Lake Morey

Aquatic Vegetation Management Program
2008 - Year Two Report

North End
8/11/06 - Pre - Treatment

North End
8/22/07 - Year of Treatment

North End
8/28/08 - Year After Treatment

First Version: October, 2008

Prepared for:

Board of Selectman
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INTRODUCTION

The second year of a five-year Integrated Management Plan to control Eurasian watermilfoil at Lake Morey was completed in 2008. Aquatic Control Technology, Inc. (ACT) was contracted by the Town of Fairlee and the Lake Morey Preservation Association (LMPA) for the herbicide treatment of 50 acres and the associated permitting and monitoring.

This project was initiated in 2007 with sectional treatments on 45 acres using Renovate 3 (triclopyr liquid) and Renovate OTF (triclopyr flake) herbicides, combined with on-going use of non-chemical techniques. The 2007 treatments demonstrated that selective control of milfoil could be achieved using triclopyr herbicide; however, incomplete milfoil control was seen in some of the smaller plots treated along the steeply-sloped west and east shores. This was attributed to insufficient herbicide concentration exposure time due to dilution and, in the case of the west shore, treatment of mature milfoil plants that did not uptake or translocate the herbicide effectively.

Remaining milfoil beds documented in Lake Morey in August 2007 were found along the steeply-sloped west and east shores and the south shore. Renovate OTF was proposed to target these narrow, shoreline milfoil beds. Recommended changes to the 2008 treatment protocol to improve efficacy that were requested in the permit application included:

1. Treat earlier in the growing season when all milfoil plants are less than 4 feet tall. This will likely require a mid-late May treatment date.
2. Treat a minimum of 2.5 acres around each milfoil bed to overcome the effects of dilution. The only exceptions to this might be along the southwest shoreline were there are several small milfoil beds isolated very close to shore.
3. Increase the application rate to 2.0 – 2.5 ppm.

Aquatic Nuisance Control Permit #2007-C13 was issued on April 2, 2008. The permit required the treatment to be performed before water temperatures reached 60° F or after June 22. The expanded treatment areas were approved, but the increased application rate was not approved. The treatment proceeded on May 13.

The following report summarizes the results of 2008 treatment program, details findings from the comprehensive aquatic plant survey and offers recommendations for continuation of the program during the 2009 season and beyond.

HERBICIDE TREATMENT PROGRAM - 2008

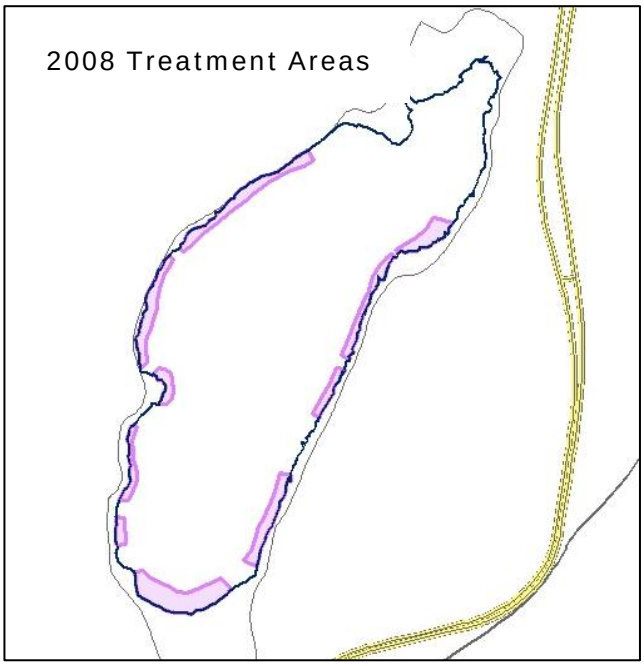
Program Chronology

A chronology of the 2008 treatment program is provided below:

- DEC permit issuance (ANC 2007-C13)..... April 2
- Pre-treatment inspection and finalize treatment areas..... May 1
- Treatment – 50 acres with Renovate OTF ..... May 13
- Herbicide residue monitoring.....May 14, May 20, May 27, June 4 & June 10
- Post-treatment inspection.....June 14 & July 10
- Comprehensive aquatic plant survey .....August 27 & August 28

Treatment Areas

The treatment areas were verified following the pre-treatment inspection performed on May, 1 2008. While some active milfoil growth was observed, plants were generally found within 2-3 feet of the bottom and less than 1 foot of active or new tissue was observed. Therefore the treatment plots remained unchanged from what proposed following the August 2007 surveys and the total area treated was 50 acres (Figure A-1).



Summary of 2008 Treatment

A treatment date of Tuesday, May 13 was selected to insure that the water temperatures would not exceed 60° F and to comply with other conditions of ANC 2007-C13. The required pre-treatment notifications were completed by LMPA.

Weather conditions on the day of treatment were mostly sunny, with an air temperature ranging between 60-70° F. Wind was out of the north, estimated at 5-10 mph, but did not interfere with treatment. Prior to treatment, water temperature was measured using a YSI Temperature/Dissolved Oxygen meter. Within proposed treatment areas along the west shore and at the south end of the lake, water temperature was nearly uniform at 56° F to depths of 14 feet.

Table 1: Temperature / Dissolved Oxygen Profiles on Day of Treatment (5/13/08)

	West Shore (Area I)		South End (Area E)	
Depth (feet)	Temp (°F)	DO (mg/l)	Temp (°F)	DO (mg/l)
surface	56.3	11.1	56.7	10.8
2	56.3	11.1	56.7	10.8
4	56.3	11.1	56.7	10.7
6	56.3	11.1	56.7	10.5
8	56.3	11.1	56.5	10.7
10	56.1	11.0	56.5	10.8
12	56.1	10.9	56.5	10.6
14	55.9	10.9	56.5	10.6
16			55.8	10.7

The treatment was conducted using two boats, one airboat and one fiberglass work skiff. Both boats were outfitted with a granular eductor spray system that fed the granular herbicide into a stream of water using a calibrated venturi-type eductor. The mixture was then sprayed off the stern of each boat using fan-pattern nozzles. This system allowed for the granular herbicide to be evenly distributed throughout the treatment areas and "flash-mixing" the granules with water before application significantly reduced the

potential for airborne dust and off-target drift. Again both boats were equipped with Differential/WAAS GPS navigation systems to insure that the herbicide was evenly applied to the designated treatment areas. The herbicide was applied in approximately 8 hours.

Herbicide Residue Testing

In compliance with conditions of the ANC 2007-C13, water samples were collected from ten (10) locations in Lake Morey (one sample from each treatment block) and from one (1) downstream location (Figure B-1). Sampling was required 24 hours following treatment and then weekly until concentrations at all sample locations dropped below 75 ppb, which was the drinking water restriction imposed by DEC. Additional sampling was then required until concentrations were <1 ppb before the irrigation restriction could be lifted.

ACT and SePRO provided sampling instructions and sample bottles to LMPA representatives. Collected samples were shipped via overnight delivery to SePRO's laboratory in Whittakers, North Carolina. Analytical results were emailed to DEC and Town once they were received. Copies of the laboratory reports are provided in Appendix B.

Samples were collected on May 14, May 20, May 27, June 4 and June 10. The highest in-lake concentration detected during the 24-hour sampling round was 0.36 ppm or 360 ppb and was found in the largest treatment plot (E) at the south end of the lake. The 24-hour values in the other plots ranged from 30 ppb to 190 ppb. By May 27, all sampled locations showed triclopyr concentrations below 20 ppb and DEC lifted the restriction on drinking lake water. By June 10, the concentration was below the detectable limit of <1.0 ppb at all sampled sites and DEC lifted the restriction of using lake water for irrigation.

Post –Treatment Survey

A cursory visual inspection of the treatment areas was performed by Marc Bellaud and Gerry Smith from ACT and Greg McGrath from LMPA on June 14, approximately one-month after treatment. Visual symptoms of herbicidal activity were evident to varying degrees on the milfoil plants. Stems and leaflets showed some elongation, bending and twisting, which are consistent with the epinasty that occurs with auxin-mimic herbicides like triclopyr. We expected that the herbicidal activity was slowed by the colder water temperatures that were present at the time of treatment and remained hopeful that the plants would continue to die-back over the next several weeks.

Photographs taken on 6/14/08 showing variability in milfoil control

A second post-treatment inspection was performed by ACT and LMPA on July 10. Milfoil control had progressed along the northwest shore and at the south end, but milfoil along the east and southwest shores appeared to be recovering. The milfoil plants were still bent over in the water column, but there appeared to be new growth of leaflets. On a positive note, the native plant community was healthy and did not appear to be impacted by the treatment. Species observed included: *Potamogeton amplifolius*, *P.*

robbinsii, P. illinoensis, P. zosteriformis, P. praelongus, P. pusillus, Ceratophyllum demersum, Elodea canadensis, Bidens beckii and *Najas flexilis.*

Photographs taken on 7/10/08 showing variability in milfoil control

LMPA facilitated additional visual surveys of Lake Morey with representatives from SePRO on August 7 and with Dr. Kurt Getsinger of the U.S. Army Corps of Engineers on August 20. Similar observations were made during both surveys.

LATE SEASON COMPREHENSIVE AQUATIC VEGETATION SURVEY

Survey Methods

The late season comprehensive aquatic vegetation survey conducted on August 27 and 28 replicated the methods that were employed during the 2006 & 2007 seasons. Relative abundance data was recorded using rake-toss and SCUBA methods at 116 data points established using a point-intercept approach based on an 80 meter grid throughout the littoral zone (Figure C_1). Details on the specific survey methods are provided in Appendix C.

Survey Findings

Plant species encountered at the data point locations were used for the comparative analysis discussed below. The plant species list remained consistent with prior year findings. No species were encountered that had not been found in prior years and no species were absent compared with the 2007 findings. Four species with limited distribution in 2006 were not recorded in 2007. Three species that were seen in 2006, were still not encountered in 2008. These species included: *Brasenia screberi, Utricularia purpurea* and *Nymphoides cordata.*

In 2008, there was roughly a 20% reduction in the occurrence of milfoil lake-wide as compared to 2007 and more than a 45% reduction from the 2006 survey survey findings. There were notable increases in the occurrence of some pondweed species, specifically *Potamogeton praelongus, P. illinoensis* and *P. zosterformis.*

Table 2: Aquatic Plant Species and Frequency of Occurrence at Data Points

Species	Common Name	Abbreviation (used in field data)	2006 Frequency of Occurrence	2007 Frequency of Occurrence	2008 Frequency of Occurrence
Ceratophyllum demersum	coontail	Cd	37.9%	47.4%	**43.1%**
Myriophyllum spicatum	Eurasian watermilfoil	Ms	61.2%	43.1%	**33.6%**
Potamogeton robbinsii	Robbins' pondweed	Pr	16.4%	27.6%	**32.8%**
Potamogeton amplifolius	largeleaf pondweed	Pa	26.7%	23.3%	**31.0%**
Megalodonta beckii	water marigold	Mb	11.2%	19.0%	**30.2%**
Chlorophyta	filamentous green algae	Fa	12.9%	23.3%	**28.4%**
Najas flexilis	bushy pondweed	Na	30.2%	28.4%	**28.4%**
Zosterella dubia	water stargrass	Zd	18.1%	28.4%	**25.0%**
Vallisneria americana	wild celery	V	26.7%	21.6%	**24.1%**
Potamogeton praelongus	Whitestem pondweed	Pprae	8.6%	11.2%	**23.3%**
Nitella sp.	stonewort	Ni	2.6%	18.1%	**19.8%**
Potamogeton illinoensis	Illinois pondweed	Pi	0.9%	8.6%	**19.8%**
Potamogeton zosteriformis	flat-stem pondweed	Pz	14.7%	5.2%	**16.4%**
Potamogeton gramineus	variable-leaf pondweed	Pg	13.8%	12.1%	**15.5%**
Nymphaea odorata	white waterlily	Ny	1.7%	2.6%	**4.3%**
Musci sp.	aquatic moss	Mu	5.2%	2.6%	**3.4%**
Potamogeton pusillus	small pondweed	Pp	6.0%	12.1%	**2.6%**
Chara sp.	muskgrass	Ca	3.4%	3.4%	**0.9%**
Eleocharis sp.	spikerush (submersed)	Eo	2.6%	0%	**0.9%**
Elodea canadensis	elodea	Ec	10.3%	3.4%	**0.9%**
Brasenia screberi	watershield	B	0.9%	0%	**0%**
Nymphoides cordata	floating-heart	Nc	0.9%	0%	**0%**
Utricularia purpurea	purple bladderwort	Up	0.9%	0%	**0%**

Maps depicting the distribution of each species documented during the survey are provided in Appendix C.

Species richness values remained consistent with prior years and were actually higher than 2007 values at all depth ranges.

Table 3: Species Richness

Data Point Depth Range (feet)	2006 Species Richness	2007 Species Richness	2008 Species Richness
Less than or equal to 5	5.6	5.1	5.3
Greater than 5 and less than or equal to 10	4.5	4.1	5.2
Greater than 10 and less than or equal to 20	3.1	3.6	4.0
Greater than 20	0.2	0.9	1.5
Total	3.1	3.4	3.8

Differences Observed Between Treatment and Non-Treatment Areas

To allow for some comparative analysis the data point information was separated into Non-Treatment areas (north end – north of the treatments performed on the west and east shore) and Treatment areas. The treatment areas included all points found along the west, east and south shores of the lake. Plant species frequency of occurrence data for the two areas follows:

The variability in frequency of occurrence values for most of the native species seen between the Treatment and Non-Treatment areas was consistent with the 2007 findings and species distribution maps. The low occurrence of milfoil in the Non-Treatment area in the north end (11.4%) was encouraging and suggests there was positive carryover milfoil control from the 2007 treatments. On the other hand, milfoil occurrences in the Treatment Areas remained relatively high (43.2%). The milfoil occurrence value for the same data points in 2007 was 54.3%, so some reduction in milfoil distribution was realized from the 2008 treatments.

There was a more significant reduction in the percent milfoil cover (density) values. Based on the August 2008 survey data, the average percent milfoil cover throughout the Treatment area was 11%. The average percent milfoil cover for the same area based on the August 2007 survey data was 25%. Lake-wide, the percent milfoil cover at all sampled data points was reduced from 10% in 2007 to 3% in 2008.

