Minutes of Wayland SWQC 8 January, 2013 Meeting

Prepared by Bob Goldsmith

Present: Toni Moores, Bob Goldsmith, Lin Bradford, Mike Lowery, Tom Largy

1. The meeting came to order at 7:30 PM.

2. Minutes of the previous meeting were approved 5-0

3. Public Comment. None

4. Dudley Pond (milfoil control)

    a. A discussion was held about possible alum treatment to fix phosphorus in the sediment and remove from the water column. Mike will contact Tom Flannery (DCR) to get DCR's views. Toni will continue to evaluate this possible treatment.
    b. Mike will prepare RFP's for spot herbicide treatment next spring for review and submission to Lycott and ACT. After receipt of proposals, the two bidders will be invited to review our information on the pond and offer their advice for future weed control.
    c. A lengthy discussion was held about control of nutrients in the pond, based on Toni's analysis of pond quality (attached). It was concluded that the analysis of pond preferred pond maintenance procedures is very complex, and experts should be consulted (as above).

5. Heard Pond.(water chestnut control). No discussion

6. North Pond.(milfoil control)

    a. Mike reported on various meetings with groups concerned with the management of all ponds of Lake Cochituate. Mike will meet with the Natick ConCom Administrator (Bob Bois), Tom Flannery and others to try to formulate a lake-wide management plan.
    b. Lycott's report for 2012 management is attached.

7. OML Complaint
    a. Bob will contact Mark Lanza to ask if any further discussions have occurred related to Mr. Harris' possibly withdrawing his complaint to the AG's office.

8. An invoice for $40 to renew membership in COLAP was approved, 5-0

9. The next meeting is scheduled for Tuesday, Feb. 5th.

10. Lin's wife's provided packages of cookies, which were distributed to all, with much appreciation expressed.

11. The committee voted 5-0 to adjourn at about 8:45 PM.

Draft
Dudley Pond Water Quality
Comparison of Historical Water Quality Data
January 6, 2013
Toni Moores

The purpose of this report is to present and compare Dudley Pond water quality data to determine if there are trends in the data. In the past various Dudley Pond water quality data have been collected from various locations for various purposes on an irregular basis with reports from the following years: 1978, 1981, 1982, 2005 and 2007. In the spring of 2011 the SWQC began an annual water quality sampling program that has sampled three Dudley Pond locations (sample points) at three depths each with the objective evaluating water quality in the Pond, particularly as it relates to management of weeds and algae.

Summary

1. Prior to 2011 the most complete set of water quality data for Dudley Pond exists in the IEP report from 1981. However the small amount of water quality data and seasonal variations in the historical data make it difficult to identify trends in the Dudley Pond water quality from the 1970s to the present with any certainty.
2. pH, ORP, DO % Saturation, and Temperature data is not available for the years prior to 2011. The range in these parameters in Table 1 for 2012 was greater than in 2011. The reason for this greater range in 2012 is not known, but it is thought that climate differences in 2011 versus 2012 may be involved.
3. Based on the Secchi depths, it appears that the trend in the Secchi measurement data indicates that water quality in Dudley Pond may have improved since the early 1980's. (High Secchi measurements are good and low measurements are bad.)
4. Based on the highest Trophic State Indexes for past years, it would appear from Table 1 that the trophic state of Dudley Pond has improved since the early 1980's. (High TSIs are bad and low TSIs are good)
5. Total Phosphorus concentrations appear to be decreasing; however, it is not clear how dynamic phosphorus measurements are, making the timing of sample gathering important. For example, was there a spike in the phosphorus concentration in late September 2012 that, in part, caused the October 3, 2012 Cyanobacteria (Algae) bloom?
6. No data could be found regarding the concentrations of ammonia, nitrate and total nitrogen prior to 2011. As a result it is not possible to comment on trends involving these compounds.
7. Since chlorophyll a concentrations are generally related to the phosphorus concentration and Secchi measurements it is believed that the chlorophyll a concentrations are decreasing with time; however, the dynamic nature of chlorophyll a measurements and the fact that gravity settling increases chlorophyll a concentrations, this claim cannot be made with any certainty.

Methods

Available water quality data was gathered and assembled in Table 1. The methods used to gather water quality data prior to 2011 could not be found. The methods used to gather water quality data by the SWQC during 2011 and 2012 can be found in the Dudley Pond Water Quality Sampling Program reports at www.issuu.com, user: wswqc, pass: surfacewater.

Results

A summary of Dudley Pond water quality data is shown in Table 1 below.

Table 1
Dudley Pond Historical Water Quality Comparison

Parameter	1978	1981	1982	2005	2007	2011	2012
pH su							
Hi						8.3	8.82
Low						6.84	5.97
ORP mv							
Hi						257	262.6
Low						-53.8	- 186
DO%							
Hi						108.9	124
Low						2.6	1.3
Temp C							
Hi						23.45	28.53
Low						6.45	6.1
Secchi Depth m							
Hi		3	2.6			3.75	3.78
Low	1.14	1.69			2.08	3.28	2.05
Trophic State Index							
Hi		63				50	55
Low		37				41	38
Phosphorus ppm	0.04	0.05	0.02	0.23		0.04	0.01
Ammonia ppm						0.5	-
Nitrate ppm						0.24	0.53
Total Nitrogen ppm						2	0.91
Chlorophyll a ug/l low/high		1.7/6.8				2.6/44.09	1.98/17.51
BG Algae Bloom	?	?	?	?	?	no	10/3/12
Data Source	Larkin	IEP	IEP	ESS	G&L	SWQC	SWQC

Discussion

pH, ORP, DO % Saturation, and Temperature data is not available for the years 1978, 1981, 1982, 2005 and 2007. However, when these parameters for 2012 are compared to 2011 it appears that the range of the high and low values for each parameter was greater during 2012 than during 2011. It is not known why the 2012 data had a larger range than the 2011 data.

Secchi Depth Data – From the data in Table 1 it would appear that Secchi measurements in 2011 and 2012 have improved since 1978. Although the high Secchi measurement obtained in 2012 was greater that the high 2011 Secchi measurement and the low Secchi measurement in 2012 was lower (worse) that the low Secchi measurement in 2011, given the inaccuracies inherent in the Secchi measurement, the 2011 and the 2012 Secchi measurements are thought to be essentially the same. It appears that the trend in the Secchi measurement data indicates that water quality in Dudley Pond has improved since the 1970's and may have improved since the early 1980's.

Trophic State Index – No TSI data exists for the years prior to 2011; however, since the TSI is a function of Secchi depths, phosphorus concentration and Chlorophyll a it was possible to calculate TSIs from the IEP data. It would appear that the trophic state of Dudley Pond has improved since the 1970's and 1980's.

Note – Only the highest values for phosphorus, ammonia, nitrate and total nitrogen concentrations measured in 2011 and 2012 are listed in Table 1 since the lowest value in each case is zero.

Phosphorus – When the phosphorus concentration measured in 2012 is compared to past years, it appears that the phosphorus concentration is decreasing in Dudley Pond. Caution in this regard should be exercised because it is not known how dynamic phosphorus concentrations are. For example, did very high phosphorus concentrations occur preceding an algae bloom as in early October 2012, only to rapidly decrease due to conversion of the phosphorus into algae biomass?

Ammonia – Due to the lack of historical ammonia data it is difficult to assess whether there is a year to year trend in the ammonia concentrations in Dudley Pond.

