

November 13, 2013

Mr. Michael Allard, President
Namaske Lake Association
MEAllard@AllardVentures.com

Re: 2014 Proposal/Agreement for an Herbicide Treatment Program to Control Invasive Variable Milfoil Growth in Namaske Lake in Goffstown, New Hampshire

Dear Mr. Allard:

Please accept this as our Bid/Proposal for a treatment program to control invasive variable milfoil (*Myriophyllum heterophyllum*) in portions of Namaske Lake during the 2014 season.

INTRODUCTION AND RECOMMENDED TREATMENT APPROACH

Aquatic Control Technology is familiar with conditions at Namaske Lake having performed treatment programs there in past years. Last year, we tried two new 2,4-D granular amine herbicide formulations at several sites throughout New Hampshire. These products were effective when adequate herbicide concentration-exposure-time could be sustained, but were less effective in areas subject to dilution and mixing with untreated water (i.e. shoreline areas, high-flow areas, small areas with a lot of flow, etc.). The concentration-exposure-time required for Navigate (2,4-D BEE) does not appear to be as long, but dilution can still be an issue and granules can “plug” in soft bottom sediment and reduce the treatment effectiveness. Navigate also carries extended restriction periods on using treated lake water for drinking and irrigation following treatment, which can present problems for June treatments.

Based on the extent of the variable milfoil infestation at Namaske Lake, our recommended treatment program involves a two-phased approach: June treatment with Reward (diquat) herbicide, followed by a September treatment with Navigate herbicide to target regrowth. Diquat should provide suppression of milfoil for the majority of the summer and reducing the plant biomass in the spring will force the plants to use their starch reserves to produce new stems and foliage, rather than strengthening their root structures. This should result in a more complete and effective 2,4-D treatment in September. Treating with diquat initially will also break the cycle of repeat 2,4-D treatments and help avoid the possibility of any herbicide tolerance from developing. The maximum water use restriction periods for drinking and irrigation following treatment with Reward are only 3-5 days. If the two-phased treatment approach is not desired, then treatment with diquat could be performed in June, or treatment with 2,4-D could be performed in June or September.

SCOPE OF SERVICES

Permitting:

Aquatic Control will prepare and file a Special Permit application for this treatment project on behalf of the Client. Tasks completed during permitting will include:

- Completing the Special Permit Application form and assembling the normal attachments.
- Assembling names and mailing addresses for abutting property owners that can be keyed to Town Tax Maps, querying abutting property owners as to their source of domestic water.
- Completing all normal mailings and newspaper notifications required by the Special Permit.

Treatment:

Aquatic Control’s New Hampshire licensed chemical applicators will apply USEPA/State registered herbicide(s) to designated treatment areas in accordance with the Special Permit issued by the NH Division of Pesticide Control. Final decisions on the product(s) applied, application rate(s) used, specific area(s) treated and the date(s) of treatment, will be made by mutual agreement between ACT, the Client and DES and will follow all requirements and conditions of the Special Permit.

Depending on the time of year and specific areas of treatment, the treatment will be performed using either an Airboat or aluminum work skiff powered by a conventional outboard motor. Granular herbicides will be applied using mechanical cyclone spreaders, an eductor system that delivers the granules in stream of water using fan shaped nozzles, or a hand-held granular blower. Application equipment will be properly calibrated and a Differential/WAAS GPS system will be on board the treatment boat(s) during the application to insure that the herbicide is evenly applied throughout the designated treatment areas.

Immediately prior to treatment, shorelines around the treatment areas and for a 200-foot buffer distance will be posted with signs warning of the temporary water use restrictions to be imposed per the Special Permit.

Monitoring and Reporting:

Aquatic Control will complete the following monitoring and reporting tasks to comply with conditions of the Special Permit.

- Perform pre and post treatment surveys of treatment areas.
- Arrange to have the post-treatment herbicide monitoring conducted by an independent, state-certified laboratory.
- Prepare and submit a year-end report.

TENTATIVE SCHEDULE OF PERFORMANCE - 2014

- Prepare and file Special Permit Application with NH DPC January/February
- Pre-treatment survey(s).....May/June and/or August
- Chemical treatments (1 or 2 applications).....June and/or early September
- Post-treatment inspections and reporting.....June-October

CLIENT RESPONSIBILITIES

It would be the Client’s Responsibility for compliance and assistance with the following:

- Provide an accurate and current list of all abutting property owners to each treatment area (those located within 200 feet), a copy of the town tax maps that show all the abutting parcels, and an updated inventory of water source (i.e. wells or intakes) for the abutting properties
- Identify and provide names and addresses of any property owners with direct water intakes located within 1200 feet of the proposed treatment areas.
- Identify locations of any community or public wells and their proximity to the treatment areas.
- Providing alternate water to abutters that may have to restrict their water use for drinking or irrigation following treatment, if requested and required.
- Provide a copy of the updated Long-Term Vegetation Management Plan prepared by DES.
- If possible, assist with posting on the day of treatment; or post the lake in advance of treatment. Aquatic Control will provide pre-printed posters.