Table 4: Non-Treatment Areas (north end)
Species Frequency of Occurrence (n=35)

Species	2008 # of occurrences	2008 Frequency of occurrence
Potamogeton robbinsii	24	68.6%
Megalodona beckii	18	51.4%
Potamogeton zosteriformis	17	48.6%
Ceratophyllum demersum	14	40.0%
Potamogeton praelongus	14	40.0%
Najas flexilis	13	37.1%
Chlorophyta - filamentous	11	31.4%
Vallisneria americana	11	31.4%
Potamogeton amplifolius	8	22.9%
Potmogeton illinoensis	8	22.9%
Potamogeton gramineus	6	17.1%
Myriophyllum spicatum	4	11.4%
Nitella sp.	4	11.4%
Nymphaea odorata	4	11.4%
Zosterella dubia	3	8.6%
Eloecharis sp.	1	2.9%
Musci sp.	1	2.9%

Table 5: Treatment Areas (west, east & south shores)
Species Frequency of Occurrence (n=81)

Species	2008 # of occurrences	2008 Frequency of occurrence
Ceratophyllum demersum	36	44.4%
Myriophyllum spicatum	35	43.2%
Potamogeton amplifolius	28	34.6%
Zosterella dubia	26	32.1%
Chlorophyta - filamentous	22	27.2%
Nitella sp.	19	23.5%
Najas flexilis	18	22.2%
Megalodona beckii	17	21.0%
Vallisneria americana	17	21.0%
Potamogeton illinoensis	15	18.5%
Potamogeton robbinsii	14	17.3%
Potamogeton praelongus	13	15.3%
Potamogeton gramineus	12	14.8%
Musci sp.	3	3.7%
Potamogeton pusillus	3	3.7%
Potamogeton pusilus	3	3.7%
Potamogeton zosteriformis	2	2.5%
Chara sp.	1	1.2%
Elodea canadensis	1	1.2%
Nymphaea odorata	1	1.2%

Late Season Milfoil Bed Mapping

Since all the milfoil beds that remained after the 2007 program were treated in 2008, visually mapping milfoil in late summer 2008 proved to be considerably more difficult. Due to favorable weather conditions that provided for good to excellent visibility, many of the remaining milfoil plants were visible even though the plants were often bent over and several feet below the surface. Figure A_2 depicts the GPS locations of milfoil plants and field notes of small milfoil bed locations encountered during the August 28 survey. Additional milfoil plants were found in deeper water and were not evident from the surface, consistent with observations made during the SCUBA inspection.

Low density milfoil was found throughout the entire littoral zone. The lowest density and fewest occurrences of milfoil was encountered in the north end, which included the 30-acre block that was treated with triclopyr liquid and the 8-acre block that was treated with triclopyr flake in 2007. Again, this suggests good carryover milfoil control in these areas. Unfortunately, milfoil was regularly encountered throughout the 2008 treatment areas. The south end and northwest shore (north of the state boat launch) had the lowest density milfoil. The southwest shore and eastern shoreline had the highest densities. Several small patches were found in these areas where between 10-20% milfoil or greater than 20% milfoil cover was observed.

SUMMARY AND EVALUATION OF 2008 AQUATIC VEGETATION MANAGEMENT PROGRAM

Renovate OTF Herbicide Treatments

The 2008 Renovate OTF treatments did reduce milfoil density and distribution, but were less effective than anticipated. The reduced level of response seen in 2008 is believed to be the result of two factors:

1. Exposure to a sub-lethal dose of triclopyr
2. Insufficient active milfoil growth to insure adequate triclopyr uptake

Comparing the results of all the triclopyr treatments performed at Lake Morey, Lake St. Catherine, Lake Hortonia, and Burr Pond during the 2006, 2007 and 2008 seasons, it is evident that both dose and treatment timing are critical when using triclopyr herbicide due to the relatively short period of exposure that the plants have for herbicide uptake.

For the most part, the 2007 treatments performed at Lake Morey provided good milfoil control during the year-of-treatment and good carryover milfoil control through the year-after-treatment. Only the bed along the west shore did not respond favorably and this was attributed to the fact that the milfoil plants had already flowered in this location and they may have had a reduced metabolism that limited herbicide uptake. Previous spot-treatments at Lake St. Catherine and Lake Hortonia were also performed later in the season (between late June and late July) when there was more mature (but not flowering) milfoil plants and response was favorable during both the year-of-treatment and year-after-treatment.

It was hoped that milfoil would be more susceptible to triclopyr earlier in the growing season, because this would reduce conflicts with lake users and there would be less impact on non-target plants that were not in their most active phase of growth. Milfoil plants were actively growing on May 13, 2008, but only an estimated 1-2 feet of active or new plant tissue was observed on what appeared to be old stems. Milfoil plants were generally within 2-4 feet of the bottom. Some additional active milfoil growth was seen at Lake Hortonia and Lake St. Catherine, which were treated one-week later than Lake Morey, but there was still only approximately 2-4 feet of new milfoil growth in the water column.

By contrast, the 2007 Renovate OTF treatments at all three waterbodies were performed when the milfoil plants were generally within 1-2 feet of the surface in water depths of 7-10 feet. The target application rate was the same during the 2007 and 2008 treatments three waterbodies (1.85 ppm at Lake Morey and 1.75 ppm at Lake Hortonia and Lake St. Catherine – all calculated based on the bottom 4 feet of the water column). The treatment areas were expanded beyond the extent of the milfoil beds to help overcome the effects of dilution, but an even application rate was targeted throughout the treatment area. Treatment timing or stage of plant growth was probably the most significant difference between the 2008 treatments and prior triclopyr treatments in Vermont.

The request to increase the Renovate OTF application rate to 2.5 ppm (calculated on the bottom 4 feet) was not approved in the 2008 permit (#ANC 2007-C13) due to stated concerns over the potential for adverse impacts to non-target plants. Ultimately, the milfoil was either exposed to sub-lethal triclopyr concentrations or did not have enough active tissue growth to absorb sufficient levels of triclopyr. We expect that both were causes of the reduced treatment efficacy seen at Lake Morey in 2008.

Probably our best regional comparison of a Renovate OTF treatment for Eurasian watermilfoil control comes from Saratoga Lake, New York where approximately 300 acres were treated in 2008. Even though nearly 300 contiguous acres were treated, similar to Lake Morey the treatment still represented less 10% of the Saratoga Lake's surface area. The principal differences with the 2008 Renovate OTF treatments in

Vermont were the treatment timing and application rate. At Saratoga, milfoil plants were estimated to be between 5-7 feet tall and rapidly growing at the time of treatment during the last week of May. The application rate also ranged between 2.0 ppm and 2.25 ppm (calculated on the bottom 4 feet) throughout the treatment area, as compared to the 1.75 ppm to 1.85 ppm rates used in Vermont. Treatment response was excellent. Milfoil plants had collapsed and almost completely decomposed within six weeks of the treatment and no significant regrowth had occurred by the end of the summer. There was no obvious adverse impact to non-target plants. Robust growth of several pondweed (*Potamogeton spp.)* species, coontail (*Ceratophyllum demersum),* elodea (*Elodea canadensis)*, wild celery (*Vallisneria americana)* and water starwort (*Zosterella dubia)* was evident within six weeks of treatment and persisted throughout the summer. Vegetation was surveyed lake-wide by the Darrin Fresh Water Institute in August 2008, but the final report is not yet available. Native plant growth was so dense in some areas that mechanical weed harvesters were used to cut boating lanes for shoreline residents. During the year-of-treatment, it appeared that the higher triclopyr application rate and later treatment date resulted in significantly better milfoil control without causing adverse impacts to non-target native plants.

Spread Prevention and Non-Chemical Control Activities

As required by the DEC Permit, non-chemical milfoil control activities continued at Lake Morey during the 2008 season. Remaining bottom barrier was removed from treatment areas and considerable time was spent by volunteers and contract divers hand-harvesting scattered milfoil. LMPA also continued with its education and boat ramp monitoring programs. Details of the non-chemical control efforts were summarized by LMPA and are provided in Appendix D.

RECOMMENDATIONS FOR 2009 MANAGEMENT PROGRAM

The 2008 treatment program did result in additional reduction of milfoil distribution and density in Lake Morey, but the remaining milfoil cover is still too extensive and widespread to be effectively managed using only non-chemical control techniques in 2009. This assessment is based on Aquatic Control's professional opinion and the Town's and LMPA's considerable past experience using diver hand-pulling, suction-harvesting and bottom barriers in prior years. At least another consecutive year of treatment with triclopyr herbicide is recommended to reduce milfoil to levels presently found at the north end of the lake before non-chemical techniques can be attempted cost-effectively and will have a greater potential for success. Furthermore, it was evident from the improved milfoil control seen along the northwest shoreline in 2008 that herbicide treatment in successive years may improve efficacy. This is probably due to the fact that the milfoil root structure was stressed and expended additional energy (starch reserves) producing new stems and foliage.

Recommended changes to improve triclopyr treatment efficacy in 2009 include:

1. Target treatment of contiguous band along the east, south and west shores to the state boat launch (Figure A-3).
2. Delay treatment until there is more active milfoil growth to improve herbicide uptake. Treatment timing cannot be dictated by the 60° F water temperature guideline. Milfoil plants need to be actively growing, with substantial new growth of stems and foliage. Additional milfoil biomass is expected to provide more surface area for herbicide uptake and may help limit dilution caused by water movement.
3. Increase the application rate to at least 2.5 ppm calculated on the bottom 4 feet. This is especially critical along the steeply sloped west and east shorelines where the average water depth in milfoil

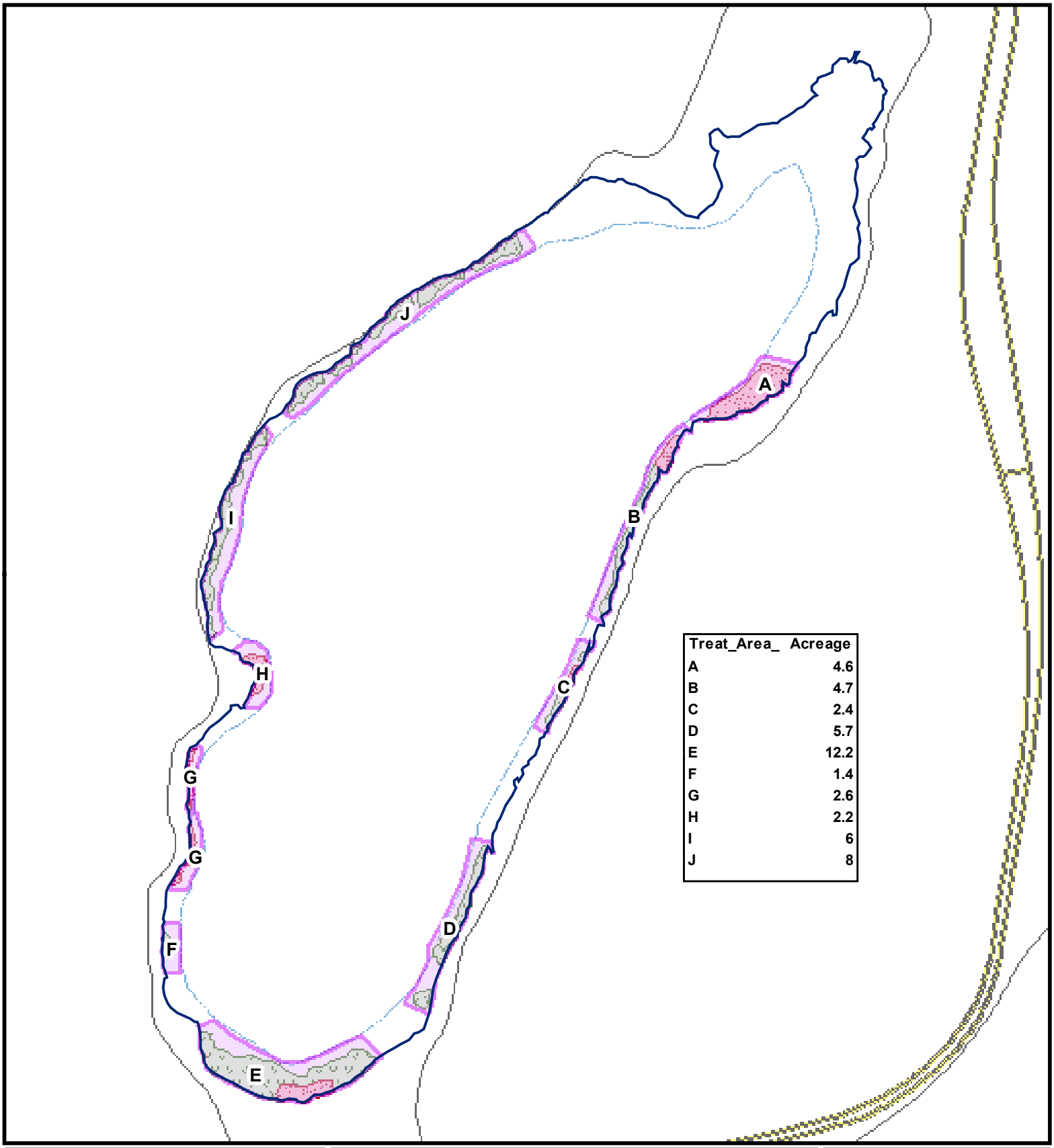
beds probably exceeds 7 feet. Increasing the dose to 2.5 ppm in the bottom 4 feet would result in a 35% increase in the application rate over the 2008 treatment. The current Renovate OTF label now allows for the treatment dose to be calculated on the entire water volume of the area being treated; it is no longer limited to the bottom 4 feet.

4. Continue to evaluate the flake and liquid formulations of triclopyr. The flake formulation has only been available since 2007 and information is still being learned on its field dissipation rates. It is clear that sufficient exposure to lethal concentrations of triclopyr will provide highly-selective control of milfoil, but the narrow shoreline beds of milfoil found throughout much of Lake Morey have proven to be especially challenging. See if any additional concentration-exposure-time data from actual field treatments is available, to help determine which formulation or combination offers the greatest potential for success at Lake Morey.