Nitrate – No nitrate data could be found for years prior to 2011, so it is not known whether there is a trend in the nitrate concentration in Dudley Pond. If 2011 versus 2012 nitrate concentrations are any indication a case could be made that the nitrate concentration is increasing; however, judgment regarding this issue should be reserved until more data has been gathered.

Total Nitrogen – No total nitrogen data could be found for years prior to 2011. When the total nitrogen concentration in 2012 is compared to 2011 a case could be made that the total nitrogen concentration in Dudley Pond is decreasing; however, judgment regarding this issue should be reserved until more data has been gathered.

Chlorophyll a – Chlorophyll a is an indirect measurement of how much photosynthetic biomass is in the water column and since very little chlorophyll a data exists prior to 2011 and the chlorophyll a concentration is dynamic during an algae bloom, it is difficult to determine if there is a trend in chlorophyll a data for the Pond. Since the chlorophyll a concentration is generally related to the phosphorus concentration and Secchi measurements, which are thought to have improved over time, it is believed that the chlorophyll a concentrations are decreasing with time. However, the 2011 and 2012 data concerning chlorophyll a indicates that the highest concentrations of chlorophyll a were found at depths below the thermocline (depths greater than 12 feet) suggesting that gravity has an impact on the concentration of chlorophyll a. This would suggest that only the chlorophyll a concentrations above the thermocline should be considered when calculating the Trophic State Index.

FINAL REPORT
For Management of *Myriophyllum spicatum*
NORTH POND, LAKE COCHITUATE
Framingham, Natick, & Wayland
MASSACHUSETTS
2012

DRAFT

BY:____________________________
William E. Stevenson, President

LYCOTT ENVIRONMENTAL, INC.
21 WEST MAIN STREET
SPENCER, MA 01562
T (508) 885-0101 / F (774) 745-0277
info@lycott.com

Contents

Tables

Figures

Images

Appendices

1.0 **Introduction**

Lycott Environmental, Inc. (Lycott) was contracted on May 25, 2011 to continue the integrated management program for Eurasian Water-milfoil (*Myriophyllum spicatum*, E. Milfoil) in North Pond of Lake Cochituate. Intensive management of this water body was initiated in 2009 when an herbicide treatment utilizing both systemic and contact herbicides (triclopyr and diquat, respectively) was conducted. Following the initial treatment, an integrated management program was implemented to maintain re-growth that has occurred in isolated areas of the pond.

In 2010, the Department of Conservation and Recreation (DCR), in a cooperation with the Town of Wayland (Wayland Surface Water Qualify Committee), the Town of Framingham (Framingham Conservation Commission), and other "Friends" groups, implemented management techniques including hand-pulling and installation of a fragmentation barrier to curb re-infestation.

In 2011,management methods included a total of ten (10) acres of diquat treatment in three (3) separate areas of the pond, an experimental isolated triclopyr application utilizing a limno-curtain, hand-pulling, surveys, and maintenance of a fragment barrier at the Route 30 culvert to minimize the spread of fragments from Middle Pond.

The goal of the 2012 management program was to further assess re-growth and to continue implementing effective management strategies to reduce the spread of this invasive species. Based on the variable nature of *M. spicatum's* growth in North Pond, Lycott provided several options in its Response to Solicitation of Proposals from DCR so that the most effective management techniques could be implemented throughout the growing season.

The following sections of this report detail the efforts undertaken by Lycott to manage the *M. spicatum* infestation in North Pond during 2012.

2.0 **Fragmentation Barrier**

Image 1: Fragmentation Barrier

Due to extensive growth of *M. spicatum* in areas of Lake Cochituate upstream of North Pond, re-infestation of North Pond through fragmentation continues to be a great concern. In an effort to minimize this risk, a fragmentation barrier was installed on May 21st at the inlet to North Pond, just outside of the Route 30 culvert[1]. As in previous years, the barrier was positioned in a "J" configuration so that fragments could be caught in the 'hook' (Image 1). Repositioning of the barrier was necessary on several occasions due to high water flow from heavy rain and boat traffic (Table 1). Volunteers from the Wayland Surface Water Quality Committee (WSWQC) removed

[1] A Notice to Proceed for this project had not been issued by DCR as of this date. In an effort to contain as many E. Milfoil fragments as possible, the Wayland Surface Water Quality Committee (WSWQC) requested and funded Lycott's installation of the fragment barrier.

fragmentscaught in the barrier throughout the project. Data collected by the WSWQC can be found in Appendix D. The barrier was removed by Lycott on October 31st.

Table 1: Tasks Associated with Fragmentation Barrier

Date	Task
May 21	Deployment
June 12	Reposition
July 30	Reposition
August 1	Diver cleaning of fragments and newly rooted plants
October 31	Removal

3.0 Pre-Management Survey

On May 31, 2012,a pre-management survey of North Pond was conducted by biologists Joy Trahan-Liptak and Brittany Laginhas. Data was recorded for the information listed below at each of the 84 pre-established survey points in North Pond.

Depth
Densities of Observed Species
Total Biomass of Observed Species
Percent Cover of All Observed Species
*Percent Cover of Target Species (*Myriophyllumspicatum*)*

This information was compiled into an Excel® spreadsheet and several maps were prepared depicting the data. A summary report containing this data was provided to DCR on June 12, 2012 (included in Appendix C).

In addition to the survey at each of the pre-established locations, the entire perimeter of the water body was also surveyed in order to establish the broad distribution of *M. spicatum*. GPS waypoints were recorded at each site where *M. spicatum* was observed and the density of this species was also recorded at each point. This information was used to create a broad distribution and density map of *M. spicatum* in North Pond.

At this time, growth of *M. spicatum* was noted as trace to sparse with isolated occurrences (i.e.,individual or small clusters of *M. spicatum* plants) common along the western shoreline of the water body. Based on these results, Lycott advised that DCR and the partners consider a management strategy that involved a combination of hand-pulling and diquat treatment or a strictly hand-pulling operation.

4.0 Management Activities

Following discussion with the partner organizations, DCR authorized Lycott to conduct a hand-harvesting operation in order to manage *M. spicatum* throughout the 2012 summer season. Initially, a total of seven (7) days were allocated to this management effort; however, due to an increase in growth and distribution two (2) additional days were authorized.

4.1 Management Area Delineation

Multiple in-water and boat surveys for *M. spicatum*were conducted in conjunction with each day of hand-harvesting. Observations noted during these surveys allowed for allocation of harvesting activities in order to achieve maximum control.

4.2 Hand-Harvesting

The following table details the hand-harvesting schedule:

Table 2: Locations and Amounts of *M. spicatum*Removed from North Pond During 2012

Location*	Number of Plants Hand-Harvested										Average Density**
	June 23	July 6	July 17	July 20	July 25	Aug. 1	Aug. 23	Sept. 4	Sept. 10	Location Total	
Beach to Narrows		700					238		107	1,045	M/D
Crew Cove	300	190	130					300		920	D
Culvert						432				432	M
Dam Cove to Island					130	21				151	S
Fishing Area			50							50	T
I-90 to Culvert			423							423	S/M
Island to I-90						842	235			1,077	D
North Cove to Dam Cove				181						181	T
Peninsula									66	66	T
Wayland Rec.	200							130	222	552	M/D
Number of Locations: 11									**Total Plants:**	**4,897**	

** A map of these locations can be found in Appendix A*
*** T – Trace, S – Sparse, M – Moderate, D - Dense*

5.0 <u>Post-ManagementSurvey</u>

5.1 Methods

A detailed final survey of North Pondwas conducted on September 27, 2012 by Joy Trahan-Liptak and Brittany Laginhasto identify and map species of aquatic vegetation to determine the effectiveness of management techniques. The protocol and data collected during the pre-management survey was replicated for this post-management survey.Maps depicting the results are included in Appendix A, while raw data can be found in Appendix B.

