2018	41.53126	-73.44822	1-4	3	0.1064
306	MyrSpi		Patch	8/28/2018	41.53258	-73.44817	1-4	3	0.4473
307	MyrSpi		Patch	8/28/2018	41.53464	-73.44754	1-5	3	0.3282
308	MyrSpi		Patch	8/28/2018	41.53610	-73.44723	1-5	3	0.0741
309	MyrSpi		Patch	8/28/2018	41.53810	-73.44695	1-5	3	0.1893
310	MyrSpi		Patch	8/28/2018	41.54029	-73.44676	1-5	3	0.0639
311	MyrSpi		Patch	8/28/2018	41.54432	-73.44841	0-1	3	0.0520
312	MyrSpi		Patch	8/29/2018	41.44863	-73.43067	1-4	3	3.2315
313	MyrSpi		Patch	8/29/2018	41.44931	-73.43170	0-1	3	0.0493
314	MyrSpi		Patch	8/29/2018	41.44699	-73.42974	0-1	3	0.1119
315	MyrSpi		Patch	8/29/2018	41.44757	-73.42951	0-1	3	0.1322
316	MyrSpi		Patch	7/31/2018	41.45296	-73.43660	1-4	4	6.2188
317	MyrSpi		Patch	7/31/2018	41.44591	-73.44860	1-4	4	6.3915
318	MyrSpi		Patch	7/31/2018	41.43956	-73.45336	1-4	4	3.6150
319	MyrSpi		Patch	7/31/2018	41.43544	-73.45439	1-4	4	2.4528
320	MyrSpi		Patch	7/31/2018	41.42733	-73.45370	1-4	4	47.1947
321	MyrSpi		Patch	7/31/2018	41.46655	-73.44198	2-4	4	1.2791
322	MyrSpi		Patch	8/2/2018	41.42642	-73.45715	1-4	4	0.4567
323	MyrSpi		Patch	8/2/2018	41.43933	-73.45843	1-4	4	1.0613
324	MyrSpi		Patch	8/2/2018	41.45708	-73.45305	1-4	4	2.2145
325	MyrSpi		Patch	8/2/2018	41.46463	-73.45824	1-4	4	1.1491
326	MyrSpi		Patch	8/2/2018	41.46651	-73.45538	1-4	4	4.2464
327	MyrSpi		Patch	8/3/2018	41.47573	-73.46123	1-4	4	0.2654
328	MyrSpi		Patch	8/3/2018	41.47803	-73.46146	1-4	4	2.1810
329	MyrSpi		Patch	8/3/2018	41.47983	-73.46219	1-4	4	0.3976
330	MyrSpi		Patch	8/3/2018	41.48332	-73.46009	1-4	4	4.0060
331	MyrSpi		Patch	8/3/2018	41.47711	-73.45517	1-4	4	1.4300
332	MyrSpi		Patch	8/3/2018	41.47477	-73.45332	1-4	4	0.1917
333	MyrSpi		Patch	8/3/2018	41.47338	-73.45303	1-4	4	0.4408
334	MyrSpi		Patch	8/3/2018	41.47104	-73.45148	1-4	4	1.3339
335	MyrSpi		Patch	8/3/2018	41.46967	-73.45062	1-4	4	0.2091
336	MyrSpi		Patch	8/3/2018	41.46775	-73.45005	1-4	4	1.1374
337	MyrSpi		Patch	8/3/2018	41.46609	-73.45049	1-5	4	1.7106
338	MyrSpi		Patch	8/3/2018	41.46543	-73.44844	1-5	4	0.4557
339	MyrSpi		Patch	8/3/2018	41.46471	-73.44738	1-4	4	0.0961
340	MyrSpi		Patch	8/3/2018	41.46257	-73.44634	1-4	4	3.8810
341	MyrSpi		Patch	8/6/2018	41.47252	-73.43435	1-5	4	83.5036
342	MyrSpi		Patch	8/6/2018	41.49200	-73.45585	1-4	4	2.5653
343	MyrSpi		Patch	8/9/2018	41.49180	-73.45840	1-5	4	0.0164

Appendix Candlewood Lake Invasive Plant Location Data 2018 (8 of 10)

FID	Invasive Plant Name	Notes	Type	Date	Latitude	Longitude	Depth (m)	Abundance	Area (acres)
344	MyrSpi		Patch	8/9/2018	41.49129	-73.45849	2-5	4	0.2007
345	MyrSpi		Patch	8/9/2018	41.48795	-73.46055	1-5	4	6.0751
346	MyrSpi		Patch	8/9/2018	41.48570	-73.45965	0-1	4	0.2657
347	MyrSpi		Patch	8/9/2018	41.49856	-73.46862	2-5	4	2.9961
348	MyrSpi		Patch	8/9/2018	41.50094	-73.46511	2-5	4	10.7685
349	MyrSpi		Patch	8/9/2018	41.50250	-73.45997	2-5	4	2.5749
350	MyrSpi		Patch	8/15/2018	41.55043	-73.47689	1-4	4	3.8777
351	MyrSpi		Patch	8/15/2018	41.55763	-73.48076	1-5	4	6.4924
352	MyrSpi		Patch	8/16/2018	41.51651	-73.45555	2-5	4	1.8320
353	MyrSpi		Patch	8/16/2018	41.54657	-73.46374	1-5	4	1.1409
354	MyrSpi		Patch	8/16/2018	41.55398	-73.46921	1-4	4	1.7239
355	MyrSpi		Patch	8/21/2018	41.53743	-73.46229	1-5	4	1.0368
356	MyrSpi		Patch	8/21/2018	41.53521	-73.46173	1-5	4	1.7401
357	MyrSpi		Patch	8/21/2018	41.54290	-73.46652	1-5	4	0.6415
358	MyrSpi		Patch	8/21/2018	41.54371	-73.46615	1-5	4	0.2400
359	MyrSpi		Patch	8/21/2018	41.54514	-73.46613	1-5	4	0.3021
360	MyrSpi		Patch	8/21/2018	41.54928	-73.46820	1-5	4	2.5127
361	MyrSpi		Patch	8/21/2018	41.56093	-73.48454	1-5	4	0.1034
362	MyrSpi		Patch	8/21/2018	41.56362	-73.48741	1-5	4	6.8043
363	MyrSpi		Patch	8/21/2018	41.57090	-73.49108	1-4	4	5.4265
364	MyrSpi		Patch	8/21/2018	41.56617	-73.48805	1-5	4	0.6620
365	MyrSpi		Patch	8/21/2018	41.56818	-73.48411	1-5	4	8.5676
366	MyrSpi		Patch	8/21/2018	41.56382	-73.48315	3-5	4	1.6845
367	MyrSpi		Patch	8/21/2018	41.56272	-73.48334	3-5	4	0.7407
368	MyrSpi		Patch	8/23/2018	41.44923	-73.43088	1-3	4	0.1873
369	MyrSpi		Patch	8/23/2018	41.45572	-73.43413	1-5	4	6.2283
370	MyrSpi		Patch	8/23/2018	41.50414	-73.44124	1-5	4	8.4622
371	MyrSpi		Patch	8/23/2018	41.51461	-73.44011	1-5	4	6.0008
372	MyrSpi		Patch	8/24/2018	41.52207	-73.44611	3-5	4	0.3291
373	MyrSpi		Patch	8/24/2018	41.52783	-73.44249	1-5	4	10.6030
374	MyrSpi		Patch	8/24/2018	41.51970	-73.43597	1-5	4	3.3256
375	MyrSpi		Patch	8/24/2018	41.52219	-73.43567	1-5	4	0.2368
376	MyrSpi		Patch	8/24/2018	41.52226	-73.43608	1-5	4	0.0112
377	MyrSpi		Patch	8/24/2018	41.52278	-73.43619	1-5	4	0.0333
378	MyrSpi		Patch	8/24/2018	41.52321	-73.43642	1-5	4	0.0447
379	MyrSpi		Patch	8/24/2018	41.53630	-73.44058	1-5	4	1.5073
380	MyrSpi		Patch	8/24/2018	41.54169	-73.44347	1-5	4	2.3116
381	MyrSpi		Patch	8/24/2018	41.54831	-73.44302	1-5	4	0.2331
382	MyrSpi		Patch	8/24/2018	41.56421	-73.44121	1-5	4	6.7668
383	MyrSpi		Patch	8/24/2018	41.57121	-73.44306	1-5	4	1.1033
384	MyrSpi		Patch	8/28/2018	41.54719	-73.44712	1-5	4	4.2943
385	MyrSpi		Patch	8/28/2018	41.55502	-73.44465	1-5	4	2.1934
386	MyrSpi		Patch	8/28/2018	41.56199	-73.44432	1-5	4	3.5467
387	MyrSpi		Patch	8/28/2018	41.56652	-73.44506	1-5	4	0.6960
388	MyrSpi		Patch	8/28/2018	41.56847	-73.44551	1-4	4	0.3255
389	MyrSpi		Patch	8/28/2018	41.57250	-73.44415	1-5	4	0.8422
390	MyrSpi		Patch	8/29/2018	41.44969	-73.43194	0-1	4	0.0372
391	MyrSpi		Patch	8/29/2018	41.44872	-73.43133	0-1	4	0.0226
392	MyrSpi		Patch	8/29/2018	41.44831	-73.43099	0-1	4	0.0578

Appendix Candlewood Lake Invasive Plant Location Data 2018 (9 of 10)

FID	Invasive Plant Name	Notes	Type	Date	Latitude	Longitude	Depth (m)	Abundance	Area (acres)
393	MyrSpi		Patch	8/29/2018	41.44767	-73.43038	0-1	4	0.2683
394	MyrSpi		Patch	9/13/2018	41.56140	-73.44424	1-3	5	0.6528
395	MyrSpi		Patch	9/13/2018	41.56000	-73.44398	1-3	5	0.3261
396	MyrSpi		Patch	9/13/2018	41.56393	-73.44479	1-3	5	0.1876
397	MyrSpi		Patch	9/13/2018	41.56457	-73.44479	1-3	5	0.0716
398	MyrSpi		Patch	9/13/2018	41.56511	-73.44493	1-3	5	0.1790
399	MyrSpi		Patch	9/13/2018	41.57110	-73.44309	1-3	5	0.5285
400	MyrSpi		Patch	9/13/2018	41.56895	-73.44284	1-3	5	0.0504
401	MyrSpi		Patch	9/13/2018	41.56683	-73.44201	1-3	5	0.0577
402	MyrSpi		Patch	9/13/2018	41.56012	-73.44050	1-3	5	0.0402
403	MyrSpi		Patch	9/13/2018	41.54357	-73.44308	1-3	5	0.2728
404	MyrSpi		Patch	9/13/2018	41.53844	-73.44269	1-3	5	0.0861
405	MyrSpi		Patch	9/13/2018	41.51876	-73.43719	0-2	5	0.0828
406	MyrSpi		Patch	9/13/2018	41.51358	-73.44014	0-2	5	0.6656
407	MyrSpi		Patch	9/13/2018	41.50401	-73.44174	0-2	5	1.0937
408	MyrSpi		Patch	9/13/2018	41.51417	-73.45338	1-3	5	0.2327
409	MyrSpi		Patch	9/13/2018	41.56629	-73.48810	1-3	5	0.1137
410	MyrSpi		Patch	9/13/2018	41.55840	-73.48149	1-3	5	1.1497
411	MyrSpi		Patch	9/13/2018	41.54939	-73.46781	2-3	5	0.3325
412	MyrSpi		Patch	9/13/2018	41.55054	-73.46969	1-3	5	0.2606
413	MyrSpi		Patch	9/13/2018	41.53559	-73.46570	1-3	5	0.0852
414	MyrSpi		Patch	9/13/2018	41.53516	-73.46204	1-3	5	0.2261
415	MyrSpi		Patch	9/13/2018	41.53589	-73.46193	1-3	5	0.0699
416	MyrSpi		Patch	9/13/2018	41.52261	-73.46482	1-3	5	0.0442
417	MyrSpi		Patch	9/13/2018	41.52230	-73.46472	1-3	5	0.0772
418	MyrSpi		Patch	9/13/2018	41.52094	-73.46567	1-3	5	0.2256
419	MyrSpi		Patch	9/13/2018	41.51916	-73.46481	1-3	5	0.3746
420	MyrSpi		Patch	9/13/2018	41.43903	-73.45876	1-3	5	0.1694
421	MyrSpi		Patch	9/14/2018	41.45298	-73.43660	1-3	5	1.5886
422	MyrSpi		Patch	9/14/2018	41.44559	-73.44903	1-3	5	0.2388
423	MyrSpi		Patch	9/14/2018	41.43905	-73.45429	1-3	5	0.1914
424	MyrSpi		Patch	9/14/2018	41.43843	-73.45443	1-3	5	0.1321
425	MyrSpi		Patch	9/14/2018	41.42791	-73.45182	2-3	5	1.3130
426	MyrSpi		Patch	9/14/2018	41.42737	-73.45015	1-4	5	3.3140
427	MyrSpi		Patch	9/14/2018	41.42563	-73.45232	1-4	5	2.5839
428	MyrSpi		Patch	9/14/2018	41.42543	-73.45599	1-4	5	0.4781
429	MyrSpi		Patch	9/14/2018	41.42590	-73.45693	1-4	5	0.0296
430	MyrSpi		Patch	9/14/2018	41.45695	-73.45421	1-4	5	0.4247
431	MyrSpi		Patch	9/14/2018	41.48053	-73.46207	1-4	5	0.1359
432	MyrSpi		Patch	9/14/2018	41.48127	-73.46187	1-4	5	0.1447
433	MyrSpi		Patch	9/14/2018	41.48413	-73.45949	1-4	5	2.8361
434	MyrSpi		Patch	9/14/2018	41.47078	-73.45104	1-3	5	0.1529
435	MyrSpi		Patch	9/14/2018	41.48828	-73.45941	2-4	5	0.1584
436	MyrSpi		Patch	9/14/2018	41.48627	-73.45984	1-4	5	0.9038
437	MyrSpi		Patch	9/14/2018	41.48762	-73.46245	1-4	5	1.8298
438	MyrSpi		Patch	9/14/2018	41.49115	-73.46605	1-4	5	0.1045
439	MyrSpi		Patch	9/14/2018	41.49854	-73.46897	0-2	5	0.9940
440	MyrSpi		Patch	9/14/2018	41.49893	-73.46832	1-3	5	0.3118
441	MyrSpi		Patch	9/14/2018	41.49709	-73.46810	0-2	5	0.0534

Appendix Candlewood Lake Invasive Plant Location Data 2018 (10 of 10)

FID	Invasive Plant Name	Notes	Type	Date	Latitude	Longitude	Depth (m)	Abundance	Area (acres)
442	MyrSpi		Patch	9/14/2018	41.49569	-73.46612	1-4	5	0.3211
443	MyrSpi		Patch	9/14/2018	41.49597	-73.46429	2-4	5	0.0882
444	MyrSpi		Patch	9/14/2018	41.49615	-73.46347	2-4	5	0.1533
445	MyrSpi		Patch	9/14/2018	41.48736	-73.43507	2-4	5	0.1084
446	MyrSpi		Patch	9/14/2018	41.47690	-73.44448	2-4	5	0.2989
447	MyrSpi		Patch	9/14/2018	41.47572	-73.44432	2-4	5	0.0247
448	MyrSpi		Patch	9/14/2018	41.47236	-73.43690	0-2	5	0.8519
449	MyrSpi		Patch	9/14/2018	41.47301	-73.43710	0-2	5	0.3485
450	MyrSpi		Patch	9/14/2018	41.46431	-73.42542	1-4	5	2.6372
451	MyrSpi		Patch	9/14/2018	41.46344	-73.42516	0-2	5	0.2631
452	MyrSpi		Patch	9/14/2018	41.46015	-73.42817	1-4	5	1.3682
453	MyrSpi		Patch	9/14/2018	41.46070	-73.42978	2-4	5	0.6983
454	MyrSpi		Patch	9/14/2018	41.46178	-73.43131	2-4	5	0.1279
455	MyrSpi		Patch	9/14/2018	41.57294	-73.49162	0-1	5	0.4581
456	MyrSpi		Patch	43357	41.571188	-73.492045	0-1	5	0.104151485
457	NajMin		Patch	43321	41.49706	-73.467945	0-2	2	0.172536
458	NajMin		Patch	43336	41.570953	-73.442839	0-1	2	0.535156
459	NajMin		Patch	8/24/2018	41.51875	-73.43622	0-1	2	0.4369

Candlewood Lake 2019

Appendix Candlewood Lake Invasive Plant Location Data 2019 (1 of 8)

