

LAKE ST CATHERINE
AQUATIC VEGETATION MANAGEMENT PROGRAM
2014 ANNUAL REPORT

November 2014

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AQUATIC CONTROL TECHNOLOGY

POND AND LAKE MANAGEMENT SPECIALISTS

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INTRODUCTION

The 2014 season marked the eleventh year of Aquatic Control’s involvement in the Integrated Management Plan at Lake St. Catherine developed to control of non-native Eurasian watermilfoil (*Myriophyllum spicatum*) in the lake. Milfoil management efforts under this plan have included a whole-lake Sonar (fluridone) herbicide treatment in 2004 followed by annual spot-treatments with Renovate (triclopyr) herbicide and diver assisted suction harvesting and hand-pulling.

Management activities in 2014 included spot-treatment of five areas, totaling approximately 54 acres with Renovate OTF (triclopyr granular) herbicide, as well as diver hand-pulling and diver assisted suction harvesting. These efforts were consistent with the current five-year Integrated Management Plan (2014-2019).

The following report summarizes the results of 2014 Treatment Program and details findings from the late season comprehensive aquatic plant survey that has been performed annually to document in-lake plant conditions and help evaluate and refine management goals. Specific information on the 2014 diver hand-pulling and diver assisted suction harvesting efforts will be provided by the Lake St. Catherine Association (LSCA) under a separate cover.

HERBICIDE TREATMENT PROGRAM - 2014

Program Chronology

A chronology of the 2014 treatment program is provided below:

- Pre-treatment inspection and finalize treatment areas..... May 25
- DEC permit issuance (ANC 2014-C01)..... June 10
- Treatment of approximately 54.4 acres with Renovate OTF June 25
- Herbicide residue monitoring.....June 26, July 3 & 14
- Comprehensive aquatic plant surveySeptember 9 & 10

Pre-Treatment Inspection

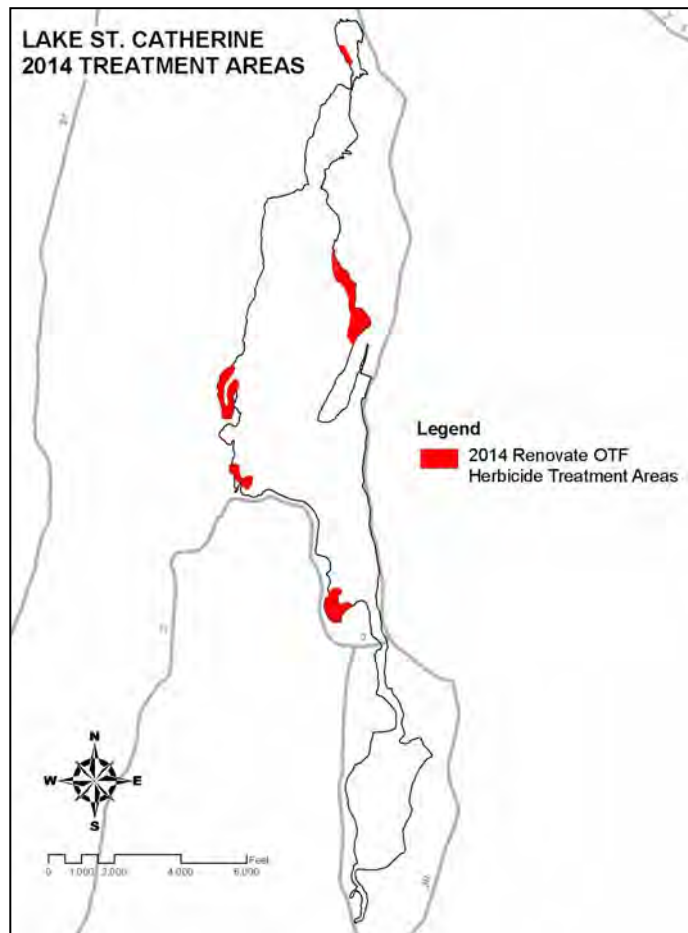
On May 25, 2014 the entire shoreline littoral area of Lake St. Catherine (Lily Pond, Main Lake and Little Lake) was surveyed by Aquatic Control Technology to determine the stage of milfoil growth and to make adjustments to the 2014 treatment scope. Results of the survey were communicated to LSCA for their input and final determination on proposed treatment areas. At the time of the survey milfoil growth was actively growing and was generally within 3-4 feet tall.

Summary of 2014 Treatment

Ultimately five areas totaling 54.4 acres were targeted for treatment (Figure 1). Consistent with previous years, each treatment area was evaluated with regards to milfoil cover/distribution as well as several other factors including: the potential for increased milfoil spread; the potential for effective treatment; and the overall benefit of milfoil control with respect to the lake, lake residents and other potential users. A final treatment map was provided to DEC for review and approval.

The treatment date of Wednesday, June 25, 2014 was selected to allow enough time to comply with the notification requirements of ANC Permit #2014-C01 and so that the two-day swimming restriction (day of treatment and one additional day) would not be imposed over a weekend.

Weather conditions on the day of treatment were overcast in the morning with light rain in the afternoon. The air temperature was roughly 84° F; wind was out of the southwest estimated at <5 mph. Surface water temperature in the main basin was approximately 22.8°C.



The treatment was conducted with a 20-foot aluminum work skiff. The granular herbicide was applied using two stern mounted spreaders. The treatment boat was equipped with a Differential/WAAS GPS navigation system to insure that the herbicide was evenly applied to the designated treatment areas. The State Boat Ramp located on the channel between the Main Lake and Little Lake was used as the base of operations.

Treatment was performed as a split application whereby roughly 70-75% of the herbicide was applied to each of the designated areas initially and then the remaining 25-30% was applied several hours later. There was approximately 3-4 hours between each application. This split application approach has been used in recent years to increase concentration-exposure-time and help increase treatment efficacy. Renovate OTF (triclopyr granular) herbicide was applied at a target dose of 2.25 ppm in the bottom 4-feet of the water column. A total of 13,080 pounds of Renovate OTF were applied to the six treatment areas. The herbicide application took approximately 6 hours to complete.

Herbicide Residue Testing

In compliance with conditions of the ANC Permit #2014-C01, water samples were collected from within and immediately downstream of Lake St. Catherine following treatment for analysis of triclopyr concentrations. Sampling was required 24 hours following treatment and then at least monthly until concentrations at all sample locations dropped below 75 ppb, which was the drinking water restriction imposed by DEC.

A map of the sampling locations is attached to the end of this report (Appendix A). Sampling instructions and sample bottles were provided to LSCA representatives by ACT and SePRO. Collected samples were shipped via overnight delivery to SePRO's laboratory in Whittakers, North Carolina.

Samples were collected on June 26, July 3 and July 14. The highest in-lake concentration detected during the initial sampling round was 0.725 ppm (725 ppb), which was collected at Site E, a small cove area on the western shore of the lake 24 hrs post treatment. On July 3, one week post-treatment, triclopyr concentrations at all sample locations except Lily Pond (Site A) were below the 75 ppb drinking water threshold. A final round of samples was collected on July 14 at which time triclopyr concentrations had dropped below the 75ppb threshold at all locations.

Table 1: FasTEST Sampling Results (ppb)

Site	26-Jun	3-July	14-July
A	438.5	97.5	32.7
B	210.4	12.2	6.7
C	164.9	14.3	7.5
D	179.5	12.2	7.8
E	725.3	15.9	9.1
F	3.5	2.9	4.8
G	<1.0	<1.0	<1.0
H	<1.0	<1.0	<1.0

LATE SEASON COMPREHENSIVE AQUATIC VEGETATION SURVEY

Survey Methods

The late season comprehensive aquatic vegetation survey conducted on September 9 & 10 replicated the methods that were employed in the previous years of this management program.

All three major lake basins were systematically toured by boat. Transect and data point locations established in 2001, were relocated using a Differential GPS system (Appendix B – Figure 1). The following information was recorded at each data point: aquatic plants present, dominant species, percent total plant cover, plant biomass and percent milfoil cover. Water depths that were recorded during the pre-treatment survey were checked using a high-resolution depth finder. In most cases, the water depth at the data point was within 1 foot of what was recorded in 2001. The plant community was assessed through visual inspection, use of a long-handled rake and throw-rake, and with an Aqua-Vu underwater camera system. Plants were identified to genus and species level when possible. Plant cover was given a percentage rank based on the areal coverage of plants within an approximate 400 square foot area assessed at each data point. Generally, in areas with 100% cover, bottom sediments could not be seen through the vegetation. Percentages less than 100% indicated the amount of bottom area covered by plant growth. The percentage of Eurasian watermilfoil was also recorded at each data point. In addition to

cover percentage, a plant biomass index was assigned at each data point to document the amount of plant growth vertically through the water column. Plant biomass was estimated on a scale of 0-4, as follows:

- 0 No biomass; plants generally absent
- 1 Low biomass; plants growing only as a low layer on the sediment
- 2 Moderate biomass; plants protruding well into the water column but generally not reaching the water surface
- 3 High biomass; plants filling enough of the water column and/or covering enough of the water surface to be considered a possible recreational nuisance or habitat impairment
- 4 Extremely high biomass; water column filled and/or surface completely covered, obvious nuisance conditions and habitat impairment severe

Field data recorded at each transect and data point location is provided in the Field Survey Data Table found in Appendix B.

Survey Findings

Quantitative measures of the aquatic plant community documented in 2014 were comparable to prior years. While milfoil distribution (FOC - frequency of occurrence) and abundance (% cover) has fluctuated annually, overall vegetative cover and biomass indices remain relatively static in all three basins (Lilly Pond, Lake St. Catherine & Little Lake).

The composition of the vegetative community has also remained relatively unchanged since 2001 and is dominated by native pondweed species, namely: *Potamogeton robbinsii*, *Potamogeton illinoensis*, *Potamogeton amplifolius*, *Potamogeton zosteriformis* & *Ceratophyllum demersum*. Diversity has also been maintained throughout the course of management with 20 different aquatic plant species identified this fall.

Comparative data for all three basins from data collected during late season between 2001 and 2014 is listed below (Table 2).

Table 2: Summary of Survey Data

LILY POND	2001	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Total Number of Data Points	24	24	24	22	24	24	24	24	24	24	24	24
Total Plant Cover	90%	80%	98%	88%	91%	98%	94%	98%	93%	94%	96%	94%
Milfoil Cover	9%	6%	2%	0%	2%	7%	<1%	<1%	<1%	1%	5%	1.5%
Plant Biomass Index	3.1	2.5	3.3	2.5	2.8	3.3	2.7	2.3	2.9	3.1	3.5	3.4

LAKE ST. CATHERINE												
Total Number of Data Points	129	129	129	129	129	129	129	129	129	129	129	129
Total Plant Cover	66%	46%	51%	57%	58%	66%	58%	63%	59%	56%	63%	63%
Milfoil Cover	43%	16%	0%	4%	11%	4%	5%	2%	7%	8%	16%	15%
Plant Biomass Index	1.9	1.5	1.6	1.8	2.0	2.0	2.0	1.3	1.8	1.5	2.0	2.0

LITTLE LAKE												
Total Number of Data Points	43	43	43	43	43	43	43	43	43	43	43	43
Total Plant Cover	72%	66%	78%	83%	83%	77%	58%	62%	76%	81%	80%	86%
Milfoil Cover	15%	0%	0%	2%	7%	10%	<1%	5%	9%	14%	7%	10%
Plant Biomass Index	2.3	2.1	2.4	2.9	2.8	2.7	2.2	2.7	3.3	2.5	3.0	3.2

Table 3: Species List and Frequency of Occurrence (entire lake system)

Macrophyte Species	2001	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<i>Potamogeton robbinsii</i>	52%	76%	88%	74%	77%	68%	84%	78%	57%	76%	76%	73%
<i>Myriophyllum spicatum</i>	94%	44%	17%	33%	74%	65%	38%	40%	43%	51%	64%	54%
<i>Potamogeton amplifolius</i>	33%	38%	43%	49%	52%	53%	51%	56%	23%	35%	32%	31%
<i>Najas flexilis</i>	22%	0%	8%	39%	34%	22%	15%	16%	14%	8%	4%	7%
<i>Potamogeton illinoensis</i>	4%	1%	2%	9%	23%	39%	29%	36%	35%	53%	56%	57%
<i>Potamogeton zosteriformis</i>	28%	3%	29%	29%	23%	19%	16%	26%	22%	20%	23%	36%
<i>Zosterella dubia</i>	1%	1%	9%	8%	23%	17%	7%	13%	4%	2%	4%	11%
<i>Ceratophyllum demersum</i>	20%	8%	11%	12%	21%	18%	17%	22%	10%	21%	15%	17%
<i>Nitella / Chara</i>	17%	6%	36%	40%	14%	14%	13%	2%	2%	1%	0%	3%
<i>Nymphaea odorata</i>	16%	5%	11%	10%	11%	11%	10%	7%	7%	12%	12%	14%
<i>Vallisneria americana</i>	29%	13%	2%	4%	9%	8%	15%	15%	14%	15%	18%	19%
<i>Brasenia schreberi</i>	4%	8%	7%	7%	7%	6%	5%	5%	5%	3%	4%	4%
<i>Utricularia vulgaris</i>	8%	9%	2%	6%	7%	7%	11%	8%	2%	4%	4%	7%
<i>Elodea canadensis</i>	32%	1%	1%	1%	5%	43%	60%	30%	10%	14%	23%	12%
<i>Chlorophyta</i>	2%	37%	26%	7%	4%	8%	3%	2%	3%	4%	3%	4%
<i>Potamogeton crispus</i>	2%	1%	7%	5%	3%	1%	0%	0%	1%	1%	0%	1%
<i>Potamogeton epihydrus</i>	2%	6%	7%	3%	3%	5%	1%	1%	1%	4%	1%	2%
<i>Nuphar variegatum</i>	5%	5%	5%	2%	2%	1%	2%	1%	2%	1%	1%	0%
<i>Potamogeton gramineus</i>	23%	1%	6%	6%	2%	4%	4%	4%	11%	8%	3%	3%
<i>Isoetes sp.</i>	2%	6%	2%	5%	2%	3%	1%	0%	1%	1%	0%	0%
<i>Utricularia gibba</i>	2%	0%	1%	5%	1%	1%	4%	1%	0%	0%	0%	0%
<i>Eleocharis sp.</i>	1%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<i>Lemna minor</i>	7%	1%	0%	1%	0%	1%	1%	0%	0%	0%	0%	0%
<i>Megalodonta beckii</i>	3%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0.5%