APPENDIX A

Figures

- A_1 – 2008 Proposed and Final Herbicide Treatment Areas
- A_2 – Late Season Milfoil Distribution
- A_3 – 2009 Proposed Herbicide Treatment Areas



Treat_Area_	Acreage
A	4.6
B	4.7
C	2.4
D	5.7
E	12.2
F	1.4
G	2.6
H	2.2
I	6
J	8

Lake Morey

Fairlee, VT

PROPOSED 2008 TREATMENT AREAS

FIGURE:	SURVEY DATE:	MAP DATE:
A - 1	08/22/07	12/11/07

Legend:

- Proposed 2008 treatment areas (50 acres)
- Abundant Eurasian watermilfoil cover (>60%)
- Common Eurasian watermilfoil cover (<60%) mixed with native plants

N

0 200 400 800 1,200 Feet

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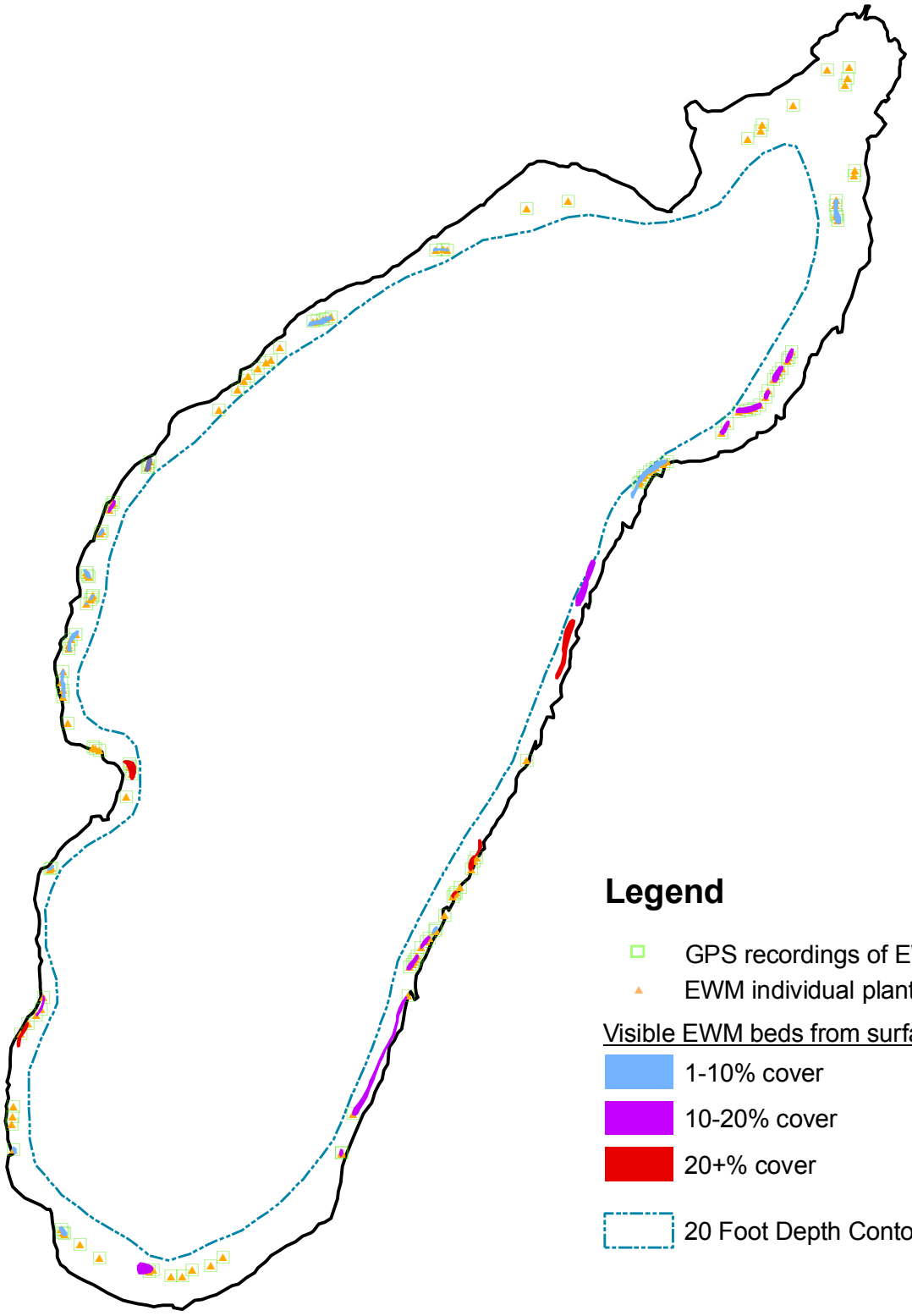

Lake Morey

Fairlee, VT

August 2008 Milfoil Distribution

FIGURE:	SURVEY DATE:	MAP DATE:
A_2	08/28/08	10/24/08

Legend:

N

0 550 1,100 2,200 3,300 Feet

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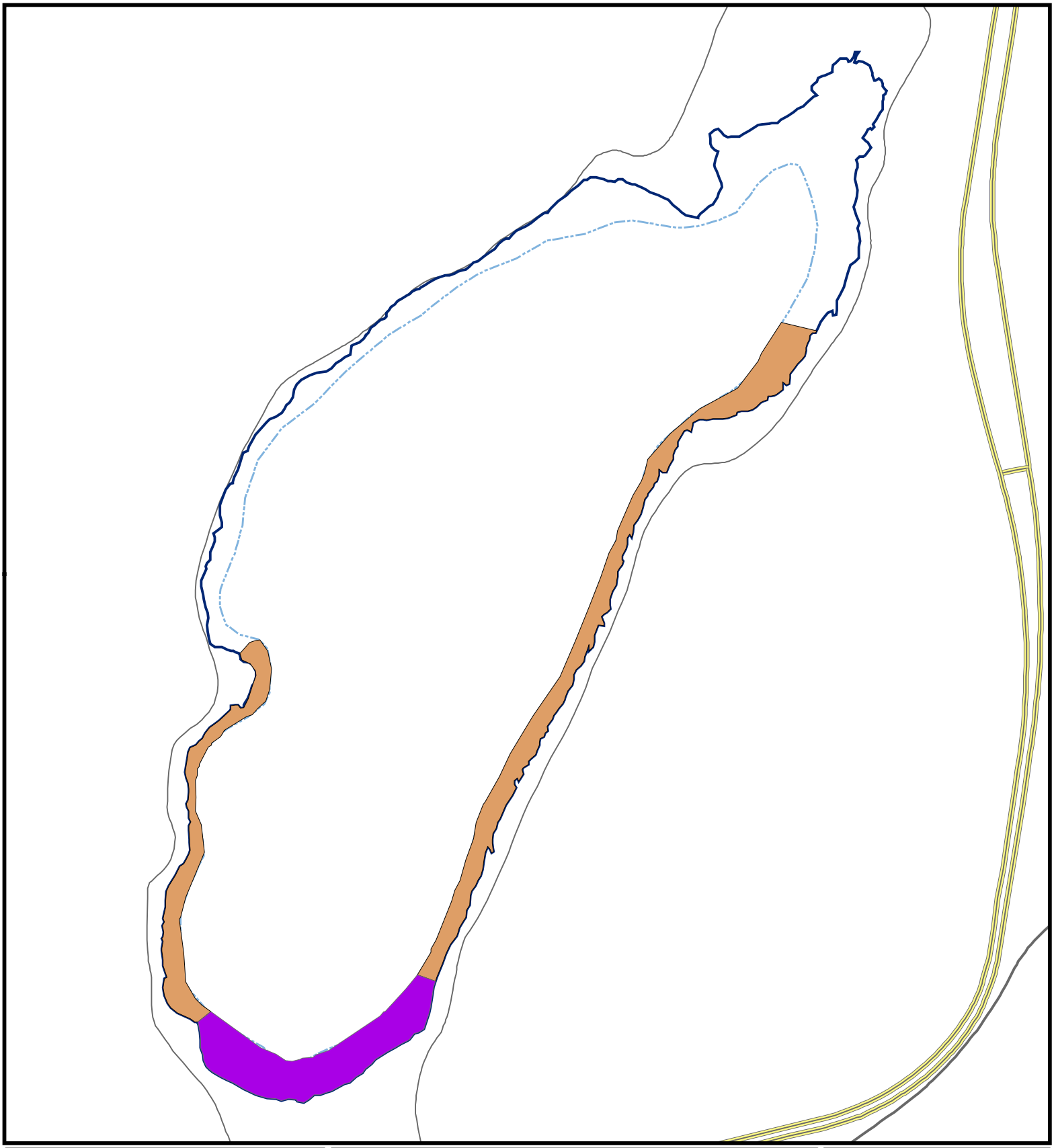

Lake Morey

Fairlee, VT

PROPOSED 2009 TREATMENT AREAS

FIGURE:	SURVEY DATE:	MAP DATE:
A_3	08/28/08	10/24/08

Legend:

Proposed 2009 treatment areas (34 acres)

Proposed 2009 treatment areas (18 acres)

N

0 200 400 800 1,200 Feet

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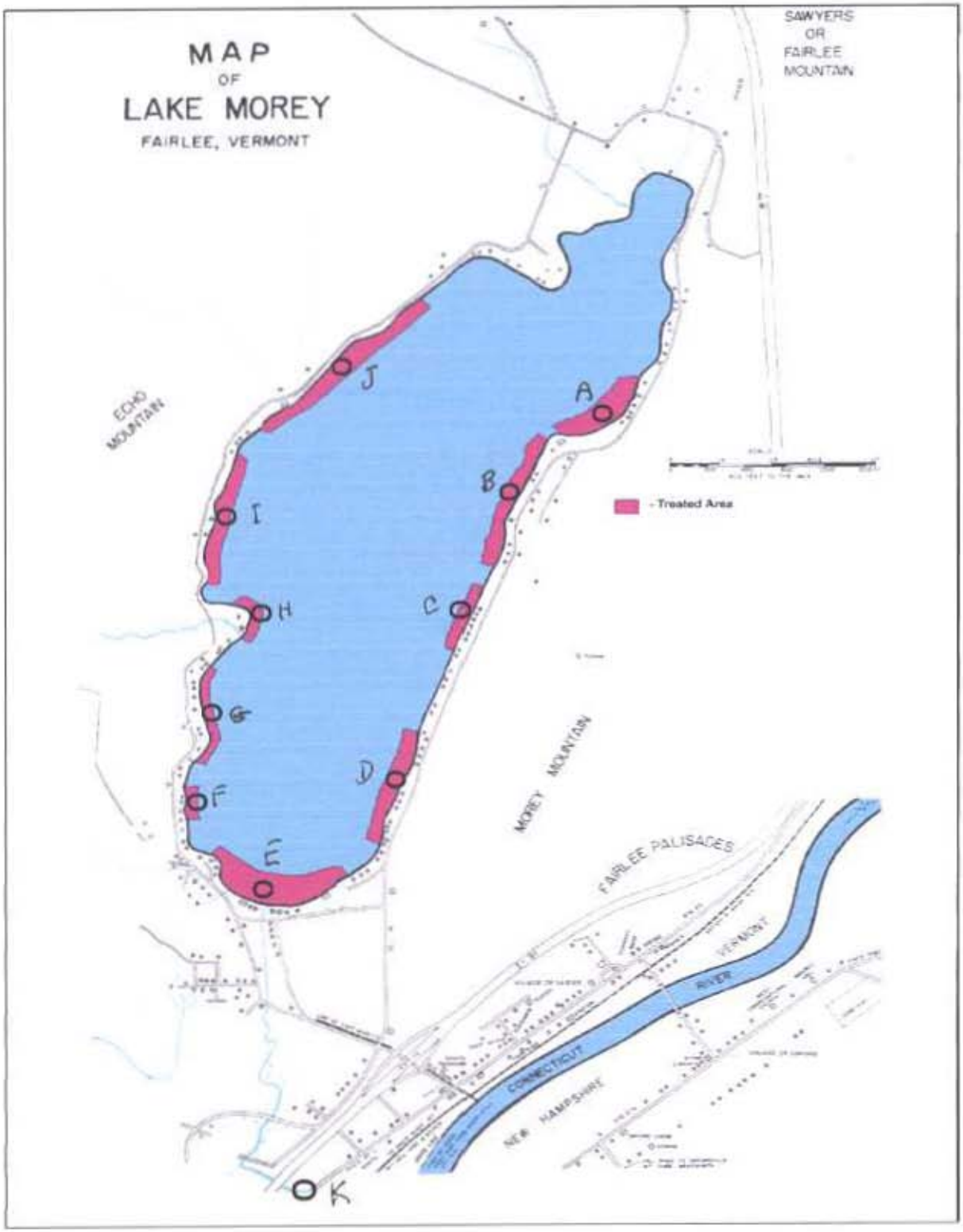
APPENDIX B

Herbicide Residue Testing Results

- Figure B_1 – Triclopyr Residue Sampling Location; prepared by DEC annotated by LMPA
- Residue sampling summary table
- SePRO Laboratory Report – 5/14/08 sampling round
- SePRO Laboratory Report – 5/20/08 sampling round
- SePRO Laboratory Report – 5/27/08 sampling round
- SePRO Laboratory Report – 6/3/08 sampling round
- SePRO Laboratory Report – 6/10/08 sampling round

Attachment C

Areas Approved for Renovate OTF Treatment and Sample Locations



Sample Sites O

Renovate OTF Treatment Area

Restricted Water Use Area – Entire Lake and Outlet Stream to U.S. Route 5

Figure B-1

Lake Morey 2008 Renovate Assay Results

Residue (ppm)

Collection Date	5/14	5/20	5/27	6/4	6/10
A	0.03	0.03	0.02	0.02	<1 ppb
B	0.03	0.03	0.02		
C	0.06	0.03	0.02		
D	0.14	0.09	0.02		
E	0.36	0.03	0.02	0.01	<1 ppb
F	0.11	0.02	0.02		
G	0.01	0.02	0.02		
H	0.06	0.03	0.02	0.01	<1 ppb
I	0.19	0.03	0.02		
J	0.07	0.03	0.02		
K	0.13	0.02	0.01	<1 ppb	<1 ppb
Lake Average	0.11	0.03	0.02		

Treatment date:

5/13/2008

FasTEST Results Confidential - Not For Distribution

Cooperator:	Aquatic Control Technology, Inc	**Phone:**	**Fax:**
Marc Bellaud	11 John Rd	(508) 805-1000	
Territory: Sarah Miller	Sutton MA 01590-		

Sample	Date(s) Treated	Sonar	Date Collected	Rate Applied	Acres Treated	Sample Location Description	Results PPB
1.	05/13/08	Renovat	5/14/2008	1.85ppm	4.6	A	0.03ppm
2.	05/13/08	Renovat	5/14/2008	1.85ppm	4.7	B	0.03ppm
3.	05/13/08	Renovat	5/14/2008	1.85ppm	2.4	C	0.06ppm
4.	05/13/08	Renovat	5/14/2008	1.85ppm	5.7	D	0.14ppm
5.	05/13/08	Renovat	5/14/2008	1.85ppm	12.2	E	0.36ppm
6.	05/13/08	Renovat	5/14/2008	1.85ppm	1.4	F	0.11ppm
7.	05/13/08	Renovat	5/14/2008	1.85ppm	2.6	G	0.01ppm
8.	05/13/08	Renovat	5/14/2008	1.85ppm	2.2	H	0.06ppm
9.	05/13/08	Renovat	5/14/2008	1.85ppm	6.0	I	0.19ppm
10.	05/13/08	Renovat	5/14/2008	1.85ppm	8.0	K	0.07ppm

Depth Sample Collected:		**Date Sample Received:**	5/15/2008
Storage Conditions:	Refrigerated	**Condition of Sample(s) Box/Water Containers:**	Excellent / excellent
Date Shipped to SePRO:	5/14/2008	**Date Analysis was Performed:**	5/19/2008
How would you like results sent to you? **Fax**	No **Regular Mail** Yes	**Date Results Sent to Cooperator:**	5/20/2008

Back of Data Sheet

Name of Waterbody:	Lake Morey	**Size of Waterbody in Acres:**	538
Average Depth in Feet:	4	**Target Plant(s) to Control:**	Eurasian watermilfoil

Back of Data Sheet

FasTEST Results Confidential - Not For Distribution

Cooperator:	Aquatic Control Technology, Inc	**Phone:**	**Fax:**
Marc Bellaud	11 John Rd	(508) 805-1000	
Territory: Sarah Miller	Sutton MA 01590-		

Sample	Date(s) Treated	Sonar	Date Collected	Rate Applied	Acres Treated	Sample Location Description	Results PPB
1.	05/13/08	Renovat	5/14/2008	1.85ppm	N.A.	K	0.13ppm
2.							
3.							
4.							
5.							
6.							
7.							
8.							
9.							
10.							