FID	Invasive Plant Name	Notes	Type	Date	Latitude	Longitude	Depth (m)	Abundance	Area (acres)
1	MyrSpi		Point	8/14/2019	41.44099	-73.45233	0-1	1	0.0002
2	MyrSpi		Point	8/15/2019	41.46396	-73.46113	0-1	1	0.0002
3	MyrSpi		Point	8/15/2019	41.46398	-73.46108	0-1	1	0.0002
4	MyrSpi		Point	8/15/2019	41.46401	-73.46107	0-1	1	0.0002
5	MyrSpi		Point	8/26/2019	41.48079	-73.45733	0-1	1	0.0002
6	MyrSpi		Point	8/26/2019	41.48084	-73.45727	0-1	1	0.0002
7	MyrSpi		Point	8/26/2019	41.47947	-73.45665	0-1	1	0.0002
8	MyrSpi		Point	8/26/2019	41.47948	-73.45669	0-1	1	0.0002
9	MyrSpi		Point	8/26/2019	41.46990	-73.45055	0-1	1	0.0002
10	MyrSpi		Point	8/26/2019	41.46989	-73.45057	0-1	1	0.0002
11	MyrSpi		Point	8/28/2019	41.45938	-73.42788	0-1	1	0.0002
12	MyrSpi		Point	8/28/2019	41.46870	-73.42562	0-1	1	0.0002
13	MyrSpi		Point	9/1/2019	41.52387	-73.46439	0-1	1	0.0002
14	MyrSpi		Point	9/1/2019	41.52366	-73.46435	0-1	1	0.0002
15	MyrSpi		Point	9/1/2019	41.52363	-73.46435	0-1	1	0.0002
16	MyrSpi		Point	9/1/2019	41.52296	-73.46423	0-1	1	0.0002
17	MyrSpi		Point	9/1/2019	41.52239	-73.46415	0-1	1	0.0002
18	MyrSpi		Point	9/1/2019	41.52203	-73.45942	0-1	1	0.0002
19	MyrSpi		Point	9/1/2019	41.52227	-73.45952	0-1	1	0.0002
20	MyrSpi		Point	9/3/2019	41.47914	-73.43422	0-1	1	0.0002
21	MyrSpi		Point	9/3/2019	41.47999	-73.43457	0-1	1	0.0002
22	MyrSpi		Point	9/3/2019	41.48004	-73.43458	0-1	1	0.0002
23	MyrSpi		Point	9/3/2019	41.48011	-73.43460	0-1	1	0.0002
24	MyrSpi		Point	9/3/2019	41.48099	-73.43498	0-1	1	0.0002
25	MyrSpi		Point	9/3/2019	41.48096	-73.43498	0-1	1	0.0002
26	MyrSpi		Point	9/3/2019	41.51403	-73.44137	0-1	1	0.0002
27	MyrSpi		Point	9/3/2019	41.51403	-73.44139	0-1	1	0.0002
28	MyrSpi		Point	9/1/2019	41.49453	-73.46846	0-2	1	0.0002
29	MyrSpi		Point	9/1/2019	41.49452	-73.46844	0-2	1	0.0002
30	MyrSpi		Patch	8/28/2019	41.46375	-73.42470	0-1	1	0.0170
31	MyrSpi		Patch	8/15/2019	41.42588	-73.45703	0-1	1	0.0211
32	MyrSpi		Patch	9/11/2019	41.53093	-73.46546	0-1	1	0.0244
33	MyrSpi		Patch	8/14/2019	41.45708	-73.44469	2-5	1	0.0247
34	MyrSpi		Patch	9/11/2019	41.53141	-73.46597	0-1	1	0.0316
35	MyrSpi		Patch	8/26/2019	41.48477	-73.45991	0-2	1	0.0399
36	MyrSpi		Patch	8/26/2019	41.48449	-73.46011	0-2	1	0.0562
37	MyrSpi		Patch	9/11/2019	41.55835	-73.48248	0-1	1	0.0698
38	MyrSpi		Patch	9/11/2020	41.53538	-73.46215	0-1	1	0.0716
39	MyrSpi		Patch	9/11/2019	41.55664	-73.48035	0-1	1	0.0953
40	MyrSpi		Patch	8/26/2019	41.48501	-73.45893	0-2	1	0.1154
41	MyrSpi		Patch	8/15/2019	41.46546	-73.45907	1-4	1	0.1184
42	MyrSpi		Patch	8/14/2019	41.45791	-73.44501	2-5	1	0.1421
43	MyrSpi		Patch	8/26/2019	41.48522	-73.45970	0-2	1	0.1620
44	MyrSpi		Patch	9/11/2019	41.55831	-73.48169	0-1	1	0.2430
45	MyrSpi		Patch	8/26/2019	41.48407	-73.45967	0-2	1	0.2844
46	MyrSpi		Patch	8/15/2019	41.45665	-73.45434	0-2	1	0.3333
47	MyrSpi		Patch	9/11/2019	41.55853	-73.48491	0-1	1	0.4478
48	MyrSpi		Patch	9/3/2019	41.51595	-73.44045	0-1	1	0.5078
49	MyrSpi		Patch	9/3/2019	41.48071	-73.43537	0-2	1	0.7047

Appendix Candlewood Lake Invasive Plant Location Data 2019 (2 of 8)

FID	Invasive Plant Name	Notes	Type	Date	Latitude	Longitude	Depth (m)	Abundance	Area (acres)
50	MyrSpi		Patch	9/3/2019	41.47755	-73.43409	0-2	1	0.9985
51	MyrSpi		Point	9/11/2019	41.52394	-73.45838	1-3	2	0.0002
52	MyrSpi		Point	9/11/2019	41.56889	-73.49057	1-3	2	0.0002
53	MyrSpi		Point	9/11/2019	41.56903	-73.49049	1-3	2	0.0002
54	MyrSpi		Point	9/11/2019	41.56944	-73.49049	1-3	2	0.0002
55	MyrSpi		Point	9/11/2019	41.56949	-73.49038	1-3	2	0.0002
56	MyrSpi		Point	9/11/2019	41.56954	-73.49025	1-3	2	0.0002
57	MyrSpi		Point	9/11/2019	41.56956	-73.49020	1-3	2	0.0002
58	MyrSpi		Point	9/11/2019	41.57235	-73.49115	1-3	2	0.0002
59	MyrSpi		Point	9/11/2019	41.57225	-73.49126	1-3	2	0.0002
60	MyrSpi		Point	9/11/2019	41.57262	-73.49130	1-3	2	0.0002
61	MyrSpi		Point	9/11/2019	41.57288	-73.49124	1-3	2	0.0002
62	MyrSpi		Point	8/28/2019	41.45891	-73.43532	2-4	2	0.0002
63	MyrSpi		Point	9/5/2019	41.49744	-73.44803	2-4	2	0.0002
64	MyrSpi		Point	9/11/2019	41.57501	-73.49227	0-1	2	0.0002
65	MyrSpi		Point	9/11/2019	41.57455	-73.49217	0-1	2	0.0002
66	MyrSpi		Point	9/1/2019	41.52540	-73.46424	0-1	2	0.0002
67	MyrSpi		Point	9/1/2019	41.52472	-73.46459	0-1	2	0.0002
68	MyrSpi		Point	9/1/2019	41.52466	-73.46458	0-1	2	0.0002
69	MyrSpi		Point	9/1/2019	41.52464	-73.46458	0-1	2	0.0002
70	MyrSpi		Point	9/1/2019	41.52460	-73.46460	0-1	2	0.0002
71	MyrSpi		Point	9/1/2019	41.52455	-73.46457	0-1	2	0.0002
72	MyrSpi		Point	9/1/2019	41.52452	-73.46454	0-1	2	0.0002
73	MyrSpi		Point	9/1/2019	41.52443	-73.46453	0-1	2	0.0002
74	MyrSpi		Point	9/1/2019	41.52391	-73.46437	0-1	2	0.0002
75	MyrSpi		Point	9/1/2019	41.52358	-73.46436	0-1	2	0.0002
76	MyrSpi		Point	9/1/2019	41.52318	-73.46426	0-1	2	0.0002
77	MyrSpi		Point	9/3/2019	41.47704	-73.43326	0-1	2	0.0002
78	MyrSpi		Point	9/3/2019	41.47702	-73.43324	0-1	2	0.0002
79	MyrSpi		Point	9/3/2019	41.47706	-73.43328	0-1	2	0.0002
80	MyrSpi		Point	9/3/2019	41.47747	-73.43331	0-1	2	0.0002
81	MyrSpi		Point	9/3/2019	41.47750	-73.43331	0-1	2	0.0002
82	MyrSpi		Point	9/3/2019	41.47752	-73.43331	0-1	2	0.0002
83	MyrSpi		Point	9/3/2019	41.47757	-73.43330	0-1	2	0.0002
84	MyrSpi		Point	9/3/2019	41.47782	-73.43356	0-1	2	0.0002
85	MyrSpi		Point	9/3/2019	41.47905	-73.43421	0-1	2	0.0002
86	MyrSpi		Point	9/3/2019	41.47909	-73.43421	0-1	2	0.0002
87	MyrSpi		Point	9/3/2019	41.47899	-73.43418	0-1	2	0.0002
88	MyrSpi		Point	9/3/2019	41.47895	-73.43414	0-1	2	0.0002
89	MyrSpi		Point	9/3/2019	41.47926	-73.43435	0-1	2	0.0002
90	MyrSpi		Point	9/3/2019	41.47964	-73.43442	0-1	2	0.0002
91	MyrSpi		Point	9/3/2019	41.47969	-73.43445	0-1	2	0.0002
92	MyrSpi		Point	9/3/2019	41.51668	-73.43970	0-1	2	0.0002
93	MyrSpi		Point	9/4/2019	41.50406	-73.44554	0-1	2	0.0002
94	MyrSpi		Point	9/4/2019	41.50403	-73.44557	0-1	2	0.0002
95	MyrSpi		Point	9/4/2019	41.56078	-73.44433	0-1	2	0.0002
96	MyrSpi		Point	9/4/2019	41.56078	-73.44432	0-1	2	0.0002
97	MyrSpi		Point	9/5/2019	41.50286	-73.45182	0-1	2	0.0002
98	MyrSpi		Point	9/5/2019	41.50319	-73.45206	0-1	2	0.0002

Appendix Candlewood Lake Invasive Plant Location Data 2019 (3 of 8)

FID	Invasive Plant Name	Notes	Type	Date	Latitude	Longitude	Depth (m)	Abundance	Area (acres)
99	MyrSpi		Point	9/5/2019	41.50336	-73.45222	0-1	2	0.0002
100	MyrSpi		Point	9/5/2019	41.50367	-73.45245	0-1	2	0.0002
101	MyrSpi		Point	9/5/2019	41.50407	-73.45276	0-1	2	0.0002
102	MyrSpi		Point	9/5/2019	41.50420	-73.45282	0-1	2	0.0002
103	MyrSpi		Point	9/5/2019	41.50479	-73.45316	0-1	2	0.0002
104	MyrSpi		Point	9/5/2019	41.50513	-73.45331	0-1	2	0.0002
105	MyrSpi		Point	9/11/2019	41.57298	-73.49154	0-2	2	0.0002
106	MyrSpi		Point	9/11/2019	41.57198	-73.49185	0-2	2	0.0002
107	MyrSpi		Point	9/1/2019	41.49449	-73.46841	0-2	2	0.0002
108	MyrSpi		Point	9/1/2019	41.49494	-73.46870	0-2	2	0.0002
109	MyrSpi		Point	9/1/2019	41.49629	-73.46890	0-2	2	0.0002
110	MyrSpi		Point	9/1/2019	41.51087	-73.47046	0-2	2	0.0002
111	MyrSpi		Point	9/1/2019	41.51074	-73.47055	0-2	2	0.0002
112	MyrSpi		Point	9/1/2019	41.51070	-73.47060	0-2	2	0.0002
113	MyrSpi		Point	9/1/2019	41.51067	-73.47063	0-2	2	0.0002
114	MyrSpi		Point	9/1/2019	41.51064	-73.47064	0-2	2	0.0002
115	MyrSpi		Point	9/1/2019	41.51060	-73.47068	0-2	2	0.0002
116	MyrSpi		Point	9/1/2019	41.51054	-73.47072	0-2	2	0.0002
117	MyrSpi		Point	9/1/2019	41.51039	-73.47078	0-2	2	0.0002
118	MyrSpi		Point	9/3/2019	41.52616	-73.43684	0-2	2	0.0002
119	MyrSpi		Point	9/3/2019	41.52689	-73.43689	0-2	2	0.0002
120	MyrSpi		Patch	9/3/2019	41.51537	-73.44142	0-1	2	0.0065
121	MyrSpi		Patch	8/26/2019	41.47083	-73.45032	0-2	2	0.0070
122	MyrSpi		Patch	8/26/2019	41.47311	-73.45068	1-5	2	0.0075
123	MyrSpi		Patch	9/11/2019	41.56938	-73.48902	0-1	2	0.0087
124	MyrSpi		Patch	8/26/2019	41.47222	-73.45023	1-5	2	0.0098
125	MyrSpi		Patch	8/26/2019	41.47961	-73.45715	1-3	2	0.0100
126	MyrSpi		Patch	9/4/2019	41.51207	-73.44481	2-4	2	0.0101
127	MyrSpi		Patch	9/4/2019	41.54243	-73.44804	1-4	2	0.0102
128	MyrSpi		Patch	9/3/2019	41.52336	-73.43641	0-2	2	0.0107
129	MyrSpi		Patch	9/4/2019	41.50434	-73.44523	0-1	2	0.0113
130	MyrSpi		Patch	9/11/2019	41.57205	-73.49195	0-1	2	0.0125
131	MyrSpi		Patch	8/26/2019	41.47944	-73.45670	1-3	2	0.0129
132	MyrSpi		Patch	9/4/2019	41.55748	-73.43979	2-4	2	0.0134
133	MyrSpi		Patch	8/26/2019	41.46594	-73.44594	2-5	2	0.0138
134	MyrSpi		Patch	8/15/2019	41.45810	-73.45612	2-5	2	0.0173
135	MyrSpi		Patch	8/15/2019	41.43441	-73.45914	2-5	2	0.0202
136	MyrSpi		Patch	9/1/2019	41.49873	-73.46808	0-2	2	0.0215
137	MyrSpi		Patch	9/4/2019	41.55683	-73.43963	1-5	2	0.0216
138	MyrSpi		Patch	9/11/2019	41.53246	-73.46303	0-1	2	0.0222
139	MyrSpi		Patch	9/1/2019	41.52273	-73.45987	0-1	2	0.0222
140	MyrSpi		Patch	9/11/2019	41.53258	-73.46232	0-1	2	0.0237
141	MyrSpi		Patch	9/11/2019	41.57070	-73.49172	0-2	2	0.0241
142	MyrSpi		Patch	9/11/2019	41.56269	-73.47736	1-4	2	0.0242
143	MyrSpi		Patch	9/11/2019	41.55670	-73.48107	1-4	2	0.0249
144	MyrSpi		Patch	8/15/2019	41.46533	-73.46124	2-4	2	0.0263
145	MyrSpi		Patch	8/28/2019	41.45340	-73.43230	1-3	2	0.0283
146	MyrSpi		Patch	9/4/2019	41.52090	-73.44658	2-4	2	0.0303
147	MyrSpi		Patch	8/28/2019	41.46672	-73.42406	0-1	2	0.0334

Appendix Candlewood Lake Invasive Plant Location Data 2019 (4 of 8)

FID	Invasive Plant Name	Notes	Type	Date	Latitude	Longitude	Depth (m)	Abundance	Area (acres)
148	MyrSpi		Patch	8/15/2019	41.45748	-73.45531	2-5	2	0.0355
149	MyrSpi		Patch	9/11/2019	41.55500	-73.48074	2-5	2	0.0356
150	MyrSpi		Patch	9/1/2019	41.49523	-73.46874	2-4	2	0.0357
151	MyrSpi		Patch	9/11/2019	41.56424	-73.47887	1-4	2	0.0375
152	MyrSpi		Patch	9/3/2019	41.48128	-73.43530	0-1	2	0.0381
153	MyrSpi		Patch	9/3/2019	41.52772	-73.43711	0-1	2	0.0385
154	MyrSpi		Patch	9/3/2019	41.51925	-73.43513	0-1	2	0.0395
155	MyrSpi		Patch	9/11/2019	41.55578	-73.48104	2-5	2	0.0412
156	MyrSpi		Patch	9/1/2019	41.49990	-73.46862	0-2	2	0.0419
157	MyrSpi		Patch	8/28/2019	41.44809	-73.43083	0-1	2	0.0436
158	MyrSpi		Patch	9/5/2019	41.53907	-73.45691	1-4	2	0.0436
159	MyrSpi		Patch	9/3/2019	41.52398	-73.43648	1-3	2	0.0457
160	MyrSpi		Patch	9/4/2019	41.51245	-73.44467	2-4	2	0.0471
161	MyrSpi		Patch	8/24/2019	41.52277	-73.43807	2-5	2	0.0493
162	MyrSpi		Patch	8/24/2019	41.47395	-73.44644	2-5	2	0.0497
163	MyrSpi		Patch	8/24/2019	41.47212	-73.44683	0-2	2	0.0501
164	MyrSpi		Patch	9/1/2019	41.50310	-73.46154	2-4	2	0.0546
165	MyrSpi		Patch	8/28/2019	41.44855	-73.43120	0-1	2	0.0579
166	MyrSpi		Patch	9/1/2019	41.51093	-73.47027	0-2	2	0.0594
167	MyrSpi		Patch	9/4/2019	41.49962	-73.44527	2-5	2	0.0605
168	MyrSpi		Patch	9/11/2019	41.54342	-73.47256	2-5	2	0.0652
169	MyrSpi		Patch	9/1/2019	41.50600	-73.46045	2-4	2	0.0653
170	MyrSpi		Patch	9/4/2019	41.50958	-73.44580	2-4	2	0.0678
171	MyrSpi		Patch	9/11/2019	41.54100	-73.47194	2-5	2	0.0715
172	MyrSpi		Patch	8/15/2019	41.46503	-73.46152	1-3	2	0.0716
173	MyrSpi		Patch	9/5/2019	41.55508	-73.47285	0-1	2	0.0727
174	MyrSpi		Patch	9/3/2019	41.50388	-73.44129	0-2	2	0.0753
175	MyrSpi		Patch	9/1/2019	41.51020	-73.46187	2-4	2	0.0759
176	MyrSpi		Patch	9/1/2019	41.50921	-73.46800	2-4	2	0.0759
177	MyrSpi		Patch	8/14/2019	41.45553	-73.44074	2-4	2	0.0771
178	MyrSpi		Patch	9/11/2019	41.56347	-73.47824	1-4	2	0.0778
179	MyrSpi		Patch	9/1/2019	41.51028	-73.46933	0-2	2	0.0782
180	MyrSpi		Patch	9/4/2019	41.54032	-73.44680	1-4	2	0.0783
181	MyrSpi		Patch	9/5/2019	41.53487	-73.45552	1-4	2	0.0794
182	MyrSpi		Patch	8/26/2019	41.47186	-73.45029	1-5	2	0.0818
183	MyrSpi		Patch	9/1/2019	41.50418	-73.46218	2-4	2	0.0847
184	MyrSpi		Patch	9/3/2019	41.52235	-73.43563	0-1	2	0.0855
185	MyrSpi		Patch	9/4/2019	41.55626	-73.43959	2-4	2	0.0863
186	MyrSpi		Patch	8/15/2019	41.46582	-73.46069	2-4	2	0.0873
187	MyrSpi		Patch	9/1/2019	41.52285	-73.46032	0-1	2	0.0937
188	MyrSpi		Patch	9/1/2019	41.50993	-73.46876	0-2	2	0.0953
189	MyrSpi		Patch	9/1/2019	41.55395	-73.47122	0-1	2	0.0957
190	MyrSpi		Patch	9/1/2019	41.50672	-73.46046	2-4	2	0.0970
191	MyrSpi		Patch	9/4/2019	41.51146	-73.44506	2-4	2	0.1008
192	MyrSpi		Patch	8/26/2019	41.47639	-73.44833	2-5	2	0.1015
193	MyrSpi		Patch	9/11/2019	41.56835	-73.48375	0-1	2	0.1039
194	MyrSpi		Patch	9/5/2019	41.55519	-73.47243	0-1	2	0.1165
195	MyrSpi		Patch	9/5/2019	41.55423	-73.46731	0-1	2	0.1169
196	MyrSpi		Patch	8/28/2019	41.44742	-73.43014	0-1	2	0.1216