5.2 Results

While indigenous aquatic vegetation is distributed throughout the water body's littoral zone, percent cover and biomass index data indicate that plants are more likely to occur in shallow water and sheltered locations (see maps of *Total Biomass* and *Percent Cover of Observed Species*). Of the ten (10) species of rooted aquatic vegetation observed during 2012, the four (4) *Potamogetons* were most common. *P. gramineus* (Grassy Pondweed) was most notable, occurred at approximately 26 percent of sample locations and extended well beyond these isolated points in several areas.

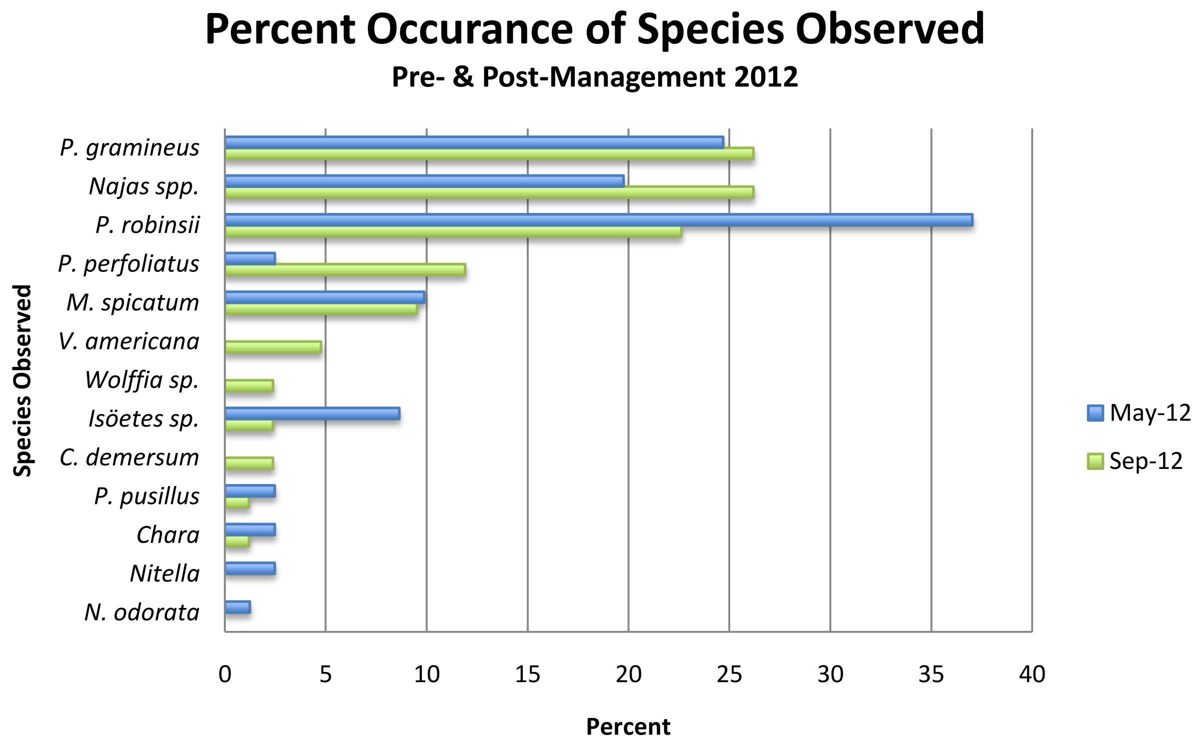


Figure 1: Percent occurrence of species observed pre- & post-management 2012 in North Pond.

A final littoral zone survey was conducted in conjunction with the September point survey to identify the broad distribution and densities of *M. spicatum*. While isolated occurrences (individual or small clusters of *M. spicatum* plants) were common along the western shoreline and in northern portions of the pond, moderate to dense beds of *M. spicatum* were present in the southern and eastern portions of this water body.

6.0 <u>Conclusion and Recommendations</u>

Despite hand-pulling efforts which removed 4,897 *M. spicatum* plants from eleven sites during 2012, distribution of this species has increased substantially. *M. spicatum* was identified at ten percent of the points surveyed during the point-intercept survey; however, growth extends well beyond these single points (see map of 'September 2012 Distribution and Density of *M. spicatum*'). The most extensive growth was observed in southern and eastern portions of the pond. Growth in these areas is likely promoted by fragmentation via recreational activities and upstream contributions, particularly from Middle Pond and Snake Brook Cove.

It should also be noted that the majority of *M. spicatum* plants in the southern portions of the pond were coexisting with *P. gramineus*. This species grows in dense beds in several locations of North Pond, most notably around the island, in the Crew Cove, north to the 'narrows', and in the southeastern corner near the Route 30 culvert. When *M. spicatum* coexists with dense growth of *P. gramineus,* hand-harvesting can be imprecise due to the difficulty of finding the target species. *P. gramineus* may also be mistaken for *M. spicatum* by observers from above (see images below).

Image 2: *P. gramineus*

Image 3: *M. spicatum*

Based on our results, *M. spicatum* increased substantially in spite of hand-harvesting efforts; therefore, Lycott is recommending that spot treatments utilizing triclopyr and/or diquat be conducted in conjunction with hand-harvesting during the 2013 season. The following factors should/will be considered when selecting management techniques for the coming year:

- Density has been defined as moderate or dense.
- Growth will be difficult to manage successfully with hand-pulling and/or bottom barrier placement due to the following factors:
    - The existence of native species in moderate to heavy densities makes finding *M. spicatum* difficult
    - Wide distribution of *M. spicatum* over more than 1.5 acres will be difficult to target with bottom barrier
    - Sediment deposits can greatly reduce visibility during hand-pulling and therefore increase the chance that plants will be overlooked
- Treatment will result in seasonal elimination of *M. spicatum* and allow physical management techniques to regain effectiveness in future years.
- Areas are located within or in close proximity to high traffic locations and fragmentation, as a result of boat traffic and/or swimming activities, is likely.
- Achieving control of *M. spicatum* in these areas will benefit the lake as a whole by decreasing the overall amount of fragmentation and therefore spread to the remainder of the water body.

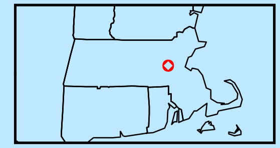
It remains likely that an increase in the distribution of *M. spicatum*, beyond that observed in 2012, will occur during 2013. A management strategy similar to that conducted in 2011 is therefore recommended to regain control of *M. spicatum* in North Pond.