COST AND PAYMENT SCHEDULE

As discussed in the Scope of Services, we recommend a two-phased treatment approach with a Reward (diquat) treatment in June followed by a Navigate (2,4-D BEE granular) treatment in September.

June	Reward (diquat)	37.4acres @1 gal/ac	\$8,740
September	Navigate (2,4-D BEE granular)	20 acres @ 111 lbs/ac	\$10,440
	TOTAL		\$19,180

If this approach is not desired, optional pricing for a single treatment with Navigate only in June or September.

June or September	Navigate (2,4-D BEE granular)	37.4 acres @ 111 lbs/ac	\$18,490
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The total cost of the chemical treatment program, broken down by task, is listed below.

Initial Herbicide Application in spring or fall (June or early-mid September)

Task	Description	Reward (diquat) herbicide	Navigate (2,4-D BEE) herbicide
1	Prepare and file Special Permit application with NH DPC (inclusive of all required direct and certified mailings to a maximum of 120 abutters and publication of 3 newspaper notices) ¹	\$1850	\$1790
2	Perform chemical treatment of up to 37.4 acres (inclusive of all labor, chemical & equipment) ²	\$5150	\$15,100
3	Pre and post-treatment surveys and submittal of the required written reporting to the State	\$700	\$700
4	Herbicide residue sample collection and analysis (assumes 2 samples are required) ³	\$1040	\$1000
	Herbicide Application Program Total	\$8,740	\$18,590

¹ Any changes to the 2014 permitting process (i.e. requirements for additional information, different notification requirements, different survey and monitoring requirements, etc.) may incur additional cost. Should a Public Hearing be requested, there will be additional charge of: \$500 for Aquatic Control to prepare for and attend the Public Hearing plus any direct costs associated with mailing (certified mail at \$7.00 per piece). If either fewer or more abutters require notification based on the final areas being treated, the cost will be adjusted accordingly.

² Should less acreage require treatment than is listed in bid map, the treatment cost will be calculated using the following formula:

	Reward Program Cost	Navigate Program Cost
Base cost for certified applicator labor, equipment and mobilization	\$1000	\$2000
Per acre unit cost (note: higher application rates will carry a higher per acre cost)	\$120	\$350

³ Requirements for additional sampling will carry additional costs of \$250 per sample for sample analysis and \$350 per round for sample collection and delivery to the lab.

Optional Second Herbicide Application in fall (early-mid September)

A second, follow-up application would require the following tasks:

- Task 5 – Re-notification for second treatment (inclusive of all required direct and certified mailings to a maximum of 120 abutters and publication of 2 newspaper notices)..... \$1140
- Task 6 – Perform follow-up 2,4-D treatment in September..... \$8,000
- Task 7 – Additional post-treatment survey..... \$300
- Task 8 – Herbicide residue sample collection and analysis (assumes 2 samples are required) \$1,000³

NOTE: The same unit costs and footnotes for the Initial Herbicide Application will apply to the Optional Second Application (Tasks 5-8 listed above). The total program cost would vary depending the total acreage being treated, number of abutters requiring notification, and number of herbicide residue tests required.

Payment of the project total shall be made as follows:

- **\$1850** for Task 1 permitting due upon accepting and returning a signed copy of this Proposal/Agreement
- Initial Herbicide Application cost due in full upon completion
- Additional tasks billed upon completion.
- **\$500** (balance) due upon submission of project completion report

Payment is due within 14 days of receipt of an invoice. Please contact us in advance if an alternative payment schedule is required.

In the unforeseen event that the NH DPC does not issue a permit for a timely treatment program, you would be obligated to only pay for work and expenses performed on Task 1 (permitting). Our ability to proceed with this treatment program is naturally contingent upon timely receipt of the required NH DPC approved permits. Specific, mutually agreeable date(s) for chemical treatment will be scheduled with you in advance and prior to permitting.

If we are selected for this project, please return a signed copy of this Proposal/Agreement to our office at your earliest convenience. If you have questions or need any additional information please do not hesitate to contact our office.

We look forward to assisting the Namaske Lake Association with its variable milfoil control efforts at Namaske Lake in 2014. We are confident that our recommended treatment approach will provide effective invasive plant control for the 2014 season, and will lay the groundwork for a more affordable, integrated management program in future years.