Appendix Candlewood Lake Invasive Plant Location Data 2019 (5 of 8)

FID	Invasive Plant Name	Notes	Type	Date	Latitude	Longitude	Depth (m)	Abundance	Area (acres)
197	MyrSpi		Patch	8/15/2019	41.42606	-73.45689	2-5	2	0.1221
198	MyrSpi		Patch	9/5/2019	41.55408	-73.46931	0-1	2	0.1223
199	MyrSpi		Patch	8/24/2019	41.47457	-73.44729	2-5	2	0.1233
200	MyrSpi		Patch	9/4/2019	41.52639	-73.44608	1-4	2	0.1235
201	MyrSpi		Patch	9/11/2019	41.54035	-73.47165	2-5	2	0.1314
202	MyrSpi		Patch	9/1/2019	41.52599	-73.46462	0-1	2	0.1337
203	MyrSpi		Patch	9/11/2019	41.57035	-73.49112	2-3	2	0.1360
204	MyrSpi		Patch	8/15/2019	41.44358	-73.45571	2-5	2	0.1422
205	MyrSpi		Patch	9/4/2019	41.51049	-73.44547	2-4	2	0.1428
206	MyrSpi		Patch	9/4/2019	41.53794	-73.44705	1-4	2	0.1438
207	MyrSpi		Patch	9/4/2019	41.51843	-73.44544	2-4	2	0.1472
208	MyrSpi		Patch	9/5/2019	41.53704	-73.45623	1-4	2	0.1542
209	MyrSpi		Patch	8/15/2019	41.44165	-73.45717	2-5	2	0.1543
210	MyrSpi		Patch	9/4/2019	41.55681	-73.44400	1-5	2	0.1555
211	MyrSpi		Patch	8/26/2019	41.46459	-73.44729	1-5	2	0.1559
212	MyrSpi		Patch	8/26/2019	41.47372	-73.45320	2-5	2	0.1612
213	MyrSpi		Patch	9/1/2019	41.49807	-73.46916	0-2	2	0.1661
214	MyrSpi		Patch	9/5/2019	41.51524	-73.45295	2-4	2	0.1700
215	MyrSpi		Patch	9/4/2019	41.52730	-73.44641	1-4	2	0.1712
216	MyrSpi		Patch	9/5/2019	41.51396	-73.45338	0-1	2	0.1771
217	MyrSpi		Patch	9/11/2019	41.53274	-73.46616	2-5	2	0.1773
218	MyrSpi		Patch	8/26/2019	41.47312	-73.45287	2-5	2	0.1836
219	MyrSpi		Patch	9/11/2019	41.57130	-73.49216	0-2	2	0.1983
220	MyrSpi		Patch	8/15/2019	41.46396	-73.46215	1-3	2	0.2033
221	MyrSpi		Patch	8/14/2019	41.45694	-73.44158	2-4	2	0.2246
222	MyrSpi		Patch	8/15/2019	41.46704	-73.45969	2-5	2	0.2293
223	MyrSpi		Patch	9/1/2019	41.49590	-73.46879	2-4	2	0.2488
224	MyrSpi		Patch	9/5/2019	41.54997	-73.46469	1-4	2	0.2518
225	MyrSpi		Patch	9/3/2019	41.50331	-73.44049	0-2	2	0.2577
226	MyrSpi		Patch	8/15/2019	41.46550	-73.45823	2-5	2	0.2628
227	MyrSpi		Patch	9/5/2019	41.54064	-73.45752	1-4	2	0.2733
228	MyrSpi		Patch	8/15/2019	41.42599	-73.44987	0-2	2	0.2777
229	MyrSpi		Patch	8/26/2019	41.48092	-73.45755	2-5	2	0.2847
230	MyrSpi		Patch	9/11/2019	41.53575	-73.46704	2-5	2	0.2970
231	MyrSpi		Patch	9/3/2019	41.51856	-73.43687	0-1	2	0.3041
232	MyrSpi		Patch	8/15/2019	41.46479	-73.45987	2-5	2	0.3050
233	MyrSpi		Patch	9/4/2019	41.56833	-73.44544	1-4	2	0.3092
234	MyrSpi		Patch	8/28/2019	41.44903	-73.43022	0-1	2	0.3150
235	MyrSpi		Patch	9/1/2019	41.49915	-73.46918	0-2	2	0.3274
236	MyrSpi		Patch	8/15/2019	41.44587	-73.45113	2-5	2	0.3281
237	MyrSpi		Patch	9/11/2019	41.52530	-73.45875	2-5	2	0.3330
238	MyrSpi		Patch	9/8/2019	41.51249	-73.44117	1-4	2	0.3423
239	MyrSpi		Patch	9/3/2019	41.51165	-73.44107	2-5	2	0.3446
240	MyrSpi		Patch	8/28/2019	41.44756	-73.42952	0-1	2	0.3448
241	MyrSpi		Patch	9/4/2019	41.50764	-73.44554	2-4	2	0.3519
242	MyrSpi		Patch	9/1/2019	41.50873	-73.46709	1-4	2	0.3533
243	MyrSpi		Patch	8/15/2019	41.45414	-73.45066	2-5	2	0.3631
244	MyrSpi		Patch	9/11/2019	41.56688	-73.49003	1-5	2	0.3680
245	MyrSpi		Patch	9/1/2019	41.49412	-73.46805	2-4	2	0.3781

Appendix Candlewood Lake Invasive Plant Location Data 2019 (6 of 8)

FID	Invasive Plant Name	Notes	Type	Date	Latitude	Longitude	Depth (m)	Abundance	Area (acres)
246	MyrSpi		Patch	9/5/2019	41.55171	-73.46591	1-4	2	0.3908
247	MyrSpi		Patch	8/15/2019	41.42412	-73.45274	0-2	2	0.3940
248	MyrSpi		Patch	9/11/2019	41.56786	-73.48860	1-5	2	0.4055
249	MyrSpi		Patch	9/11/2019	41.56889	-73.48354	0-1	2	0.4148
250	MyrSpi		Patch	9/4/2019	41.50214	-73.44505	2-4	2	0.4192
251	MyrSpi		Patch	9/11/2019	41.55884	-73.47579	2-5	2	0.4195
252	MyrSpi		Patch	8/15/2019	41.44808	-73.44975	2-5	2	0.4564
253	MyrSpi		Patch	9/11/2019	41.56277	-73.48347	2-5	2	0.4659
254	MyrSpi		Patch	8/15/2019	41.43259	-73.45976	2-5	2	0.4746
255	MyrSpi		Patch	9/4/2019	41.55380	-73.43969	2-4	2	0.5047
256	MyrSpi		Patch	9/11/2019	41.56165	-73.47609	1-4	2	0.5792
257	MyrSpi		Patch	8/15/2019	41.44973	-73.45191	2-3	2	0.5798
258	MyrSpi		Patch	9/5/2019	41.51432	-73.45339	1-4	2	0.6134
259	MyrSpi		Patch	9/5/2019	41.50129	-73.45462	2-5	2	0.6151
260	MyrSpi		Patch	9/1/2019	41.50992	-73.47025	1-4	2	0.6186
261	MyrSpi		Patch	8/15/2019	41.42497	-73.45253	0-2	2	0.6405
262	MyrSpi		Patch	8/15/2019	41.43093	-73.46013	2-4	2	0.6488
263	MyrSpi		Patch	8/15/2019	41.46412	-73.45825	2-5	2	0.6683
264	MyrSpi		Patch	8/26/2019	41.46414	-73.44558	2-5	2	0.6803
265	MyrSpi		Patch	9/4/2019	41.52951	-73.44733	1-4	2	0.6914
266	MyrSpi		Patch	8/24/2019	41.52214	-73.43765	2-5	2	0.7480
267	MyrSpi		Patch	9/5/2019	41.54291	-73.46644	1-5	2	0.7483
268	MyrSpi		Patch	9/11/2019	41.56621	-73.48807	1-5	2	0.7561
269	MyrSpi		Patch	8/26/2019	41.46159	-73.44529	1-5	2	0.8058
270	MyrSpi		Patch	8/15/2019	41.42708	-73.45791	2-5	2	0.9097
271	MyrSpi		Patch	8/14/2019	41.45875	-73.44373	2-5	2	0.9237
272	MyrSpi		Patch	9/11/2019	41.57046	-73.48878	0-3	2	0.9467
273	MyrSpi		Patch	8/24/2019	41.47355	-73.44833	2-5	2	0.9752
274	MyrSpi		Patch	9/4/2019	41.50454	-73.44506	2-4	2	1.0415
275	MyrSpi		Patch	8/15/2019	41.43952	-73.45832	2-5	2	1.0486
276	MyrSpi		Patch	9/5/2019	41.49741	-73.45390	1-5	2	1.0702
277	MyrSpi		Patch	8/14/2019	41.45406	-73.44432	2-5	2	1.0751
278	MyrSpi		Patch	9/11/2019	41.53128	-73.46548	1-5	2	1.0759
279	MyrSpi		Patch	8/24/2019	41.46652	-73.44209	2-5	2	1.0980
280	MyrSpi		Patch	9/1/2019	41.51382	-73.46163	2-4	2	1.1134
281	MyrSpi		Patch	9/3/2019	41.49347	-73.44553	2-5	2	1.1237
282	MyrSpi		Patch	8/14/2019	41.45030	-73.44624	2-5	2	1.1459
283	MyrSpi		Patch	8/15/2019	41.42398	-73.45438	0-2	2	1.1736
284	MyrSpi		Patch	9/11/2019	41.56682	-73.48682	1-5	2	1.1921
285	MyrSpi		Patch	8/26/2019	41.47912	-73.45659	2-5	2	1.2002
286	MyrSpi		Patch	9/11/2019	41.56394	-73.48321	2-5	2	1.2384
287	MyrSpi		Patch	9/3/2019	41.51356	-73.44027	0-1	2	1.2458
288	MyrSpi		Patch	9/4/2019	41.53365	-73.44785	1-4	2	1.3082
289	MyrSpi		Patch	8/26/2019	41.47113	-73.45156	1-5	2	1.3096
290	MyrSpi		Patch	9/11/2019	41.57005	-73.49041	2-3	2	1.3789
291	MyrSpi		Patch	8/26/2019	41.47617	-73.45459	2-5	2	1.4401
292	MyrSpi		Patch	9/5/2019	41.54700	-73.46378	1-4	2	1.4947
293	MyrSpi		Patch	8/15/2019	41.46617	-73.45053	2-5	2	1.5271
294	MyrSpi		Patch	9/5/2019	41.54423	-73.46064	1-4	2	1.5415

Appendix Candlewood Lake Invasive Plant Location Data 2019 (7 of 8)

FID	Invasive Plant Name	Notes	Type	Date	Latitude	Longitude	Depth (m)	Abundance	Area (acres)
295	MyrSpi		Patch	8/24/2019	41.47166	-73.44527	2-5	2	1.5630
296	MyrSpi		Patch	8/26/2019	41.47699	-73.44947	2-5	2	1.6381
297	MyrSpi		Patch	9/1/2019	41.50821	-73.45913	2-4	2	1.6888
298	MyrSpi		Patch	9/5/2019	41.51652	-73.45558	2-5	2	1.8703
299	MyrSpi		Patch	9/1/2019	41.50650	-73.46454	1-4	2	1.9020
300	MyrSpi		Patch	8/26/2019	41.46891	-73.44801	1-5	2	2.0571
301	MyrSpi		Patch	8/14/2019	41.43539	-73.45445	2-5	2	2.0636
302	MyrSpi		Patch	8/26/2019	41.46724	-73.44961	1-5	2	2.0809
303	MyrSpi		Patch	9/1/2019	41.50251	-73.45996	2-4	2	2.1091
304	MyrSpi		Patch	9/1/2019	41.50851	-73.46064	2-4	2	2.1297
305	MyrSpi		Patch	8/15/2019	41.45702	-73.45295	2-5	2	2.2030
306	MyrSpi		Patch	9/5/2019	41.54863	-73.47036	1-4	2	2.2167
307	MyrSpi		Patch	9/4/2019	41.52311	-73.44628	1-4	2	2.2274
308	MyrSpi		Patch	9/5/2019	41.55387	-73.46916	1-4	2	2.4349
309	MyrSpi		Patch	8/26/2019	41.46245	-73.44653	1-5	2	2.4424
310	MyrSpi		Patch	9/11/2019	41.53692	-73.46888	1-5	2	2.7986
311	MyrSpi		Patch	8/14/2019	41.43946	-73.45367	2-5	2	2.8135
312	MyrSpi		Patch	9/4/2019	41.56471	-73.44093	0-1	2	2.9659
313	MyrSpi		Patch	8/14/2019	41.42954	-73.45329	2-5	2	2.9910
314	MyrSpi		Patch	9/5/2019	41.49648	-73.44622	1-5	2	3.1583
315	MyrSpi		Patch	9/11/2019	41.53407	-73.46230	1-5	2	3.3464
316	MyrSpi		Patch	8/15/2019	41.46641	-73.45535	2-5	2	3.5194
317	MyrSpi		Patch	9/5/2019	41.54874	-73.46795	1-4	2	3.6088
318	MyrSpi		Patch	9/3/2019	41.51703	-73.43971	1-5	2	3.9222
319	MyrSpi		Patch	9/11/2019	41.52879	-73.46180	1-5	2	4.1182
320	MyrSpi		Patch	9/1/2019	41.50403	-73.46592	1-4	2	4.8094
321	MyrSpi		Patch	8/15/2019	41.46912	-73.45693	1-5	2	4.9218
322	MyrSpi		Patch	9/4/2019	41.56274	-73.44445	1-4	2	4.9952
323	MyrSpi		Patch	9/11/2019	41.55806	-73.48366	1-5	2	5.2186
324	MyrSpi		Patch	8/14/2019	41.44529	-73.44930	2-5	2	5.2907
325	MyrSpi		Patch	9/11/2019	41.54871	-73.47556	2-5	2	5.7323
326	MyrSpi		Patch	9/11/2019	41.56784	-73.48314	1-5	2	6.0734
327	MyrSpi		Patch	9/5/2019	41.55868	-73.47500	1-4	2	6.0890
328	MyrSpi		Patch	8/28/2019	41.45565	-73.43420	1-5	2	6.1294
329	MyrSpi		Patch	8/26/2019	41.48068	-73.46073	1-5	2	6.5949
330	MyrSpi		Patch	8/28/2019	41.44904	-73.43074	1-5	2	6.6499
331	MyrSpi		Patch	8/14/2019	41.45310	-73.43682	1-5	2	6.6829
332	MyrSpi		Patch	9/4/2019	41.54922	-73.44651	1-5	2	6.8718
333	MyrSpi		Patch	9/4/2019	41.56569	-73.44160	1-5	2	7.2593
334	MyrSpi		Patch	9/5/2019	41.52604	-73.45349	1-4	2	7.7155
335	MyrSpi		Patch	9/11/2019	41.55768	-73.48076	1-5	2	7.8174
336	MyrSpi		Patch	9/11/2019	41.53656	-73.46537	1-5	2	8.5697
337	MyrSpi		Patch	8/24/2019	41.52790	-73.44254	2-5	2	8.9430
338	MyrSpi		Patch	9/3/2019	41.54400	-73.44203	1-5	2	11.2268
339	MyrSpi		Patch	9/3/2019	41.50377	-73.44150	1-5	2	11.4168
340	MyrSpi		Patch	9/1/2019	41.52004	-73.46289	1-5	2	13.8782
341	MyrSpi		Patch	9/5/2019	41.50444	-73.45321	1-5	2	17.8947
342	MyrSpi		Patch	8/28/2019	41.46523	-73.42850	1-5	2	24.6027
343	MyrSpi		Patch	8/28/2019	41.47933	-73.43933	1-5	2	31.8058