Appendix A

Lycott Environmental, Inc.
21 West Main Street
Spencer, MA 01562

2012 North Pond Recommended Management Areas

North Pond of Lake Cochituate
Natick, Framingham, Wayland
Massachusetts



May 2012

Pond Area: 195 acres

1:11,000

530 265 0 530 1,060

Feet

N

USGS Color Ortho Imagery (2008/2009)

Legend

Hand-Harvesting

Diquat Treatment (3.5 acres)*

Town Boundary

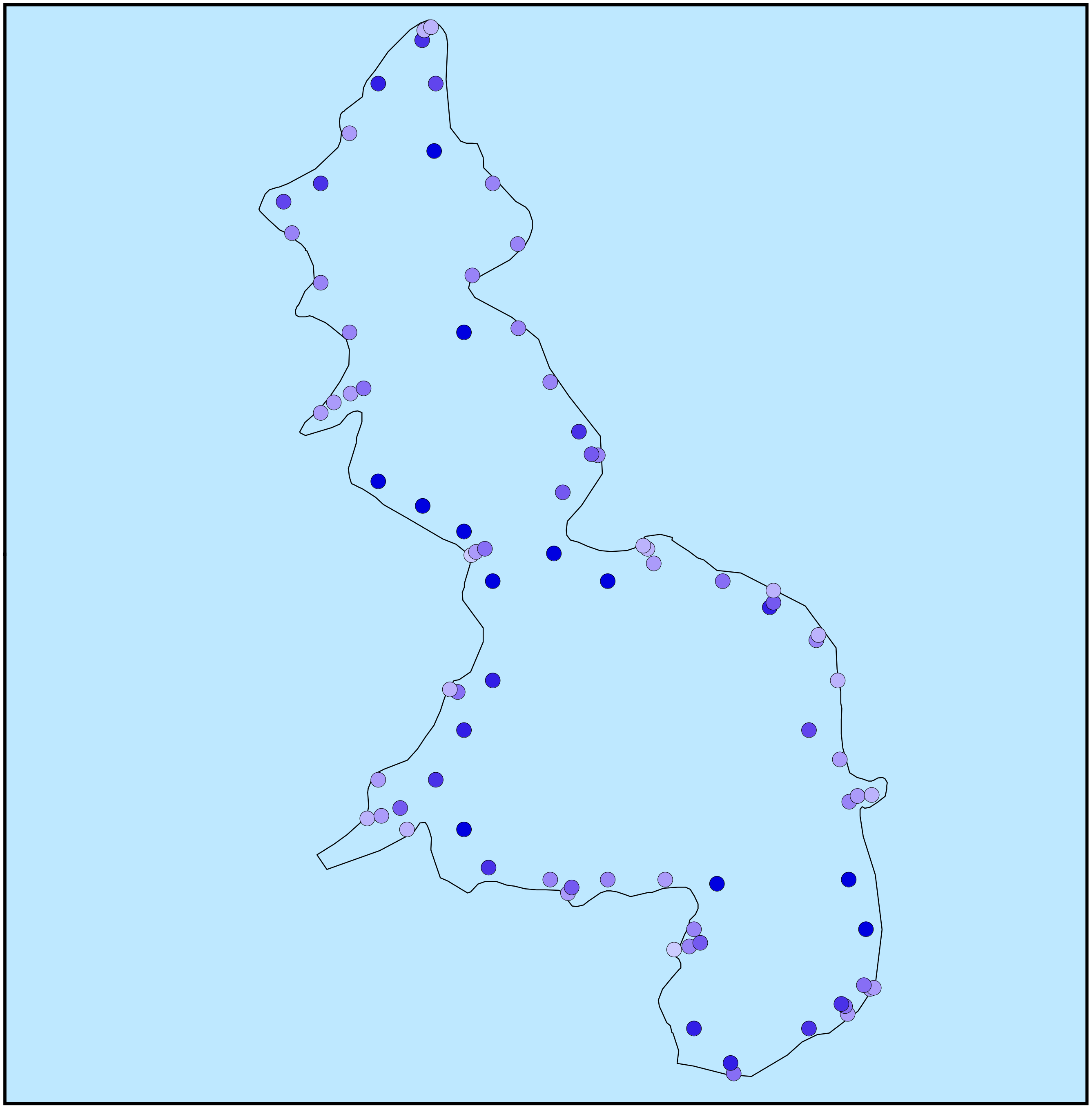
* Post-Treatment Hand-Harvesting experiment to be conducted in this area

Lycott Environmental, Inc.

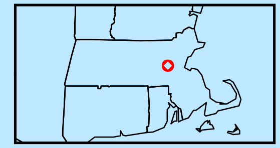
LYCOTT

21 West Main Street
Spencer, MA 01562
508-885-0101
www.lycott.com
info@lycott.com

Depths Recorded at Point Sampling Stations



North Pond of Lake Cochituate
Natick, Framingham, Wayland
Massachusetts



September 2012

Pond Area: 195 acres

1:10,750

520 260 0 520 1,040

Feet

N

Data collected 9/27/2012

Legend

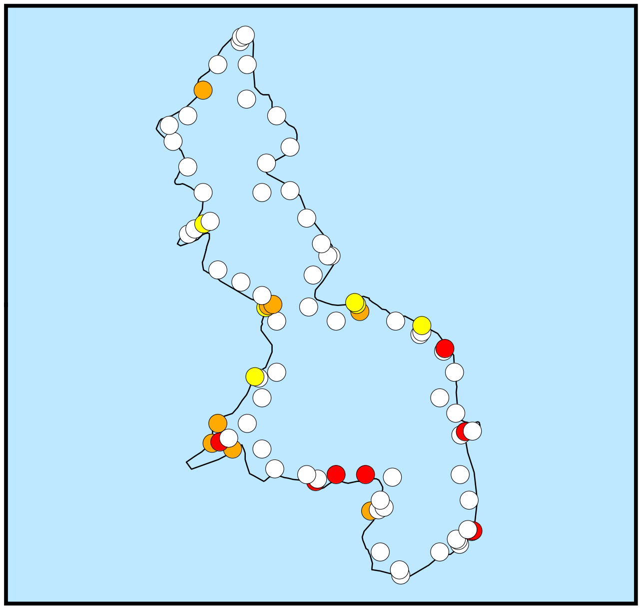
Depth in Feet

- 0 - 1
- 2 - 3
- 4 - 6
- 7 - 9
- 10 - 12
- 13 - 15
- 16 - 18
- 19 - 21
- 22 - 24
- 25 - 50

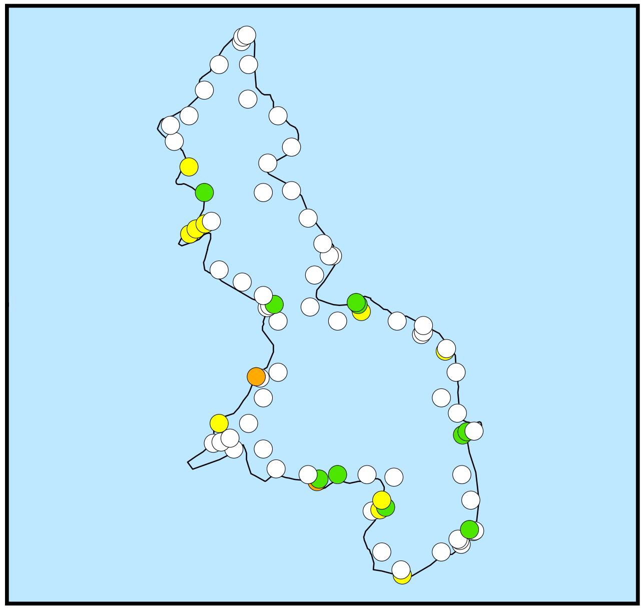
Lycott Environmental, Inc.