Depth Sample Collected:

Date Sample Received: 5/15/2008

Storage Conditions: Refrigerated

Condition of Sample(s) Box/Water Containers: Excellent / excellent

Date Shipped to SePRO: 5/14/2008

Date Analysis was Performed: 5/19/2008

How would you like results sent to you? **Fax** No **Regular Mail** Yes

Date Results Sent to Cooperator: 5/20/2008

Back of Data Sheet

Name of Waterbody: Lake Morey + 1

Average Depth in Feet: 4

Back of Data Sheet

Size of Waterbody in Acres: 538

Target Plant(s) to Control: Eurasian watermilfoil

FasTEST Results Confidential - Not For Distribution

Cooperator:	Aquatic Control Technology, Inc	**Phone:**	**Fax:**
Gerald Smith	11 John Rd	(508) 865-1000	(508) 865-1220
Territory: Sarah Miller	Sutton MA 01590-		

Sample	Date(s) Treated	Sonar	Date Collected	Rate Applied	Acres Treated	Sample Location Description	Results PPB
1.						run #0004 correlation 1.0 recovery 86%	
2.	05/13/08		5/20/2008	1.85 ppm OTF	4.6	A	.03 ppm
3.	05/13/08		5/20/2008	1.85 ppm OTF	4.7	B	.03 ppm
4.	05/13/08		5/20/2008	1.85 ppm OTF	2.4	C	.03 ppm
5.	05/13/08		5/20/2008	1.85 ppm OTF	5.7	D	.09 ppm
6.	05/13/08		5/20/2008	1.85 ppm OTF	12.2	E	.03 ppm
7.	05/13/08		5/20/2008	1.85 ppm OTF	1.4	F	.02 ppm
8.	05/13/08		5/20/2008	1.85 ppm OTF	2.6	G	.02 ppm
9.	05/13/08		5/20/2008	1.85 ppm OTF	2.2	H	.03 ppm
10.	05/13/08		5/20/2008	1.85 ppm OTF	6	I	.03 ppm

Depth Sample Collected: within bottom 4 ft.

Date Sample Received: 5/21/2008

Storage Conditions: Analyzed upon receipt

Condition of Sample(s) Box/Water Containers: Excellent

Date Shipped to SePRO: 5/20/2008

Date Analysis was Performed: 5/22/2008

How would you like results sent to you? **Fax** No **Regular Mail** Yes

Date Results Sent to Cooperator: 5/23/2008

Back of Data Sheet

Name of Waterbody: Lake Morey

Average Depth in Feet:

Back of Data Sheet

Size of Waterbody in Acres: 539

Target Plant(s) to Control: Eurasian watermilfoil

FasTEST Results Confidential - Not For Distribution

Cooperator:	Aquatic Control Technology, Inc	**Phone:**	**Fax:**
Gerald Smith	11 John Rd	(508) 865-1000	(508) 865-1220
Territory: Sarah Miller	Sutton MA 01590-		

Sample	Date(s) Treated	Sonar	Date Collected	Rate Applied	Acres Treated	Sample Location Description	Results PPB
1.						run #0004 correlation 1.0 recovery 86%	
2.	05/13/08		5/20/2008	1.85 ppm OTF	8	J	.03 ppm
3.	05/13/08		5/20/2008	1.85 ppm OTF	NA	K	.02 ppm
4.							
5.							
6.							
7.							
8.							
9.							
10.							

Depth Sample Collected: within bottom 4 ft.

Date Sample Received: 5/21/2008

Storage Conditions: Analyzed upon receipt

Condition of Sample(s) Box/Water Containers: Excellent

Date Shipped to SePRO: 5/20/2008

Date Analysis was Performed: 5/22/2008

How would you like results sent to you? **Fax** No **Regular Mail** Yes

Date Results Sent to Cooperator: 5/23/2008

Back of Data Sheet

Name of Waterbody: Lake Morey

Average Depth in Feet:

Back of Data Sheet

Size of Waterbody in Acres: 538

Target Plant(s) to Control: Eurasian watermilfoil

FasTEST Results Confidential - Not For Distribution

Cooperator:	Aquatic Control Technology, Inc	**Phone:**	**Fax:**
Gerald Smith	11 John Rd	(508) 865-1000	(508) 865-1220
Territory: Sarah Miller	Sutton MA 01590-		

Sample	Date(s) Treated	Sonar	Date Collected	Rate Applied	Acres Treated	Sample Location Description	Results PPB
1.						run # TR0015 corr. .999	
2.	05/13/08	ren	6/4/2008	1.85 ppm	4.6	A	.02 ppm
3.	05/13/08	ren	6/4/2008	1.85 ppm	2.2	H	.01 ppm
4.	05/13/08	ren	6/4/2008	1.85 ppm	12.2	E	.01 ppm
5.	05/13/08	ren	6/4/2008	1.85 ppm	NA	K	<1.0 ppb
6.							
7.							
8.							
9.							
10.							

Depth Sample Collected: within bottom 4 ft

Date Sample Received: 6/4/2008

Storage Conditions: Refrigerated

Condition of Sample(s) Box/Water Containers: Excellent

Date Shipped to SePRO: 6/3/2008

Date Analysis was Performed: 6/5/2008

How would you like results sent to you? **Fax** No **Regular Mail** Yes

Date Results Sent to Cooperator: 6/6/2008

Back of Data Sheet

Name of Waterbody: Lake Morey

Average Depth in Feet:

Back of Data Sheet

Size of Waterbody in Acres: 538

Target Plant(s) to Control: Eurasian watermilfoil

FasTEST Results Confidential - Not For Distribution

Cooperator:	Aquatic Control Technology, Inc	**Phone:**	**Fax:**
Gerald Smith	11 John Rd	(508) 865-1000	(508) 865-1220
Territory: Sarah Miller	Sutton MA 01590-		

Sample	Date(s) Treated	Herbicide	Date Collected	Rate Applied	Acres Treated	Sample Location Description	Results	UOM
1.	05/13/08	Renovate 3	6/10/2008	1.85	4.6	A	<1.0	ppb
2.					12.2	E	<1.0	ppb
3.					2.2	H	<1.0	ppb
4.					NA	K	<1.0	ppb
5.								
6.								
7.								
8.								
9.								
10.								

Depth Sample Collected:

Date Sample Received: 6/12/2008

Storage Conditions: Analyzed upon receipt

Condition of Sample(s) Box/Water Containers: Excellent — excellent

Date Shipped to SePRO: 6/11/2008

Date Analysis was Performed: 6/12/2008

Run #: 21 **% Control Rec:** 91 **Correlation:** 0.999

Date Results Sent to Cooperator: 6/13/2008

Back of Data Sheet

Name of Waterbody: Lake Morey

Average Depth in Feet: 4

Back of Data Sheet

Size of Waterbody in Acres: 538

Target Plant(s) to Control: Eurasian watermilfoil

APPENDIX C

Comprehensive Aquatic Vegetation Survey Information

- Sampling Methods
- Figure C_1 – Data Point Sampling Location
- Field Data Table
- Vegetation Species Distribution Maps

COMPREHENSIVE AQUATIC VEGETATION SURVEY METHODS

These survey methods were derived from the point intercept sampling method developed by the U.S. Army Corps of Engineers (Madsen 1999) and the "Point Intercept Rake Toss Relative Abundance Method" introduced by Cornell University and the New York State Department of Environmental Conservation (Lord and Kishbaugh 2005). Survey methods were validated by DEC staff and modified to incorporate the use of SCUBA diver to verify rake toss data. These point intercept methods are intended to document the spatial distribution of species along with quantifiable measures of percent cover and biomass values.

Using ArcView software, point intercept data points were created by the vertices of an 80 meter grid that was superimposed over the lake's littoral zone. This included all areas of Lake Morey where the reported water depth was less than 20 feet, and was based on the 1973 bathymetric contour map drawn by the Vermont Department of Water Resources.

Data points were navigated to by boat using a Trimble Pro XRS Differential GPS unit equipped with sub-meter accuracy. At each data point the boat was anchored at bow and stern. Two rake tosses were then performed on opposite sides of the boat. The total quantity of vegetation collected was assigned a biomass based on the PIRTRAM values shown below:

Rake Toss Vegetation Biomass

Abundance Categories	Field Measure	Typical Dry Weight (g/m^2) Ranges Associated with Plant Abundance
"Z" = no plant(s)	Nothing	0
"T" = trace plant(s)	Fingerful	~ 0.0001 - 2.000
"S" = sparse plant(s)	Handful	~ 2.001 - 140.000
"M" = medium plant(s)	Rakeful	~ 140.001 - 230.000
"D" = dense plant(s)	Can't bring in boat	~ 230.001 - 450.000+

Source: (Lord and Kishbaugh 2005)

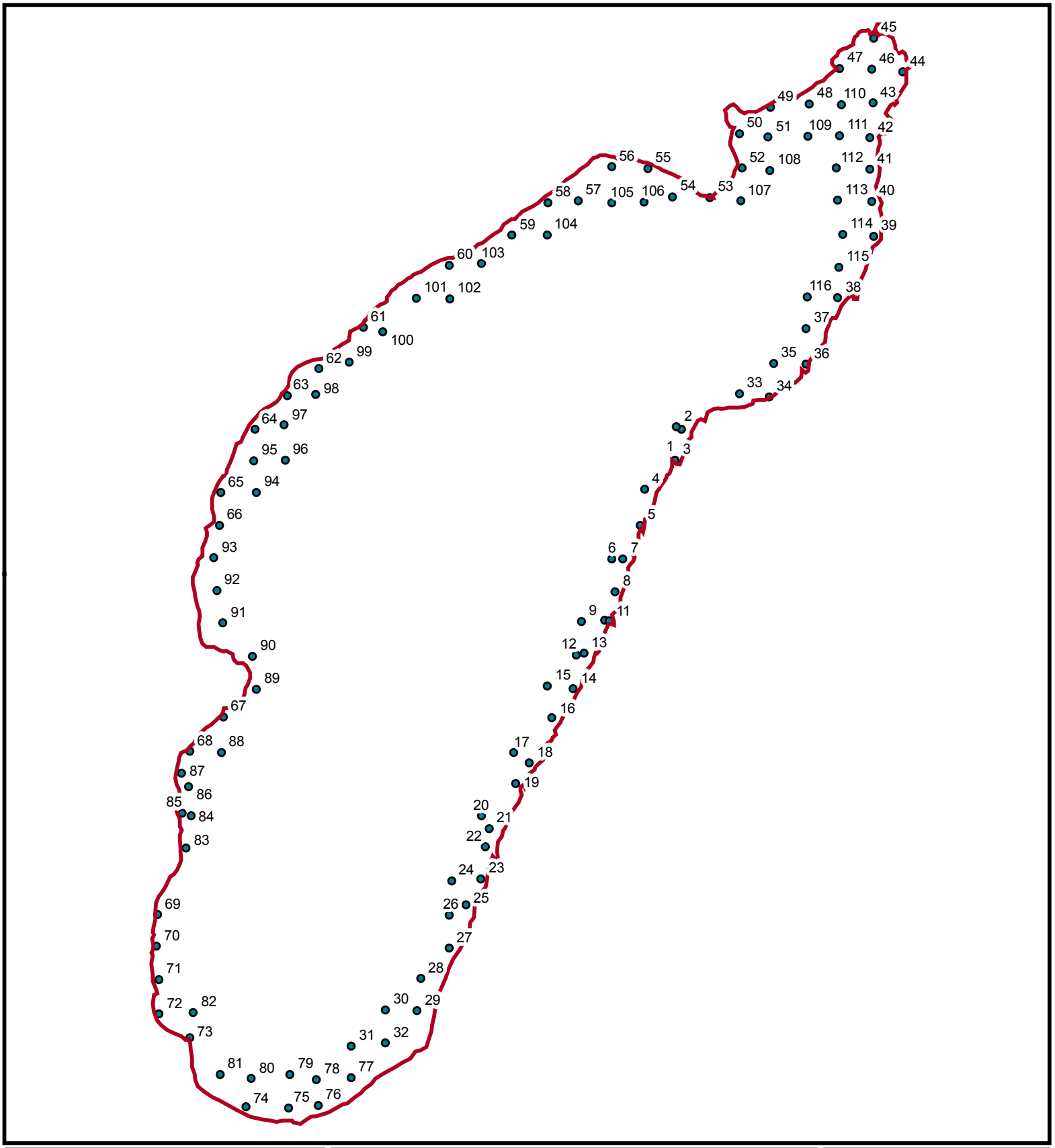
Each rake-full was then separated by plant species and the percent composition of each species was estimated. At data points deeper than five feet a SCUBA diver was used to provide visual verification of the rake toss data.

Water depth was recorded at each data point using a calibrated sounding rod for depths less than 15 feet and a high-resolution fish finder for depths in excess of 15 feet.

A total of 116 data points were generated based on an 80 meter grid throughout the littoral zone (Figure 1). The depth range of the sampled data points ranged from 2 to 34 feet. Distribution of the data points by depth was fairly uniform.

Depth Distribution of Sampled Data Points

Depth Range (feet)	# Data Points
Less than or equal to 5	25
Greater than 5 and less than or equal to 10	25
Greater than 10 and less than or equal to 20	34
Greater than 20	32
Total	116



Lake Morey

Fairlee, VT

Data Point Location Map

FIGURE:	SURVEY DATE:	MAP DATE:
C_1	08/22/07	10/24/08

Legend:

- Recorded DGPS survey point locations
  Same points sampled during
  2006, 2007 & 2008 surveys

N

0 500 1,000 2,000 3,000 Feet

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SUTTON, MASSACHUSETTS 01590
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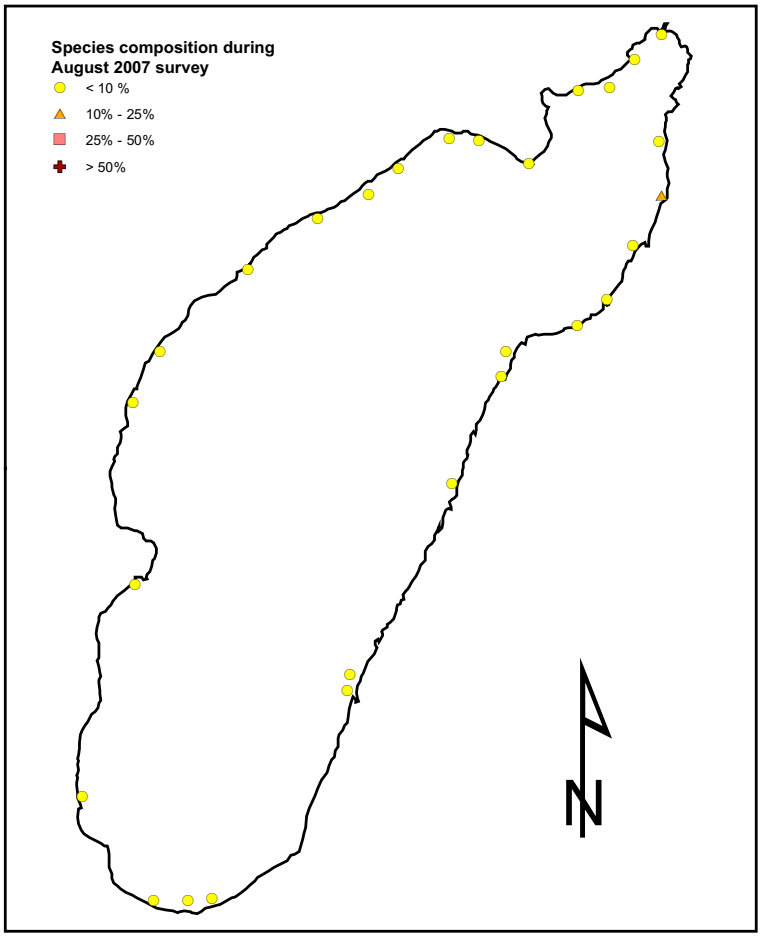
Lake Morey - Field Survey Data (08/27/08 08/28/08)