Appendix Candlewood Lake Invasive Plant Location Data 2019 (8 of 8)

FID	Invasive Plant Name	Notes	Type	Date	Latitude	Longitude	Depth (m)	Abundance	Area (acres)
344	MyrSpi		Patch	8/14/2019	41.42679	-73.45368	1-5	2	41.1774
345	MyrSpi		Patch	9/3/2019	41.52224	-73.43609	0-2	3	0.0121
346	MyrSpi		Patch	9/3/2019	41.52280	-73.43620	0-2	3	0.0363
347	MyrSpi		Patch	8/28/2019	41.44683	-73.42961	0-1	3	0.0839
348	MyrSpi		Patch	9/11/2019	41.57007	-73.48391	0-1	3	0.0955
349	MyrSpi		Patch	9/3/2019	41.52750	-73.43723	1-3	3	0.1168
350	MyrSpi		Patch	8/24/2019	41.52373	-73.43835	2-5	3	0.1327
351	MyrSpi		Patch	8/26/2019	41.48575	-73.45958	1-5	3	0.2610
352	MyrSpi		Patch	8/24/2019	41.47205	-73.44722	2-5	3	0.3779
353	MyrSpi		Patch	9/4/2019	41.57249	-73.44421	1-5	3	0.6064
354	MyrSpi		Patch	9/3/2019	41.51985	-73.43593	1-5	3	3.3840
355	MyrSpi		Patch	8/24/2019	41.52803	-73.43838	2-5	3	4.4964
356	MyrSpi		Patch	9/11/2019	41.56343	-73.48740	1-5	3	4.8472
357	MyrSpi		Patch	8/26/2019	41.48924	-73.46073	1-5	3	13.1253
358	MyrSpi		Patch	9/11/2019	41.56928	-73.48466	0-1	4	0.0207
359	MyrSpi		Patch	8/28/2019	41.44782	-73.43055	0-1	4	0.1017
360	MyrSpi		Patch	9/11/2019	41.57004	-73.48453	0-1	4	0.1469
361	MyrSpi		Patch	9/11/2019	41.56949	-73.48477	0-1	5	0.0358
362	NajMin	Transect 8	Patch	9/8/2019	41.51278	-73.44118	1-4	2	0.0322

Squantz Pond 2018

Appendix Squantz Pond Invasive Plant Location Data 2018 (1 of 2)

FID	Invasive Plant Name	Notes	Type	Date	Latitude	Longitude	Depth (m)	Abundance	Area (acres)
1	MyrSpi		Point	8/9/2018	41.53920	-73.48337	0-2	1	0.0002
2	MyrSpi		Point	7/31/2018	41.51385	-73.47364	1-3	2	0.0002
3	MyrSpi		Point	7/31/2018	41.51389	-73.47366	1-3	2	0.0002
4	MyrSpi		Point	7/31/2018	41.51393	-73.47367	1-3	2	0.0002
5	MyrSpi		Point	7/31/2018	41.51448	-73.47393	1-3	2	0.0002
6	MyrSpi		Point	7/31/2018	41.51443	-73.47394	1-3	2	0.0002
7	MyrSpi		Point	7/31/2018	41.51441	-73.47395	1-3	2	0.0002
8	MyrSpi		Point	7/31/2018	41.51442	-73.47400	1-3	2	0.0002
9	MyrSpi		Point	8/2/2018	41.52606	-73.48631	0-2	2	0.0002
10	MyrSpi		Point	8/9/2018	41.53799	-73.48351	0-2	2	0.0002
11	MyrSpi		Point	8/9/2018	41.53807	-73.48354	0-2	2	0.0002
12	MyrSpi		Point	8/9/2018	41.53813	-73.48354	0-2	2	0.0002
13	MyrSpi		Patch	8/9/2018	41.53732	-73.48345	0-2	2	0.0341
14	MyrSpi		Patch	7/31/2018	41.51362	-73.47361	1-4	2	0.0341
15	MyrSpi		Patch	8/9/2018	41.53399	-73.48458	1-3	2	0.0412
16	MyrSpi		Patch	8/2/2018	41.51689	-73.48304	1-4	2	0.0697
17	MyrSpi		Patch	8/9/2018	41.53465	-73.48470	1-3	2	0.0941
18	MyrSpi		Patch	8/2/2018	41.52924	-73.48496	1-3	2	0.1222
19	MyrSpi		Patch	8/2/2018	41.52845	-73.48587	0-2	2	0.1225
20	MyrSpi		Patch	7/31/2018	41.51729	-73.47689	1-3	2	0.1917
21	MyrSpi		Patch	8/2/2018	41.53057	-73.48512	1-3	2	1.6262
22	MyrSpi		Patch	8/2/2018	41.51272	-73.47608	1-4	2	1.9879
23	MyrSpi		Point	7/31/2018	41.51330	-73.47337	1-3	3	0.0002
24	MyrSpi		Point	8/9/2018	41.53400	-73.48389	2-4	3	0.0002
25	MyrSpi		Point	8/9/2018	41.53397	-73.48320	0-2	3	0.0002
26	MyrSpi		Point	8/9/2018	41.53371	-73.48317	0-2	3	0.0002
27	MyrSpi		Patch	8/9/2018	41.53934	-73.48369	0-2	3	0.0282
28	MyrSpi		Patch	8/2/2018	41.52524	-73.48576	1-3	3	0.1654
29	MyrSpi		Patch	8/9/2018	41.53309	-73.48323	2-4	3	0.1880
30	MyrSpi		Patch	7/31/2018	41.51232	-73.47227	1-4	3	0.2187
31	MyrSpi		Patch	8/2/2018	41.52806	-73.48568	1-4	3	0.2381
32	MyrSpi		Patch	7/31/2018	41.51156	-73.47120	1-3	3	0.2407
33	MyrSpi		Patch	8/9/2018	41.53557	-73.48467	0-2	3	0.2983
34	MyrSpi		Patch	7/31/2018	41.51768	-73.47729	1-4	3	0.3188
35	MyrSpi		Patch	7/31/2018	41.51654	-73.47635	1-3	3	0.6067
36	MyrSpi		Patch	7/31/2018	41.51550	-73.47519	1-4	3	0.6433
37	MyrSpi		Patch	8/9/2018	41.53209	-73.48330	2-4	3	0.6521
38	MyrSpi		Patch	8/2/2018	41.53201	-73.48472	1-3	3	0.6603
39	MyrSpi		Patch	8/2/2018	41.51222	-73.47469	1-3	3	0.6877
40	MyrSpi		Patch	7/31/2018	41.51904	-73.47834	1-4	3	0.8254
41	MyrSpi		Patch	7/31/2018	41.52216	-73.48044	1-4	3	0.9958
42	MyrSpi		Patch	7/31/2018	41.51065	-73.47231	1-3	3	1.3007
43	MyrSpi		Patch	8/2/2018	41.51130	-73.47847	1-4	3	1.6612
44	MyrSpi		Patch	7/31/2018	41.52596	-73.48246	1-4	3	3.1229
45	MyrSpi		Patch	7/31/2018	41.53048	-73.48319	1-4	3	3.4653
46	MyrSpi		Point	8/9/2018	41.53663	-73.48439	0-2	4	0.0002
47	MyrSpi		Patch	8/2/2018	41.51107	-73.47894	1-4	4	0.0400
48	NajMin	Transect 4	Point	8/9/2018	41.53083	-73.48280	0-1	2	0.0002
49	NajMin		Patch	8/2/2018	41.51248	-73.47549	0-1	2	0.0394

Appendix Squantz Pond Invasive Plant Location Data 2018 (2 of 2)

FID	Invasive Plant Name	Notes	Type	Date	Latitude	Longitude	Depth (m)	Abundance	Area (acres)
50	NajMin		Patch	8/2/2018	41.51204	-73.47481	0-1	2	0.2491

Candlewood Lake Eurasian Watermilfoil Surface Location Data

2018

Appendix Candlewood Lake Eurasian watermilfoil to Surface Locations 2018 (1 of 10)

FID	Surveyor	Invasive Plant Name	Type	Notes	Date	Latitude	Longitude	Area (acres)
1	Greg Bugbee	MyrSpi	Patch	Depth = 1-3	9/13/2018	-73.44424	41.56140	0.6528
2	Greg Bugbee	MyrSpi	Patch	Depth = 1-3	9/13/2018	-73.44398	41.56000	0.3261
3	Greg Bugbee	MyrSpi	Patch	Depth = 1-3	9/13/2018	-73.44479	41.56393	0.1876
4	Greg Bugbee	MyrSpi	Patch	Depth = 1-3	9/13/2018	-73.44479	41.56457	0.0716
5	Greg Bugbee	MyrSpi	Patch	Depth = 1-3	9/13/2018	-73.44493	41.56511	0.179
6	Greg Bugbee	MyrSpi	Patch	Depth = 1-3	9/13/2018	-73.44309	41.57110	0.5285
7	Greg Bugbee	MyrSpi	Patch	Depth = 1-3	9/13/2018	-73.44284	41.56895	0.0504
8	Greg Bugbee	MyrSpi	Patch	Depth = 1-3	9/13/2018	-73.44201	41.56683	0.0577
9	Greg Bugbee	MyrSpi	Patch	Depth = 1-3	9/13/2018	-73.44050	41.56012	0.0402
10	Greg Bugbee	MyrSpi	Patch	Depth = 1-3	9/13/2018	-73.44308	41.54357	0.2728
11	Greg Bugbee	MyrSpi	Patch	Depth = 1-3	9/13/2018	-73.44269	41.53844	0.0861
12	Greg Bugbee	MyrSpi	Patch	Depth = 1-3	9/13/2018	-73.45338	41.51417	0.2327
13	Greg Bugbee	MyrSpi	Patch	Depth = 1-3	9/13/2018	-73.48810	41.56629	0.1137
14	Greg Bugbee	MyrSpi	Patch	Depth = 1-3	9/13/2018	-73.48149	41.55840	1.1497
15	Greg Bugbee	MyrSpi	Patch	Depth = 1-3	9/13/2018	-73.46969	41.55054	0.2606
16	Greg Bugbee	MyrSpi	Patch	Depth = 1-3	9/13/2018	-73.46570	41.53559	0.0852
17	Greg Bugbee	MyrSpi	Patch	Depth = 1-3	9/13/2018	-73.46204	41.53516	0.2261
18	Greg Bugbee	MyrSpi	Patch	Depth = 1-3	9/13/2018	-73.46193	41.53589	0.0699
19	Greg Bugbee	MyrSpi	Patch	Depth = 1-3	9/13/2018	-73.46482	41.52261	0.0442
20	Greg Bugbee	MyrSpi	Patch	Depth = 1-3	9/13/2018	-73.46472	41.52230	0.0772
21	Greg Bugbee	MyrSpi	Patch	Depth = 1-3	9/13/2018	-73.46567	41.52094	0.2256
22	Greg Bugbee	MyrSpi	Patch	Depth = 1-3	9/13/2018	-73.46481	41.51916	0.3746
23	Greg Bugbee	MyrSpi	Patch	Depth = 1-3	9/13/2018	-73.45876	41.43903	0.1694
24	Greg Bugbee	MyrSpi	Patch	Depth = 1-3	9/14/2018	-73.43660	41.45298	1.5886
25	Greg Bugbee	MyrSpi	Patch	Depth = 1-3	9/14/2018	-73.44903	41.44559	0.2388
26	Greg Bugbee	MyrSpi	Patch	Depth = 1-3	9/14/2018	-73.45429	41.43905	0.1914
27	Greg Bugbee	MyrSpi	Patch	Depth = 1-3	9/14/2018	-73.45443	41.43843	0.1321
28	Greg Bugbee	MyrSpi	Patch	Depth = 1-3	9/14/2018	-73.45104	41.47078	0.1529
29	Greg Bugbee	MyrSpi	Patch	Depth = 1-3	9/14/2018	-73.46832	41.49893	0.3118
30	Greg Bugbee	MyrSpi	Patch	Depth = 1-4	9/14/2018	-73.45015	41.42737	3.314
31	Greg Bugbee	MyrSpi	Patch	Depth = 1-4	9/14/2018	-73.45232	41.42563	2.5839
32	Greg Bugbee	MyrSpi	Patch	Depth = 1-4	9/14/2018	-73.45599	41.42543	0.4781
33	Greg Bugbee	MyrSpi	Patch	Depth = 1-4	9/14/2018	-73.45693	41.42590	0.0296
34	Greg Bugbee	MyrSpi	Patch	Depth = 1-4	9/14/2018	-73.45421	41.45695	0.4247
35	Greg Bugbee	MyrSpi	Patch	Depth = 1-4	9/14/2018	-73.46207	41.48053	0.1359
36	Greg Bugbee	MyrSpi	Patch	Depth = 1-4	9/14/2018	-73.46187	41.48127	0.1447
37	Greg Bugbee	MyrSpi	Patch	Depth = 1-4	9/14/2018	-73.45949	41.48413	2.8361
38	Greg Bugbee	MyrSpi	Patch	Depth = 1-4	9/14/2018	-73.45984	41.48627	0.9038
39	Greg Bugbee	MyrSpi	Patch	Depth = 1-4	9/14/2018	-73.46245	41.48762	1.8298
40	Greg Bugbee	MyrSpi	Patch	Depth = 1-4	9/14/2018	-73.46605	41.49115	0.1045
41	Greg Bugbee	MyrSpi	Patch	Depth = 1-4	9/14/2018	-73.46612	41.49569	0.3211
42	Greg Bugbee	MyrSpi	Patch	Depth = 1-4	9/14/2018	-73.42542	41.46431	2.6372
43	Greg Bugbee	MyrSpi	Patch	Depth = 1-4	9/14/2018	-73.42817	41.46015	1.3682
44	Greg Bugbee	MyrSpi	Patch	Depth = 2-3	9/13/2018	-73.46781	41.54939	0.3325
45	Greg Bugbee	MyrSpi	Patch	Depth = 2-3	9/14/2018	-73.45182	41.42791	1.313
46	Greg Bugbee	MyrSpi	Patch	Depth = 2-4	9/14/2018	-73.45941	41.48828	0.1584
47	Greg Bugbee	MyrSpi	Patch	Depth = 2-4	9/14/2018	-73.46429	41.49597	0.0882

Appendix Candlewood Lake Eurasian watermilfoil to Surface Locations 2018 (2 of 10)