Lily Pond

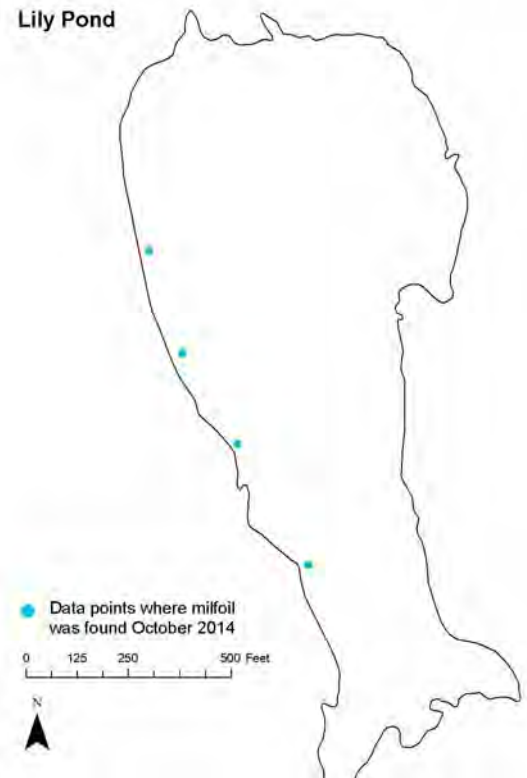
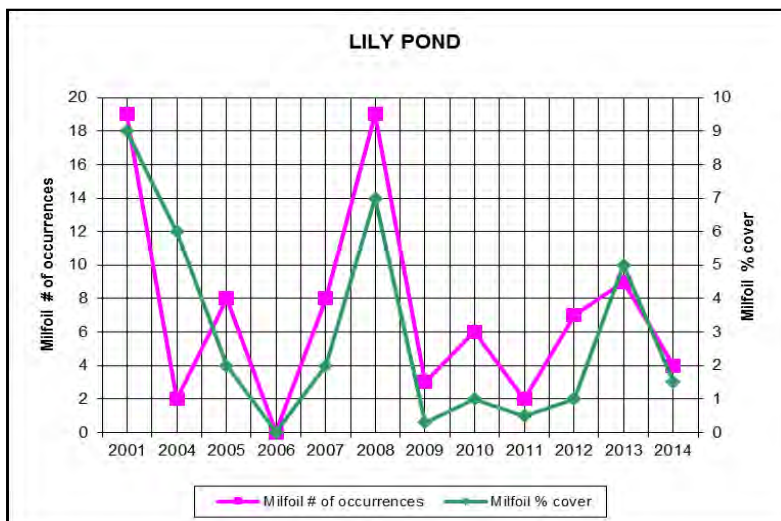
Milfoil FOC decreased significantly between 2013 and 2014 due to treatment in this area, dropping from roughly 42% to about 17%. Despite good control of milfoil following the treatment, low density growth was found scattered along the western shore. One dense patch of milfoil was also observed north of the treatment area on the western shore in approximately one foot of water.

Native species in Lily Pond remained healthy with both cover and distribution indices similar to what has been recorded in previous years. *Potamogeton robbinsii* (100%) remained the most abundant plant in the basin followed by *Potamogeton amplifolius* (75%) and *Potamogeton zosteriformis* (67%). *Ceratophyllum demersum* and *Potamogeton illinoensis* were also abundant and were encountered 54% of the surveyed data points. FOC and percent cover of other plant species in Lily Pond was similar to previous years.

Table 4: Lily Pond – Species List and Frequency of Occurrence

Macrophyte Species	2001	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<i>Potamogeton robbinsii</i>	95.8%	91.7%	95.8%	95.5%	91.7%	87.5%	95.8%	95.8%	87.5%	95.8%	100%	100%
<i>Ceratophyllum demersum</i>	70.8%	4.2%	50.0%	45.5%	83.3%	83.3%	83.3%	79.2%	75.0%	62.5%	66.7%	54.2%
<i>Potamogeton amplifolius</i>	33.3%	100.0%	91.7%	77.3%	79.2%	87.5%	91.7%	87.5%	37.5%	45.8%	75.0%	75.0%
<i>Potamogeton illinoensis</i>	0.0%	4.2%	8.3%	9.1%	45.8%	41.7%	25.0%	16.7%	45.8%	41.7%	45.8%	54.2%
<i>Myriophyllum spicatum</i>	79.2%	8.3%	33.3%	0.0%	33.3%	79.2%	12.5%	25.0%	8.3%	29.2%	41.7%	16.7%
<i>Potamogeton zosteriformis</i>	58.3%	8.3%	62.5%	0.0%	25.0%	45.8%	12.5%	66.7%	45.8%	33.3%	29.2%	66.7%
<i>Zosterella dubia</i>	4.2%	0.0%	37.5%	0.0%	25.0%	20.8%	8.3%	50.0%	0.0%	0.0%	0.0%	16.7%
<i>Nymphaea odorata</i>	62.5%	16.7%	29.2%	9.1%	20.8%	25.0%	33.3%	16.7%	25.0%	29.2%	37.5%	37.5%
<i>Potamogeton crispus</i>	4.2%	4.2%	4.2%	4.5%	12.5%	0.0%	0.0%	0.0%	4.2%	0.0%	0.0%	0.0%
Chlorophyta	0.0%	29.2%	95.8%	31.8%	8.3%	29.2%	12.5%	4.2%	16.7%	20.8%	16.7%	29.2%
<i>Elodea canadensis</i>	29.2%	0.0%	8.3%	0.0%	8.3%	29.2%	45.8%	79.2%	16.7%	29.2%	16.7%	12.5%
<i>Utricularia vulgaris</i>	29.2%	37.5%	0.0%	27.3%	4.2%	12.5%	16.7%	4.2%	16.7%	20.8%	16.7%	29.2%
<i>Chara sp. / Nitella sp.</i>	0.0%	0.0%	0.0%	4.5%	4.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<i>Wolffia sp.</i>	0.0%	0.0%	0.0%	4.5%	4.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<i>Potamogeton epihydrus</i>	0.0%	12.5%	4.2%	0.0%	4.2%	4.2%	4.2%	0.0%	4.2%	4.2%	0.0%	0.0%
<i>Potamogeton gramineus</i>	16.7%	0.0%	8.3%	0.0%	4.2%	0.0%	8.3%	0.0%	8.3%	8.3%	0.0%	0.0%
<i>Utricularia gibba</i>	0.0%	0.0%	0.0%	40.9%	0.0%	0.0%	4.2%	0.0%	0.0%	0.0%	0.0%	0.0%
<i>Potamogeton natans</i>	0.0%	0.0%	0.0%	9.1%	0.0%	8.3%	8.3%	12.5%	8.3%	0.0%	0.0%	12.5%
<i>Lemna minor</i>	45.8%	8.3%	0.0%	4.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<i>Brasenia schreberi</i>	4.2%	4.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<i>Isoetes sp.</i>	0.0%	4.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<i>Najas flexilis</i>	4.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<i>Nuphar variegatum</i>	16.7%	16.7%	16.7%	0.0%	0.0%	0.0%	0.0%	4.2%	4.2%	0.0%	0.0%	0.0%
<i>Vallisneria americana</i>	33.3%	45.8%	0.0%	0.0%	0.0%	0.0%	8.3%	4.2%	4.2%	0.0%	0.0%	0.0%

Chart 1: Lily Pond: *Myriophyllum spicatum* Number of Occurrences and Percent Cover



Lake St. Catherine (Main Basin)

The distribution and composition of native plant species in the main basin of Lake St. Catherine was consistent with recent years. *Potamogeton robbinsii* remained the most common plant species in the main basin and was recorded at 60.9% of the surveyed locations. *Myriophyllum spicatum* and *Potamogeton illinoensis* were secondary in abundance and were recorded at 55.5% of surveyed data point locations in the Main Lake. *Potamogeton zosteriformis* and *Potamogeton amplifolius* remained well distributed and were at 32% and 25% the surveyed data points respectively. Cover of other native plant species remained relatively consistent with previous years and only minor fluctuations in distribution indices were evident between 2013 and 2014.

Table 5: Lake St. Catherine – Species List and Frequency of Occurrence (main basin)

Macrophyte Species	2001	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<i>Myriophyllum spicatum</i>	98.4%	65.1%	14.7%	35.7%	76.7%	58.9%	44.2%	27.9%	49.6%	46.5%	65.6%	55.5%
<i>Potamogeton robbinsii</i>	31.0%	65.1%	82.2%	62.0%	66.7%	58.1%	78.3%	72.9%	58.1%	66.7%	66.4%	60.9%
<i>Najas flexilis</i>	19.4%	0.0%	12.4%	56.6%	50.4%	34.1%	21.7%	24.8%	20.2%	12.4%	5.5%	6.3%
<i>Potamogeton amplifolius</i>	28.7%	14.7%	25.6%	34.1%	38.8%	38.0%	41.1%	44.2%	25.6%	34.9%	27.3%	25.0%
<i>Potamogeton zosteriformis</i>	24.0%	2.3%	31.0%	41.9%	27.9%	18.6%	19.4%	23.3%	30.2%	20.2%	20.3%	32.0%
<i>Zosterella dubia</i>	0.0%	0.8%	4.7%	11.6%	27.9%	21.7%	7.8%	8.5%	5.4%	1.6%	1.6%	13.3%
<i>Chara sp. / Nitella sp.</i>	1.6%	17.1%	62.0%	57.4%	20.9%	21.7%	19.4%	2.3%	0.8%	0.0%	0.0%	4.7%
<i>Potamogeton illinoensis</i>	6.2%	0.8%	0.8%	8.5%	15.5%	34.1%	23.3%	31.0%	32.6%	53.3%	57.0%	55.5%
<i>Potamogeton pusillus</i>	0.0%	0.0%	0.0%	5.4%	12.4%	6.3%	5.4%	11.6%	12.4%	4.7%	3.9%	0.0%
<i>Ceratophyllum demersum</i>	10.9%	10.9%	6.2%	7.0%	10.9%	10.1%	7.8%	14.0%	6.2%	10.9%	1.6%	4.7%
<i>Vallisneria americana</i>	14.0%	3.1%	0.8%	3.1%	8.5%	9.3%	13.2%	13.2%	10.1%	9.3%	14.8%	14.1%
<i>Elodea canadensis</i>	27.9%	0.0%	0.0%	0.8%	4.7%	51.9%	71.3%	14.7%	8.5%	7.0%	18.8%	7.0%
<i>Nymphaea odorata</i>	3.1%	1.6%	2.3%	3.1%	3.1%	3.1%	3.1%	1.6%	2.3%	1.6%	0.8%	2.3%
<i>Brasenia schreberi</i>	0.0%	0.8%	0.8%	2.3%	2.3%	2.3%	2.3%	1.6%	2.3%	0.8%	0.8%	2.3%
<i>Chlorophyta</i>	0.0%	43.4%	14.7%	3.1%	2.3%	3.9%	0.8%	0.8%	3.1%	2.3%	0.0%	0.0%
<i>Isoetes sp.</i>	2.3%	8.5%	0.8%	6.2%	2.3%	4.7%	0.0%	0.0%	0.8%	0.8%	0.0%	0.0%
<i>Potamogeton gramineus</i>	17.8%	0.0%	4.7%	1.6%	2.3%	6.2%	3.1%	6.2%	14.7%	9.3%	3.1%	3.9%
<i>Potamogeton crispus</i>	1.6%	0.0%	9.3%	5.4%	1.6%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%
<i>Potamogeton epiphydrus</i>	2.3%	3.1%	5.4%	2.3%	0.8%	3.9%	0.8%	0.8%	0.8%	2.3%	0.0%	1.6%
<i>Nuphar variegatum</i>	0.8%	0.0%	0.0%	0.8%	0.8%	0.0%	0.0%	0.8%	0.8%	0.0%	0.0%	0.0%
<i>Utricularia vulgaris</i>	0.8%	0.8%	0.8%	0.0%	0.0%	1.6%	0.8%	3.1%	0.0%	0.8%	0.0%	0.8%
<i>Lemna minor</i>	1.6%	0.0%	0.0%	0.0%	0.0%	0.8%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%
<i>Megalodonta beckii</i>	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

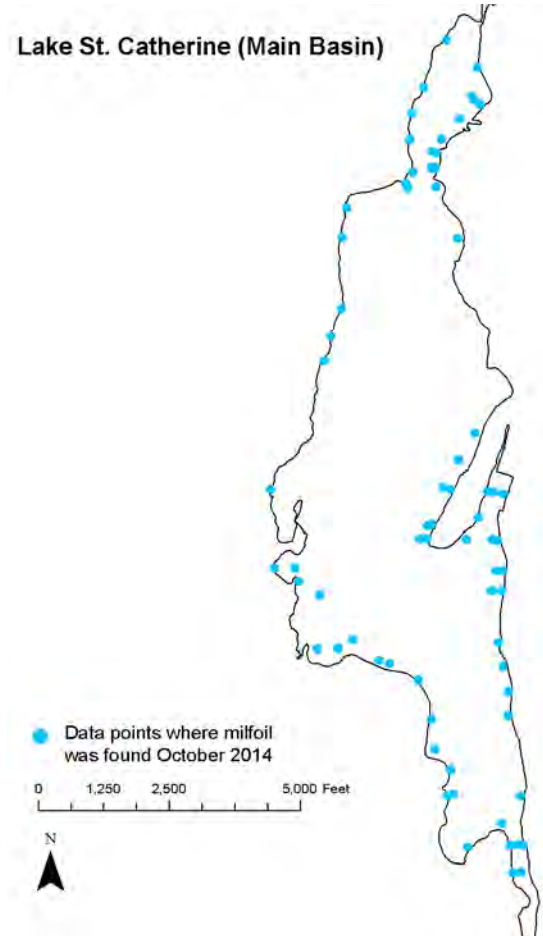
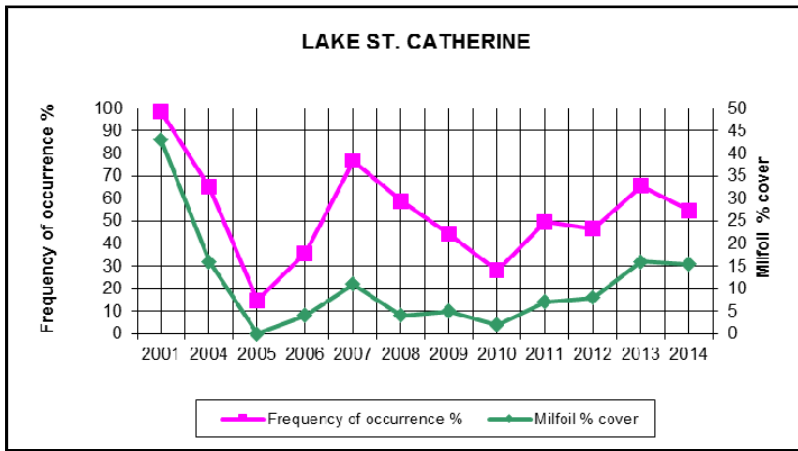
Milfoil FOC decreased between 2013 and 2014 from 65.6% to 55.5%, due in large part to successful treatment of a few of the large dense beds of milfoil. Milfoil was the dominant species at 39% of the locations where found, which represented a drop of roughly 14% from 2013. Average cover of milfoil remained static in the Main Lake from 2013 to 2014, decreasing from 16% to 15%.