SurveyPointID	DEPTH	Lat	Lon	Ca	Cd	Ec	Eo	Mb	Ms	Mu	Na	Ni	Ny	Pa	Pg	Pi	Pp	Pprae	Pr	Pz	V	Zd	Fa
1	18	43.92581207	-72.14446799					1	30					20			1			1	1	20	
2	23	43.92586337	-72.14461354																				10
3	3	43.92512545	-72.14465476		1	1		1	10			1		5	1	5					2	60	
4	27	43.92447715	-72.14559436		1				1														
5	4	43.92368493	-72.14574014						10													20	
6	32	43.92293931	-72.14662664																				1
7	15	43.922943	-72.14627401						30		1			1	2	2						30	
8	11	43.92221314	-72.14651721						15					10							1	50	
9	32	43.92155872	-72.14756296																				
10	13	43.92157626	-72.14684339						10					10					1			20	
11	3	43.92156755	-72.14670825											15	15							60	
12	29	43.92080985	-72.14772238																				
13	17	43.92084971	-72.14748591		20				20					1	1							20	
14	3	43.92005814	-72.14782225						1					30		1						10	
15	33	43.92012606	-72.14861076																				1
16	17	43.91942736	-72.14847373		1				20		20			5								10	
17	31	43.91864852	-72.14966185																				
18	13	43.9184169	-72.14917525		20				30		10				20							10	
19	14	43.91795856	-72.1495925		20				1					10		20		1		1		30	
20	32	43.91724949	-72.15064503																				
21	16	43.91696865	-72.1504224		1				20		10			10		10		20	10		10		
22	14	43.91656028	-72.1505317		10			1			10			20				20			10	40	
23	5	43.91584887	-72.15067508		10			1	30		1			5		5			1			40	
24	32	43.91581274	-72.15157498																				
25	16	43.91527669	-72.15114701		20				1		20							20					
26	29	43.91504737	-72.15164884																				
27	6	43.91431011	-72.15166238		10				20		10			40		1						30	
28	25	43.91365088	-72.15254343		1							20											10
29	10	43.91292846	-72.15266002		10						1			20				60				5	
30	26	43.91295245	-72.15362939									1											1
31	23	43.91215479	-72.15468309		1						20												20
32	9	43.91221295	-72.1536341		30			15						10	10	10						1	
33	6	43.92659818	-72.14267219		1			5	1							1			30				
34	2	43.92652367	-72.14176789		1				5		10		40								5	10	
35	10	43.9272716	-72.14162429		25				20						30	10							
36	3	43.92724031	-72.14062378									1		1				10	5		5	80	
37	11	43.92803581	-72.14061574		50													10					
38	5	43.92871795	-72.13964087		10			1								10			40	5	5	30	
39	4	43.93008179	-72.13853491		1				1				5								20		

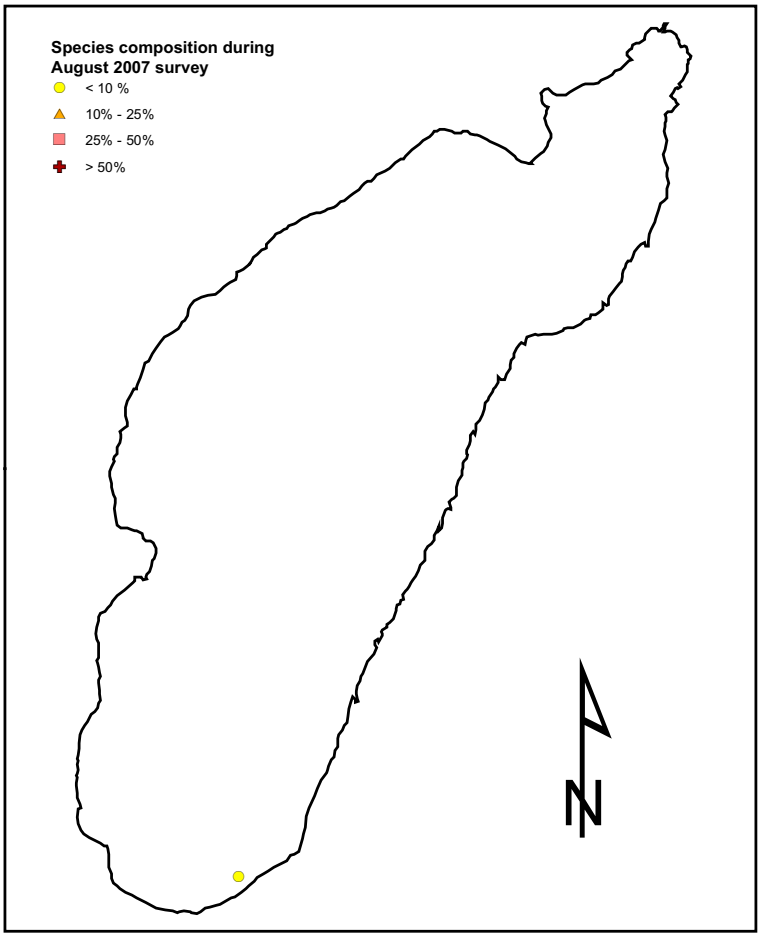
SurveyPointID	DEPTH	Lat	Lon	Ca	Cd	Ec	Eo	Mb	Ms	Mu	Na	Ni	Ny	Pa	Pg	Pi	Pp	Pprae	Pr	Pz	V	Zd	Fa
40	5	43.93085722	-72.13858511					10						30	10				10	1		10	
41	6	43.93156299	-72.13864308					40								1		1	30	5	5		
42	7	43.93226375	-72.13862566					10								5			85	1			
43	7	43.93304064	-72.13852863					10			10								60	20			10
44	4	43.93372561	-72.13761874					1			5		10	20					10	10			
45	3	43.93447649	-72.13851001					40			1		20					1	40	1	1		
46	6	43.93378169	-72.13856653					10	1		1			1					30	1			
47	5	43.93380876	-72.13955073					1			5		1						80	1	1		
48	6	43.933025	-72.14048186					15						1	10	1		1	60		5		
49	3	43.9329539	-72.14168843					5						5					40	1	5		
50	4	43.93237307	-72.14264465					1											70	1			5
51	10	43.93229993	-72.14175844					60			1			10	1	10		10		10			
52	6	43.93160771	-72.14256378															1	95	1		1	
53	4	43.9309567	-72.14354927				1			10	1										5		
54	8	43.93097232	-72.14470464					10			25				30					5			
55	4	43.93160735	-72.1454559					1			20					5			40		1		
56	6	43.93164848	-72.1465701					10	1		10			30	5				30		1		
57	10	43.93090033	-72.14761094		20			60			15					20			15	5			
58	6	43.93085846	-72.1485292					10	1		10			20	20					1	1		
59	12	43.93013939	-72.14964411		10				1						10				70		1		
60	10	43.92947499	-72.15157022		10			1	10					1	10						10	10	
61	2	43.92810401	-72.15422191		10			10	10									1			10		
62	10	43.92718738	-72.15559295		10				1									1	1				
63	5	43.92659508	-72.15656582					10	5		10			15		1						60	
64	8	43.92584581	-72.15757055		1			10			1			5					50		10		
65	7	43.92444811	-72.15862721		1			10	5					5				1	50		1		
66	6	43.92372655	-72.15866867								30			5					10				
67	10	43.91947115	-72.15857351								1										1		
68	11	43.91870827	-72.15960424						10	1	5								1				
69	12	43.91508234	-72.16062001								1												1
70	6	43.91437983	-72.16065157																				
71	8	43.91364484	-72.16059312					1	10												1	5	
72	2	43.91287589	-72.16058091												5	10							
73	4	43.91235384	-72.1596486						1					5	10							5	
74	3	43.91080593	-72.15792763					30	10					20	10						5		
75	4	43.9107856	-72.15661039					10	5					40		5					5	5	
76	4	43.91083829	-72.15571393		1					1				15		5					1		
77	5	43.91144623	-72.1546932	5				10		5				20		20						1	
78	18	43.91141244	-72.15575289		1							40											30

SurveyPointID	DEPTH	Lat	Lon	Ca	Cd	Ec	Eo	Mb	Ms	Mu	Na	Ni	Ny	Pa	Pg	Pi	Pp	Pprae	Pr	Pz	V	Zd	Fa
79	22	43.91153042	-72.1565656		5							50											20
80	15	43.91143784	-72.1577588		20				1								1						
81	9	43.9115313	-72.15872315					10			60	10						10	30				1
82	30	43.91290917	-72.15952994																				1
83	15	43.91656457	-72.15973277		20																		
84	32	43.91727776	-72.15957932																				
85	14	43.91733699	-72.15984685						10		10												10
86	30	43.91791608	-72.15964346																				
87	12	43.91822175	-72.15986344		20			10						1			20					20	10
88	34	43.91868094	-72.15863895									1											
89	18	43.92008136	-72.15754696																				
90	15	43.92081068	-72.15766103									1											1
91	21	43.92155417	-72.15857467		1							40											10
92	22	43.92228069	-72.15875759		40																		
93	15	43.92300034	-72.15883892						20			1						10	40				
94	28	43.92445394	-72.15752624																				
95	23	43.92515557	-72.15760034		1							40											1
96	29	43.9251675	-72.15663379																				
97	24	43.92595127	-72.15666727									50											10
98	23	43.92661959	-72.15569047									70											10
99	25	43.92732955	-72.15466319		1							50											10
100	23	43.92800317	-72.15361529									40											10
101	18	43.92874932	-72.1525883		1				1		15	10						10	10				
102	26	43.92872847	-72.15155376									30											
103	24	43.92950788	-72.15058374									10											20
104	22	43.93013874	-72.14856385		1													1					30
105	11	43.93084333	-72.14656523		70						1					5		10	1				
106	21	43.93086037	-72.14557414		1							10							1				30
107	21	43.93087549	-72.14260993		1							30						5					10
108	20	43.93155287	-72.14170179															5	1				40
109	20	43.93231011	-72.140539		1							20						10	1				20
110	17	43.93300378	-72.13950682																				
111	17	43.93231664	-72.13957258		60													10	1				
112	18	43.93159448	-72.13965922		10													10	1				30
113	20	43.93087876	-72.13962314		1														1				40
114	19	43.93012255	-72.13947142		5													1					50
115	15	43.92939817	-72.13959941		1													5	1	1			60
116	20	43.9287393	-72.14057127		1							10											60