FID	Surveyor	Invasive Plant Name	Type	Notes	Date	Latitude	Longitude	Area (acres)
48	Greg Bugbee	MyrSpi	Patch	Depth = 2-4	9/14/2018	-73.46347	41.49615	0.1533
49	Greg Bugbee	MyrSpi	Patch	Depth = 2-4	9/14/2018	-73.43507	41.48736	0.1084
50	Greg Bugbee	MyrSpi	Patch	Depth = 2-4	9/14/2018	-73.44448	41.47690	0.2989
51	Greg Bugbee	MyrSpi	Patch	Depth = 2-4	9/14/2018	-73.44432	41.47572	0.0247
52	Greg Bugbee	MyrSpi	Patch	Depth = 2-4	9/14/2018	-73.42978	41.46070	0.6983
53	Greg Bugbee	MyrSpi	Patch	Depth = 2-4	9/14/2018	-73.43131	41.46178	0.1279
54	Greg Bugbee	MyrSpi	Patch	Depth = 0-1	9/14/2018	-73.49162	41.57294	0.4581
55	Greg Bugbee	MyrSpi	Patch	Depth = 0-1	9/14/2018	-73.49205	41.57119	0.1042
56	Greg Bugbee	MyrSpi	Patch	Depth = 0-2	9/13/2018	-73.43719	41.51876	0.0828
57	Greg Bugbee	MyrSpi	Patch	Depth = 0-2	9/13/2018	-73.44014	41.51358	0.6656
58	Greg Bugbee	MyrSpi	Patch	Depth = 0-2	9/13/2018	-73.44174	41.50401	1.0937
59	Greg Bugbee	MyrSpi	Patch	Depth = 0-2	9/14/2018	-73.46897	41.49854	0.994
60	Greg Bugbee	MyrSpi	Patch	Depth = 0-2	9/14/2018	-73.46810	41.49709	0.0534
61	Greg Bugbee	MyrSpi	Patch	Depth = 0-2	9/14/2018	-73.43690	41.47236	0.8519
62	Greg Bugbee	MyrSpi	Patch	Depth = 0-2	9/14/2018	-73.43710	41.47301	0.3485
63	Greg Bugbee	MyrSpi	Patch	Depth = 0-2	9/14/2018	-73.42516	41.46344	0.2631
64	Greg Bugbee	MyrSpi	Point	Depth = 1.5	8/16/2018	-73.45334	41.51406	0.0002
65	Greg Bugbee	MyrSpi	Point	Depth = .5	8/16/2018	-73.45453	41.53175	0.0002
66	Greg Bugbee	MyrSpi	Point	Depth = 0-1	8/21/2018	-73.49181	41.57071	0.0002
67	Greg Bugbee	MyrSpi	Point	Depth = 3	8/21/2018	-73.49165	41.57220	0.0002
68	Greg Bugbee	MyrSpi	Point	Depth = 2	8/21/2018	-73.49182	41.57223	0.0002
69	Greg Bugbee	MyrSpi	Point	Depth = 2	8/21/2018	-73.49182	41.57226	0.0002
70	Greg Bugbee	MyrSpi	Point	Depth = 2	8/21/2018	-73.49179	41.57341	0.0002
71	Greg Bugbee	MyrSpi	Point	Depth = 1	8/21/2018	-73.49229	41.57462	0.0002
72	Greg Bugbee	MyrSpi	Point	Depth = 1	8/21/2018	-73.49085	41.57270	0.0002
73	Greg Bugbee	MyrSpi	Point	Depth = 1	8/21/2018	-73.49059	41.57228	0.0002
74	Greg Bugbee	MyrSpi	Point	Depth = 2	8/23/2018	-73.43975	41.51365	0.0002
75	Greg Bugbee	MyrSpi	Point	Depth = 2	8/23/2018	-73.43960	41.51362	0.0002
76	Greg Bugbee	MyrSpi	Point	Depth = 2	8/23/2018	-73.43960	41.51355	0.0002
77	Greg Bugbee	MyrSpi	Point	Depth = 2	8/23/2018	-73.43953	41.51340	0.0002
78	Greg Bugbee	MyrSpi	Point	Depth = 2	8/24/2018	-73.43742	41.51908	0.0002
79	Greg Bugbee	MyrSpi	Point	Depth = 2	8/24/2018	-73.43729	41.51896	0.0002
80	Greg Bugbee	MyrSpi	Point	Depth = 2	8/24/2018	-73.43727	41.51886	0.0002
81	Greg Bugbee	MyrSpi	Point	Depth = 2	8/24/2018	-73.43720	41.51878	0.0002
82	Greg Bugbee	MyrSpi	Point	Depth = 2	8/24/2018	-73.43699	41.51870	0.0002
83	Greg Bugbee	MyrSpi	Point	Depth = 2	8/24/2018	-73.43626	41.51867	0.0002
84	Greg Bugbee	MyrSpi	Point	Depth = 1.5	8/28/2018	-73.44547	41.55277	0.0002
85	Greg Bugbee	MyrSpi	Point	Depth = 2.5	8/28/2018	-73.44386	41.56026	0.0002
86	Greg Bugbee	MyrSpi	Point	Depth = 2.5	8/28/2018	-73.44389	41.56011	0.0002
87	Greg Bugbee	MyrSpi	Point	Depth = 2.5	8/28/2018	-73.44399	41.56005	0.0002
88	Greg Bugbee	MyrSpi	Point	Depth = 2.5	8/28/2018	-73.44406	41.55999	0.0002
89	Greg Bugbee	MyrSpi	Point	Depth = 2.5	8/28/2018	-73.44398	41.56059	0.0002
90	Greg Bugbee	MyrSpi	Point	Depth = 2.5	8/28/2018	-73.44423	41.56105	0.0002
91	Greg Bugbee	MyrSpi	Point	Depth = 2.5	8/28/2018	-73.44422	41.56114	0.0002
92	Greg Bugbee	MyrSpi	Point	Depth = 2.5	8/28/2018	-73.44426	41.56120	0.0002
93	Greg Bugbee	MyrSpi	Point	Depth = 2.5	8/28/2018	-73.44424	41.56134	0.0002
94	Greg Bugbee	MyrSpi	Point	Depth = 2.5	8/28/2018	-73.44427	41.56144	0.0002

Appendix Candlewood Lake Eurasian watermilfoil to Surface Locations 2018 (3 of 10)

FID	Surveyor	Invasive Plant Name	Type	Notes	Date	Latitude	Longitude	Area (acres)
95	Greg Bugbee	MyrSpi	Point	Depth = 2.5	8/28/2018	-73.44424	41.56169	0.0002
96	Greg Bugbee	MyrSpi	Point	Depth = 2.5	8/28/2018	-73.44426	41.56178	0.0002
97	Greg Bugbee	MyrSpi	Point	Depth = 2.5	8/28/2018	-73.44438	41.56189	0.0002
98	Greg Bugbee	MyrSpi	Point	Depth = 2.5	8/28/2018	-73.44454	41.56203	0.0002
99	Greg Bugbee	MyrSpi	Point	Depth = 2.5	8/28/2018	-73.44478	41.56369	0.0002
100	Greg Bugbee	MyrSpi	Point	Depth = 2.5	8/28/2018	-73.44482	41.56377	0.0002
101	Greg Bugbee	MyrSpi	Point	Depth = 2.5	8/28/2018	-73.44486	41.56492	0.0002
102	Greg Bugbee	MyrSpi	Point	Depth = 2.5	8/28/2018	-73.44493	41.56498	0.0002
103	Greg Bugbee	MyrSpi	Point	Depth = 2.5	8/28/2018	-73.44499	41.56504	0.0002
104	Greg Bugbee	MyrSpi	Point	Depth = 2.5	8/28/2018	-73.44500	41.56518	0.0002
105	Greg Bugbee	MyrSpi	Point	Depth = 2	8/29/2018	-73.48885	41.57002	0.0002
106	Greg Bugbee	MyrSpi	Point	Depth = 2	8/29/2018	-73.48817	41.56616	0.0002
107	Greg Bugbee	MyrSpi	Point	Depth = 1.5	8/29/2018	-73.48782	41.56607	0.0002
108	Greg Bugbee	MyrSpi	Point	Depth = 1.5	8/29/2018	-73.48780	41.56597	0.0002
109	Greg Bugbee	MyrSpi	Point	Depth = 1.5	8/29/2018	-73.48775	41.56584	0.0002
110	Greg Bugbee	MyrSpi	Point	Depth = 0.3	8/29/2018	-73.42980	41.44695	0.0002
111	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.44514	41.56620	0.0002
112	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.44288	41.56936	0.0002
113	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.44282	41.56946	0.0002
114	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.44255	41.56775	0.0002
115	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.44249	41.56761	0.0002
116	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.44235	41.56736	0.0002
117	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.44107	41.56556	0.0002
118	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.44079	41.56501	0.0002
119	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.44073	41.56492	0.0002
120	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.44058	41.56467	0.0002
121	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.44054	41.56268	0.0002
122	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.44048	41.56257	0.0002
123	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.44050	41.56211	0.0002
124	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.44045	41.56197	0.0002
125	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.44048	41.56124	0.0002
126	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.44174	41.55218	0.0002
127	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.44223	41.55256	0.0002
128	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.44404	41.55166	0.0002
129	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.44224	41.54688	0.0002
130	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.44303	41.54462	0.0002
131	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.44304	41.54443	0.0002
132	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.44247	41.53799	0.0002
133	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.44243	41.53783	0.0002
134	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.44235	41.53773	0.0002
135	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.44200	41.53723	0.0002
136	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.43876	41.53551	0.0002
137	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.43879	41.53549	0.0002
138	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.43883	41.53543	0.0002
139	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.43891	41.53393	0.0002
140	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.43882	41.53388	0.0002
141	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.43616	41.52280	0.0002

Appendix Candlewood Lake Eurasian watermilfoil to Surface Locations 2018 (4 of 10)

FID	Surveyor	Invasive Plant Name	Type	Notes	Date	Latitude	Longitude	Area (acres)
142	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.43576	41.52224	0.0002
143	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.43562	41.52227	0.0002
144	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.43559	41.51919	0.0002
145	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.43555	41.51914	0.0002
146	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.43542	41.51916	0.0002
147	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.43563	41.51917	0.0002
148	Greg Bugbee	MyrSpi	Point	Depth = 1	9/13/2018	-73.43519	41.51992	0.0002
149	Greg Bugbee	MyrSpi	Point	Depth = 1	9/13/2018	-73.43514	41.51944	0.0002
150	Greg Bugbee	MyrSpi	Point	Depth = 1	9/13/2018	-73.43511	41.51936	0.0002
151	Greg Bugbee	MyrSpi	Point	Depth = 1	9/13/2018	-73.43511	41.51931	0.0002
152	Greg Bugbee	MyrSpi	Point	Depth = 1	9/13/2018	-73.43524	41.51914	0.0002
153	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.43530	41.51920	0.0002
154	Greg Bugbee	MyrSpi	Point	Depth = 2	9/13/2018	-73.43535	41.51937	0.0002
155	Greg Bugbee	MyrSpi	Point	Depth = 2	9/13/2018	-73.43536	41.51940	0.0002
156	Greg Bugbee	MyrSpi	Point	Depth = 2	9/13/2018	-73.43542	41.51948	0.0002
157	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.43632	41.51869	0.0002
158	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.44027	41.51622	0.0002
159	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.44026	41.51613	0.0002
160	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.44055	41.51606	0.0002
161	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.44043	41.51598	0.0002
162	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.44114	41.51588	0.0002
163	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.44152	41.51564	0.0002
164	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.43838	41.50684	0.0002
165	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.43826	41.50645	0.0002
166	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.43785	41.50331	0.0002
167	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.43789	41.50315	0.0002
168	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.43806	41.50297	0.0002
169	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.43827	41.50286	0.0002
170	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.43851	41.50272	0.0002
171	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.43874	41.50270	0.0002
172	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.43902	41.50274	0.0002
173	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.43922	41.50283	0.0002
174	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.43948	41.50282	0.0002
175	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.43965	41.50275	0.0002
176	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.43956	41.50264	0.0002
177	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.44248	41.49878	0.0002
178	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.44246	41.49863	0.0002
179	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.45365	41.52964	0.0002
180	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.46178	41.54506	0.0002
181	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.46187	41.54509	0.0002
182	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.46187	41.54514	0.0002
183	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.46878	41.55400	0.0002
184	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.46882	41.55406	0.0002
185	Greg Bugbee	MyrSpi	Point	Depth = 2	9/13/2018	-73.46881	41.55417	0.0002
186	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.46961	41.55392	0.0002
187	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.46994	41.55385	0.0002
188	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.48310	41.56841	0.0002

Appendix Candlewood Lake Eurasian watermilfoil to Surface Locations 2018 (5 of 10)

FID	Surveyor	Invasive Plant Name	Type	Notes	Date	Latitude	Longitude	Area (acres)
189	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.48308	41.56846	0.0002
190	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.48318	41.56841	0.0002
191	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.48345	41.56868	0.0002
192	Greg Bugbee	MyrSpi	Point	Depth = 0-2	9/13/2018	-73.48333	41.56866	0.0002
193	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.48346	41.56876	0.0002
194	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.48362	41.56887	0.0002
195	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.48353	41.56895	0.0002
196	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.48373	41.56910	0.0002
197	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.48365	41.56913	0.0002
198	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.48374	41.56915	0.0002
199	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.48383	41.56915	0.0002
200	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.48398	41.56943	0.0002
201	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.48396	41.56958	0.0002
202	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.48396	41.56971	0.0002
203	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.48396	41.56980	0.0002
204	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.48394	41.56996	0.0002
205	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.48471	41.56961	0.0002
206	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.48469	41.56951	0.0002
207	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.48375	41.56845	0.0002
208	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.48373	41.56836	0.0002
209	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.48345	41.56747	0.0002
210	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.48503	41.56701	0.0002
211	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.48512	41.56711	0.0002
212	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.48568	41.56752	0.0002
213	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.48691	41.56711	0.0002
214	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.48697	41.56688	0.0002
215	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.48774	41.56581	0.0002
216	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.48776	41.56588	0.0002
217	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.48777	41.56595	0.0002
218	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.48781	41.56604	0.0002
219	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.48902	41.56990	0.0002
220	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.48895	41.56995	0.0002
221	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.48886	41.57000	0.0002
222	Greg Bugbee	MyrSpi	Point	Depth = 0-1	9/13/2018	-73.48861	41.57000	0.0002
223	Greg Bugbee	MyrSpi	Point	Depth = 0-1	9/13/2018	-73.48838	41.57023	0.0002
224	Greg Bugbee	MyrSpi	Point	Depth = 0-1	9/13/2018	-73.48920	41.57032	0.0002
225	Greg Bugbee	MyrSpi	Point	Depth = 0-1	9/13/2018	-73.48922	41.57022	0.0002
226	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.48924	41.57009	0.0002
227	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.48939	41.56997	0.0002
228	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.49082	41.57155	0.0002
229	Greg Bugbee	MyrSpi	Point	Depth = 0-1	9/13/2018	-73.49057	41.57183	0.0002
230	Greg Bugbee	MyrSpi	Point	Depth = 0-1	9/13/2018	-73.49058	41.57228	0.0002
231	Greg Bugbee	MyrSpi	Point	Depth = 0-1	9/13/2018	-73.49073	41.57236	0.0002
232	Greg Bugbee	MyrSpi	Point	Depth = 0-1	9/13/2018	-73.49083	41.57262	0.0002
233	Greg Bugbee	MyrSpi	Point	Depth = 0-1	9/13/2018	-73.49086	41.57266	0.0002
234	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.49184	41.57169	0.0002
235	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.49195	41.57162	0.0002

Appendix Candlewood Lake Eurasian watermilfoil to Surface Locations 2018 (6 of 10)

FID	Surveyor	Invasive Plant Name	Type	Notes	Date	Latitude	Longitude	Area (acres)
236	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.49117	41.57021	0.0002
237	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.48906	41.56506	0.0002
238	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.48882	41.56477	0.0002
239	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.48871	41.56472	0.0002
240	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.48861	41.56467	0.0002
241	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.48852	41.56464	0.0002
242	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.48845	41.56464	0.0002
243	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.48831	41.56458	0.0002
244	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.48829	41.56441	0.0002
245	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.48818	41.56427	0.0002
246	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.48811	41.56420	0.0002
247	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.48801	41.56411	0.0002
248	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.48792	41.56393	0.0002
249	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.48784	41.56390	0.0002
250	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.48772	41.56371	0.0002
251	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.48778	41.56357	0.0002
252	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.48741	41.56336	0.0002
253	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.48719	41.56312	0.0002
254	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.48707	41.56254	0.0002
255	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.48720	41.56248	0.0002
256	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.48736	41.56237	0.0002
257	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.48747	41.56231	0.0002
258	Greg Bugbee	MyrSpi	Point	Depth = 1-3	9/13/2018	-73.48758	41.56230	0.0002
259	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.48740	41.56224	0.0002
260	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.48735	41.56207	0.0002
261	Greg Bugbee	MyrSpi	Point	Depth = 1-3	9/13/2018	-73.48730	41.56196	0.0002
262	Greg Bugbee	MyrSpi	Point	Depth = 1-3	9/13/2018	-73.48653	41.56143	0.0002
263	Greg Bugbee	MyrSpi	Point	Depth = 1-3	9/13/2018	-73.48636	41.56143	0.0002
264	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.48572	41.56145	0.0002
265	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.48465	41.56100	0.0002
266	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.48049	41.55767	0.0002
267	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.48033	41.55745	0.0002
268	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.47998	41.55662	0.0002
269	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.48013	41.55661	0.0002
270	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.48033	41.55656	0.0002
271	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.48030	41.55644	0.0002
272	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.48023	41.55639	0.0002
273	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.48017	41.55635	0.0002
274	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.48027	41.55621	0.0002
275	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.48032	41.55623	0.0002
276	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.48052	41.55632	0.0002
277	Greg Bugbee	MyrSpi	Point	Depth = 1-3	9/13/2018	-73.47810	41.55167	0.0002
278	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.47639	41.55024	0.0002
279	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.47044	41.55138	0.0002
280	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.46547	41.53455	0.0002
281	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.46205	41.53705	0.0002
282	Greg Bugbee	MyrSpi	Point	Depth = 1-3	9/13/2018	-73.47082	41.53881	0.0002

Appendix Candlewood Lake Eurasian watermilfoil to Surface Locations 2018 (7 of 10)

FID	Surveyor	Invasive Plant Name	Type	Notes	Date	Latitude	Longitude	Area (acres)
283	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.47037	41.53851	0.0002
284	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.46904	41.53733	0.0002
285	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/13/2018	-73.46559	41.52178	0.0002
286	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.46607	41.52171	0.0002
287	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.46519	41.51994	0.0002
288	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.46297	41.51651	0.0002
289	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.46290	41.51627	0.0002
290	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.46279	41.51574	0.0002
291	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.46278	41.51562	0.0002
292	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.46274	41.51556	0.0002
293	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.46262	41.51545	0.0002
294	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.46251	41.51487	0.0002
295	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/13/2018	-73.46256	41.51478	0.0002
296	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.43444	41.45225	0.0002
297	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.43455	41.45231	0.0002
298	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.43463	41.45236	0.0002
299	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.43476	41.45246	0.0002
300	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.43495	41.45247	0.0002
301	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.43490	41.45256	0.0002
302	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.43866	41.45369	0.0002
303	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.43866	41.45361	0.0002
304	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.43878	41.45387	0.0002
305	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.43895	41.45386	0.0002
306	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.44291	41.45861	0.0002
307	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.44300	41.45863	0.0002
308	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.44335	41.45881	0.0002
309	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.44426	41.45519	0.0002
310	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.44409	41.45408	0.0002
311	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.44723	41.44804	0.0002
312	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.44725	41.44787	0.0002
313	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.44726	41.44735	0.0002
314	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.44744	41.44669	0.0002
315	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.44748	41.44669	0.0002
316	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.44758	41.44665	0.0002
317	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.44757	41.44657	0.0002
318	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.44748	41.44655	0.0002
319	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.44746	41.44651	0.0002
320	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.44736	41.44637	0.0002
321	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.44743	41.44623	0.0002
322	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.44769	41.44572	0.0002
323	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.44777	41.44567	0.0002
324	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.44812	41.44564	0.0002
325	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.44809	41.44546	0.0002
326	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.45304	41.43932	0.0002
327	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.45292	41.43924	0.0002
328	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.45453	41.43639	0.0002
329	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.45451	41.43630	0.0002