21 West Main Street
Spencer, MA 01562
508-885-0101
www.lycott.com
info@lycott.com

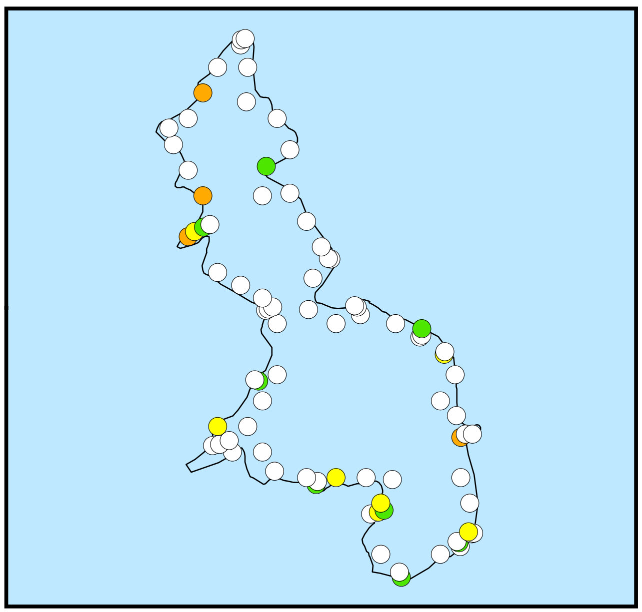
Densities of Observed Species



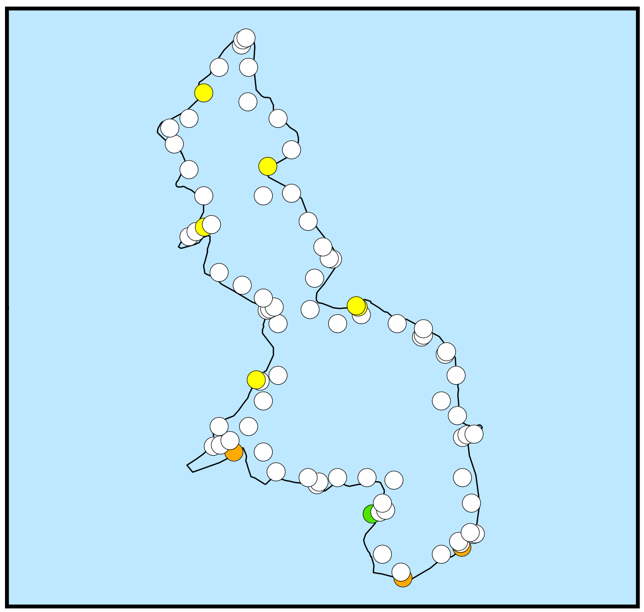
Grassy Pondweed (*Potamogeton gramineus*)
Occurs at 26% of points surveyed



Nodding Waternymph (*Najas flexilis*)
Occurs at 26% of points surveyed

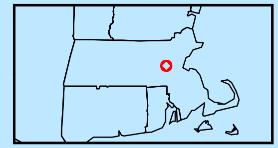


Fern-Leaf Pondweed (*Potamogeton robbinsii*)
Occurs at 23% of points surveyed



Clasping-Leaf Pondweed (*Potamogeton perfoliatus*)
Occurs at 12% of points surveyed

North Pond of Lake Cochituate
Natick, Framingham, Wayland
Massachusetts



September 2012

Pond Area: 195 acres

1:25,500

1,200 600 0 1,200 2,400
Feet

N

Data collected 9/27/2012

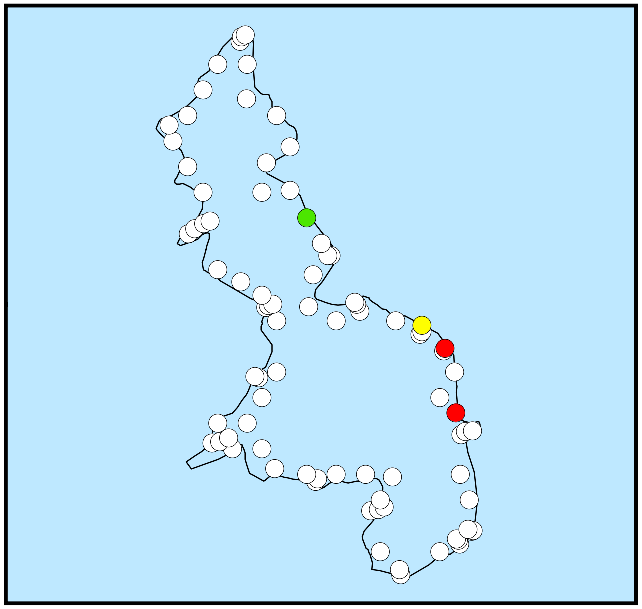
Legend

- Zero
- Trace
- Sparse
- Moderate
- Dense

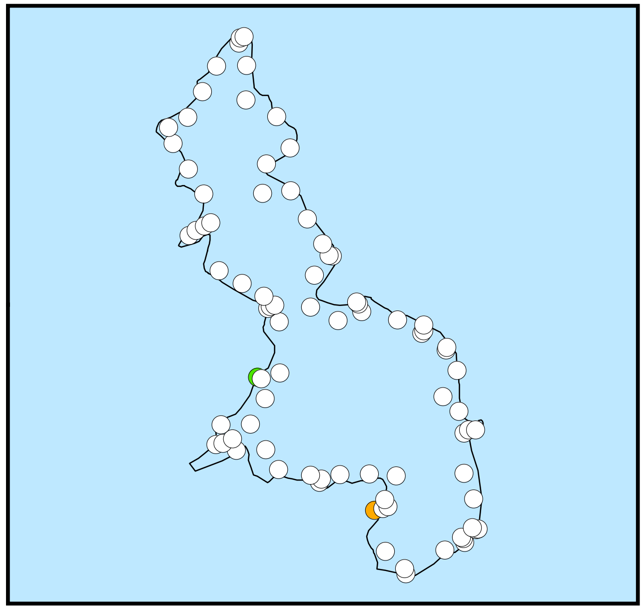
Lycott Environmental, Inc.