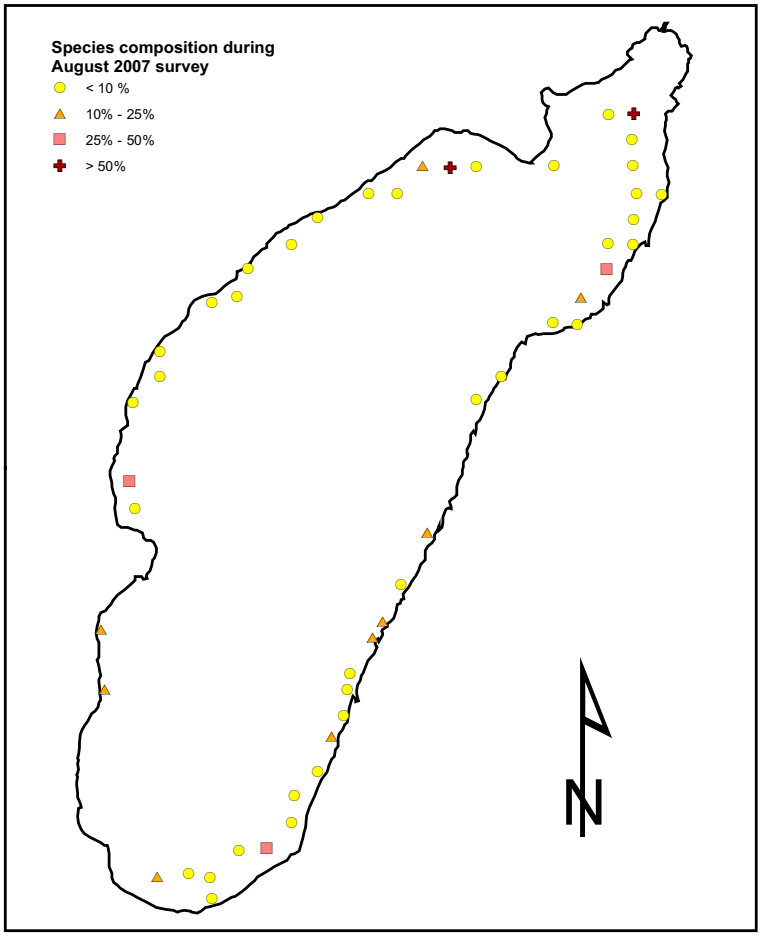
Locations of *Vallisneria americana*



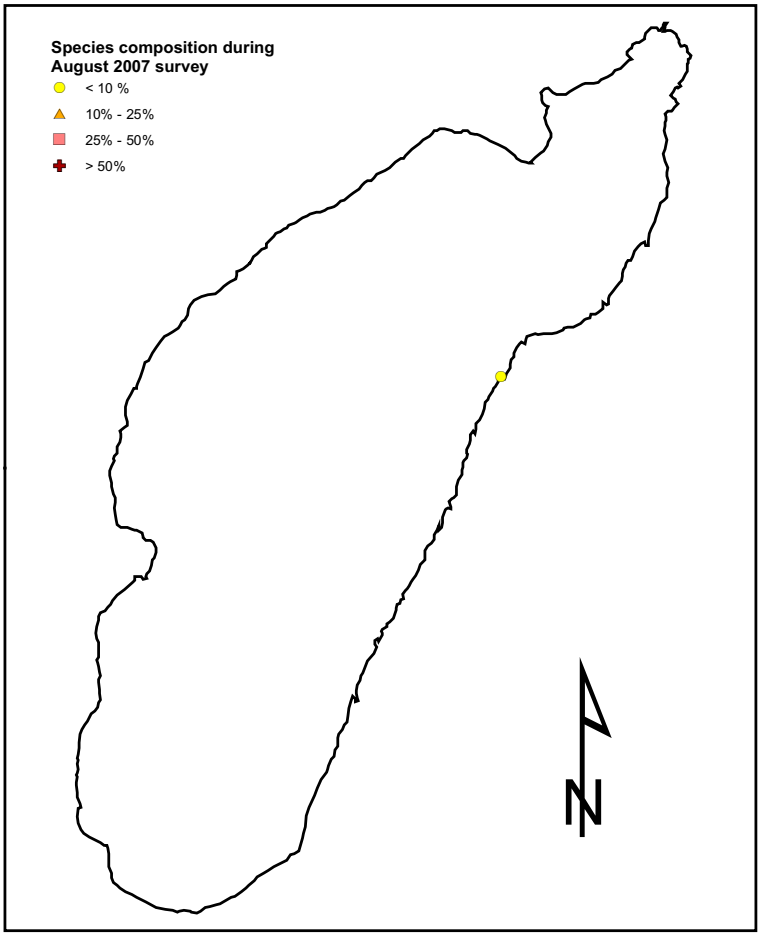
Locations of *Chara vulgaris*



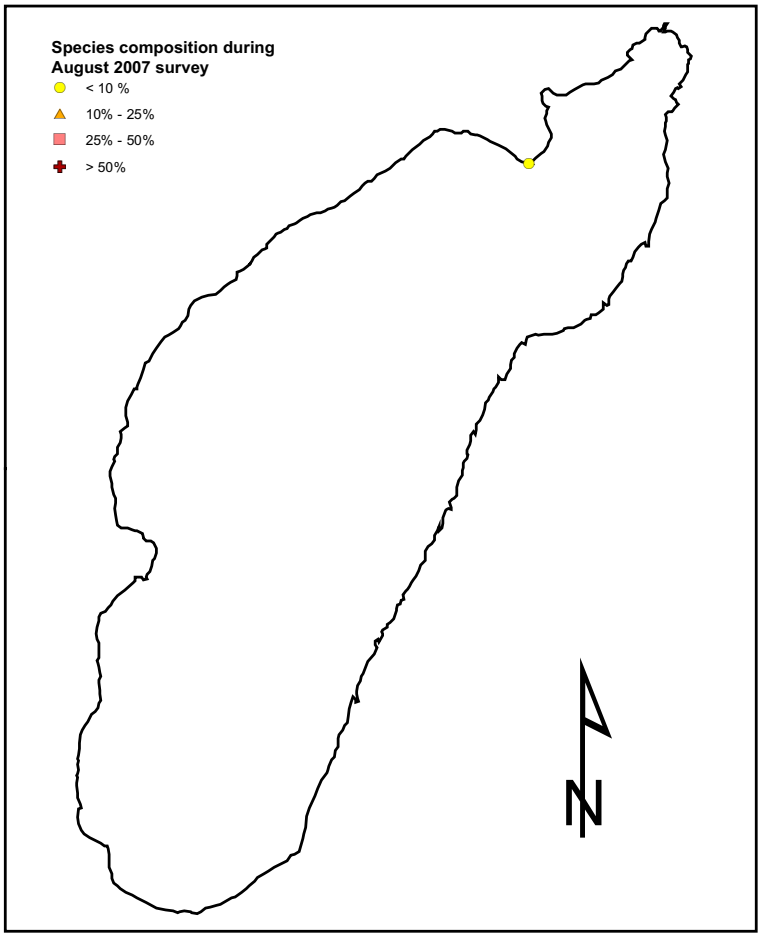
Locations of *Ceratophyllum demersum*



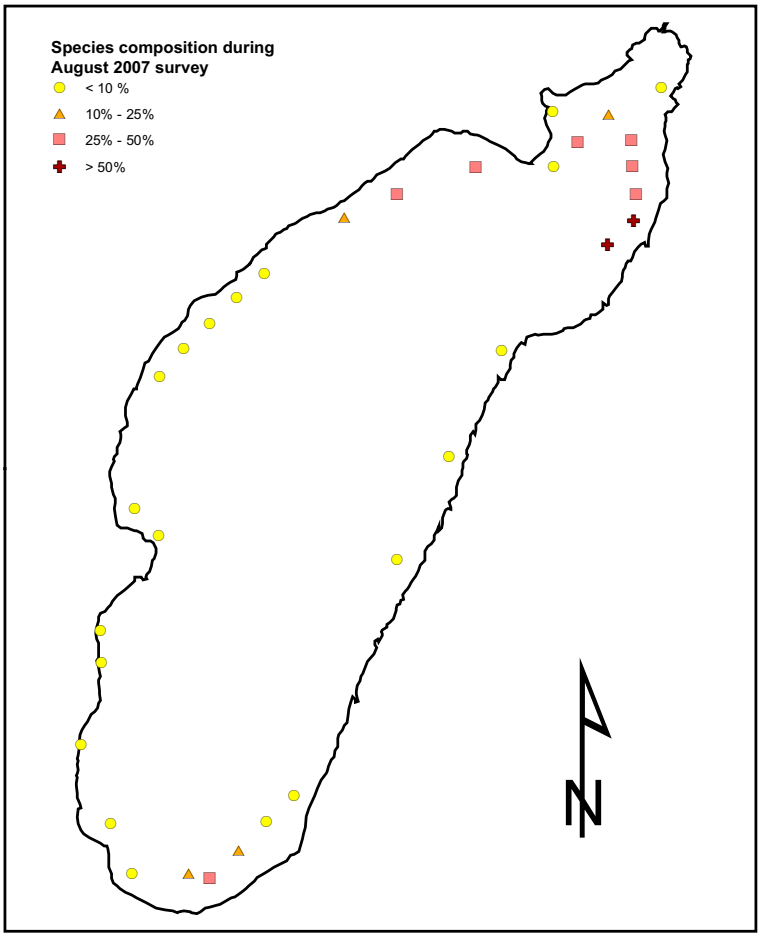
Locations of *Elodea canadensis*



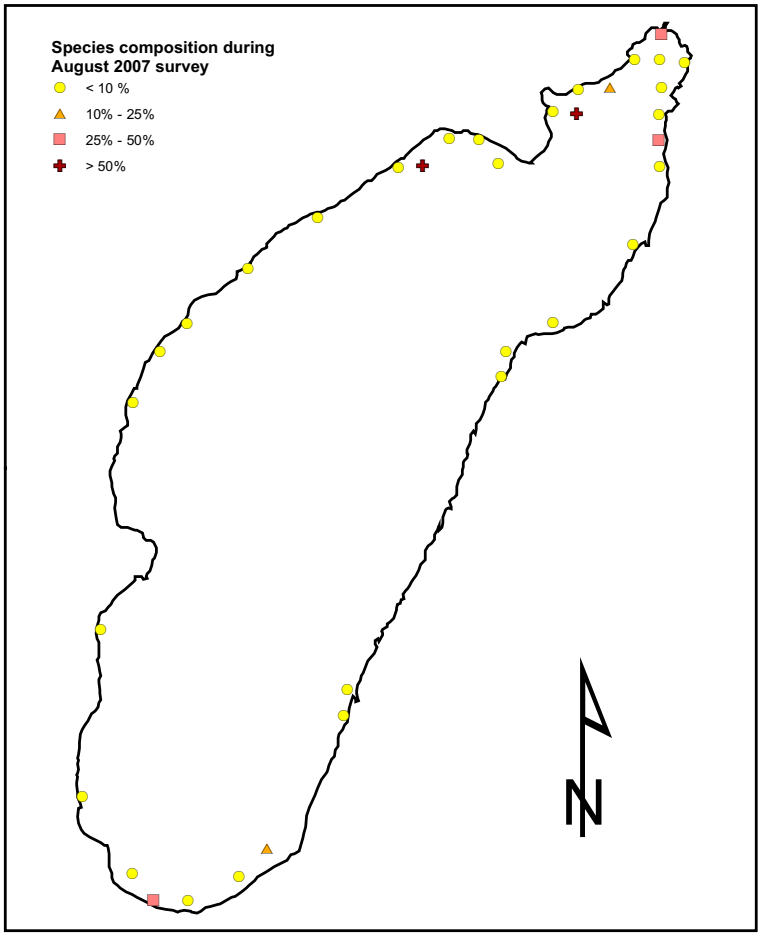
Locations of *Eleocharis sp.*



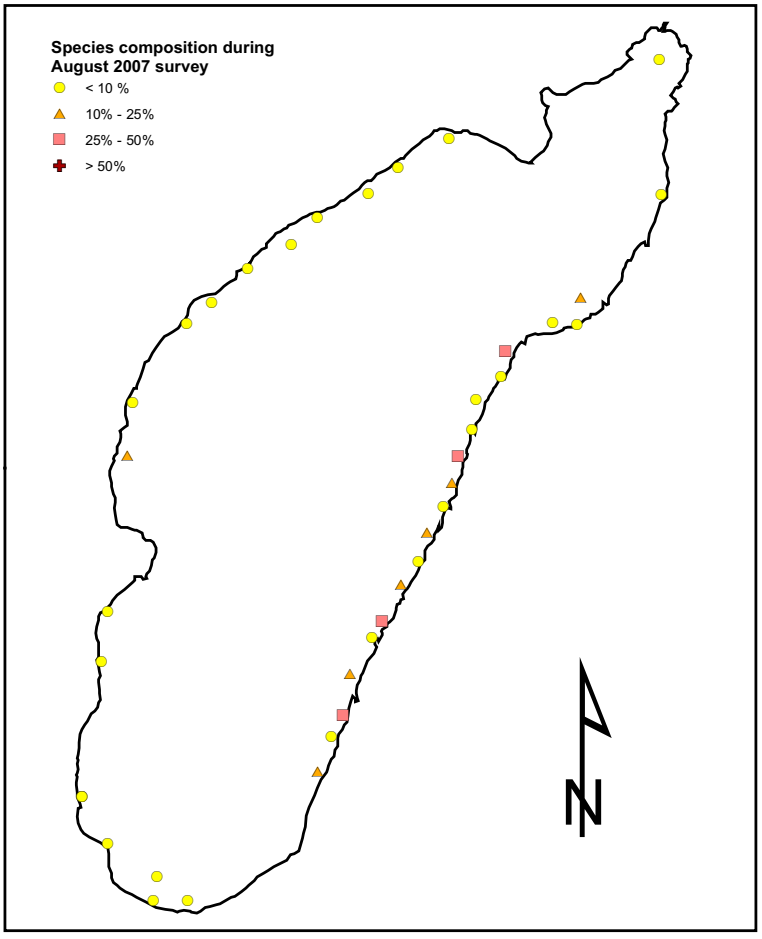
Locations of *Chlorophyta Filamentous algae*