Appendix Candlewood Lake Eurasian watermilfoil to Surface Locations 2018 (8 of 10)

FID	Surveyor	Invasive Plant Name	Type	Notes	Date	Latitude	Longitude	Area (acres)
330	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.45446	41.43590	0.0002
331	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.45440	41.43550	0.0002
332	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.45434	41.43536	0.0002
333	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.45431	41.43523	0.0002
334	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.45428	41.43505	0.0002
335	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.45424	41.43494	0.0002
336	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.45423	41.43482	0.0002
337	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.45685	41.42606	0.0002
338	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.45689	41.42617	0.0002
339	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.45071	41.45615	0.0002
340	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.45073	41.45628	0.0002
341	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.45222	41.45709	0.0002
342	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.45474	41.45716	0.0002
343	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.45484	41.45720	0.0002
344	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.45789	41.46372	0.0002
345	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.45999	41.46480	0.0002
346	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.46010	41.46471	0.0002
347	Greg Bugbee	MyrSpi	Point	Depth = 0-1	9/14/2018	-73.46109	41.46394	0.0002
348	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.46093	41.47482	0.0002
349	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.46230	41.47924	0.0002
350	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.45178	41.47162	0.0002
351	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.45168	41.47158	0.0002
352	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.45077	41.46983	0.0002
353	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.45064	41.46976	0.0002
354	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.45015	41.46876	0.0002
355	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.45009	41.46776	0.0002
356	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.44998	41.46729	0.0002
357	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.44992	41.46717	0.0002
358	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.44987	41.46704	0.0002
359	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.44967	41.46670	0.0002
360	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.44654	41.46266	0.0002
361	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.44705	41.46811	0.0002
362	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.44885	41.46965	0.0002
363	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.45549	41.49188	0.0002
364	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.45566	41.49199	0.0002
365	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.45581	41.49210	0.0002
366	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.45607	41.49223	0.0002
367	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.45620	41.49227	0.0002
368	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.45629	41.49233	0.0002
369	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.45845	41.49155	0.0002
370	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.45845	41.49145	0.0002
371	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.45851	41.49136	0.0002
372	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.45842	41.49042	0.0002
373	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.45847	41.49022	0.0002
374	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.45848	41.48998	0.0002
375	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.45853	41.48957	0.0002
376	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.45856	41.48944	0.0002

Appendix Candlewood Lake Eurasian watermilfoil to Surface Locations 2018 (9 of 10)

FID	Surveyor	Invasive Plant Name	Type	Notes	Date	Latitude	Longitude	Area (acres)
377	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.45871	41.48928	0.0002
378	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.45879	41.48921	0.0002
379	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.45896	41.48913	0.0002
380	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.45903	41.48909	0.0002
381	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.45916	41.48895	0.0002
382	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.45927	41.48873	0.0002
383	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.45916	41.48737	0.0002
384	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.45922	41.48723	0.0002
385	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/14/2018	-73.45912	41.48677	0.0002
386	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/14/2018	-73.45919	41.48669	0.0002
387	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/14/2018	-73.45903	41.48654	0.0002
388	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/14/2018	-73.46042	41.48649	0.0002
389	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/14/2018	-73.46043	41.48654	0.0002
390	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/14/2018	-73.46857	41.49978	0.0002
391	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/14/2018	-73.46865	41.49990	0.0002
392	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/14/2018	-73.46855	41.49977	0.0002
393	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/14/2018	-73.46812	41.49776	0.0002
394	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/14/2018	-73.46805	41.49689	0.0002
395	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/14/2018	-73.46557	41.49586	0.0002
396	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/14/2018	-73.46547	41.49594	0.0002
397	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.46545	41.49578	0.0002
398	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.46514	41.49573	0.0002
399	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.46519	41.49584	0.0002
400	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.46523	41.49598	0.0002
401	Greg Bugbee	MyrSpi	Point	Depth = 1-2	9/14/2018	-73.46533	41.49605	0.0002
402	Greg Bugbee	MyrSpi	Point	Depth = 2-3	9/14/2018	-73.46520	41.49594	0.0002
403	Greg Bugbee	MyrSpi	Point	Depth = 2-4	9/14/2018	-73.46517	41.49588	0.0002
404	Greg Bugbee	MyrSpi	Point	Depth = 2-4	9/14/2018	-73.43868	41.48422	0.0002
405	Greg Bugbee	MyrSpi	Point	Depth = 2-4	9/14/2018	-73.43871	41.48428	0.0002
406	Greg Bugbee	MyrSpi	Point	Depth = 2-4	9/14/2018	-73.43883	41.48442	0.0002
407	Greg Bugbee	MyrSpi	Point	Depth = 2-4	9/14/2018	-73.43894	41.48444	0.0002
408	Greg Bugbee	MyrSpi	Point	Depth = 2-4	9/14/2018	-73.44003	41.48496	0.0002
409	Greg Bugbee	MyrSpi	Point	Depth = 2-4	9/14/2018	-73.44012	41.48490	0.0002
410	Greg Bugbee	MyrSpi	Point	Depth = 2-4	9/14/2018	-73.44027	41.48502	0.0002
411	Greg Bugbee	MyrSpi	Point	Depth = 2-4	9/14/2018	-73.44035	41.48503	0.0002
412	Greg Bugbee	MyrSpi	Point	Depth = 2-4	9/14/2018	-73.43630	41.47260	0.0002
413	Greg Bugbee	MyrSpi	Point	Depth = 0-2	9/14/2018	-73.43617	41.47265	0.0002
414	Greg Bugbee	MyrSpi	Point	Depth = 2-4	9/14/2018	-73.43614	41.47252	0.0002
415	Greg Bugbee	MyrSpi	Point	Depth = 2-4	9/14/2018	-73.43569	41.47225	0.0002
416	Greg Bugbee	MyrSpi	Point	Depth = 2-4	9/14/2018	-73.43558	41.47222	0.0002
417	Greg Bugbee	MyrSpi	Point	Depth = 2-4	9/14/2018	-73.43532	41.47209	0.0002
418	Greg Bugbee	MyrSpi	Point	Depth = 2-4	9/14/2018	-73.43516	41.47200	0.0002
419	Greg Bugbee	MyrSpi	Point	Depth = 2-4	9/14/2018	-73.43008	41.46948	0.0002
420	Greg Bugbee	MyrSpi	Point	Depth = 2-4	9/14/2018	-73.43012	41.46957	0.0002
421	Greg Bugbee	MyrSpi	Point	Depth = 2-4	9/14/2018	-73.42715	41.46860	0.0002
422	Greg Bugbee	MyrSpi	Point	Depth = 2-4	9/14/2018	-73.42746	41.46384	0.0002
423	Greg Bugbee	MyrSpi	Point	Depth = 2-4	9/14/2018	-73.42752	41.46374	0.0002

Appendix Candlewood Lake Eurasian watermilfoil to Surface Locations 2018 (10 of 10)

FID	Surveyor	Invasive Plant Name	Type	Notes	Date	Latitude	Longitude	Area (acres)
424	Greg Bugbee	MyrSpi	Point	Depth = 2-4	9/14/2018	-73.42757	41.46369	0.0002
425	Greg Bugbee	MyrSpi	Point	Depth = 2-4	9/14/2018	-73.42790	41.46320	0.0002
426	Greg Bugbee	MyrSpi	Point	Depth = 2-4	9/14/2018	-73.42786	41.46310	0.0002
427	Greg Bugbee	MyrSpi	Point	Depth = 2-4	9/14/2018	-73.42784	41.46299	0.0002
428	Greg Bugbee	MyrSpi	Point	Depth = 2-4	9/14/2018	-73.42803	41.46233	0.0002

2019

Appendix Candlewood Lake Eurasian watermilfoil to Surface Locations 2019 (1 of 1)

FID	Surveyor	Invasive Plant Name	Type	Notes	Date	Latitude	Longitude	Area (acres)
1	Greg Bugbee	MyrSpi	Patch	Depth = 0-1	9/11/2019	41.56949	-73.48477	0.0358
2	Greg Bugbee	MyrSpi	Point	Depth = 0-1	9/11/2019	41.44794	-73.43067	0.0002
3	Greg Bugbee	MyrSpi	Point	Depth = 0-1	9/11/2019	41.44791	-73.43063	0.0002
4	Greg Bugbee	MyrSpi	Point	Depth = 0-1	9/11/2019	41.44781	-73.43047	0.0002
5	Greg Bugbee	MyrSpi	Point	Depth = 0-1	9/11/2019	41.44741	-73.43017	0.0002
6	Greg Bugbee	MyrSpi	Point	Depth = 0-1	9/11/2019	41.44731	-73.43007	0.0002
7	Greg Bugbee	MyrSpi	Point	Depth = 0-1	9/11/2019	41.44684	-73.42969	0.0002
8	Greg Bugbee	MyrSpi	Point	Depth = 0-1	9/11/2019	41.44676	-73.42968	0.0002
9	Greg Bugbee	MyrSpi	Point	Depth = 0-1	9/11/2019	41.44672	-73.42968	0.0002
10	Greg Bugbee	MyrSpi	Point	Depth = 0-1	9/11/2019	41.44671	-73.42968	0.0002

Transect Data

Candlewood Lake 2018

Appendix Candlewood Lake Transect Data 2018 (1 of 2)

Transect	Point	Distance from Shore (m)	Surveyor	Latitude	Longitude	Date	Depth (m)	Substrate	CerDem	EleSpp	LemMin	MyrSpi	NymOdo	PotFol	SpiPol	ValAme
1	1	0.5	Greg Bugbee	41.42378	-73.45251	8/29/2018	0.2	Muck	0	0	0	0	0	0	0	0
1	2	5	Greg Bugbee	41.42382	-73.45256	8/29/2018	0.5	Muck	0	0	0	3	0	0	0	0
1	3	10	Greg Bugbee	41.42389	-73.45255	8/29/2018	1.2	Muck	0	0	0	2	0	0	0	0
1	4	20	Greg Bugbee	41.42396	-73.45262	8/29/2018	1.7	Silt	0	0	0	2	0	0	0	0
1	5	30	Greg Bugbee	41.42403	-73.45266	8/29/2018	1.8	Silt	0	0	0	2	0	0	0	0
1	6	40	Greg Bugbee	41.42413	-73.45270	8/29/2018	2.0	Silt	0	0	0	2	0	0	0	0
1	7	50	Greg Bugbee	41.42422	-73.45273	8/29/2018	2.2	Silt	0	0	0	2	0	0	0	0
1	8	60	Greg Bugbee	41.42426	-73.45283	8/29/2018	2.3	Silt	2	0	0	2	0	0	0	0
1	9	70	Greg Bugbee	41.42438	-73.45286	8/29/2018	1.7	Gravel	0	0	0	2	0	0	0	0
1	10	80	Greg Bugbee	41.42447	-73.45285	8/29/2018	1.7	Silt	2	0	0	2	0	0	0	0
2	1	0.5	Greg Bugbee	41.42762	-73.44928	8/29/2018	0.3	Rock	0	0	0	0	0	0	0	0
2	2	5	Greg Bugbee	41.42759	-73.44933	8/29/2018	2.0	Sand	2	0	0	2	0	0	0	0
2	3	10	Greg Bugbee	41.42755	-73.44935	8/29/2018	2.5	Sand	2	0	0	2	0	0	0	0
2	4	20	Greg Bugbee	41.42753	-73.44946	8/29/2018	3.5	Silt	2	0	0	2	0	0	0	0
2	5	30	Greg Bugbee	41.42747	-73.44954	8/29/2018	3.8	Silt	3	0	0	3	0	0	0	0
2	6	40	Greg Bugbee	41.42738	-73.44965	8/29/2018	2.9	Silt	3	0	0	3	0	0	0	0
2	7	50	Greg Bugbee	41.42731	-73.44967	8/29/2018	2.3	Silt	3	0	0	3	0	0	0	0
2	8	60	Greg Bugbee	41.42721	-73.44976	8/29/2018	1.7	Silt	2	0	0	4	0	0	0	0
2	9	70	Greg Bugbee	41.42718	-73.44989	8/29/2018	3.5	Silt	0	0	0	4	0	0	0	0
2	10	80	Greg Bugbee	41.42706	-73.44990	8/29/2018	3.5	Silt	0	0	0	4	0	0	0	0
3	1	0.5	Greg Bugbee	41.47021	-73.43531	8/29/2018	0.4	Gravel	0	1	0	0	0	0	0	0
3	2	5	Greg Bugbee	41.47022	-73.43524	8/29/2018	1.2	Gravel	0	1	0	2	0	0	0	0
3	3	10	Greg Bugbee	41.47022	-73.43517	8/29/2018	2.0	Sand	0	0	0	3	0	0	0	0
3	4	20	Greg Bugbee	41.47022	-73.43505	8/29/2018	4.4	Silt	2	0	0	3	0	0	0	0
3	5	30	Greg Bugbee	41.47022	-73.43495	8/29/2018	8.0	Silt	0	0	0	0	0	0	0	0
3	6	40	Greg Bugbee	41.47023	-73.43485	8/29/2018	9.1	Silt	0	0	0	0	0	0	0	0
3	7	50	Greg Bugbee	41.47026	-73.43468	8/29/2018	9.3	Silt	0	0	0	0	0	0	0	0
3	8	60	Greg Bugbee	41.47027	-73.43458	8/29/2018	9.5	Silt	0	0	0	0	0	0	0	0
3	9	70	Greg Bugbee	41.47031	-73.43449	8/29/2018	9.7	Silt	0	0	0	0	0	0	0	0
3	10	80	Greg Bugbee	41.47033	-73.43437	8/29/2018	9.5	Silt	0	0	0	0	0	0	0	0
4	1	0.5	Greg Bugbee	41.57125	-73.48831	8/29/2018	0.3	Muck	3	0	2	2	0	0	1	0
4	2	5	Greg Bugbee	41.57124	-73.48834	8/29/2018	0.7	Muck	3	0	0	2	0	0	0	0
4	3	10	Greg Bugbee	41.57118	-73.48837	8/29/2018	1.0	Muck	3	0	0	2	0	0	0	0
4	4	20	Greg Bugbee	41.57110	-73.48841	8/29/2018	1.5	Muck	2	0	0	2	0	0	0	0
4	5	30	Greg Bugbee	41.57099	-73.48847	8/29/2018	1.6	Muck	2	0	0	2	2	0	0	0
4	6	40	Greg Bugbee	41.57092	-73.48856	8/29/2018	2.0	Muck	2	0	0	2	0	0	0	0
4	7	50	Greg Bugbee	41.57085	-73.48860	8/29/2018	2.0	Muck	2	0	0	2	0	0	0	0
4	8	60	Greg Bugbee	41.57077	-73.48862	8/29/2018	2.5	Muck	3	0	0	2	0	0	0	0
4	9	70	Greg Bugbee	41.57069	-73.48874	8/29/2018	3.0	Muck	3	0	0	2	0	0	0	0
4	10	80	Greg Bugbee	41.57062	-73.48877	8/29/2018	0.0	Muck	4	0	0	1	0	0	0	0
5	1	0.5	Greg Bugbee	41.50205	-73.45151	8/29/2018	0.3	Gravel	0	0	0	0	0	0	0	0
5	2	5	Greg Bugbee	41.50204	-73.45158	8/29/2018	0.8	Gravel	0	0	0	0	0	0	0	0
5	3	10	Greg Bugbee	41.50204	-73.45163	8/29/2018	1.6	Sand	0	0	0	2	0	0	0	0
5	4	20	Greg Bugbee	41.50205	-73.45176	8/29/2018	2.0	Sand	0	0	0	4	0	0	0	0
5	5	30	Greg Bugbee	41.50203	-73.45188	8/29/2018	2.0	Sand	0	0	0	4	0	0	0	0
5	6	40	Greg Bugbee	41.50197	-73.45200	8/29/2018	3.0	Sand	0	0	0	4	0	0	0	0
5	7	50	Greg Bugbee	41.50197	-73.45212	8/29/2018	4.0	Silt	0	0	0	4	0	0	0	0
5	8	60	Greg Bugbee	41.50193	-73.45221	8/29/2018	4.3	Silt	0	0	0	3	0	0	0	0
5	9	70	Greg Bugbee	41.50188	-73.45230	8/29/2018	4.8	Silt	0	0	0	3	0	0	0	0
5	10	80	Greg Bugbee	41.50184	-73.45245	8/29/2018	4.0	Silt	0	0	0	3	0	0	0	0
6	1	0.5	Greg Bugbee	41.51381	-73.45328	8/29/2018	0.1	Muck	0	0	3	0	0	0	1	0

Appendix Candlewood Lake Transect Data 2018 (2 of 2)