21 West Main Street
Spencer, MA 01562
508-885-0101
www.lycott.com
info@lycott.com

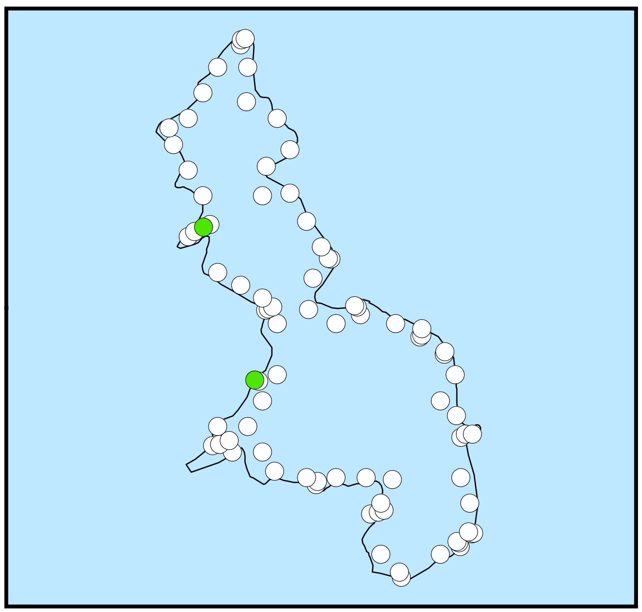
Densities of Observed Species



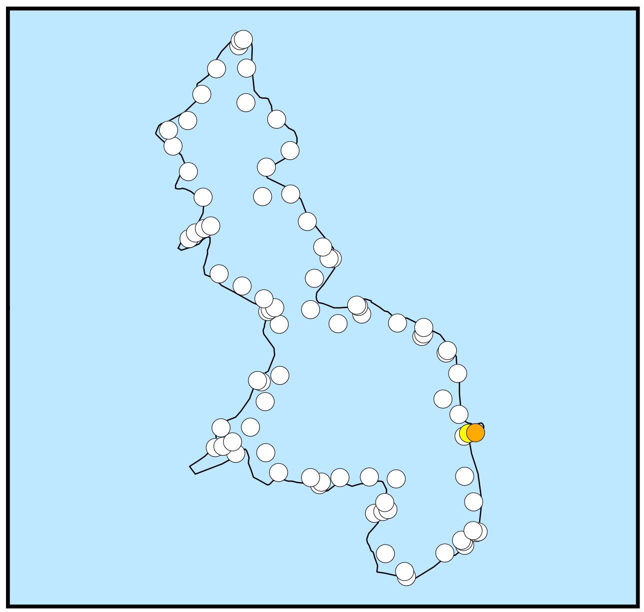
Tape Grass (*Vallisneria americana*)
Occurs at 5% of points surveyed



Quillwort (*Isoëtes*) spp.
Occurs at 2% of points surveyed

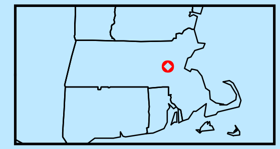


Coontail (*Ceratophyllum demersum*)
Occurs at 2% of points surveyed



Watermeal (*Wolffia*)
Occurs at 2% of points surveyed

North Pond of Lake Cochituate
Natick, Framingham, Wayland
Massachusetts



September 2012

Pond Area: 195 acres

1:25,500

1,200 600 0 1,200 2,400

Feet

N

Data collected 9/27/2012

Legend

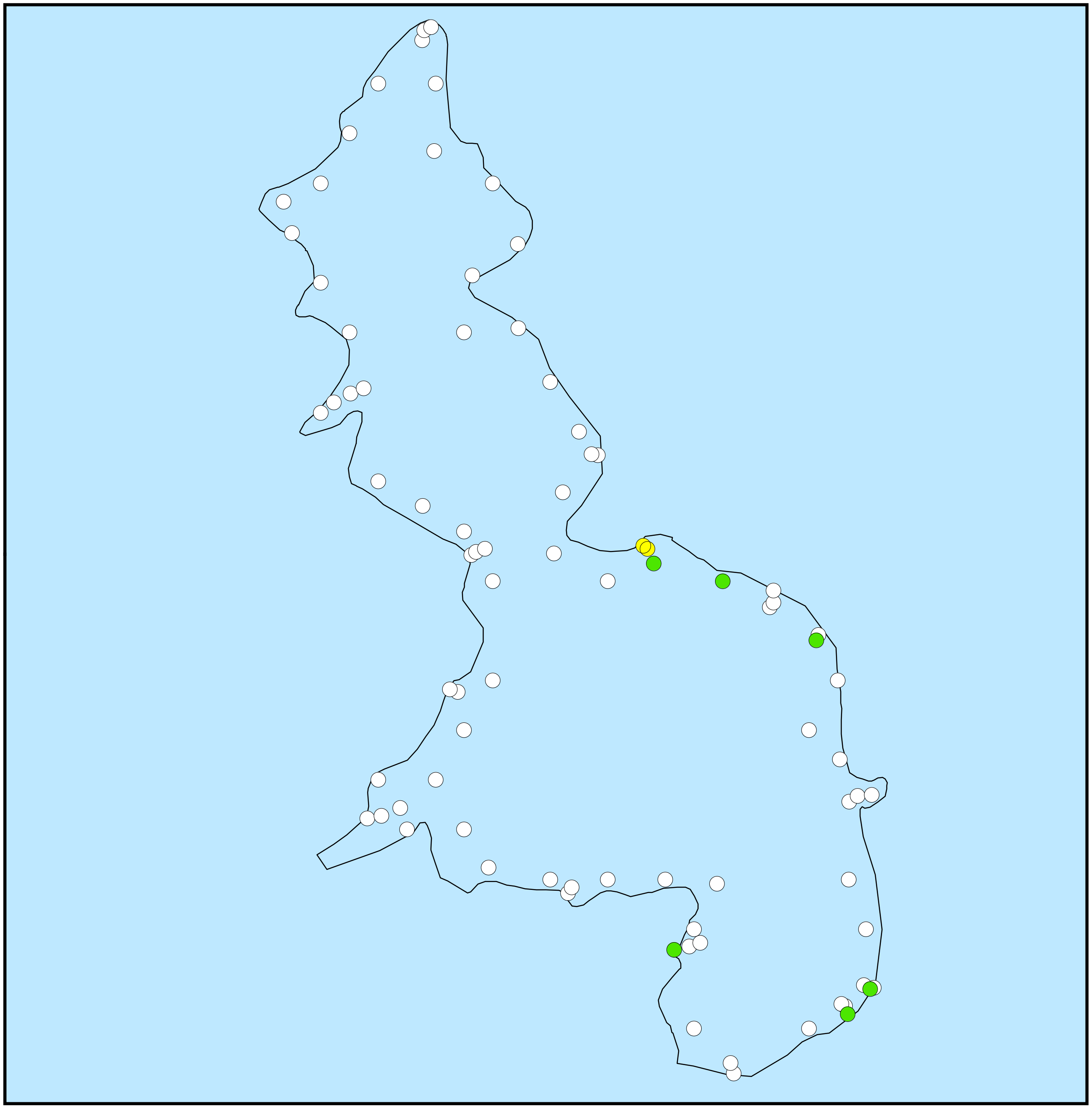
- Zero
- Trace
- Sparse
- Moderate
- Dense

Lycott Environmental, Inc.

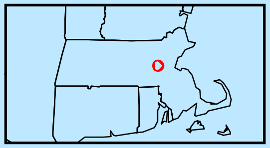
LYCOTT

21 West Main Street
Spencer, MA 01562
508-885-0101
www.lycott.com
info@lycott.com

Densities of *Myriophyllum spicatum*



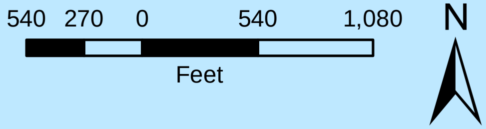
North Pond of Lake Cochituate
Natick, Framingham, Wayland
Massachusetts