Despite favorable milfoil control within the treated areas, cover and distribution continued to increase outside of the surveyed data points with several dense beds noted around the shoreline of the Main Lake. While the annual spot-treatments and diver suction hand-pulling efforts have been relatively effective, milfoil growth remains well distributed in the Main Lake.

Locations of milfoil observed during the survey were recorded with a GPS unit. The collected GPS points as well as an estimated extent of dense milfoil beds observed during the September 2014 survey are depicted in Figure 2.

Chart 2 (below) represents year-to-year change in milfoil frequency and cover in the main basin.

Chart 2: *Myriophyllum spicatum* Frequency of Occurrence and Percent Cover



Little Lake

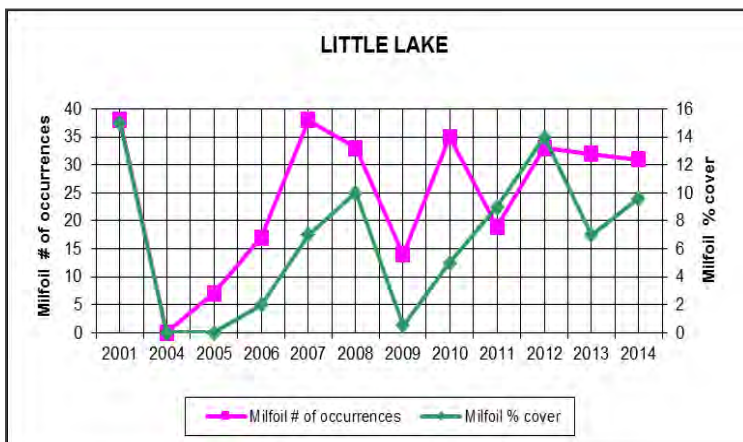
Potamogeton robbinsii and *Potamogeton illinoensis* continue to dominate the aquatic plant community in Little Lake accounting for a large percentage of the plant density recorded during the September 2014 survey. *Vallisneria americana*, *Ceratophyllum demersum*, *Potamogeton zosteriformis*, *Elodea canadensis*, , and *Potamogeton amplifolius* remain common in Little Lake and were encountered at 42%, 35%, 33%, 26% & 23% of the surveyed data points, respectively.

Myriophyllum spicatum FOC remained high (72%) in Little Lake. Where found, however, cover of milfoil was fairly low and was only the dominant species at 3 of the 31 locations where documented. Average milfoil density increased slightly but remained fairly low at just over 9.7% estimated cover.

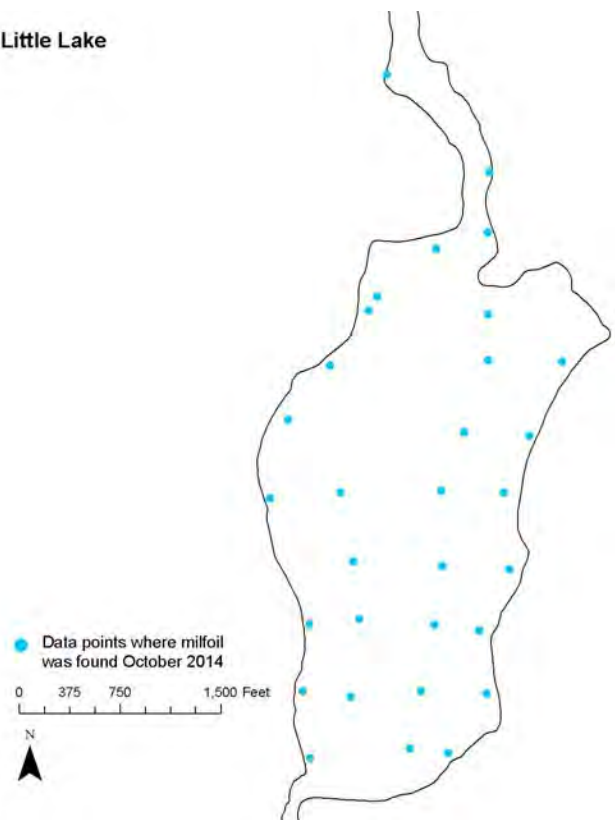
Table 6: Little Lake – Species List and Frequency of Occurrence

Macrophyte Species	2001	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<i>Potamogeton robbinsii</i>	88.4%	100.0%	100.0%	100.0%	100.0%	88.4%	95.3%	81.4%	86.0%	90.7%	93.0%	95.3%
<i>Myriophyllum spicatum</i>	88.4%	0.0%	16.3%	39.5%	88.4%	76.7%	32.6%	81.4%	44.2%	76.6%	74.4%	72.1%
<i>Potamogeton amplifolius</i>	44.2%	72.1%	69.8%	76.7%	74.4%	76.7%	55.8%	72.1%	27.9%	30.2%	20.9%	23.3%
<i>Potamogeton illinoensis</i>	0.0%	0.0%	0.0%	9.3%	32.6%	46.5%	48.5%	36.2%	62.8%	60.5%	60.5%	65.1%
<i>Utricularia vulgaris</i>	16.3%	18.6%	7.0%	11.6%	30.2%	18.6%	34.9%	25.6%	4.7%	2.3%	9.3%	14.0%
<i>Nymphaea odorata</i>	30.2%	9.3%	25.6%	30.2%	27.9%	10.1%	18.6%	18.6%	23.3%	32.6%	30.2%	37.2%
<i>Brasenia schreberi</i>	14.0%	30.2%	30.2%	23.3%	25.6%	20.9%	14.0%	11.6%	14.0%	11.6%	14.0%	11.6%
<i>Ceratophyllum demersum</i>	20.9%	0.0%	2.3%	9.3%	16.3%	7.0%	9.3%	16.3%	27.9%	27.9%	27.9%	34.9%
<i>Vallisneria americana</i>	72.1%	25.6%	7.0%	9.3%	14.0%	9.3%	25.6%	25.6%	34.9%	39.5%	39.5%	44.2%
<i>Potamogeton zosteriformis</i>	23.3%	2.3%	4.7%	4.7%	7.0%	4.7%	7.0%	9.3%	9.3%	14.0%	27.9%	32.6%
<i>Zosterella dubia</i>	2.3%	2.3%	4.7%	0.0%	7.0%	2.3%	4.7%	4.7%	2.3%	4.7%	14.0%	2.3%
<i>Potamogeton pusillus</i>	0.0%	0.0%	0.0%	2.3%	7.0%	2.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Chlorophyta	7.0%	20.9%	20.9%	4.7%	7.0%	9.3%	2.3%	2.3%	2.3%	2.3%	2.3%	0.0%
<i>Nuphar variegatum</i>	9.3%	14.0%	11.6%	7.0%	7.0%	2.3%	7.0%	2.3%	4.7%	2.3%	2.3%	0.0%
<i>Potamogeton epihydrus</i>	0.0%	11.6%	14.0%	7.0%	7.0%	7.0%	0.0%	0.0%	2.3%	9.3%	2.3%	2.3%
<i>Utricularia gibba</i>	7.0%	0.0%	2.3%	0.0%	4.7%	2.3%	14.0%	4.7%	0.0%	0.0%	0.0%	0.0%
<i>Najas flexilis</i>	39.5%	0.0%	0.0%	4.7%	2.3%	0.0%	4.7%	0.0%	4.7%	0.0%	2.3%	14.0%
<i>Elodea canadensis</i>	46.5%	4.7%	0.0%	0.0%	2.3%	23.3%	34.9%	46.5%	20.9%	27.9%	39.5%	25.6%
<i>Chara sp. / Nitella sp.</i>	7.0%	4.7%	7.0%	11.6%	0.0%	0.0%	2.3%	0.0%	4.7%	2.3%	0.0%	0.0%
<i>Potamogeton gramineus</i>	41.9%	4.7%	9.3%	23.3%	0.0%	0.0%	4.7%	0.0%	4.7%	4.7%	2.3%	0.0%
<i>Isoetes sp.</i>	0.0%	0.0%	4.7%	2.3%	0.0%	0.0%	2.3%	0.0%	0.0%	2.3%	0.0%	0.0%
<i>Potamogeton crispus</i>	0.0%	0.0%	0.0%	2.3%	0.0%	0.0%	0.0%	0.0%	0.0%	2.3%	0.0%	0.0%
<i>Polygonum sp.</i>	0.0%	0.0%	0.0%	2.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<i>Eleocharis sp.</i>	4.7%	4.7%	4.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<i>Megalodonta beckii</i>	7.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.3%	0.0%	0.0%	0.0%

Chart 3: *Myriophyllum spicatum* Number of Occurrences and Percent Cover



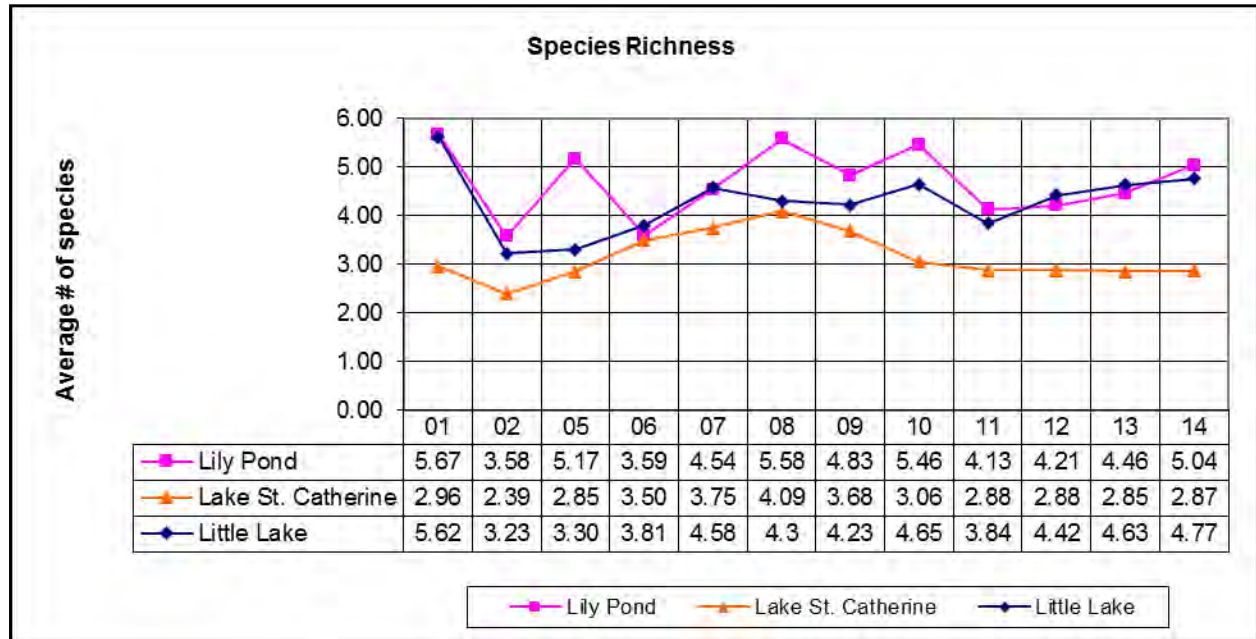
Little Lake



Species Richness

Species richness in all three basins was consistent with findings from the past five years. It does not appear that the maintenance herbicide treatments or other management practices have adversely impacted species richness or native plant diversity.