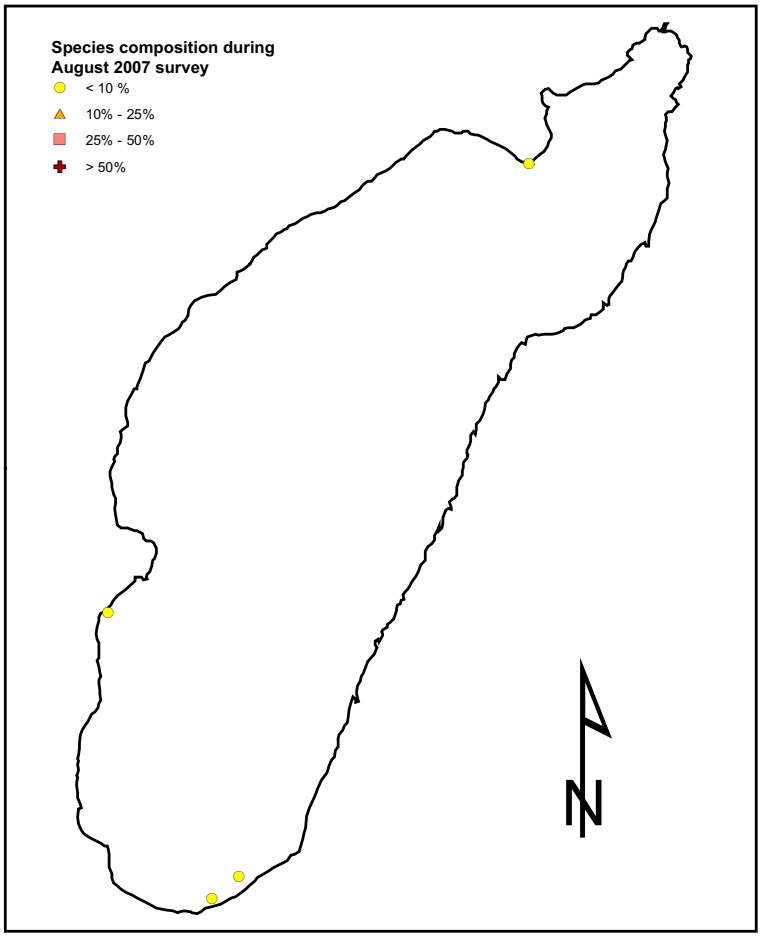
Locations of *Megalodonta beckii*



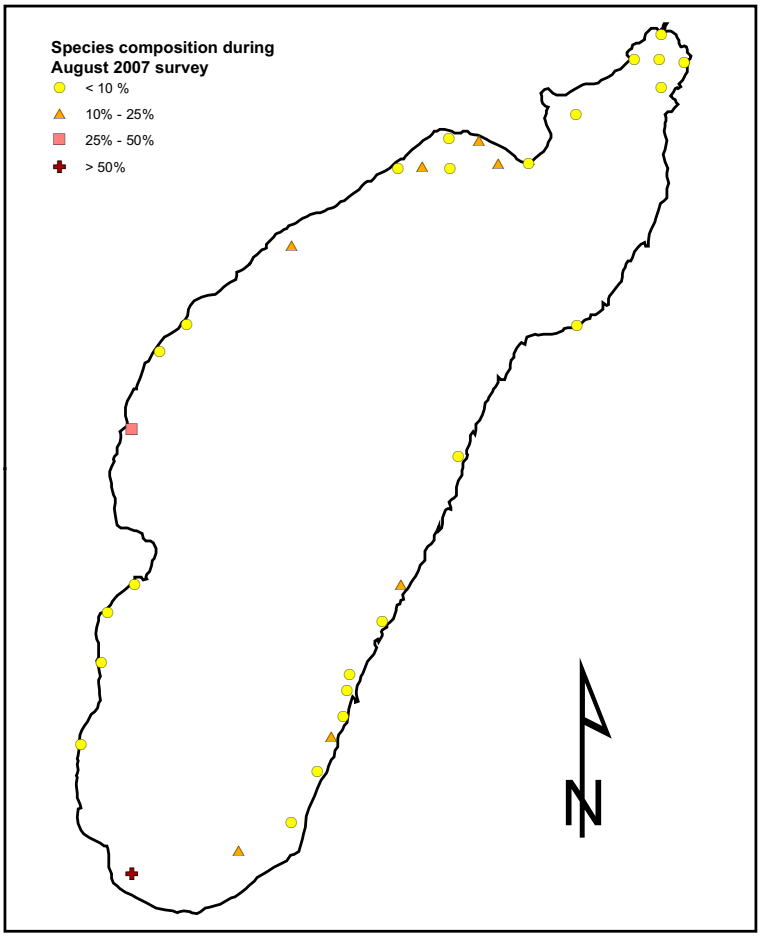
Locations of *Myriophyllum spicatum*



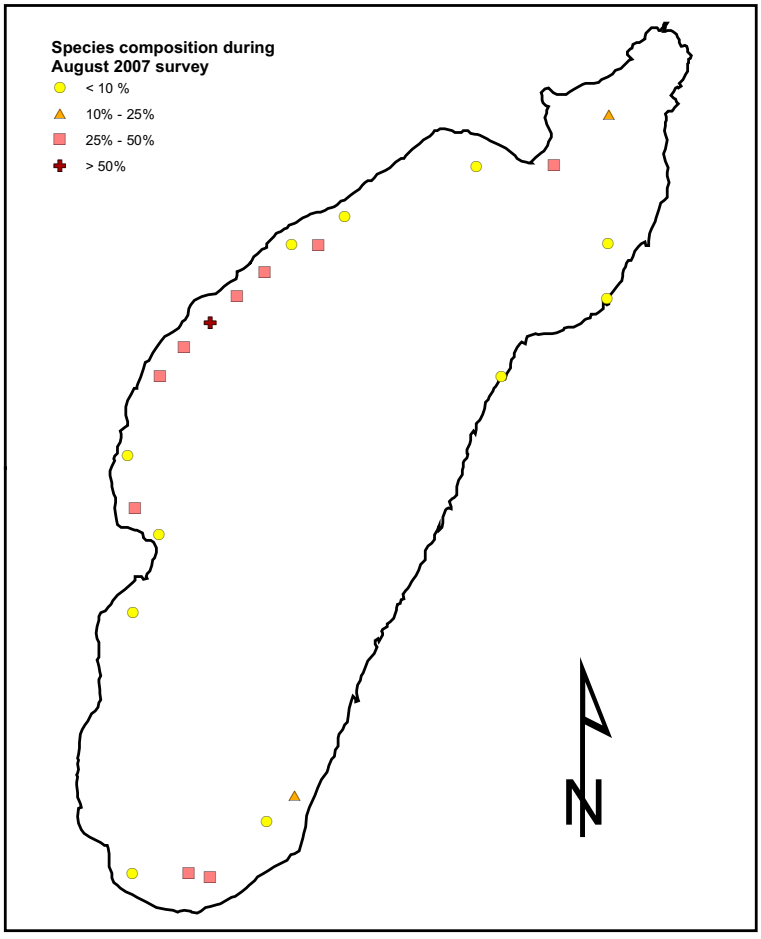
Locations of *Musci sp.*



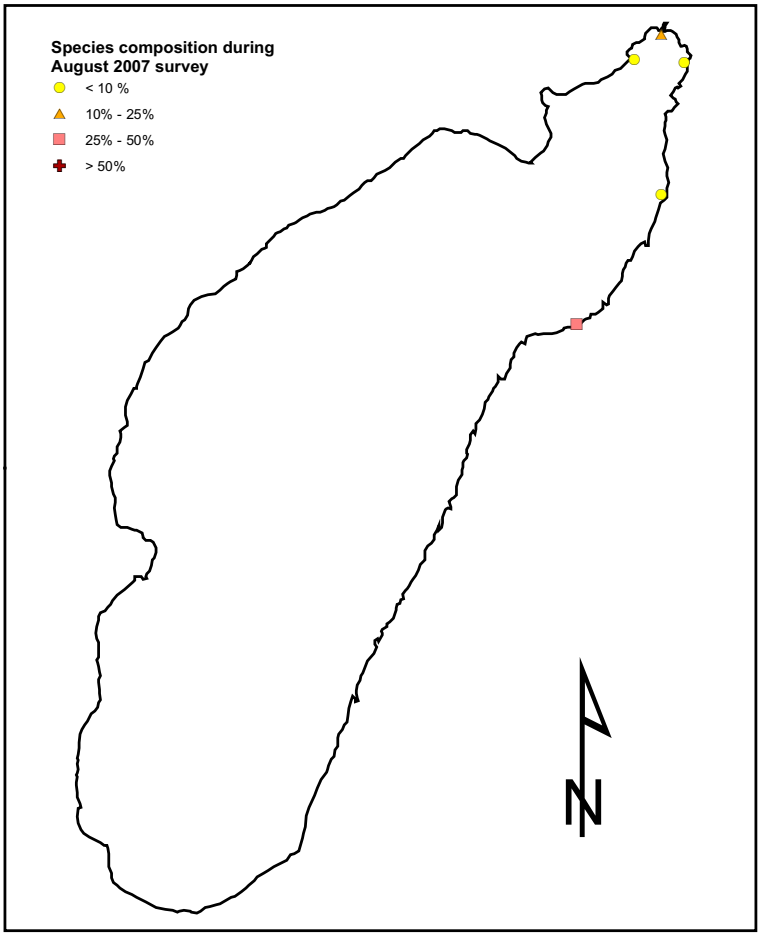
Locations of *Najas flexilis*



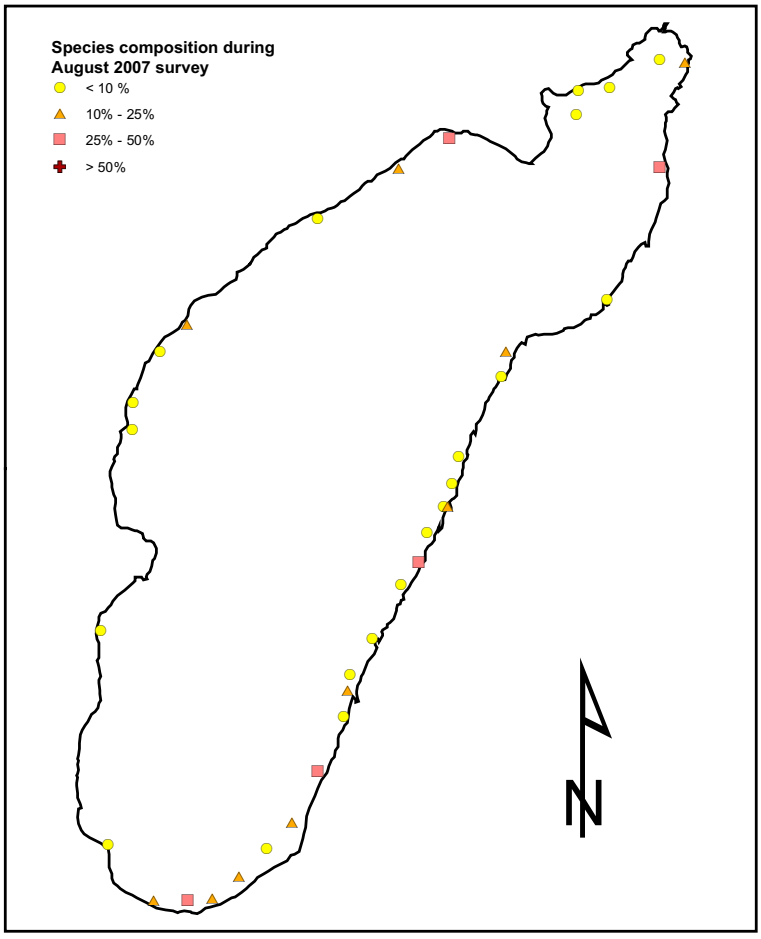
Locations of *Nitella sp.*



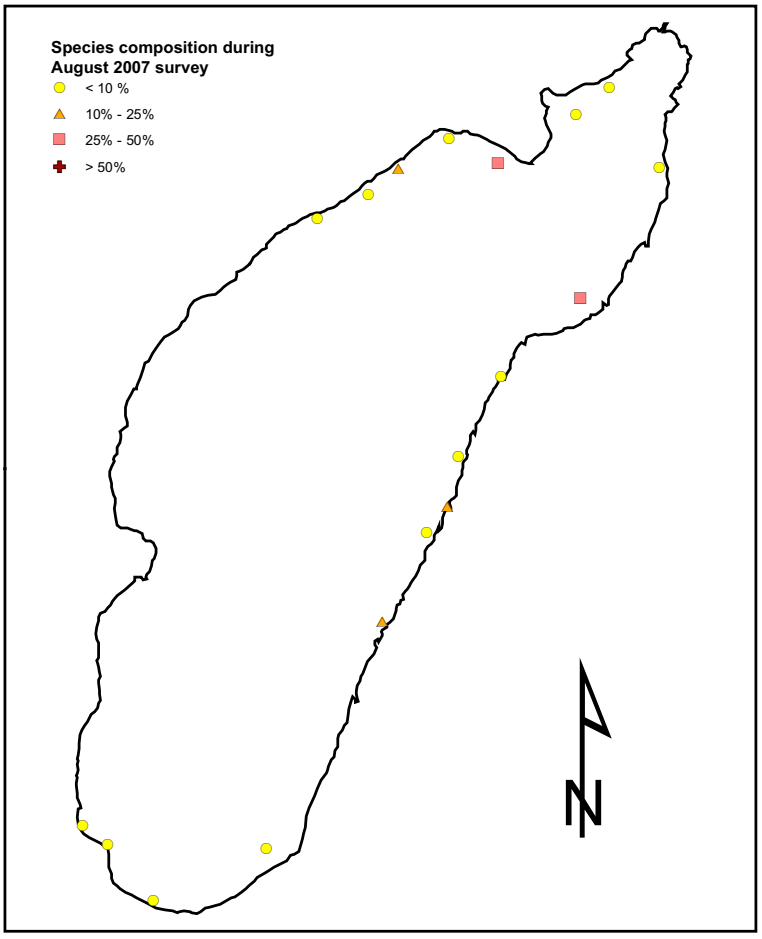
Locations of *Nymphaea odorata*



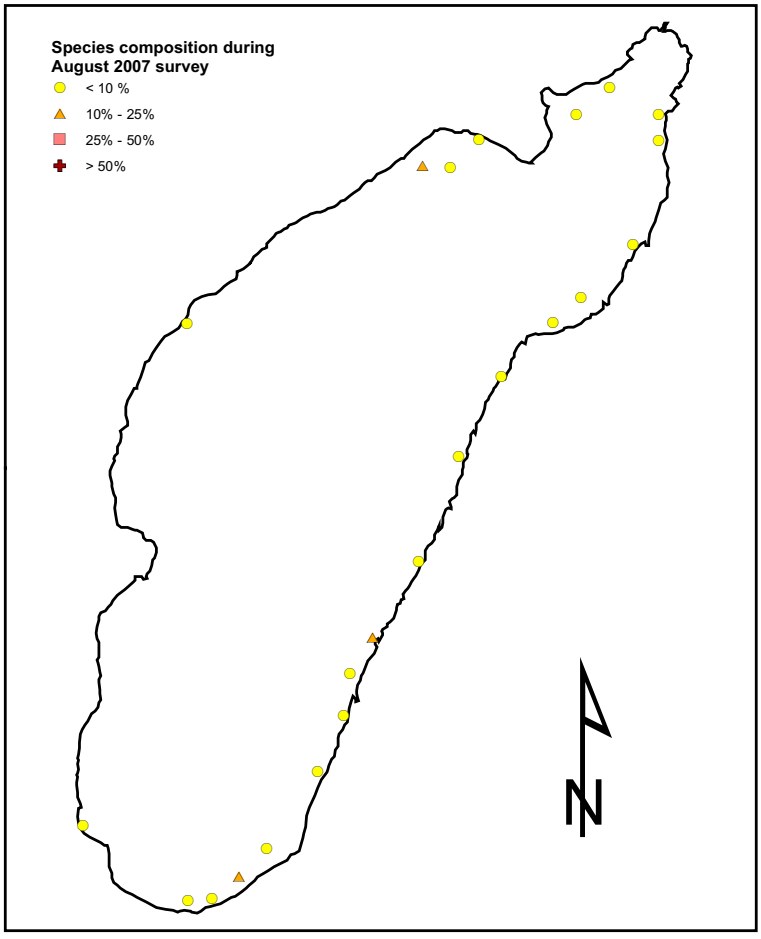
Locations of *Potamogeton amplifolius*



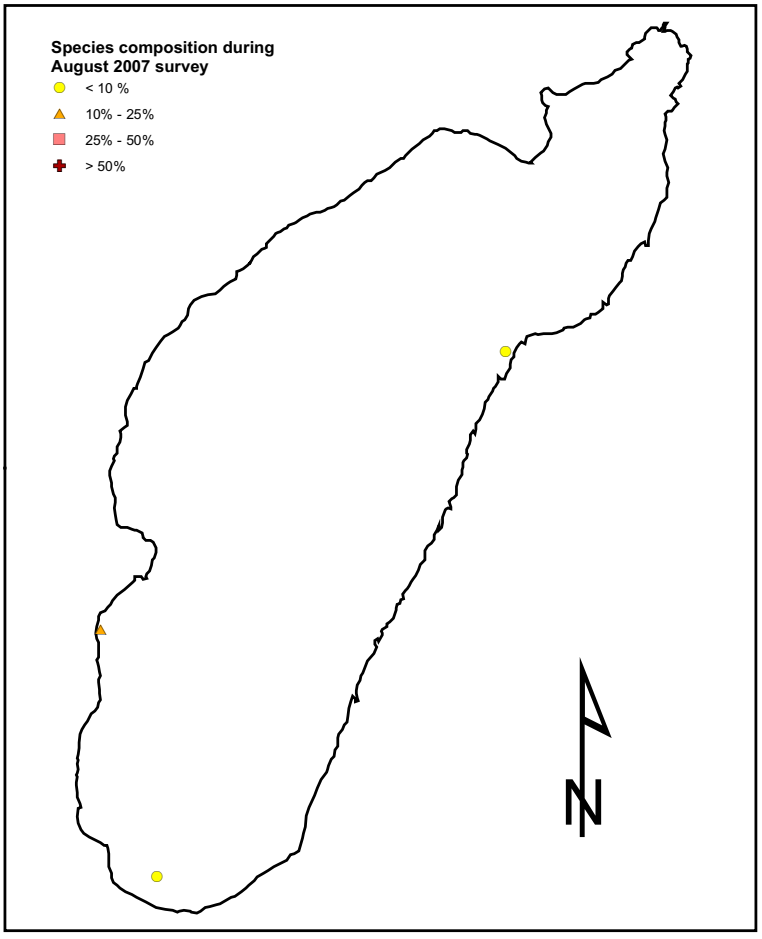
Locations of *Potamogeton gramineus*



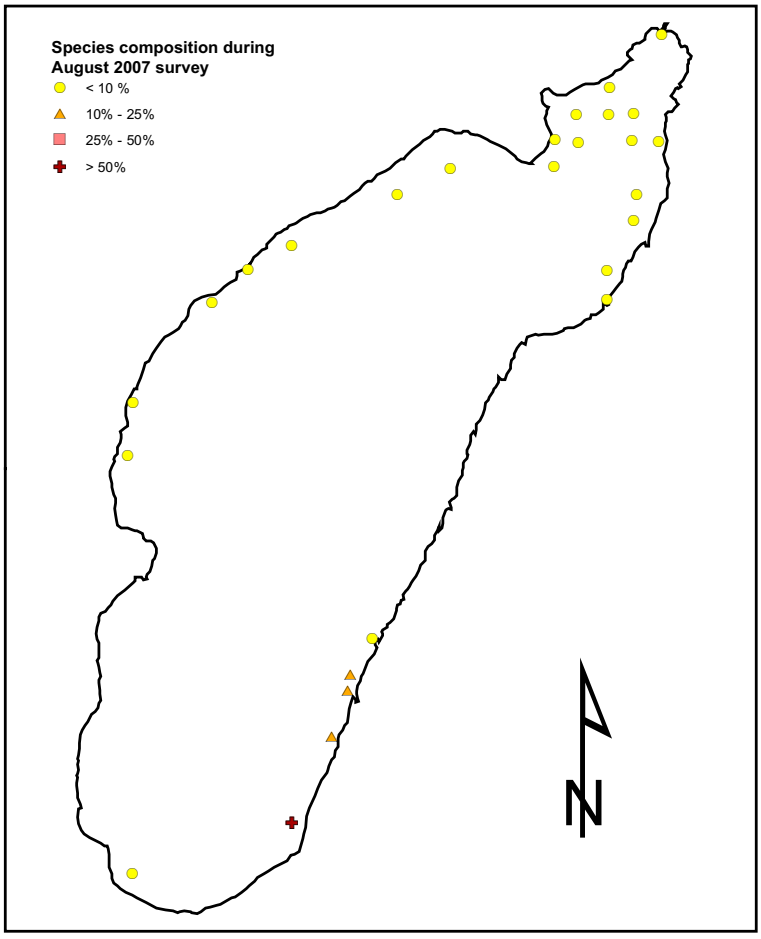
Locations of *Potamogeton illinoensis*



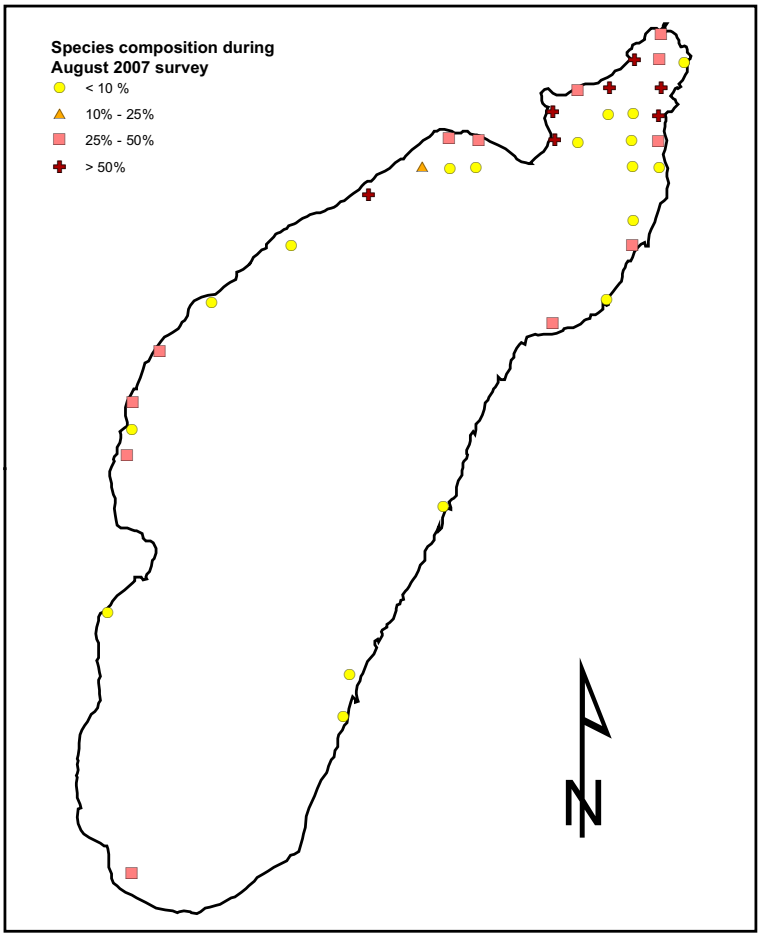
Locations of *Potamogeton pusillus*



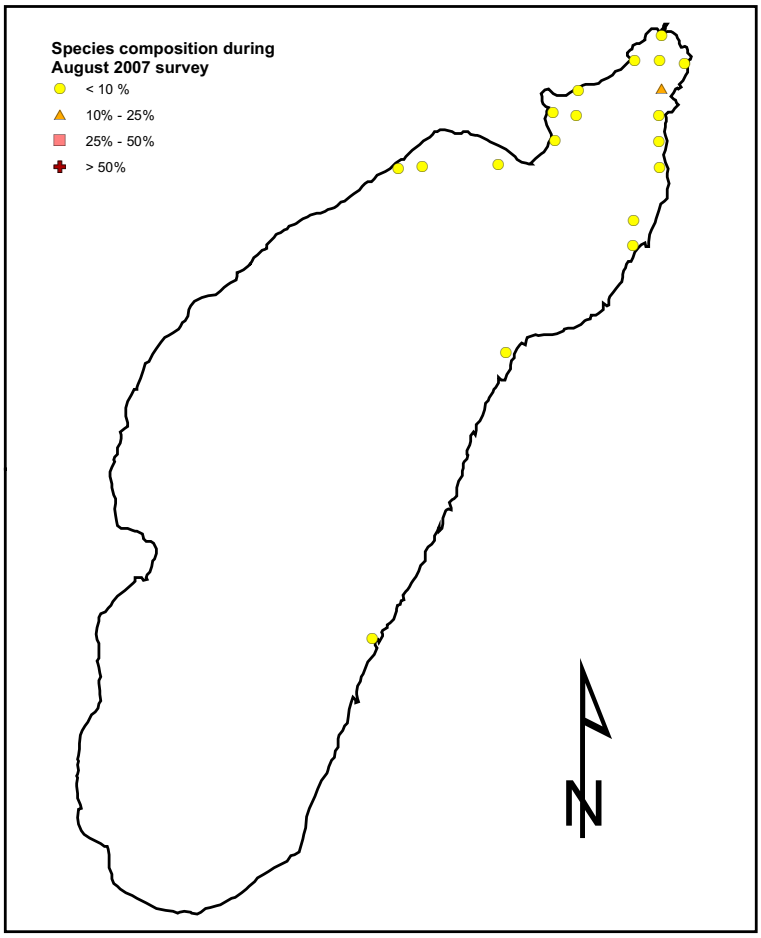
Locations of *Potamogeton praelongus*



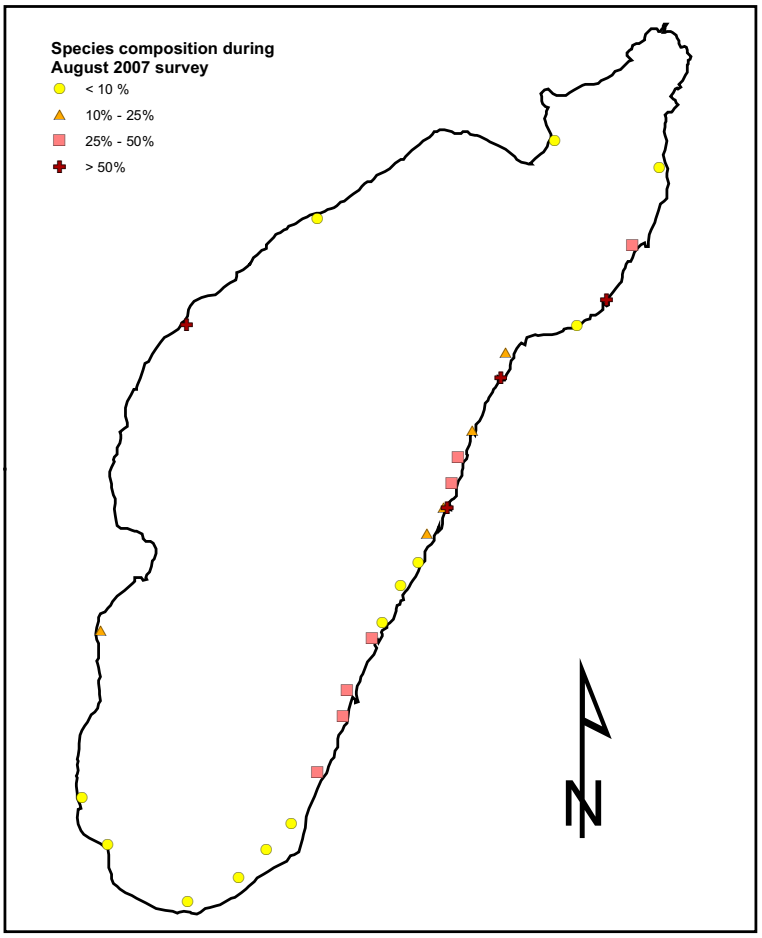
Locations of *Potamogeton robbinsii*



Locations of *Potamogeton zosteriformis*



Locations of *Zosterella dubia*



APPENDIX D

Non-Chemical Control Activities – 2008

- Summary Information prepared by LMPA

Non-Chemical Control Activities in 2008

The non-chemical control activities were divided into three segments:

1. Removal of Bottom Barrier
In accordance with ANC 2007-C13 all of the bottom barrier material located at Aloha and the Town Beach was removed and placed in storage.

2. Hand Harvesting
More than 100 Volunteers in the Adopt-A-Lake Program worked over 800 hours hand pulling milfoil (see logs of non-chemical controls below) and over 700 hours monitoring/watching/seeking milfoil. A portion of the 400 hours spent on coordination/administration was devoted to non-chemical control.

SCUBA divers from Aquatic Endeavors spent six days searching out and removing milfoil.

3. Education
The Lake Morey Protective Association instituted a new Greeter Program to inspect boats and trailers entering or leaving Lake Morey and to educate boaters and fishermen on controlling aquatic nuisance species. More than 25 people volunteered in this program. The program contracted approximately 40 hours of State Trooper time to assist in inspections.

The LMPA annual meeting attended by 75 people included a lengthy discussion of the milfoil program including Adopt-A-Lake.