September 2012

Pond Area: 195 acres

1:10,750



Data collected 9/27/2012

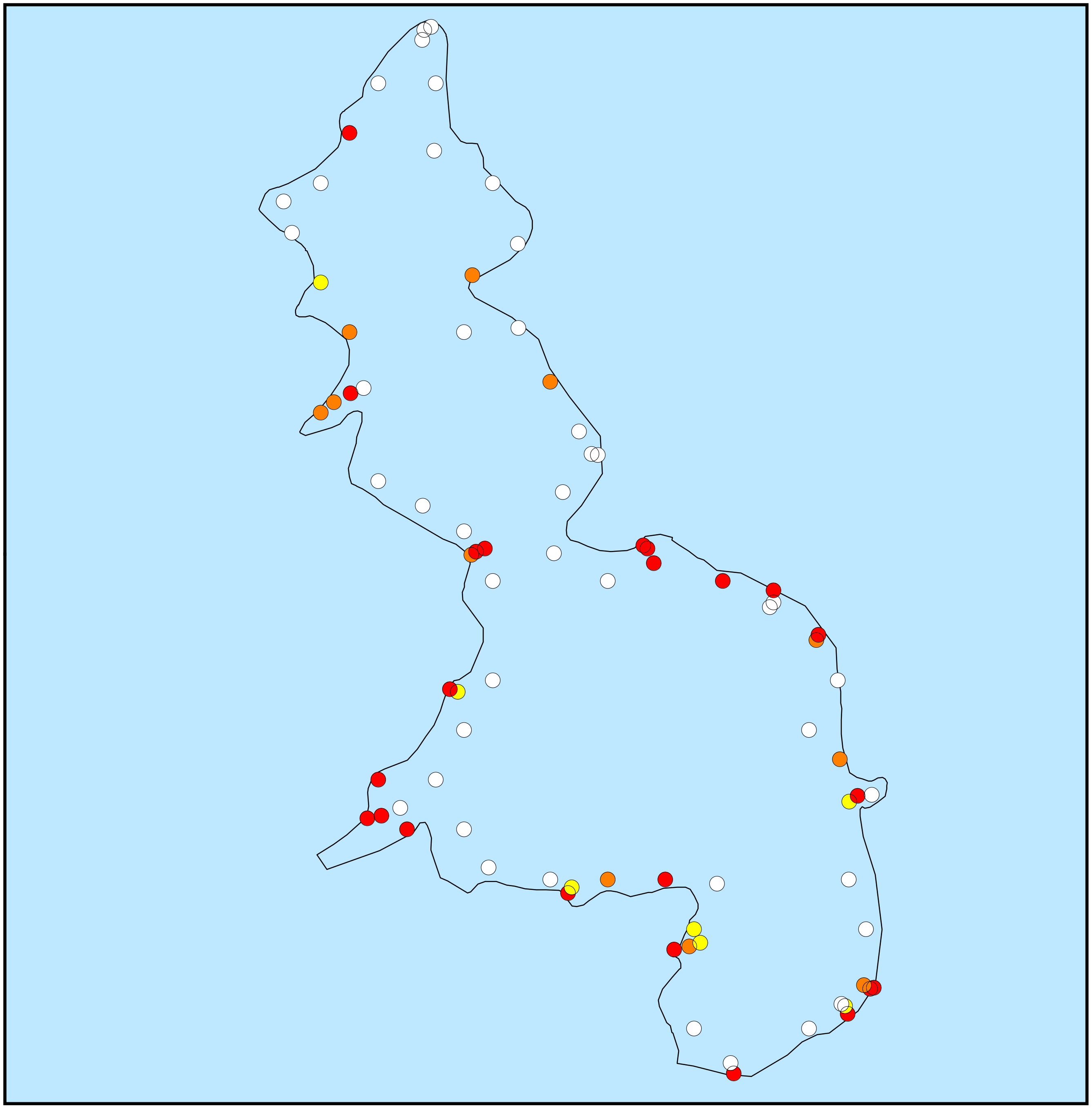
Legend

- Zero
- Trace
- Sparse

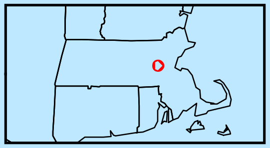
Lycott Environmental, Inc.

21 West Main Street
Spencer, MA 01562
508-885-0101
www.lycott.com
info@lycott.com

Total Biomass of Observed Species



North Pond of Lake Cochituate
Natick, Framingham, Wayland
Massachusetts



September 2012

Pond Area: 195 acres

1:10,750

540 270 0 540 1,080

Feet

N

Data collected 9/27/2012

Legend

- No Plants
- Very Low Growth
- Growth Extending into Water Column
- Growth Extending into Water Column (Near Surface)
- Growth Filling Water Column (At Surface)

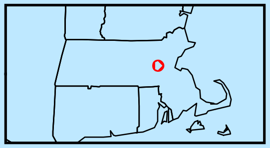
Lycott Environmental, Inc.

LYCOTT

21 West Main Street
Spencer, MA 01562
508-885-0101
www.lycott.com
info@lycott.com

Percent Cover of All Observed Species

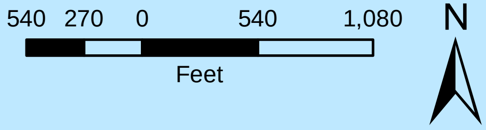
North Pond of Lake Cochituate
Natick, Framingham, Wayland
Massachusetts