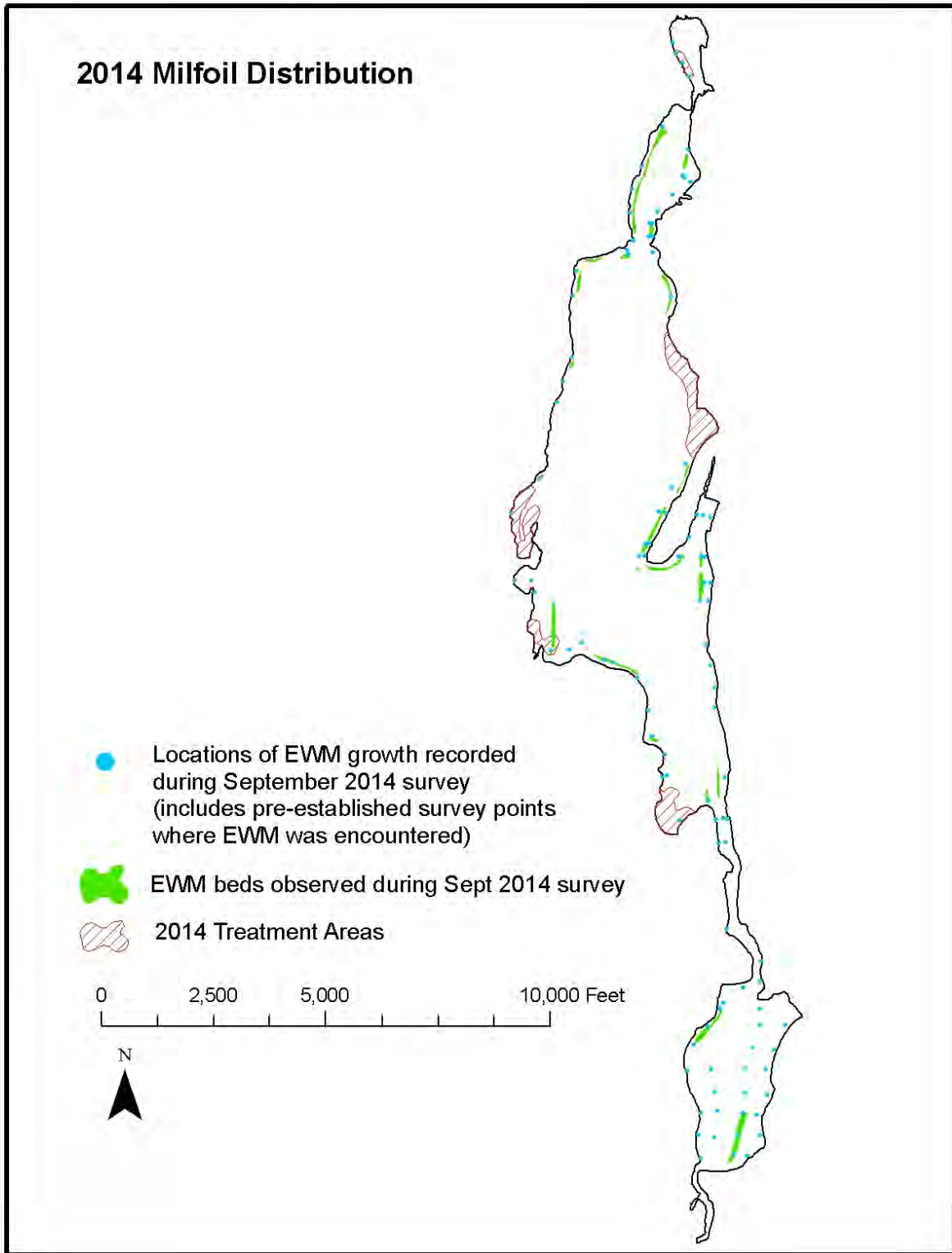
Table 7: Species Richness by Basin



Late Season Milfoil Bed Mapping

Milfoil beds were visually surveyed and mapped during the late season survey. Weather conditions and visibility were good with little wind and partly cloudy skies for most of the survey. As with past mapping efforts areas of milfoil growth were visually identified or found using a high-resolution depth finder and an underwater camera. Locations where milfoil was encountered were recorded using a GPS unit. A map of the GPS referenced milfoil locations and estimated extent of dense milfoil beds is shown in Figure 2.

Figure 2: Late season Eurasian watermilfoil distribution and Estimated Extent of Dense Milfoil Beds



SUMMARY OF 2014 AQUATIC VEGETATION MANAGEMENT PROGRAM

Renovate Herbicide Treatments

Results of the 2014 Renovate OTF (triclopyr granular) herbicide treatment program were consistent with treatment efforts performed in the Lake St. Catherine system in recent years. While some low density growth was observed around the outer extent of a few of the treated areas milfoil control overall was excellent. Based on results from previous triclopyr treatments at Lake St. Catherine we would expect to see reasonably good control of milfoil in these areas through the 2015 season.

After numerous years of use at Lake St. Catherine it is clear that triclopyr is highly selective for milfoil and its use has not had a perceptible impact on other non-target aquatic plant species. While there continued to be fluctuations in the frequency of occurrence and species richness indices, no major shifts in plant composition have been documented following any of the triclopyr applications performed at the lake. Based on data collected in the Lake St. Catherine system and other Vermont lakes, seasonal variability in native plant populations as well as the limitations of the data point survey methodology likely account for many of the documented year to year changes.

Spread Prevention and Non-Chemical Control Activities

As required by the DEC Permit, non-chemical milfoil control activities continued at Lake St. Catherine during the 2014 season. Efforts included volunteer monitoring, volunteer and paid hand harvesting and diver assisted suction harvesting. Details of the non-chemical control efforts will be provided by LSCA under separate cover.

DISCUSSION

Recent milfoil management efforts at Lake St. Catherine have focused on controlling areas of dense milfoil growth and maintaining it at non-nuisance levels. Renovate OTF (triclopyr granular) herbicide treatments have proven effective at providing selective control of milfoil where used, however, benefits from treatment have typically only been maintained for two growing seasons. While generally effective, triclopyr has also demonstrated some limitations when used in open water or smaller treatment areas where increased dilution and decreased concentration-exposure-time (CET) have resulted in less than optimal results. To maximize the effectiveness of annual treatments Aquatic Control has tried to identify and select treatment areas with the greatest chance of successful milfoil control. Additionally we have tried to improve CET by: delaying treatment until mid-June when more active plant tissue was present to maximize herbicide absorption; treating larger contiguous areas; and performing split-applications to extend the time that triclopyr was released off of the granule carrier.

It is apparent that there are still limitations of the Renovate OTF formulation to provide sufficient CET to insure complete milfoil control for partial lake or shoreline applications. Early studies with triclopyr on Eurasian watermilfoil suggested that CET's of 1.5 ppm were needed for 24 hours or 0.5 ppm were needed for 48 hours to insure >85% reduction of milfoil biomass (Netherland and Getsinger 1992). Future treatment efforts should continue to focus on improving the CET and ultimately longer-term milfoil control.

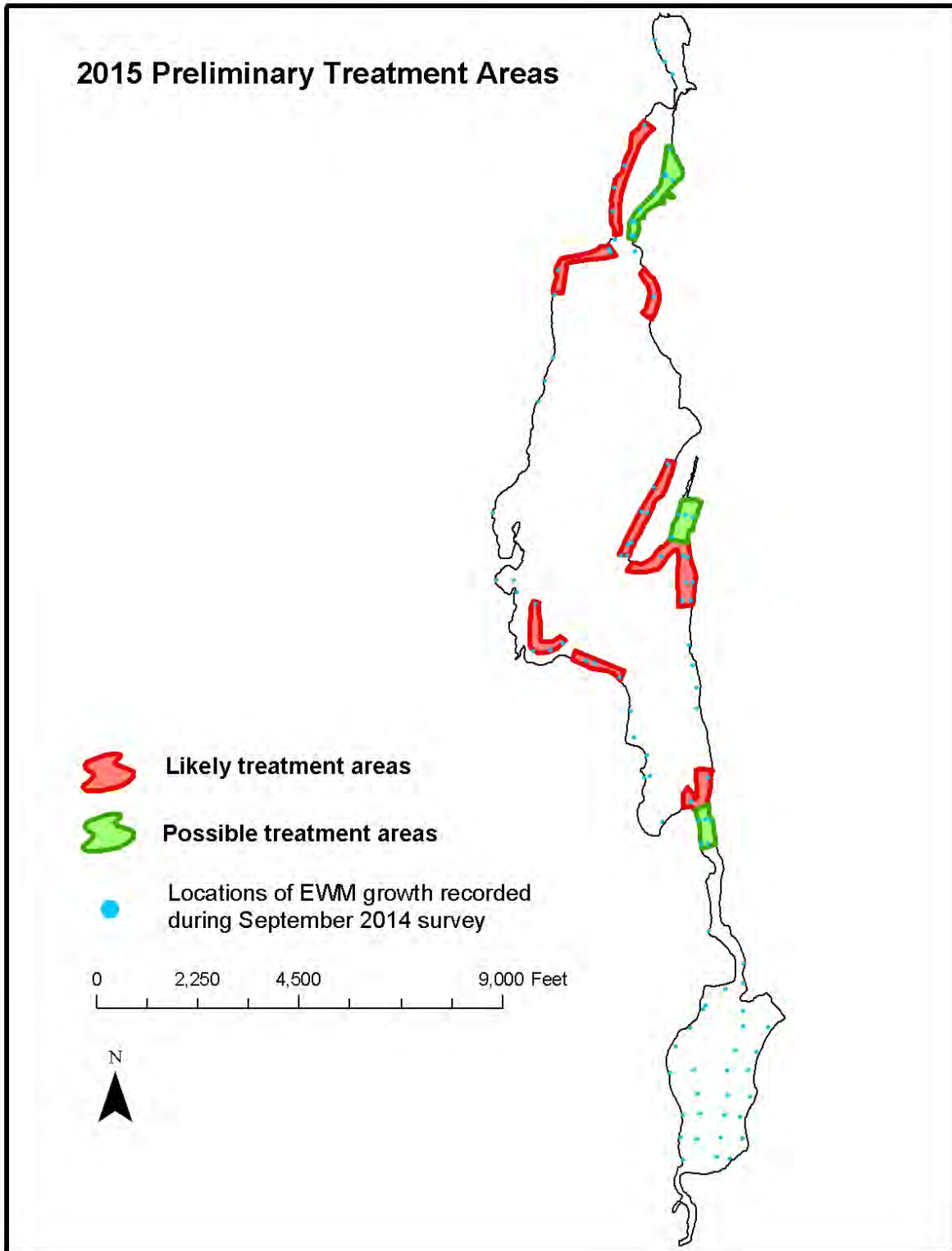
RECOMMENDATIONS FOR 2015 SEASON

Results from the 2014 Renovate OTF treatment program were good with nearly complete control of milfoil in the five areas treated. Although some low-density milfoil was observed in a few of the treated areas, most of it was found along the edges where dilution is higher and CET is more challenging. Despite some reduction in efficacy on the outer extent of the treatment areas, milfoil control overall was excellent. We attribute the improved milfoil control to successful management of the CET which we have been working to improve annually.

Unless alternative herbicides are permitted for use at the lake, or new products become available, it is likely that the use of Renovate (triclopyr) will remain the only viable herbicide option for milfoil control at Lake St. Catherine. As we have seen at Lake St. Catherine and other sites, the CET when using Renovate is critical for achieving good milfoil control. While potential treatment sites have typically been evaluated based on factors including: treatment area size, shape and location, results from this year's herbicide residue testing suggest that plant maturity may be playing a bigger role in herbicide CET than previously considered. By comparison to the past few years, results from the herbicide residue testing indicated significantly higher (average) 24-hr post-treatment triclopyr residues within the treated areas (2014: 344ppb; 2013: 247ppb; 2012: 120ppb; 2011: 213ppb). We attribute the higher post-treatment concentrations documented this year to the more mature/taller plant growth at the time of treatment which helped reduce water exchange in the treatment areas effectively improving the CET. **While timing of treatment is dictated by a number of factors and treatment will likely continue to be performed in mid-late June results from this year's treatment program suggest that plant maturity and its impact on treatment efficacy should be considered when scheduling future treatments at Lake St. Catherine.**

Preliminary 2015 treatment areas are depicted on the following page (Figure 3). Based on the density and distribution of milfoil growth observe this past fall we anticipate treatment of 50-70 acres in the main lake. Potential treatment areas will be inspected in the early spring and will be finalized with the LSCA and VT DEP prior to treatment.

Figure 3: Preliminary 2015 Management Areas



REFERENCES

Netherland, M.D. and K.D. Getsinger. 1992. Efficacy of Triclopyr on Eurasian Watermilfoil: Concentration and Exposure Time Effects. *J. Aquat. Plant Manage.* 30: 1-5.

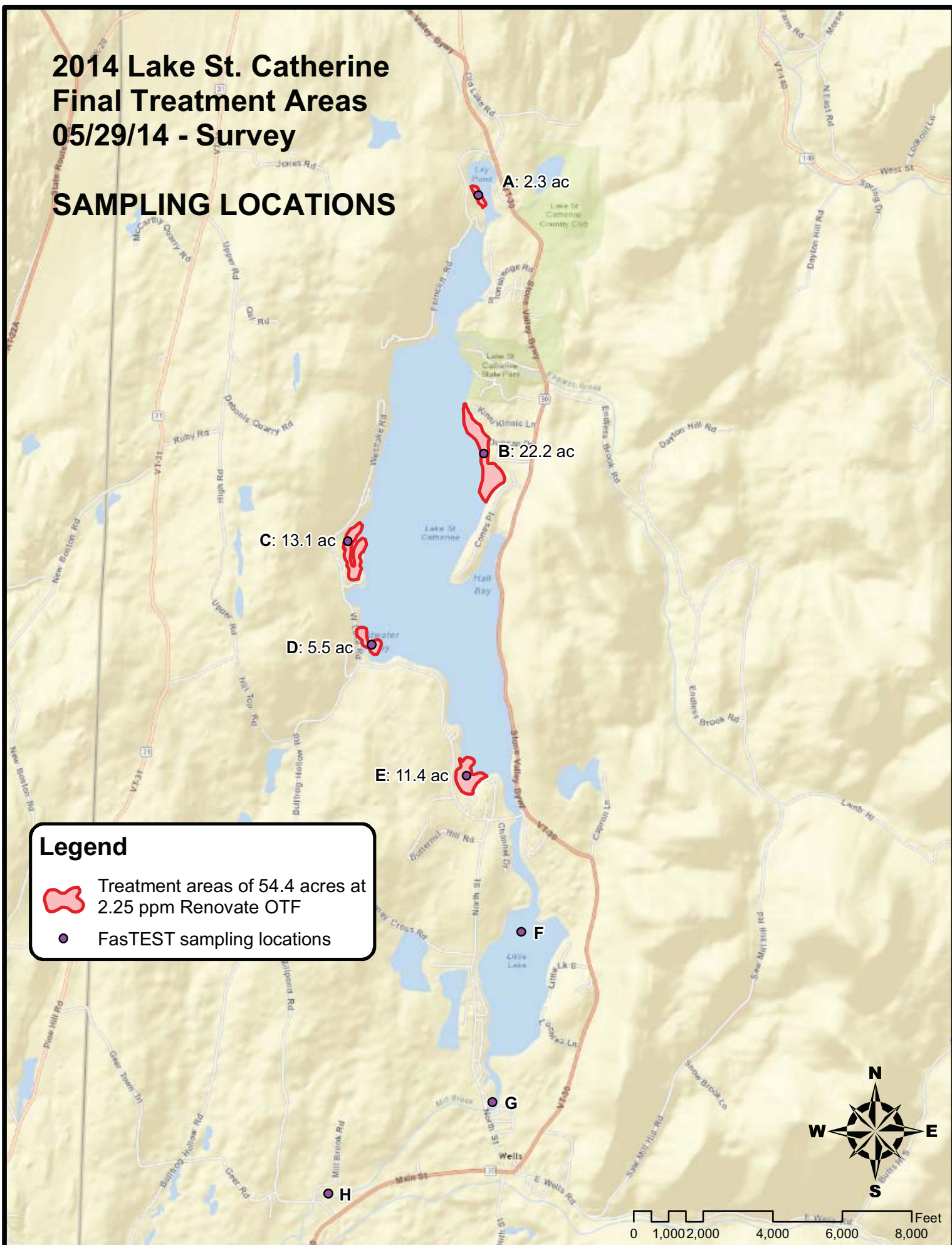
APPENDIX A

Herbicide Residue Testing Results



- Sampling Location Map
- SePRO Laboratory Report – 6/26/14 sampling round
- SePRO Laboratory Report – 7/3/14 sampling round
- SePRO Laboratory Report – 7/14/14 sampling round