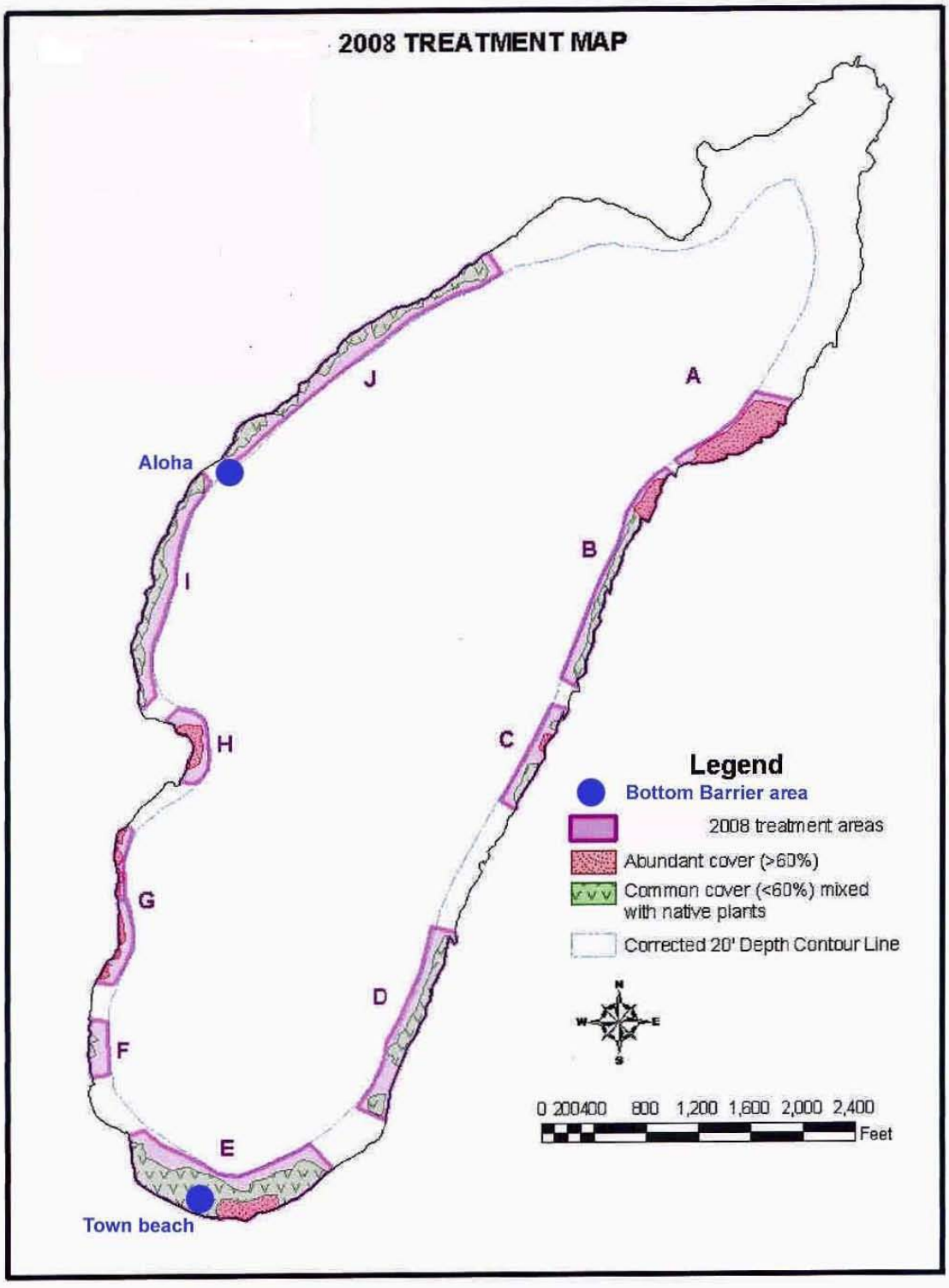
On the following pages are logs of non-chemical controls used specifically in Renovate treated areas as required by condition 27 (c) of ANC 2007-C13.

LOGS OF NON-CHEMICAL CONTROL ACTIVITY IN 2008 IN RENOVATE TREATED AREAS

During the summer of 2008 Lake residents spent 535 hours hand pulling milfoil in eight areas treated with Renovate in 2008. In addition 272 hours were spent hand pulling in three areas treated with Renovate in 2007.
Scuba divers worked 147 hours mostly in 2007 Areas A and B.
102 hours were spent in bottom barrier removal in 2008 Areas J and E.

LOG OF NON-CHEMICAL CONTROLS USED IN AREAS RENOVATE TREATED IN 2008

	HOURS HAND PULLING				2008 TREATMENT AREA
Name	June	July	Aug	Sept	
Andrews, B		2			B
Baine, C		2	4		A
Barbieri, B		8	20	7	C
Bregman, A	4	10	12	2	C
Byron, Laura & Shaun	5	15	20	2	G
Chambers, D		3	5	4	G
Charity Family		6	20	8	A
Clark Family	10	15	8	7	A
Dowler	4	7	8	1	G
Duncan, B		3	7	0.5	I
Dunlap/Loros		3	12	2	J
Larrabee, John	1	3	3	3	G
Leach, L		4			A
Martell, E		9	1		D
McCarty	8	10	8	2	I
Minard, B & S		6	9	2	C
Mitchell	3	3	4		D
Moody/Vondrak			9		A
Moran/Dinger	10	22	35		G
Powley Family		22	18		B
Rescigno, R		7	8.5		G
Stone, Byron	10	10	10		E
Thompson/Pacilio			2		J
Weaver, D	2	5.5	4	6	J
Wertheimer, R	8	6	5		D
Wilkins, Bev		3	3	3	D
HOURS SCUBA					
Martell, E		3			D
HOURS BOTTOM BARRIER REMOVAL					
Aquatic Endeavors				102	J & E


2008 TREATMENT MAP
Aloha
Town beach
A
B
C
D
E
F
G
H
I
J
Legend
Bottom Barrier area
2008 treatment areas
Abundant cover (>60%)
Common cover (<60%) mixed with native plants
Corrected 20' Depth Contour Line
N
W
E
S
0 200400 800 1,200 1,600 2,000 2,400
Feet

LOG OF NON-CHEMICAL CONTROLS USED IN AREAS RENOVATE TREATED IN 2007

	HOURS HAND PULLING				2007 TREATMENT AREA
Name	June	July	Aug	Sept	
Armstrong/Perkins	8	4	4	1	B
Bacigalupo, M			2		B
Baker, F.W.	1	2	2		D
Bonneville, N & B	30	35	25	14	B
Campanella, Anton		10	11		A
Clapp, C			5	5	A
Durgin Family	12	10	4	8	A
Hylander, J & B		3	4	3	A
Low, Dana		12	19		B
McGrath/Sherman		2	2		A
Ozimek		18			A
Scott, B			3		B
Scott, K		2	1		B
Walker			2		B
White, R		2	1		B
Zalinger		1	3	1	D
HOURS SCUBA					
Aquatic Endeavors		90	54		A & B

LAKE MOREY - 2007 MILFOIL TREATMENT MAP