Transect	Point	Distance from Shore (m)	Surveyor	Latitude	Longitude	Date	Depth (m)	Substrate	CerDem	EleSpp	LemMin	MyrSpi	NymOdo	PotFol	SpiPol	ValAme
6	2	5	Greg Bugbee	41.51383	-73.45329	8/29/2018	0.8	Muck	0	0	2	2	0	0	0	0
6	3	10	Greg Bugbee	41.51388	-73.45333	8/29/2018	1.0	Muck	0	0	0	2	0	0	0	0
6	4	20	Greg Bugbee	41.51398	-73.45331	8/29/2018	1.2	Muck	0	0	0	3	0	0	0	0
6	5	30	Greg Bugbee	41.51408	-73.45331	8/29/2018	1.8	Muck	0	0	0	4	0	0	0	0
6	6	40	Greg Bugbee	41.51416	-73.45329	8/29/2018	2.1	Sand	0	0	0	3	0	0	0	0
6	7	50	Greg Bugbee	41.51426	-73.45334	8/29/2018	2.2	Sand	0	0	0	3	0	0	0	0
6	8	60	Greg Bugbee	41.51435	-73.45328	8/29/2018	2.4	Sand	0	0	0	3	0	0	0	0
6	9	70	Greg Bugbee	41.51443	-73.45324	8/29/2018	3.5	Sand	0	0	0	2	0	0	0	0
6	10	80	Greg Bugbee	41.51454	-73.45328	8/29/2018	5.0	Silt	0	0	0	0	0	0	0	0
7	1	0.5	Greg Bugbee	41.57151	-73.44273	8/28/2018	0.2	Rock	0	0	0	0	0	0	0	0
7	2	5	Greg Bugbee	41.57152	-73.44281	8/28/2018	1.0	Rock	0	0	0	2	0	0	0	0
7	3	10	Greg Bugbee	41.57151	-73.44287	8/28/2018	1.7	Rock	0	0	0	3	0	0	0	0
7	4	20	Greg Bugbee	41.57153	-73.44297	8/28/2018	2.5	Sand	0	0	0	4	0	0	0	0
7	5	30	Greg Bugbee	41.57154	-73.44309	8/28/2018	3.0	Silt	0	0	0	4	0	0	0	0
7	6	40	Greg Bugbee	41.57155	-73.44321	8/28/2018	3.5	Silt	0	0	0	4	0	0	0	0
7	7	50	Greg Bugbee	41.57158	-73.44335	8/28/2018	0.5	Silt	0	0	0	0	0	0	0	0
7	8	60	Greg Bugbee	41.57156	-73.44345	8/28/2018	6.0	Silt	0	0	0	0	0	0	0	0
7	9	70	Greg Bugbee	41.57158	-73.44357	8/28/2018	6.8	Silt	0	0	0	0	0	0	0	0
7	10	80	Greg Bugbee	41.57159	-73.44373	8/28/2018	8.0	Silt	0	0	0	0	0	0	0	0
8	1	0.5	Greg Bugbee	41.51293	-73.44125	8/28/2018	1.0	Sand	0	0	0	0	0	1	0	0
8	2	5	Greg Bugbee	41.51290	-73.44125	8/28/2018	0.0	Gravel	0	2	0	0	0	2	0	0
8	3	10	Greg Bugbee	41.51283	-73.44121	8/28/2018	1.6	Gravel	0	0	0	2	0	0	0	0
8	4	20	Greg Bugbee	41.51276	-73.44119	8/28/2018	1.6	Gravel	0	0	0	0	0	0	0	0
8	5	30	Greg Bugbee	41.51269	-73.44119	8/28/2018	2.0	Gravel	0	0	0	3	0	0	0	0
8	6	40	Greg Bugbee	41.51262	-73.44117	8/28/2018	2.2	Silt	0	0	0	4	0	0	0	0
8	7	50	Greg Bugbee	41.51249	-73.44120	8/28/2018	3.1	Gravel	0	0	0	3	0	0	0	0
8	8	60	Greg Bugbee	41.51238	-73.44125	8/28/2018	2.6	Gravel	0	0	0	3	0	0	0	0
8	9	70	Greg Bugbee	41.51229	-73.44127	8/28/2018	3.3	Silt	0	0	0	3	0	0	0	0
8	10	80	Greg Bugbee	41.51221	-73.44124	8/28/2018	4.0	Silt	0	0	0	3	0	0	0	0
9	1	0.5	Greg Bugbee	41.48041	-73.43462	8/28/2018	0.8	Sand	1	1	0	2	0	0	0	0
9	2	5	Greg Bugbee	41.48039	-73.43467	8/28/2018	1.6	Sand	0	0	0	0	0	0	0	0
9	3	10	Greg Bugbee	41.48040	-73.43475	8/28/2018	1.7	Sand	0	0	0	0	0	0	0	0
9	4	20	Greg Bugbee	41.48040	-73.43488	8/28/2018	1.6	Sand	0	0	0	0	0	0	0	0
9	5	30	Greg Bugbee	41.48040	-73.43497	8/28/2018	2.0	Silt	1	0	0	1	0	0	0	0
9	6	40	Greg Bugbee	41.48041	-73.43511	8/28/2018	2.4	Silt	0	0	0	1	0	0	0	0
9	7	50	Greg Bugbee	41.48040	-73.43520	8/28/2018	2.5	Silt	0	0	0	1	0	0	0	0
9	8	60	Greg Bugbee	41.48039	-73.43531	8/28/2018	2.4	Silt	1	0	0	1	0	0	0	0
9	9	70	Greg Bugbee	41.48036	-73.43545	8/28/2018	2.0	Silt	0	0	0	2	0	0	0	0
9	10	80	Greg Bugbee	41.48034	-73.43554	8/28/2018	0.0	Silt	0	0	0	1	0	0	0	0
10	1	0.5	Greg Bugbee	41.44734	-73.42950	8/29/2018	0.7	Sand	0	0	0	2	0	0	0	0
10	2	5	Greg Bugbee	41.44731	-73.42956	8/29/2018	1.3	Sand	0	0	0	2	0	0	0	0
10	3	10	Greg Bugbee	41.44729	-73.42966	8/29/2018	0.0	Sand	0	0	0	2	0	0	0	0
10	4	20	Greg Bugbee	41.44724	-73.42975	8/29/2018	1.5	Sand	0	0	0	2	0	0	0	0
10	5	30	Greg Bugbee	41.44718	-73.42981	8/29/2018	1.8	Sand	2	0	0	2	0	0	0	2
10	6	40	Greg Bugbee	41.44712	-73.42987	8/29/2018	1.0	Sand	0	0	0	2	0	0	0	2
10	7	50	Greg Bugbee	41.44707	-73.42998	8/29/2018	0.2	Sand	0	0	0	2	0	0	0	0

Candlewood Lake 2019

Appendix Candlewood Lake Transect Data 2019 (1 of 2)

Transect	Point	Distance from Shore (m)	Surveyor	Latitude	Longitude	Date	Depth (m)	Substrate	CerDem	ElaSpp	EleSpp	LemMin	MyrSpi	NajMin	NymOdo	SpaSpp	SpiPol	Typha	ValAme
1	1	0.5	Greg Bugbee	41.42378	-73.45250	9/8/2019	0.2	Sand	2	0	0	0	2	0	0	0	0	0	0
1	2	5	Greg Bugbee	41.42384	-73.45253	9/8/2019	0.5	Sand	2	0	0	0	2	0	0	0	0	0	0
1	3	10	Greg Bugbee	41.42387	-73.45256	9/8/2019	1.0	Sand	2	0	0	0	2	0	0	0	0	0	0
1	4	20	Greg Bugbee	41.42397	-73.45257	9/8/2019	1.2	Sand	0	0	0	0	1	0	0	0	0	0	0
1	5	30	Greg Bugbee	41.42406	-73.45257	9/8/2019	1.6	Sand	0	0	0	0	2	0	0	0	0	0	0
1	6	40	Greg Bugbee	41.42414	-73.45263	9/8/2019	2.0	Sand	0	0	0	0	2	0	0	0	0	0	0
1	7	50	Greg Bugbee	41.42422	-73.45269	9/8/2019	2.3	Sand	0	0	0	0	2	0	0	0	0	0	0
1	8	60	Greg Bugbee	41.42431	-73.45271	9/8/2019	1.5	Sand	0	0	0	0	2	0	0	0	0	0	0
1	9	70	Greg Bugbee	41.42437	-73.45280	9/8/2019	1.7	Sand	0	0	0	0	0	0	0	0	0	0	0
1	10	80	Greg Bugbee	41.42448	-73.45279	9/8/2019	1.8	Sand	0	0	0	0	2	0	0	0	0	0	0
2	1	0.5	Greg Bugbee	41.42763	-73.44929	9/8/2019	0.2	Sand	1	0	2	0	2	0	0	0	0	0	0
2	2	5	Greg Bugbee	41.42761	-73.44931	9/8/2019	1.1	Sand	2	0	2	0	2	0	0	0	0	0	0
2	3	10	Greg Bugbee	41.42760	-73.44941	9/8/2019	2.5	Sand	3	0	2	0	3	0	0	0	0	0	0
2	4	20	Greg Bugbee	41.42754	-73.44951	9/8/2019	3.5	Muck	2	0	2	0	0	0	0	0	0	0	0
2	5	30	Greg Bugbee	41.42750	-73.44963	9/8/2019	3.2	Muck	2	0	2	0	2	0	0	0	0	0	0
2	6	40	Greg Bugbee	41.42746	-73.44973	9/8/2019	2.0	Muck	2	0	2	0	1	0	0	0	0	0	0
2	7	50	Greg Bugbee	41.42736	-73.44980	9/8/2019	2.0	Gravel	2	0	0	0	1	0	0	0	0	0	0
2	8		Greg Bugbee	41.42736	-73.44992	9/8/2019	3.0	Gravel	0	0	0	0	2	0	0	0	0	0	0
2	9	70	Greg Bugbee	41.42728	-73.44996	9/8/2019	3.2	Gravel	0	0	0	0	2	0	0	0	0	0	0
2	10	80	Greg Bugbee	41.42721	-73.45009	9/8/2019	3.2	Gravel	0	0	0	0	2	0	0	0	0	0	0
3	1	0.5	Greg Bugbee	41.47019	-73.43529	9/8/2019	0.2	Sand	0	2	2	0	0	0	0	0	0	0	0
3	2	5	Greg Bugbee	41.47018	-73.43524	9/8/2019	1.0	Sand	0	2	2	0	0	0	0	0	0	0	0
3	3	10	Greg Bugbee	41.47020	-73.43516	9/8/2019	1.9	Sand	0	0	0	0	0	0	0	0	0	0	0
3	4	20	Greg Bugbee	41.47021	-73.43509	9/8/2019	4.5	Sand	2	0	0	0	2	0	0	0	0	0	0
3	5	30	Greg Bugbee	41.47023	-73.43494	9/8/2019	7.0	Silt	0	0	0	0	0	0	0	0	0	0	0
3	6	40	Greg Bugbee	41.47019	-73.43481	9/8/2019	9.0	Silt	0	0	0	0	0	0	0	0	0	0	0
3	7	50	Greg Bugbee	41.47025	-73.43469	9/8/2019	9.5	Silt	0	0	0	0	0	0	0	0	0	0	0
3	8	60	Greg Bugbee	41.47024	-73.43458	9/8/2019	9.5	Silt	0	0	0	0	0	0	0	0	0	0	0
3	9	70	Greg Bugbee	41.47027	-73.43445	9/8/2019	9.5	Silt	0	0	0	0	0	0	0	0	0	0	0
3	10	80	Greg Bugbee	41.47029	-73.43435	9/8/2019	9.6	Silt	0	0	0	0	0	0	0	0	0	0	0
4	1	0.5	Greg Bugbee	41.57127	-73.48835	9/11/2019	0.2	Muck	0	0	0	0	0	0	0	0	0	0	0
4	2	5	Greg Bugbee	41.57123	-73.48836	9/11/2019	0.6	Muck	0	0	0	0	2	0	0	0	0	0	0
4	3	10	Greg Bugbee	41.57117	-73.48837	9/11/2019	1.0	Muck	1	0	0	0	2	0	0	0	0	0	0
4	4		Greg Bugbee	41.57108	-73.48841	9/11/2019	0.0	Muck	1	0	0	0	2	0	2	0	0	0	0
4	5	30	Greg Bugbee	41.57100	-73.48847	9/11/2019	1.5	Muck	1	0	0	0	2	0	2	0	0	0	0
4	6	40	Greg Bugbee	41.57091	-73.48847	9/11/2019	2.5	Muck	2	0	0	0	2	0	0	0	0	0	0
4	7	50	Greg Bugbee	41.57086	-73.48853	9/11/2019	2.4	Muck	1	0	0	0	0	0	0	0	0	0	0
4	8		Greg Bugbee	41.57079	-73.48856	9/11/2019	3.0	Muck	0	0	0	0	1	0	0	0	0	0	0
4	9	70	Greg Bugbee	41.57068	-73.48864	9/11/2019	3.0	Muck	0	0	0	0	0	0	0	0	0	0	0
4	10	80	Greg Bugbee	41.57060	-73.48867	9/11/2019	3.3	Muck	0	0	0	0	0	0	0	0	0	0	0
5	1	0.5	Greg Bugbee	41.50219	-73.45149	9/11/2019	0.1	Sand	0	0	0	0	0	0	0	0	0	0	0
5	2	5	Greg Bugbee	41.50216	-73.45154	9/11/2019	1.0	Sand	1	0	0	0	1	0	0	0	0	0	0
5	3	10	Greg Bugbee	41.50214	-73.45162	9/11/2019	1.3	Sand	0	0	2	0	1	0	0	0	0	0	0
5	4	20	Greg Bugbee	41.50212	-73.45172	9/11/2019	1.8	Sand	0	0	0	0	1	0	0	0	0	0	2
5	5	30	Greg Bugbee	41.50213	-73.45189	9/11/2019	2.5	Gravel	0	0	0	0	1	0	0	0	0	0	0
5	6	40	Greg Bugbee	41.50213	-73.45198	9/11/2019	3.0	Gravel	0	0	0	0	2	0	0	0	0	0	0
5	7	50	Greg Bugbee	41.50214	-73.45211	9/11/2019	3.5	Silt	0	0	0	0	2	0	0	0	0	0	0
5	8	60	Greg Bugbee	41.50213	-73.45220	9/11/2019	4.5	Silt	0	0	0	0	2	0	0	0	0	0	0
5	9	70	Greg Bugbee	41.50215	-73.45230	9/11/2019	5.3	Silt	0	0	0	0	0	0	0	0	0	0	0
5	10	80	Greg Bugbee	41.50211	-73.45245	9/11/2019	5.8	Silt	0	0	0	0	0	0	0	0	0	0	0
6	1	0.5	Greg Bugbee	41.51379	-73.45331	9/11/2019	0.2	Muck	0	0	0	2	0	0	0	0	2	0	0

Appendix Candlewood Lake Transect Data 2019 (2 of 2)