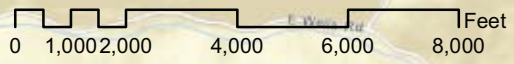
2014 Lake St. Catherine Final Treatment Areas 05/29/14 - Survey

SAMPLING LOCATIONS



Legend

-  Treatment areas of 54.4 acres at 2.25 ppm Renovate OTF
-  FastEST sampling locations





Chain of Custody: 2014-26678-00

LABORATORY REPORT

Page 1 of 2 Total

Customer Company

Company Name: Aquatic Control Tech Inc
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Sutton, MA 01590-2509

Customer Contact

Contact Person: Marc Bellaud
E-Mail Address: mbellaud@aquaticcontroltech.com
Phone: (508) 865-1000
Fax:

Waterbody Information

Waterbody: Lake St. Catherine - MA Waterbody Size (acres): 0.00 Depth Average: 0.0

Sample Information

Lab ID	Sample Location	Test Method	Results	Sampling Date	Sampling Time	Temp at Receipt (C)
28999	A	Renovate/Triclopyr (µg/L) SOP: FAST 02	438.5	06/26/2014		
29301	B	Renovate/Triclopyr (µg/L) SOP: FAST 02	210.4	06/26/2014		
29302		Renovate/Triclopyr (µg/L) SOP: FAST 02	164.9	06/26/2014		
29303		Renovate/Triclopyr (µg/L) SOP: FAST 02	179.5	06/26/2014		
29304		Renovate/Triclopyr (µg/L) SOP: FAST 02	725.3	06/26/2014		
29305		Renovate/Triclopyr (µg/L) SOP: FAST 02	3.5	06/26/2014		
29306	G	Renovate/Triclopyr (µg/L) SOP: FAST 02	< 1.00	06/26/2014		
29307	H	Renovate/Triclopyr (µg/L) SOP: FAST 02	< 1.00	06/26/2014		

Original



Waterbody Information

Waterbody: Lake St. Catherine - MA Waterbody Size (acres): 0.00 Depth Average: 0.0

Sample Information

Lab ID	Sample Location	Test Method	Results	Sampling Date	Sampling Time	Temp at Receipt (C)
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ANALYSIS STATEMENTS:
SAMPLE RECEIPT /HOLDING TIMES: All samples arrived in an acceptable condition and were analyzed within prescribed holding times in accordance with the SRTC Laboratory Sample Receipt Policy unless otherwise noted in the report.
PRESERVATION: Samples requiring preservation were verified prior to sample analysis and any qualifiers will be noted in the report.
QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.
ACCREDITED METHODS: This laboratory is not accredited for the tests marked "‡"
COMMENTS: No significant observations were made unless noted in the report.

Laboratory Information

Date Received: 06/30/2014
 Time Received: 10:00
 Date Results Sent: 07/01/2014
 Date Analysis Performed: 07/01/2014

*Disclaimer: The results listed within this Laboratory Report relate only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a dry weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the exclusive use of SRTC Laboratory and its client. This report shall not be reproduced, except in full, without written permission from SRTC Laboratory. The Chain of Custody is included and is an essential component of this report.
 This entire report was reviewed and approved for release.*

[Signature]
 Reviewed By: SRTC Laboratory Manager

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Chain of Custody: 2014-27625-00

LABORATORY REPORT

Page 1 of 2 Total

Customer Company

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Phone: (508) 865-1000
Fax:

Waterbody Information

Waterbody: Lake St. Catherine - MA Waterbody Size (acres): 0.00 Depth Average: 0.0

Sample Information

Lab ID	Sample Location	Test Method	Results	Sampling Date	Sampling Time	Temp at Receipt (C)
29485	A	Renovate/Triclopyr (µg/L) SOP: FAST 02	97.5	07/03/2014		
29486	B	Renovate/Triclopyr (µg/L) SOP: FAST 02	12.2	07/03/2014		
29487	C	Renovate/Triclopyr (µg/L) SOP: FAST 02	14.3	07/03/2014		
29488	D	Renovate/Triclopyr (µg/L) SOP: FAST 02	12.2	07/03/2014		
29489	E	Renovate/Triclopyr (µg/L) SOP: FAST 02	15.9	07/03/2014		
29490	F	Renovate/Triclopyr (µg/L) SOP: FAST 02	2.9	07/03/2014		
29491	G	Renovate/Triclopyr (µg/L) SOP: FAST 02	< 1.00	07/03/2014		
29492	H	Renovate/Triclopyr (µg/L) SOP: FAST 02	< 1.00	07/03/2014		

Original



Waterbody Information

Waterbody: Lake St. Catherine - MA Waterbody Size (acres): 0.00 Depth Average: 0.0

Sample Information

Lab ID	Sample Location	Test Method	Results	Sampling Date	Sampling Time	Temp at Receipt (C)
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ANALYSIS STATEMENTS:
SAMPLE RECEIPT /HOLDING TIMES: All samples arrived in an acceptable condition and were analyzed within prescribed holding times in accordance with the SRTC Laboratory Sample Receipt Policy unless otherwise noted in the report.
PRESERVATION: Samples requiring preservation were verified prior to sample analysis and any qualifiers will be noted in the report.
QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.
ACCREDITED METHODS: This laboratory is not accredited for the tests marked "‡"
COMMENTS: No significant observations were made unless noted in the report.

Laboratory Information

Date Received: 07/09/2014
 Time Received: 10:00
 Date Results Sent: 07/10/2014
 Date Analysis Performed: 07/10/2014

*Disclaimer: The results listed within this Laboratory Report relate only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a dry weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the exclusive use of SRTC Laboratory and its client. This report shall not be reproduced, except in full, without written permission from SRTC Laboratory. The Chain of Custody is included and is an essential component of this report.
 This entire report was reviewed and approved for release.*

West Bishop
 Reviewed By: SRTC Laboratory Manager

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Chain of Custody: 2014-28130-00

LABORATORY REPORT

Page 1 of 2 Total

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Phone: (508) 865-1000
Fax:

Waterbody Information

Waterbody: Lake St. Catherine - MA Waterbody Size (acres): 0.00 Depth Average: 0.0

Sample Information

Lab ID	Sample Location	Test Method	Results	Sampling Date	Sampling Time	Temp at Receipt (C)
29714	A	Renovate/Triclopyr (µg/L) SOP: FAST 02	32.7	07/14/2014		
29715	B	Renovate/Triclopyr (µg/L) SOP: FAST 02	6.7	07/14/2014		
29716	C	Renovate/Triclopyr (µg/L) SOP: FAST 02	7.5	07/14/2014		
29717	D	Renovate/Triclopyr (µg/L) SOP: FAST 02	7.8	07/14/2014		
29718	E	Renovate/Triclopyr (µg/L) SOP: FAST 02	9.1	07/14/2014		
29719	F	Renovate/Triclopyr (µg/L) SOP: FAST 02	4.8	07/14/2014		
29720	G	Renovate/Triclopyr (µg/L) SOP: FAST 02	< 1.00	07/14/2014		
29721	H	Renovate/Triclopyr (µg/L) SOP: FAST 02	< 1.00	07/14/2014		

Original



Waterbody Information

Waterbody: Lake St. Catherine - MA Waterbody Size (acres): 0.00 Depth Average: 0.0

Sample Information

Lab ID	Sample Location	Test Method	Results	Sampling Date	Sampling Time	Temp at Receipt (C)
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ANALYSIS STATEMENTS:
SAMPLE RECEIPT /HOLDING TIMES: All samples arrived in an acceptable condition and were analyzed within prescribed holding times in accordance with the SRTC Laboratory Sample Receipt Policy unless otherwise noted in the report.
PRESERVATION: Samples requiring preservation were verified prior to sample analysis and any qualifiers will be noted in the report.
QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.
ACCREDITED METHODS: This laboratory is not accredited for the tests marked "‡"
COMMENTS: No significant observations were made unless noted in the report.

Laboratory Information

Date Received: 07/16/2014
 Time Received: 10:00
 Date Results Sent: 07/17/2014
 Date Analysis Performed: 07/17/2014

*Disclaimer: The results listed within this Laboratory Report relate only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a dry weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the exclusive use of SRTC Laboratory and its client. This report shall not be reproduced, except in full, without written permission from SRTC Laboratory. The Chain of Custody is included and is an essential component of this report.
 This entire report was reviewed and approved for release.*

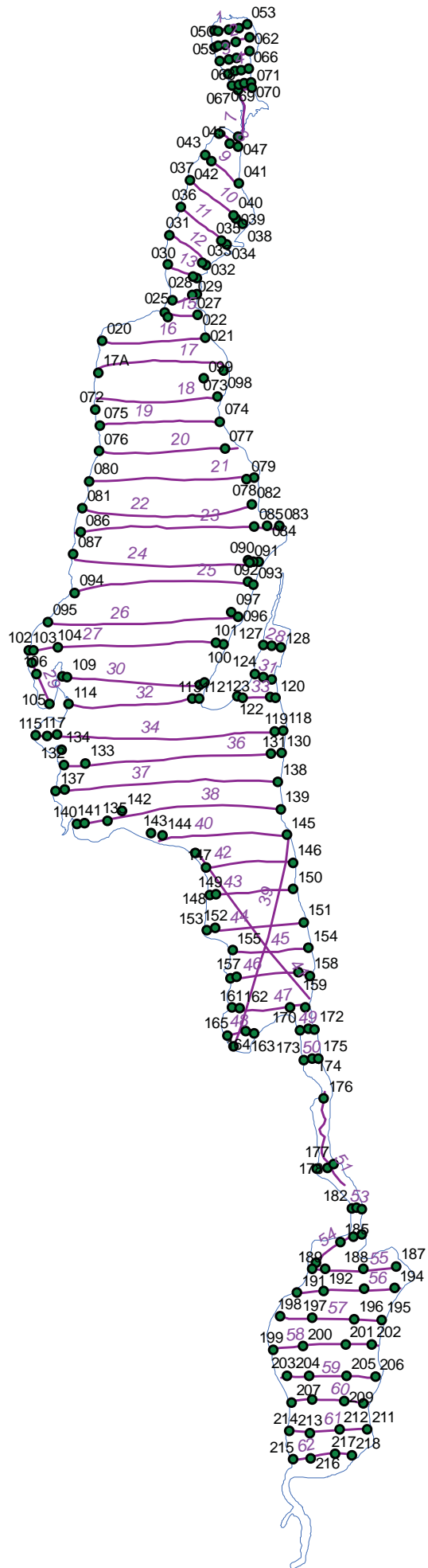
West Bishop
 Reviewed By: SRTC Laboratory Manager

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APPENDIX B

Comprehensive Aquatic Vegetation Survey Information

- Data Point Sampling Location Map
- Field Data Table
- Overall Vegetation Density Map
- Vegetation Species Distribution Maps
- Late Season Milfoil Distribution - 2014



Lake St. Catherine

Poultney & Wells, VT

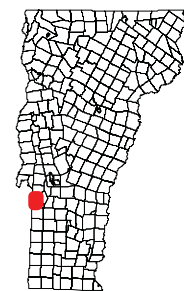
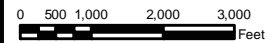
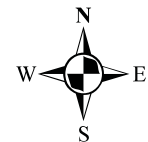
Transects & Data Point Locations
for Vegetation Survey

FIGURE:	SURVEY DATE:	MAP DATE:
B-1	9/9 & 9/10/14	11/4/14

Legend

● Data point locations recorded with GPs unit during ACT/ ReMetrix 2001 survey. Sampling replicated during ACT 2007 survey. Data points relocated with DGPS unit with sub-meter accuracy.

— Transects recorded during ACT/ ReMetrix 2001 survey using DGPS.