September 2012

Pond Area: 195 acres

1:10,750



Data collected 9/27/2012

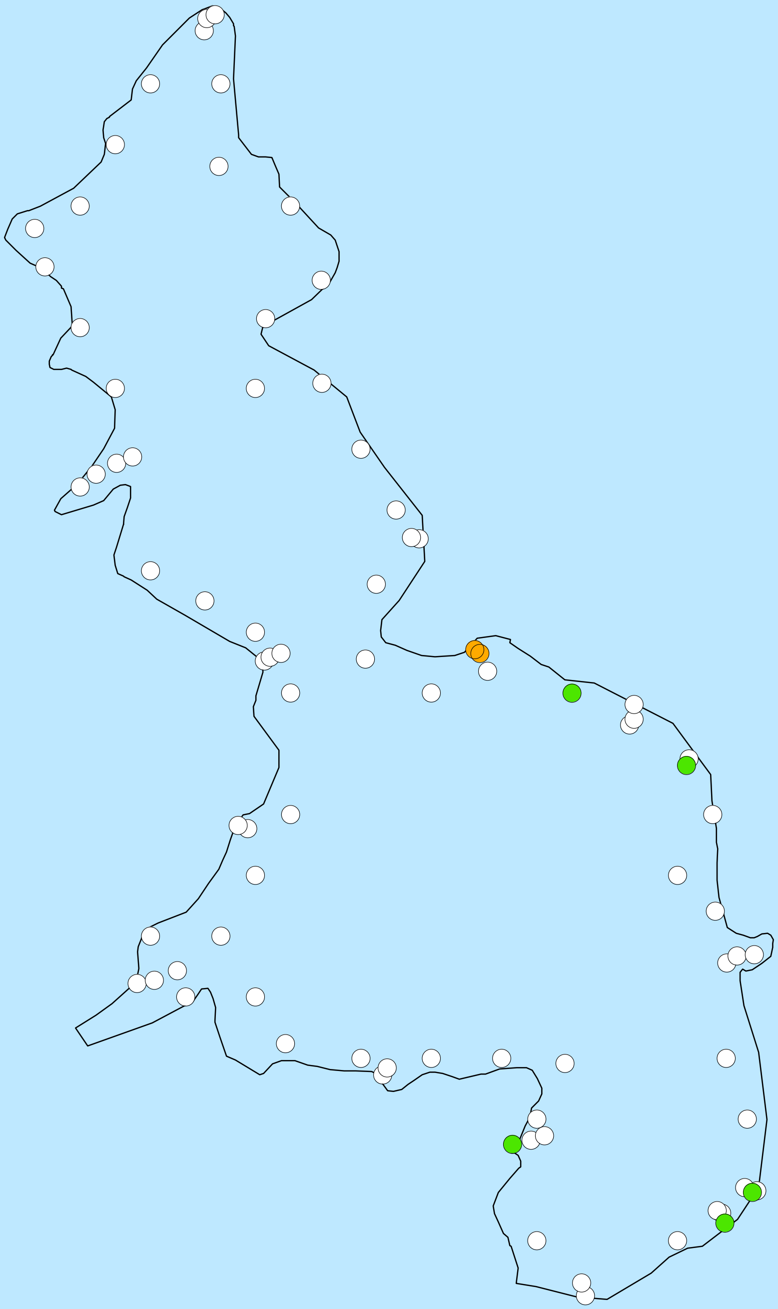
Legend

- 0 %
- 1 - 10 %
- 15 - 20 %
- 25 - 40 %
- 45 - 60 %
- 65 - 80 %
- 85 - 100%

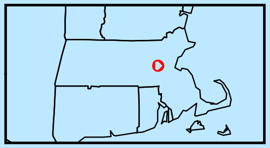
Lycott Environmental, Inc.

21 West Main Street
Spencer, MA 01562
508-885-0101
www.lycott.com
info@lycott.com

Percent Cover of Target Species: Eurasian Milfoil



North Pond of Lake Cochituate
Natick, Framingham, Wayland
Massachusetts



September 2012

Pond Area: 195 acres

1:10,750

540 270 0 540 1,080

Feet

N

Data collected 9/27/2012

Legend

0%

5%

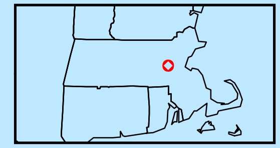
20%

Lycott Environmental, Inc.

21 West Main Street
Spencer, MA 01562
508-885-0101
www.lycott.com
info@lycott.com

2012 Harvested Areas and Number of *M. spicatum* Plants per Acre

North Pond of Lake Cochituate
Natick, Framingham, Wayland
Massachusetts



September 2012

Pond Area: 195 acres

1:11,000

530 265 0 530 1,060

Feet

N

USGS Color Ortho Imagery (2008/2009)

Legend

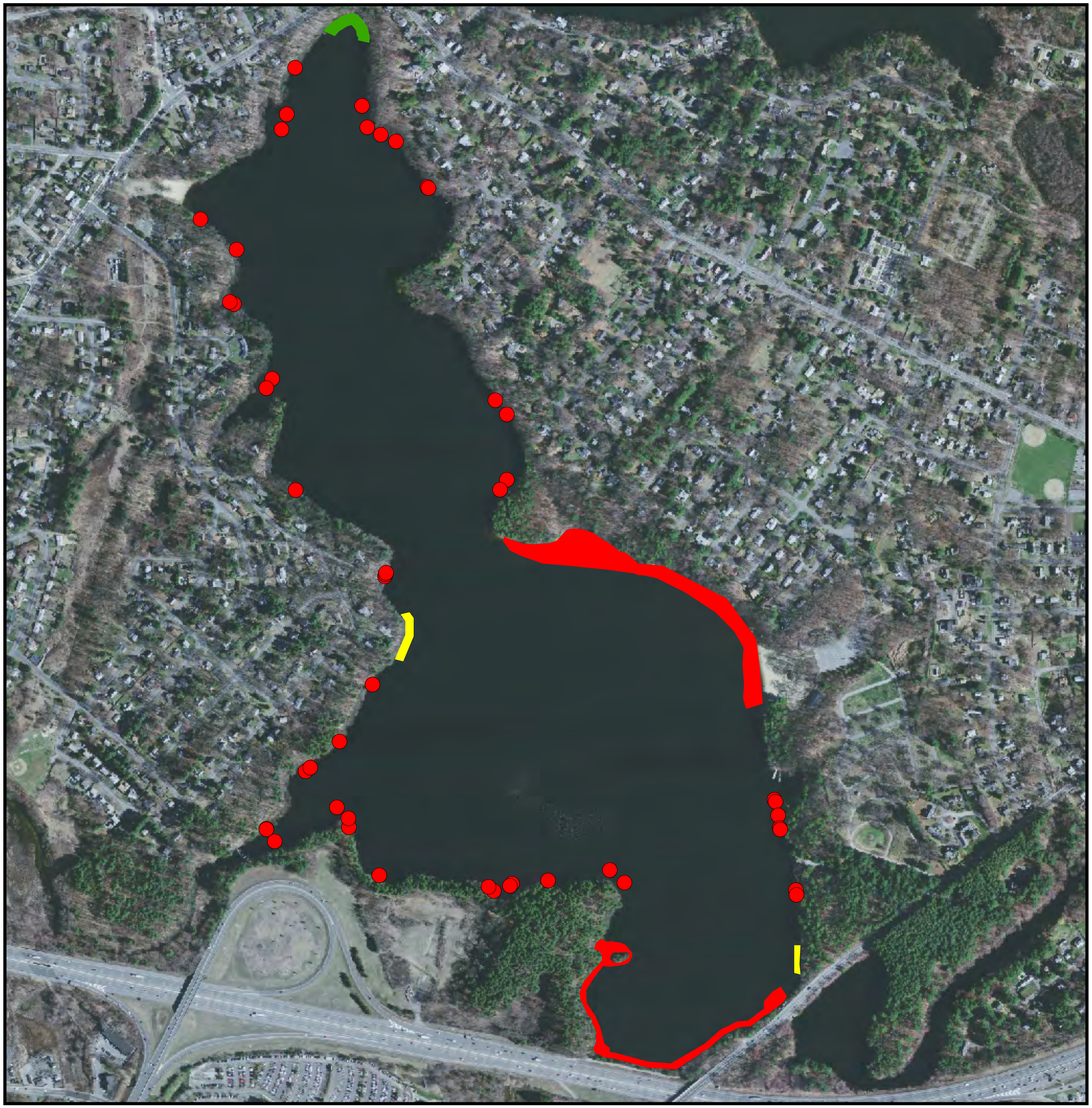
Plants Harvested Per Acre

- ≤ 100
- 101 - 300
- 301 - 500
- 501 - 1203

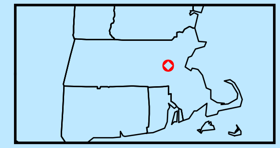
Lycott Environmental, Inc.

21 West Main Street
Spencer, MA 01562
508-885-0101
www.lycott.com
info@lycott.com

September 2012 Distribution and Density of *M. spicatum*



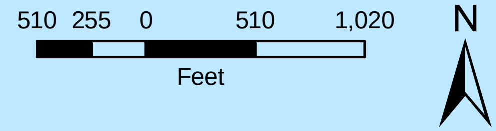
North Pond of Lake Cochituate
Natick, Framingham, Wayland
Massachusetts



September 2012

Pond Area: 195 acres

1:10,750



USGS Color Ortho Imagery (2008/2009)

Legend

Isolated E. Milfoil Plants/Clusters

E. Milfoil Beds and Densities

- Trace
- Sparse
- Moderate to Dense

Lycott Environmental, Inc.

21 West Main Street
Spencer, MA 01562
508-885-0101
www.lycott.com
info@lycott.com