Transect	Point	Distance from Shore (m)	Surveyor	Latitude	Longitude	Date	Depth (m)	Substrate	CerDem	ElaSpp	EleSpp	LemMin	MyrSpi	NajMin	NymOdo	SpaSpp	SpiPol	Typha	ValAme
6	2	5	Greg Bugbee	41.51382	-73.45331	9/11/2019	0.4	Muck	1	0	0	0	1	0	0	0	0	0	0
6	3	10	Greg Bugbee	41.51386	-73.45332	9/11/2019	1.0	Muck	0	0	0	0	2	0	0	0	0	0	0
6	4	20	Greg Bugbee	41.51395	-73.45331	9/11/2019	1.3	Muck	0	0	0	0	2	0	0	0	0	0	0
6	5	30	Greg Bugbee	41.51405	-73.45332	9/11/2019	1.8	Muck	2	0	0	0	2	0	0	0	0	0	0
6	6	40	Greg Bugbee	41.51416	-73.45332	9/11/2019	2.3	Muck	0	0	0	0	2	0	0	0	0	0	0
6	7	50	Greg Bugbee	41.51425	-73.45334	9/11/2019	2.8	Muck	0	0	0	0	3	0	0	0	0	0	0
6	8	60	Greg Bugbee	41.51435	-73.45335	9/11/2019	3.0	Muck	0	0	0	0	2	0	0	0	0	0	0
6	9	70	Greg Bugbee	41.51442	-73.45337	9/11/2019	4.2	Muck	0	0	0	0	2	0	0	0	0	0	0
6	10	80	Greg Bugbee	41.51451	-73.45339	9/11/2019	5.0	Muck	0	0	0	0	1	0	0	0	0	0	0
7	1	0.5	Greg Bugbee	41.57145	-73.44266	9/4/2019	0.1	Sand	0	0	0	0	0	0	0	0	0	0	0
7	2	5	Greg Bugbee	41.57143	-73.44273	9/4/2019	0.5	Sand	0	0	0	0	1	0	0	0	0	0	0
7	3	10	Greg Bugbee	41.57139	-73.44282	9/4/2019	1.0	Muck	1	0	0	0	1	0	0	0	0	0	0
7	4	20	Greg Bugbee	41.57140	-73.44292	9/4/2019	2.0	Muck	1	0	0	0	1	0	0	0	0	0	0
7	5	30	Greg Bugbee	41.57141	-73.44305	9/4/2019	3.0	Muck	0	0	0	0	1	0	0	0	0	0	0
7	6	40	Greg Bugbee	41.57142	-73.44313	9/4/2019	3.5	Muck	2	0	0	0	1	0	0	0	0	0	0
7	7	50	Greg Bugbee	41.57142	-73.44328	9/4/2019	4.5	Muck	3	0	0	0	1	0	0	0	0	0	0
7	8	60	Greg Bugbee	41.57140	-73.44341	9/4/2019	5.6	Muck	0	0	0	0	0	0	0	0	0	0	0
7	9	70	Greg Bugbee	41.57140	-73.44353	9/4/2019	6.0	Muck	0	0	0	0	0	0	0	0	0	0	0
7	10	80	Greg Bugbee	41.57138	-73.44363	9/4/2019	0.0	Muck	0	0	0	0	0	0	0	0	0	0	0
8	1	0.5	Greg Bugbee	41.51294	-73.44117	9/8/2019	0.5	Sand	0	0	2	0	0	0	0	0	0	0	0
8	2	5	Greg Bugbee	41.51289	-73.44119	9/8/2019	1.4	Sand	0	0	2	0	0	0	0	0	0	0	0
8	3	10	Greg Bugbee	41.51285	-73.44120	9/8/2019	1.8	Sand	0	2	2	0	2	2	0	0	0	0	0
8	4	20	Greg Bugbee	41.51276	-73.44117	9/8/2019	2.0	Gravel	0	0	0	0	2	1	0	0	0	0	0
8	5	30	Greg Bugbee	41.51269	-73.44114	9/8/2019	3.0	Gravel	0	0	0	0	2	0	0	0	0	0	0
8	6	40	Greg Bugbee	41.51257	-73.44118	9/8/2019	3.0	Gravel	0	0	0	0	2	0	0	0	0	0	0
8	7	50	Greg Bugbee	41.51248	-73.44117	9/8/2019	3.5	Gravel	0	0	0	0	3	0	0	0	0	0	0
8	8	60	Greg Bugbee	41.51239	-73.44119	9/8/2019	3.5	Gravel	0	0	0	0	3	0	0	0	0	0	0
8	9	70	Greg Bugbee	41.51231	-73.44126	9/8/2019	3.4	Gravel	0	0	0	0	3	0	0	0	0	0	0
8	10	80	Greg Bugbee	41.51225	-73.44125	9/8/2019	3.8	Gravel	0	0	0	0	3	0	0	0	0	0	0
9	1	0.5	Greg Bugbee	41.48049	-73.43463	9/8/2019	0.2	Sand	0	2	2	0	1	0	0	2	0	0	0
9	2	5	Greg Bugbee	41.48046	-73.43467	9/8/2019	1.0	Sand	0	0	0	0	1	0	0	0	0	0	0
9	3	10	Greg Bugbee	41.48045	-73.43475	9/8/2019	1.5	Sand	0	0	0	0	0	0	0	0	0	0	0
9	4	20	Greg Bugbee	41.48043	-73.43486	9/8/2019	1.7	Sand	0	0	0	0	0	0	0	0	0	0	0
9	5	30	Greg Bugbee	41.48039	-73.43499	9/8/2019	2.4	Sand	0	0	0	0	0	0	0	0	0	0	0
9	6	40	Greg Bugbee	41.48035	-73.43510	9/8/2019	2.2	Sand	0	0	0	0	2	0	0	0	0	0	0
9	7	50	Greg Bugbee	41.48034	-73.43520	9/8/2019	2.8	Sand	0	0	0	0	1	0	0	0	0	0	0
9	8	60	Greg Bugbee	41.48035	-73.43528	9/8/2019	2.5	Sand	0	0	0	0	1	0	0	0	0	0	0
9	9	70	Greg Bugbee	41.48027	-73.43542	9/8/2019	2.0	Sand	0	0	0	0	0	0	0	0	0	0	0
9	10	80	Greg Bugbee	41.48023	-73.43553	9/8/2019	1.7	Sand	0	0	0	0	0	0	0	0	0	0	0
10	1	0.5	Greg Bugbee	41.44736	-73.42952	9/8/2019	0.2	Sand	0	0	0	0	2	0	0	0	0	0	0
10	2	5	Greg Bugbee	41.44734	-73.42959	9/8/2019	0.8	Sand	1	0	0	0	2	0	0	0	0	0	0
10	3	10	Greg Bugbee	41.44731	-73.42963	9/8/2019	1.0	Muck	0	0	0	0	2	0	0	0	0	0	0
10	4	20	Greg Bugbee	41.44722	-73.42964	9/8/2019	1.6	Muck	0	0	0	0	2	0	0	0	0	0	0
10	5	30	Greg Bugbee	41.44719	-73.42980	9/8/2019	1.5	Muck	0	0	0	0	1	0	0	0	0	0	0
10	6	40	Greg Bugbee	41.44716	-73.42990	9/8/2019	0.9	Muck	0	0	0	0	1	0	0	0	0	0	0
10	7	50	Greg Bugbee	41.44707	-73.42998	9/8/2019	0.1	Muck	0	0	0	0	0	0	0	0	0	2	0

Squantz Pond 2018

Appendix Squantz Pond Transect Data (1 of 1)

Transect	Point	Distance from Shore (m)	Surveyor	Latitude	Longitude	Date	Depth (m)	Substrate	CerDem	ElaSpp	EleSpp	MyrSpi	NajMin
1	1	0.5	Summer Stebbins	41.51031	-73.47132	8/9/2018	0.1	Sand	0	2	0	0	0
1	2	5	Summer Stebbins	41.51037	-73.47135	8/9/2018	0.6	Sand	0	0	0	2	0
1	3	10	Summer Stebbins	41.51039	-73.47137	8/9/2018	0.8	Sand	0	0	0	2	0
1	4	20	Summer Stebbins	41.51050	-73.47149	8/9/2018	1.7	Silt	0	0	0	0	0
1	5	30	Summer Stebbins	41.51056	-73.47156	8/9/2018	1.9	Silt	0	0	0	2	0
1	6	40	Summer Stebbins	41.51062	-73.47163	8/9/2018	2.0	Silt	0	0	0	2	0
1	7	50	Summer Stebbins	41.51069	-73.47171	8/9/2018	3.0	Silt	0	0	0	2	0
1	8	60	Summer Stebbins	41.51075	-73.47180	8/9/2018	3.3	Silt	3	0	0	0	0
1	9	70	Summer Stebbins	41.51079	-73.47187	8/9/2018	3.8	Silt	3	0	0	0	0
1	10	80	Summer Stebbins	41.51091	-73.47191	8/9/2018	5.6	Silt	0	0	0	0	0
2	1	0.5	Summer Stebbins	41.52357	-73.48131	8/9/2018	0.1	Sand	0	0	2	0	0
2	2	5	Summer Stebbins	41.52355	-73.48137	8/9/2018	0.3	Sand	0	2	0	1	0
2	3	10	Summer Stebbins	41.52353	-73.48141	8/9/2018	1.0	Sand	0	0	0	0	0
2	4	20	Summer Stebbins	41.52349	-73.48153	8/9/2018	1.9	Silt	0	0	0	2	0
2	5	30	Summer Stebbins	41.52347	-73.48165	8/9/2018	2.2	Silt	0	0	0	2	0
2	6	40	Summer Stebbins	41.52347	-73.48173	8/9/2018	2.8	Silt	0	0	0	2	0
2	7	50	Summer Stebbins	41.52346	-73.48189	8/9/2018	4.4	Silt	1	0	0	0	0
2	8	60	Summer Stebbins	41.52327	-73.48191	8/9/2018	4.4	Silt	0	0	0	0	0
2	9	70	Summer Stebbins	41.52336	-73.48216	8/9/2018	5.7	Silt	0	0	0	0	0
2	10	80	Summer Stebbins	41.52339	-73.48217	8/9/2018	5.8	Silt	0	0	0	0	0
3	1	0.5	Summer Stebbins	41.53398	-73.48314	8/9/2018	0.2	Sand	0	0	0	1	0
3	2	5	Summer Stebbins	41.53397	-73.48318	8/9/2018	0.6	Sand	0	0	0	0	0
3	3	10	Summer Stebbins	41.53400	-73.48321	8/9/2018	1.0	Sand	0	0	0	0	0
3	4	20	Summer Stebbins	41.53397	-73.48337	8/9/2018	1.7	Silt	0	0	0	0	0
3	5	30	Summer Stebbins	41.53398	-73.48352	8/9/2018	2.7	Silt	0	0	0	2	0
3	6	40	Summer Stebbins	41.53401	-73.48364	8/9/2018	2.8	Silt	0	0	0	0	0
3	7	50	Summer Stebbins	41.53398	-73.48371	8/9/2018	2.8	Silt	0	0	0	0	0
3	8	60	Summer Stebbins	41.53395	-73.48383	8/9/2018	2.8	Silt	0	0	0	2	0
3	9	70	Summer Stebbins	41.53391	-73.48394	8/9/2018	3.0	Silt	0	0	0	2	0
3	10	80	Summer Stebbins	41.53386	-73.48411	8/9/2018	3.0	Silt	0	0	0	2	0
4	1	0.5	Summer Stebbins	41.53083	-73.48269	8/9/2018	0.1	Sand	0	0	2	2	0
4	2	20	Summer Stebbins	41.53081	-73.48275	8/9/2018	0.6	Sand	0	0	0	1	0
4	3	10	Summer Stebbins	41.53081	-73.48280	8/9/2018	0.9	Sand	0	0	0	0	2
4	4	20	Summer Stebbins	41.53079	-73.48295	8/9/2018	1.2	Silt	0	0	0	2	0
4	5	30	Summer Stebbins	41.53078	-73.48307	8/9/2018	1.7	Silt	0	0	0	2	0
4	6	40	Summer Stebbins	41.53079	-73.48318	8/9/2018	1.9	Silt	0	0	0	3	0
4	7	50	Summer Stebbins	41.53078	-73.48330	8/9/2018	2.3	Silt	0	0	0	3	0
4	8	60	Summer Stebbins	41.53078	-73.48340	8/9/2018	2.7	Silt	0	0	0	3	0
4	9	70	Summer Stebbins	41.53077	-73.48354	8/9/2018	3.3	Silt	0	0	0	2	0
4	10	80	Summer Stebbins	41.53078	-73.48366	8/9/2018	3.9	Silt	0	0	0	2	0
5	1	0.5	Summer Stebbins	41.52807	-73.48598	8/9/2018	1.5	Silt	0	0	0	0	0
5	2	10	Summer Stebbins	41.52810	-73.48601	8/9/2018	2.0	Silt	0	0	0	2	0
5	3	10	Summer Stebbins	41.52810	-73.48585	8/9/2018	2.4	Silt	0	0	0	2	0
5	4	20	Summer Stebbins	41.52808	-73.48572	8/9/2018	2.7	Silt	0	0	0	2	0
5	5	30	Summer Stebbins	41.52808	-73.48559	8/9/2018	2.6	Silt	0	0	0	2	0
5	6	40	Summer Stebbins	41.52806	-73.48546	8/9/2018	3.1	Silt	0	0	0	0	0
5	7	50	Summer Stebbins	41.52811	-73.48539	8/9/2018	2.8	Silt	0	0	0	0	0
5	8	60	Summer Stebbins	41.52811	-73.48527	8/9/2018	4.8	Silt	0	0	0	0	0
5	9	70	Summer Stebbins	41.52810	-73.48513	8/9/2018	5.4	Silt	0	0	0	0	0
5	10	80	Summer Stebbins	41.52810	-73.48500	8/9/2018	5.7	Silt	0	0	0	0	0

Squantz Pond 2019

Appendix Squantz Pond Transect Data (1 of 1)

Transect	Point	Distance from Shore (m)	Surveyor	Latitude	Longitude	Date	Depth (m)	Substrate	Notes	ElaSpp
1	1	0.5	Michael Modica	41.51017	-73.47155	8/14/2019	0.1	Sand	Nothing	0
1	2	5	Michael Modica	41.51021	-73.47158	8/14/2019	0.1	Sand	Collected ElaSpp	3
1	3	10	Michael Modica	41.51027	-73.47159	8/14/2019	0.3	Sand	Nothing	0
1	4	20	Michael Modica	41.51036	-73.47160	8/14/2019	0.6	Sand	Nothing	0
1	5	30	Michael Modica	41.51045	-73.47164	8/14/2019	1.4	Sand	Nothing	0
1	6	40	Michael Modica	41.51054	-73.47169	8/14/2019	1.9	Sand	Nothing	0
1	7	50	Michael Modica	41.51062	-73.47169	8/14/2019	2.2	Sand	Nothing	0
1	8	60	Michael Modica	41.51071	-73.47173	8/14/2019	3.0	Sand	Nothing	0
1	9	70	Michael Modica	41.51083	-73.47172	8/14/2019	4.6	Sand	Nothing	0
1	10	80	Michael Modica	41.51090	-73.47174	8/14/2019	5.4	Sand	Nothing	0
2	1	0.5	Michael Modica	41.52351	-73.48129	8/14/2019	0.1	Gravel	Nothing	0
2	2	5	Michael Modica	41.52348	-73.48138	8/14/2019	0.8	Sand	Nothing	0
2	3	10	Michael Modica	41.52346	-73.48140	8/14/2019	1.0	Sand	Nothing	0
2	4	20	Michael Modica	41.52342	-73.48154	8/14/2019	2.0	Sand	Nothing	0
2	5	30	Michael Modica	41.52338	-73.48164	8/14/2019	2.3	Silt	Nothing	0
2	6	40	Michael Modica	41.52334	-73.48176	8/14/2019	2.5	Silt	Nothing	0
2	7	50	Michael Modica	41.52331	-73.48187	8/14/2019	4.5	Silt	Nothing	0
2	8	60	Michael Modica	41.52327	-73.48200	8/14/2019	5.2	Silt	Nothing	0
2	9	70	Michael Modica	41.52323	-73.48211	8/14/2019	5.7	Silt	Nothing	0
2	10	80	Michael Modica	41.52320	-73.48219	8/14/2019	5.9	Silt	Nothing	0
3	1	0.5	Michael Modica	41.53398	-73.48308	8/14/2019	0.1	Sand		2
3	2	5	Michael Modica	41.53398	-73.48312	8/14/2019	0.3	Sand	Nothing	0
3	3	10	Michael Modica	41.53398	-73.48318	8/14/2019	0.7	Sand	Nothing	0
3	4	20	Michael Modica	41.53399	-73.48333	8/14/2019	2.0	Silt	Nothing	0
3	5	30	Michael Modica	41.53399	-73.48343	8/14/2019	2.2	Silt	Nothing	0
3	6	40	Michael Modica	41.53399	-73.48355	8/14/2019	2.3	Silt	Nothing	0
3	7	50	Michael Modica	41.53399	-73.48368	8/14/2019	2.5	Silt	Nothing	0
3	8	60	Michael Modica	41.53397	-73.48381	8/14/2019	2.5	Silt	Nothing	0
3	9	70	Michael Modica	41.53396	-73.48390	8/14/2019	2.6	Silt	Nothing	0
3	10	70	Michael Modica	41.53396	-73.48405	8/14/2019	2.8	Silt	Nothing	0
4	1	0.5	Michael Modica	41.53080	-73.48271	8/14/2019	0.1	Sand	Nothing	0
4	2	5	Michael Modica	41.53078	-73.48278	8/14/2019	0.2	Sand	Nothing	0
4	3	10	Michael Modica	41.53080	-73.48283	8/14/2019	0.9	Sand	Nothing	0
4	4	20	Michael Modica	41.53080	-73.48297	8/14/2019	0.1	Silt	Nothing	0
4	5	30	Michael Modica	41.53077	-73.48318	8/14/2019	1.9	Silt	Nothing	0
4	5	30	Michael Modica	41.53078	-73.48305	8/14/2019	1.4	Silt	Nothing	0
4	6	40	Michael Modica	41.53077	-73.48333	8/14/2019	2.5	Silt	Nothing	0
4	8	60	Michael Modica	41.53078	-73.48343	8/14/2019	2.8	Silt	Nothing	0
4	9	70	Michael Modica	41.53078	-73.48355	8/14/2019	3.3	Silt	Nothing	0
4	10	80	Michael Modica	41.53079	-73.48367	8/14/2019	3.5	Silt	Nothing	0
5	1	0.5	Michael Modica	41.52818	-73.48595	8/14/2019	0.2	Silt	Nothing	0
5	2	5	Michael Modica	41.52817	-73.48587	8/14/2019	0.3	Bedrock	Nothing	0
5	3	10	Michael Modica	41.52816	-73.48582	8/14/2019	2.0	Silt	Nothing	0
5	4	20	Michael Modica	41.52816	-73.48578	8/14/2019	1.8	Silt	Nothing	0
5	5	30	Michael Modica	41.52814	-73.48564	8/14/2019	1.9	Bedrock	Nothing	0
5	6	40	Michael Modica	41.52813	-73.48552	8/14/2019	1.4	Bedrock	Nothing	0
5	7	50	Michael Modica	41.52814	-73.48538	8/14/2019	2.3	Silt	Nothing	0
5	8	60	Michael Modica	41.52814	-73.48528	8/14/2019	4.8	Silt	Nothing	0
5	9	70	Michael Modica	41.52812	-73.48515	8/14/2019	4.9	Silt	Nothing	0
5	10	80	Michael Modica	41.52811	-73.48506	8/14/2019	5.3	Silt	Nothing	0

Notes