11 JOHN ROAD
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FAX: (508) 865-1220
WEB: WWW.AQUATICCONTROLTECH.COM

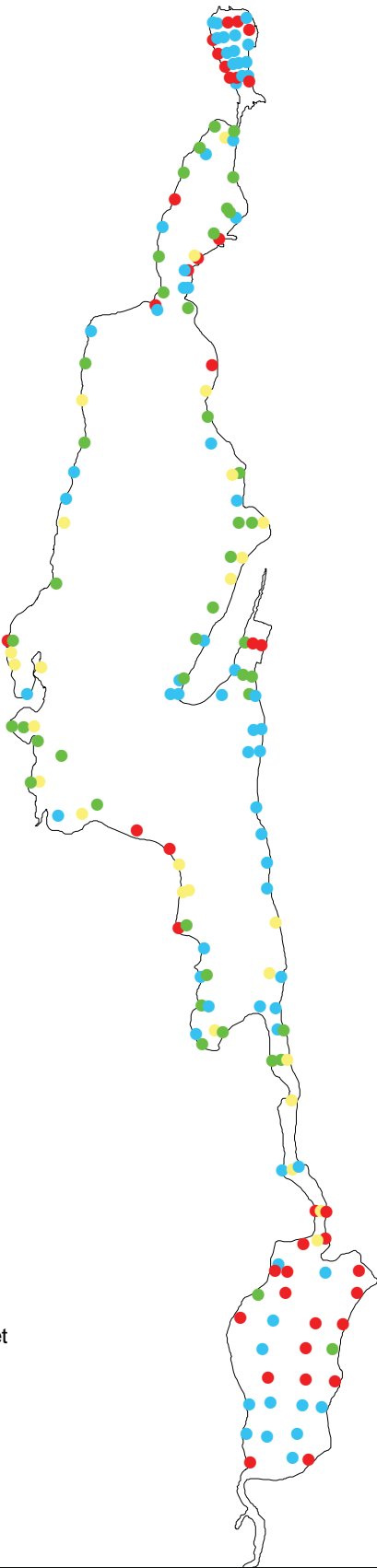
Transect	Point #	% Cover	% Ms Cover	Species Richness	Biomass	Pr	Ms	Pa	Ec	Pi	Nf	Pz	Cd	Zd	Ca	Ny	Mu	V	Fa	Pp	Uv	B	Pe	Pg	I	Pn	Ug	Nu	Pc	Lm	Ngram	Mb				
61	213	80	10	3	3	D	X		X	X																										
61	212	40	5	3	3	D	X		X	X																										
61	211	100	10	7	3	D	X	X	X	X			X																							
62	215	70	5	5	4		X		X	X			X																							
62	216	50	0	2	3	X			D																											
62	217	30	1	3	2		X		D																											
62	218	100	1	6	4	X	X		X	X								X																		
		85.81	9.63	4.77	3.16																															
						Present	15	28	10	11	23	6	14	15	1	0	13	0	15	0	0	6	4	1	0	0	0	0	0	0	0	0	0	0	1	
						Dominant	26	3	0	5	0	0	0	0	3	0	4	0	4	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
						Total	41	31	10	11	28	6	14	15	1	0	16	0	19	0	0	6	5	1	0	0	0	0	0	0	0	0	0	0	0	1
						% Frequency	95.3%	72.1%	23.3%	25.6%	65.1%	14.0%	32.6%	34.9%	2.3%	0.0%	37.2%	0.0%	44.2%	0.0%	0.0%	14.0%	11.6%	2.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.3%		

Entire Lake

Pr	Ms	Pa	Ec	Pi	Nf	Pz	Cd	Zd	Ca	Ny	Mu	V	Fa	Pp	Uv	B	Pe	Pg	I	Pn	Ug	Nu	Pc	Lm	Ngram	Mb									
Present	63	75	54	23	86	11	66	33	14	4	24	0	28	7	0	13	7	3	4	0	3	0	0	1	0	0	0	0	0	0	0	0	0	1	
Dominant	80	31	6	0	26	3	5	1	8	2	4	0	9	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	143	106	60	23	112	14	71	34	22	6	28	0	37	7	0	14	8	3	5	0	3	0	0	1	0	0	0	0	0	0	0	0	0	0	1
% Frequency	73.0%	54.1%	30.6%	11.7%	57.1%	7.1%	36.2%	17.3%	11.2%	3.1%	14.3%	0.0%	18.9%	3.6%	0.0%	7.1%	4.1%	1.5%	2.6%	0.0%	1.5%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%			

12.44898

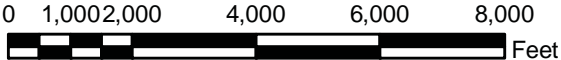
2014 TOTAL VEGETATION BIOMASS



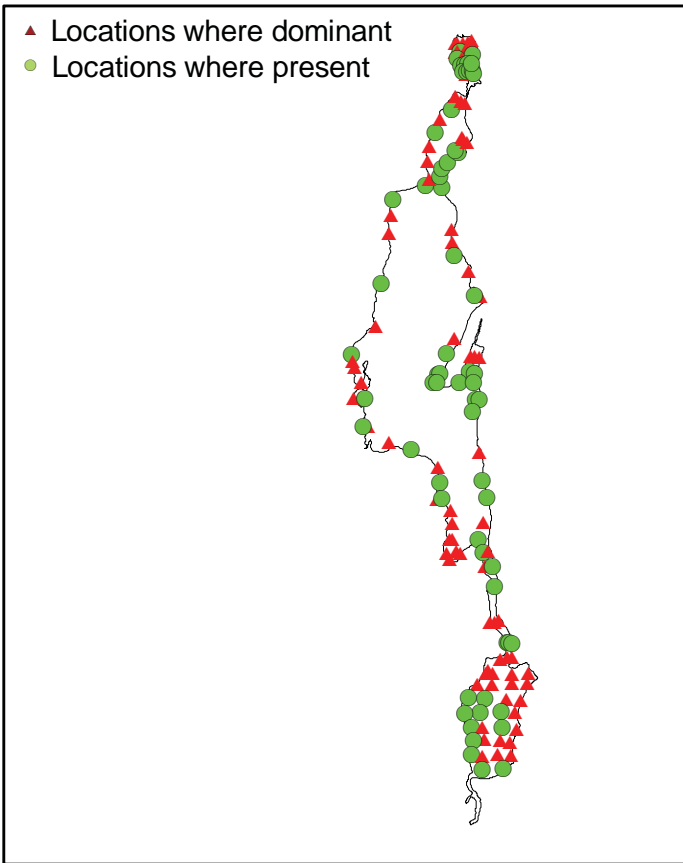
Legend

Biomass indices reported during 9/9 & 9/9/14 survey

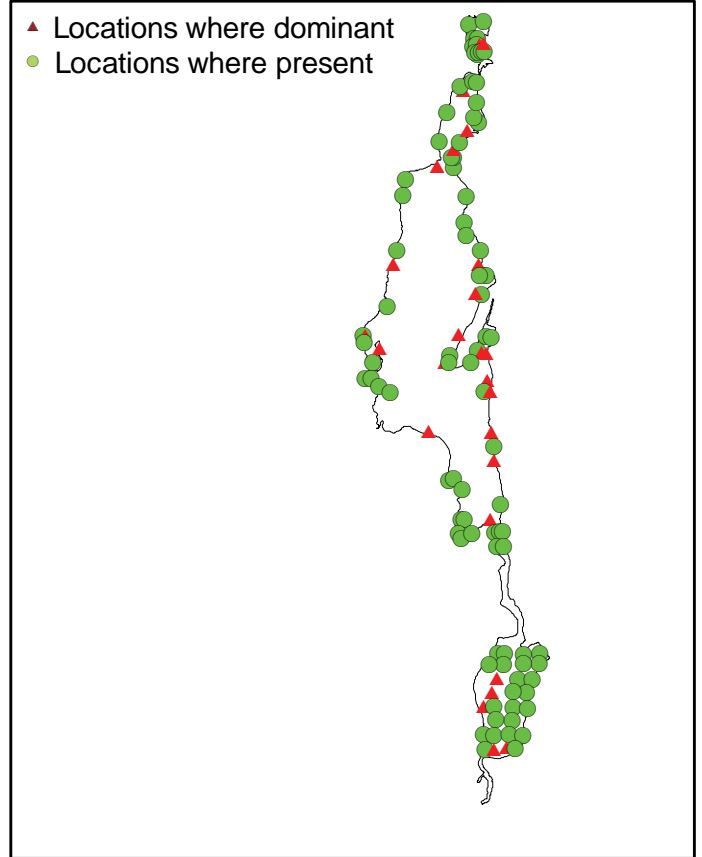
- 1 - low biomass (along bottom)
- 2 - moderate biomass (in water column)
- 3 - high biomass (approaching surface)
- 4 - extremely high biomass (topped out)



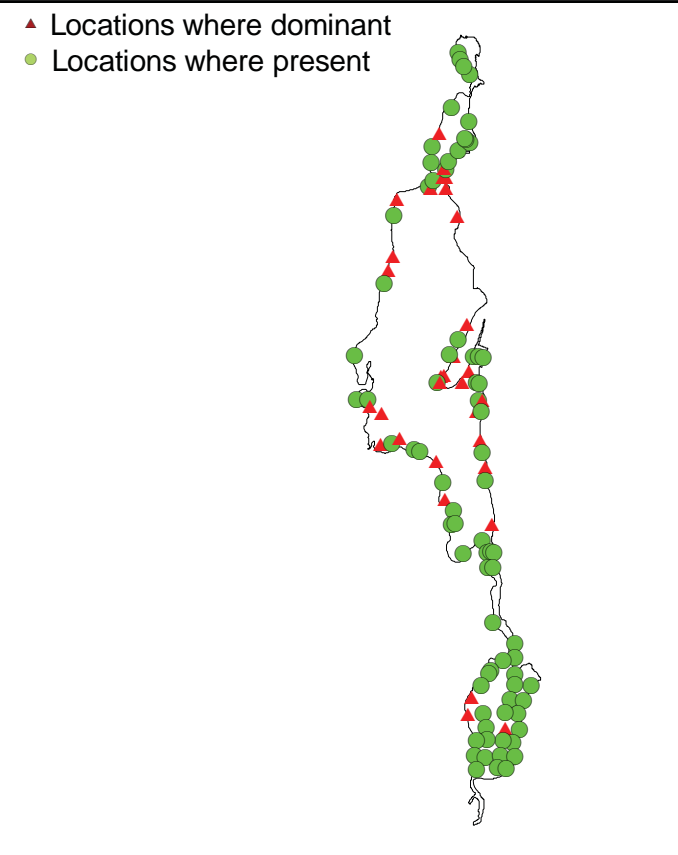
Distribution of *Potamogeton robbinsii*



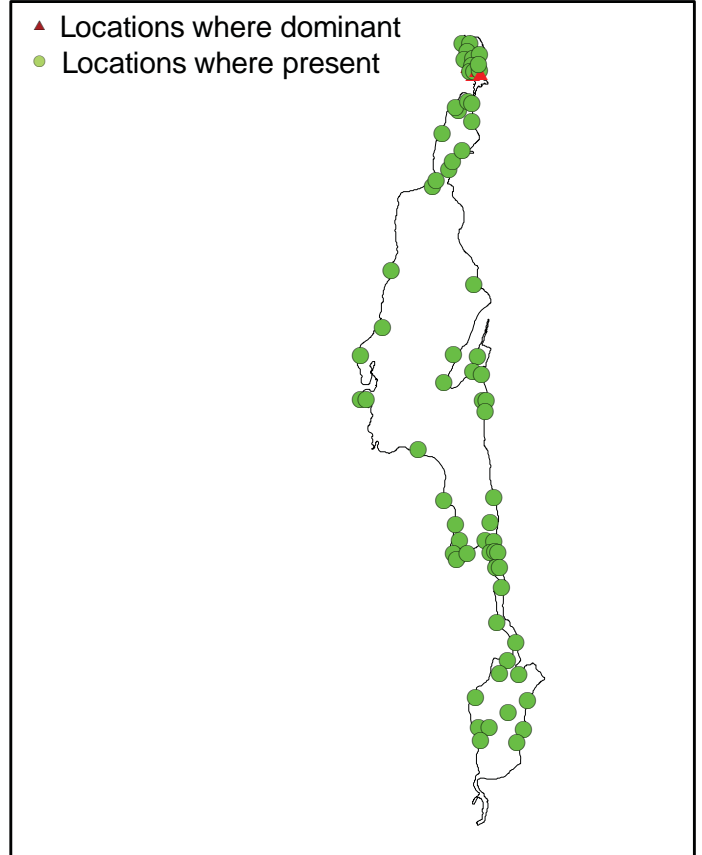
Distribution of *Potamogeton illionensis*



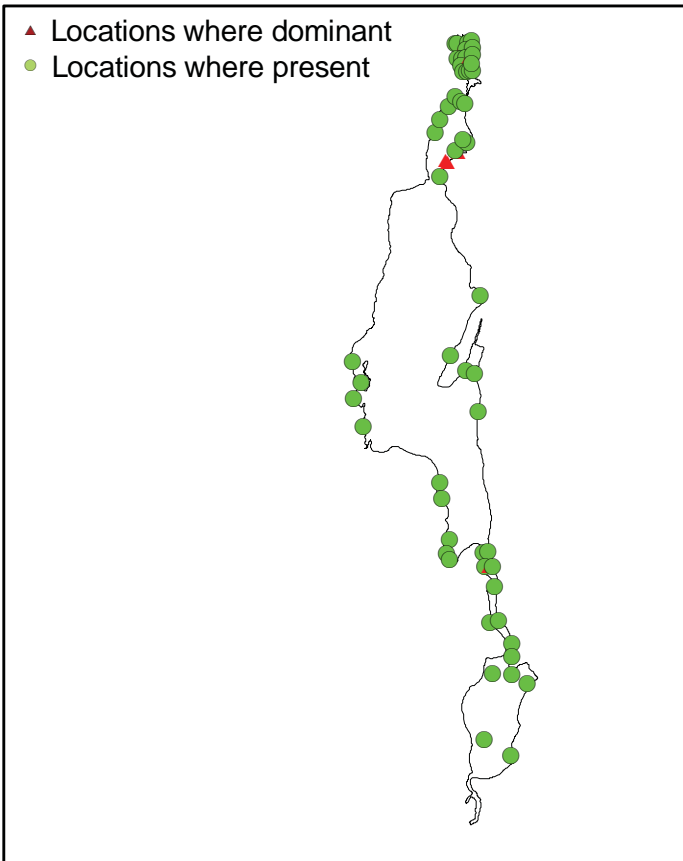
Distribution of *Myriophyllum spicatum*



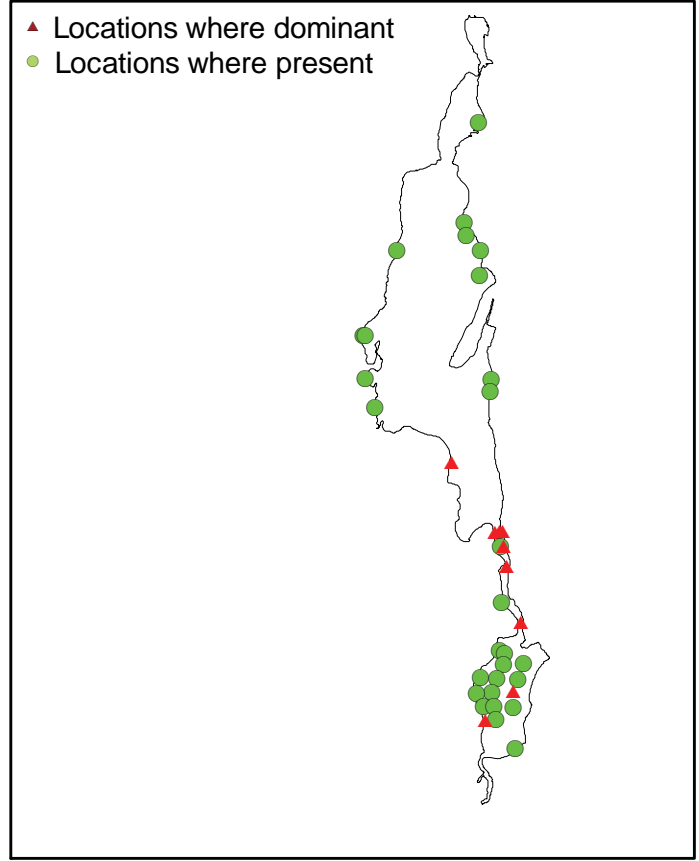
Distribution of *Potamogeton zosterformis*



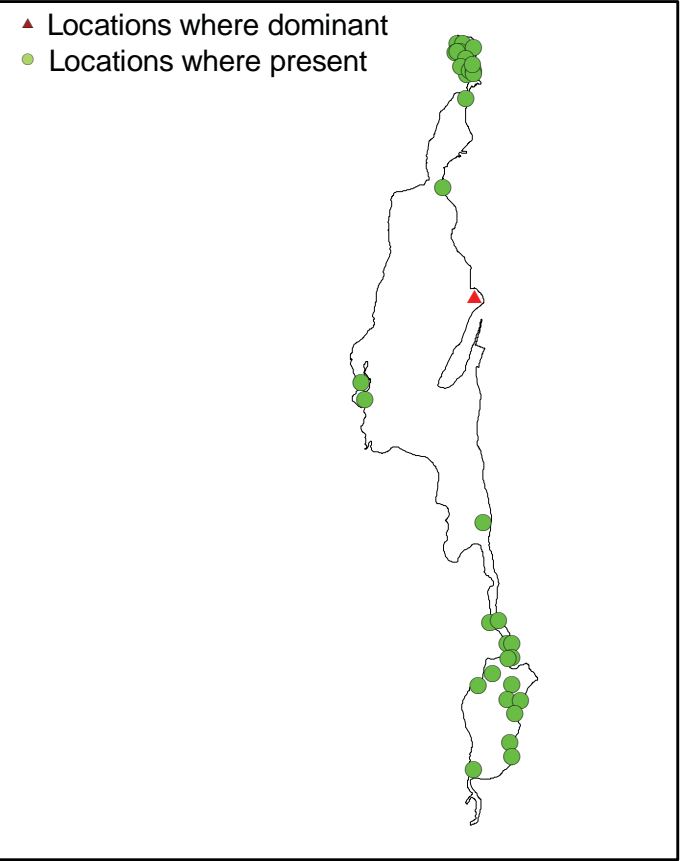
Distribution of *Potamogeton amplifolius*



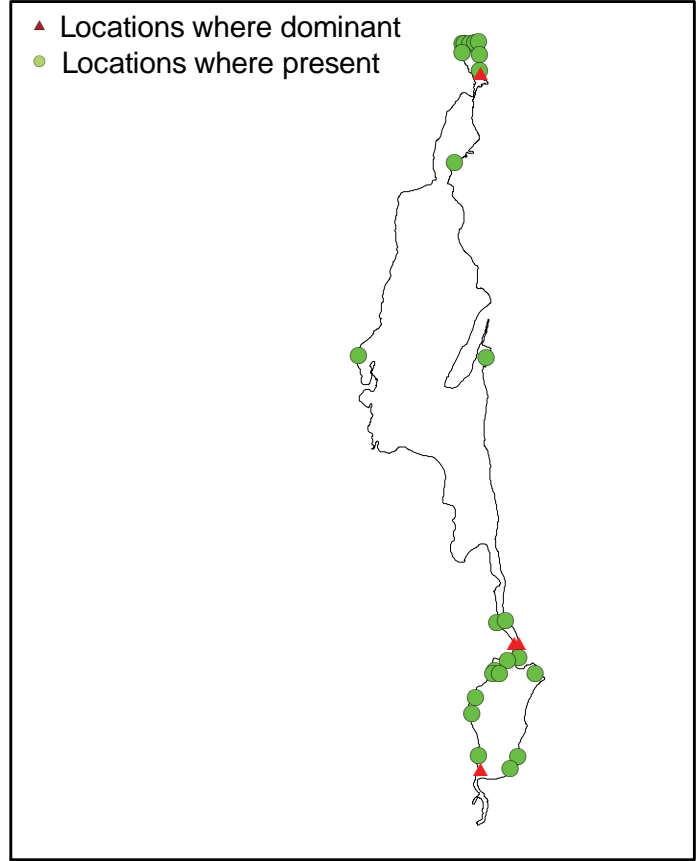
Distribution of *Vallisneria americana*



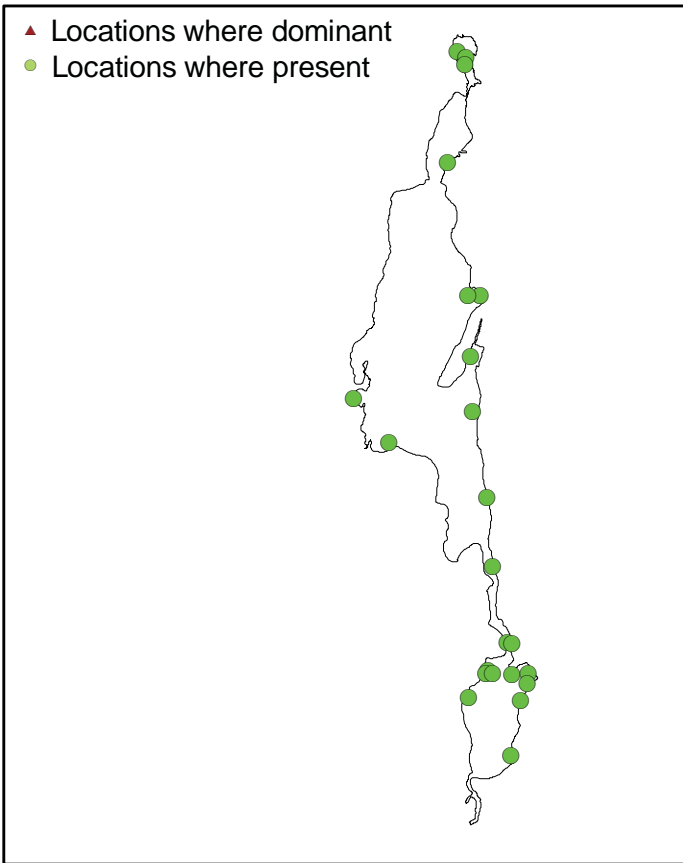
Distribution of *Ceratophyllum demersum*



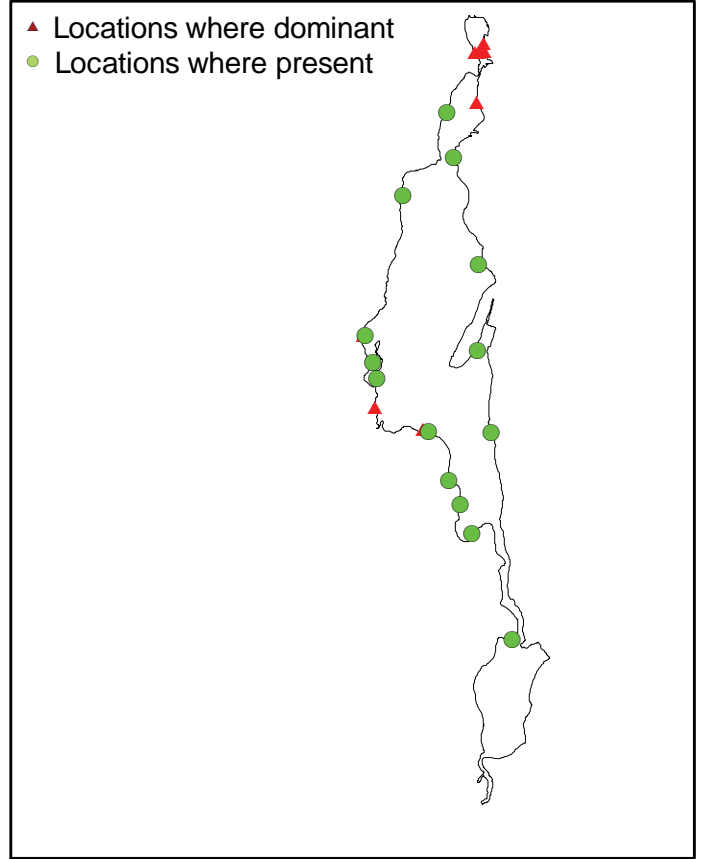
Distribution of *Nymphaea odorata*



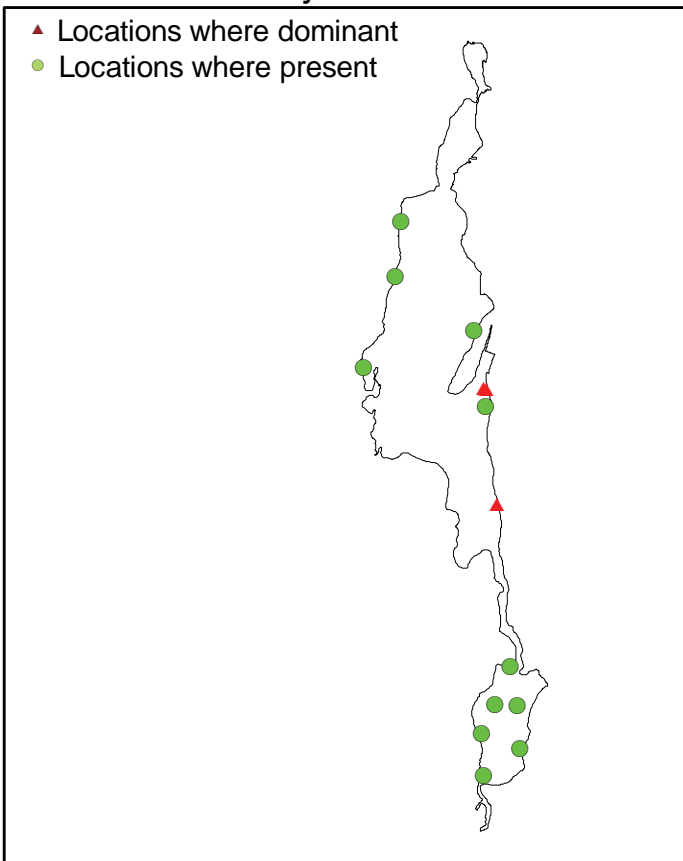
Distribution of *Elodea canadensis*



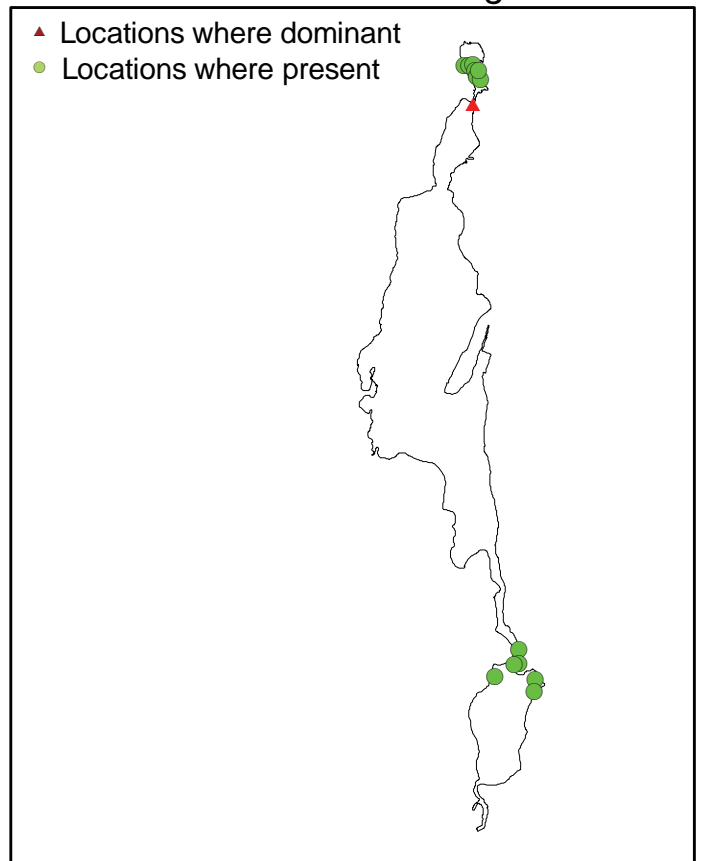
Distribution of *Zosterella dubia*



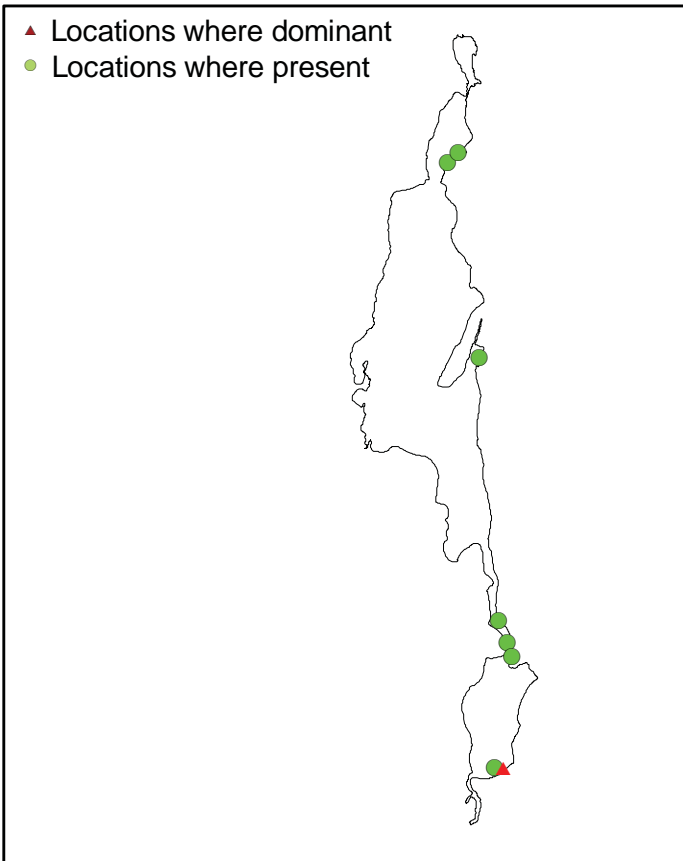
Distribution of *Najas flexilis*



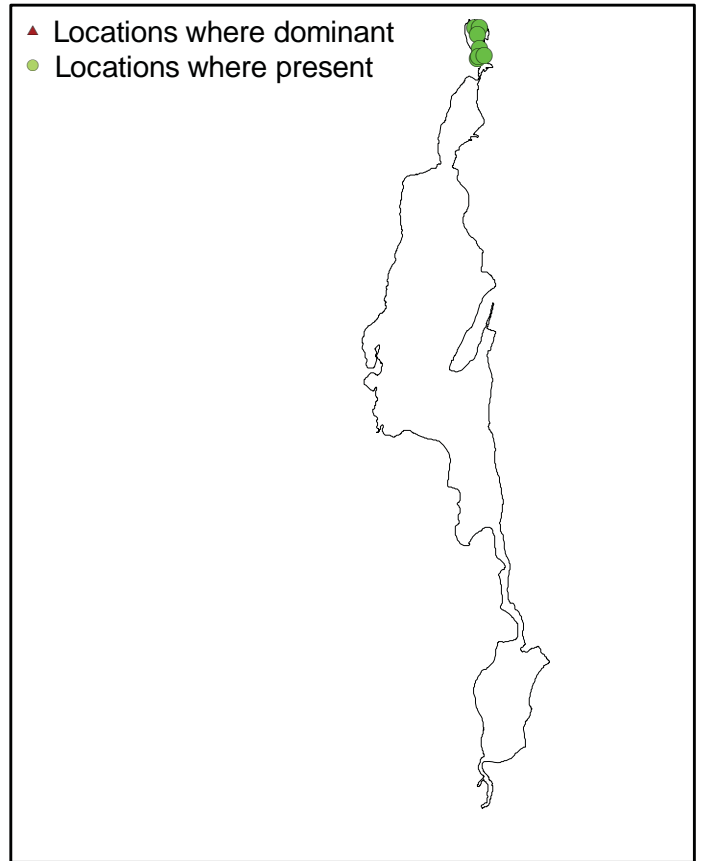
Distribution of *Utricularia vulgaris*



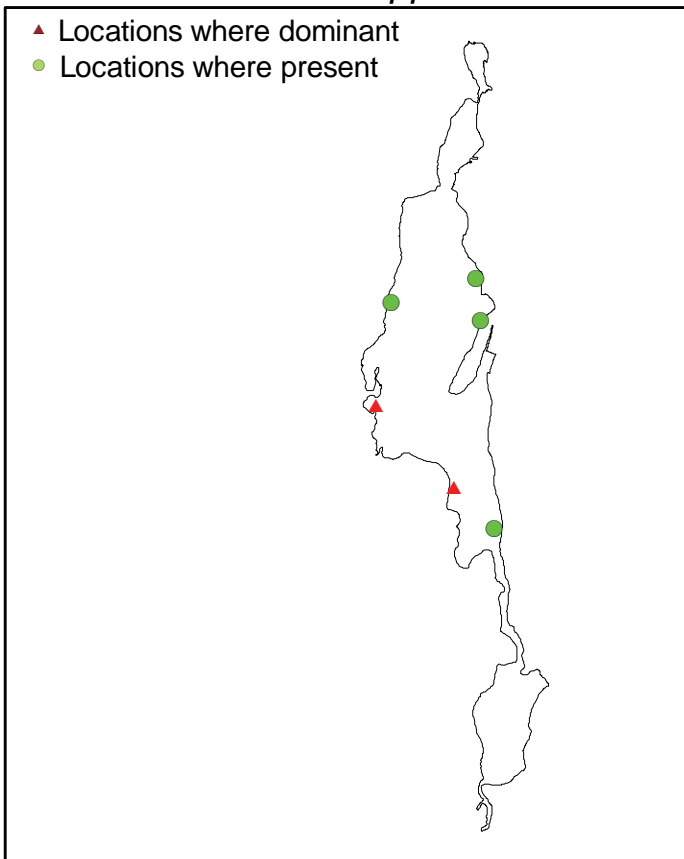
Distribution of *Brasenia schreberi*



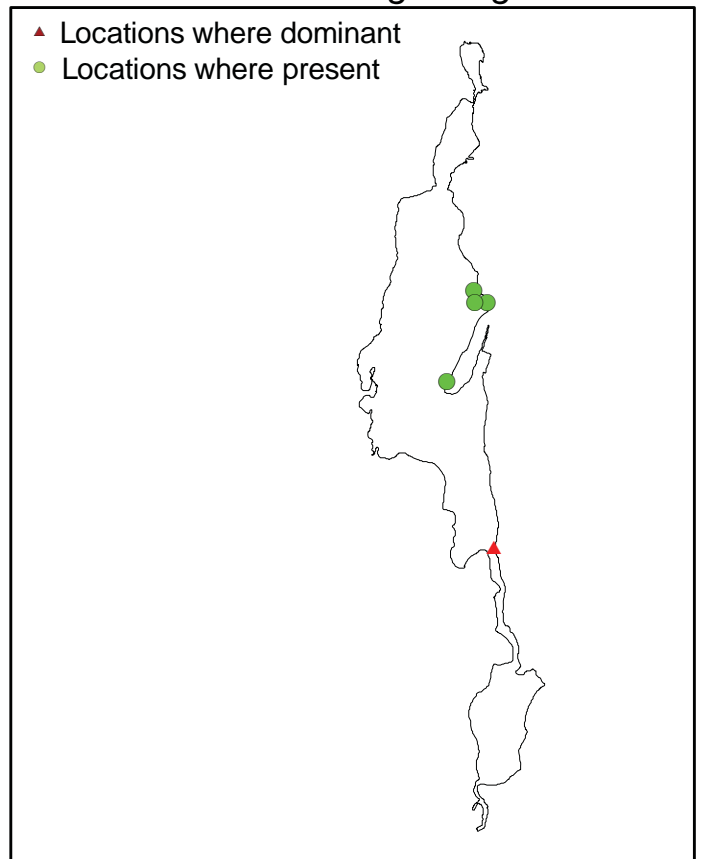
Distribution of Filamentous algae



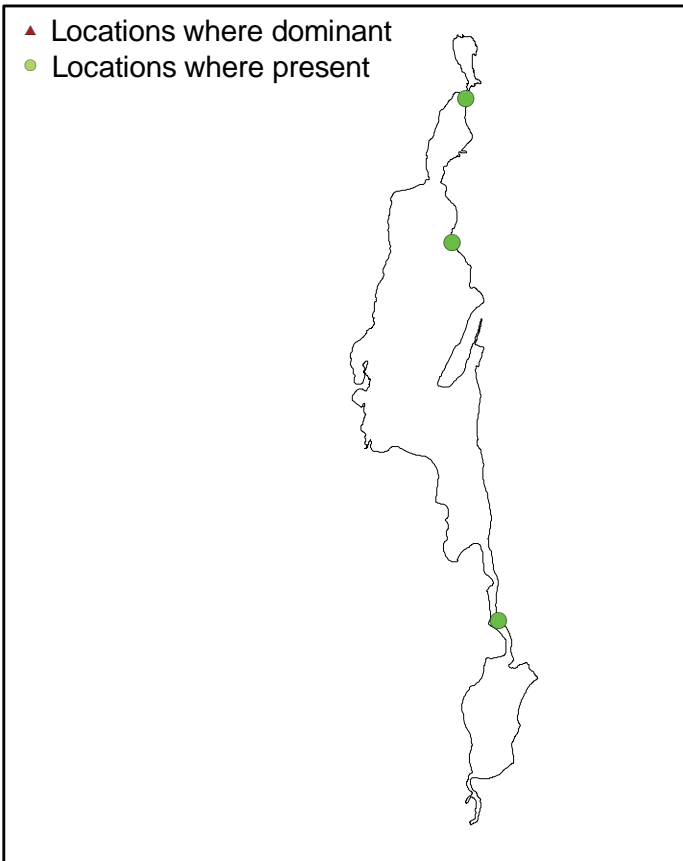
Distribution of *Chara* spp.



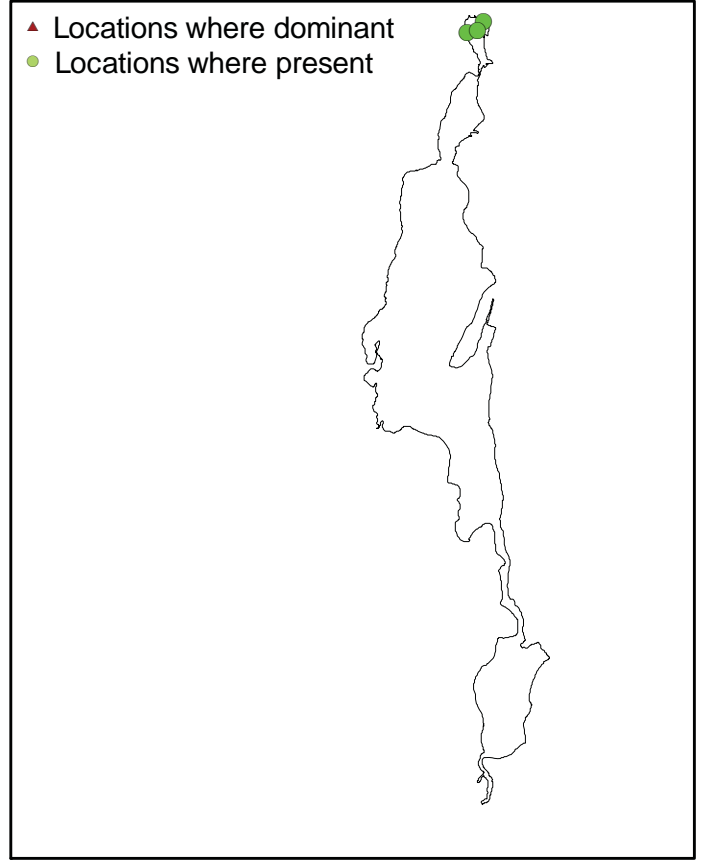
Distribution of *Potamogeton gramineus*



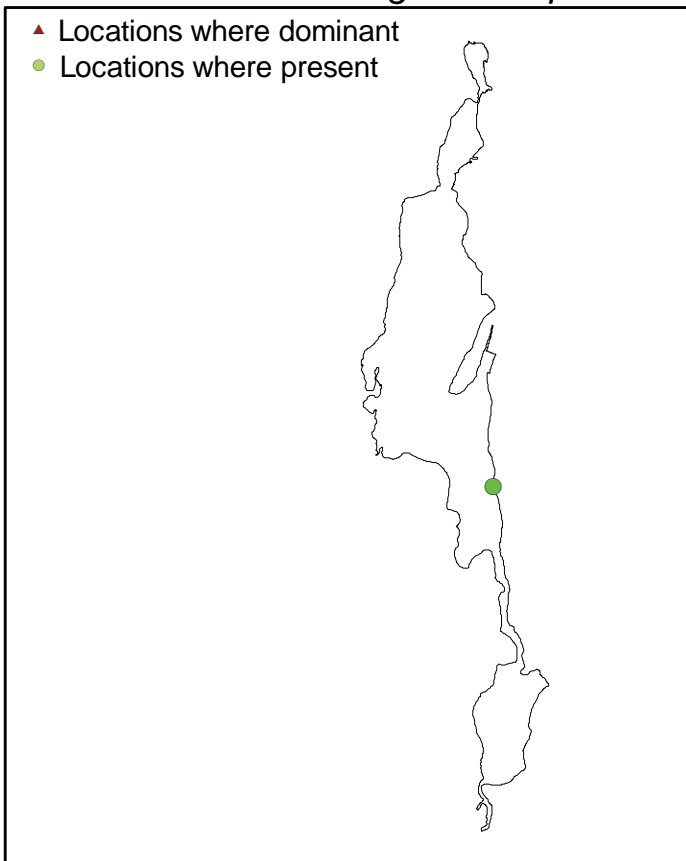
Distribution of *Potamogeton epihydrus*



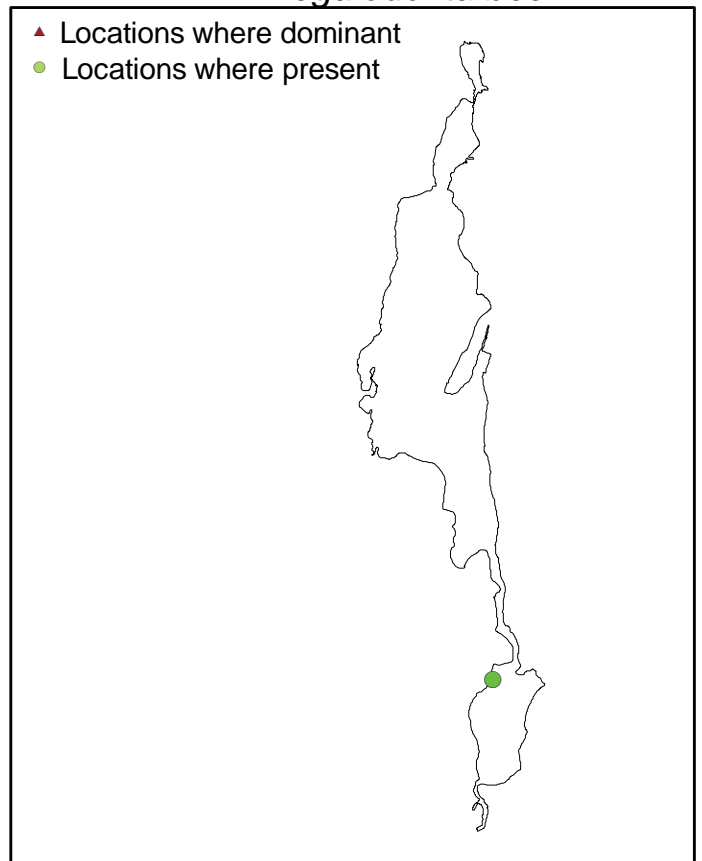
Distribution of *Potamogeton natans*



Distribution of *Potamogeton crispus*



Distribution of *Megalodonta beckii*



2014 Milfoil Distribution