Sincerely,

Aquatic Control Technology


 Marc Bellaud
 President/Aquatic Biologist

Accepted: Namaske Lake Association

By: _____
 (sign name)

 (print name)




 (date)

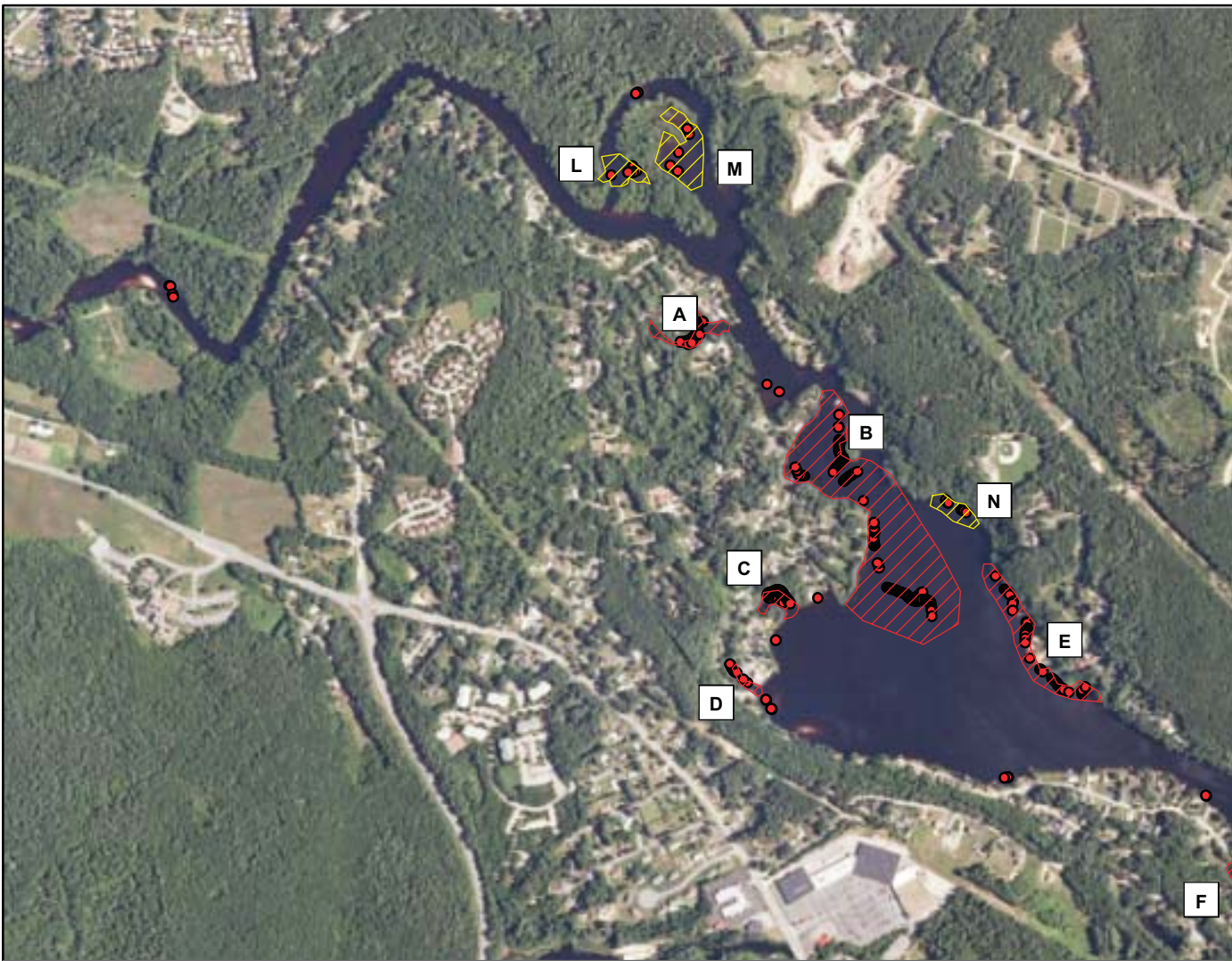
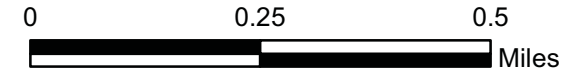
Namaske Lake

Goffstown/Manchester



Legend

-  Namaske Known 2014 Herbicide Areas- 33.4 ACRES
-  Namaske Potential 2014 Herbicide Areas- 4 ACRES
-  Namaske Milfoil_100213



*****BID NOTE*****

PLEASE PROVIDE A BID FOR TREATING UP TO 37.4 ACRES OF VARIABLE MILFOIL IN JULY AND/OR SEPTEMBER 2014.

33.4 ACRES ARE IDENTIFIED AS KNOWN TREATMENT AREAS WHERE MILFOIL GROWTH WAS DOCUMENTED THIS FALL. ADDITIONAL TREATMENT AREAS (SHOWN IN YELLOW) MAY BE ADDED BASED ON A SPRING SURVEY, THUS THE BID REQUEST FOR UP TO 37.4 ACRES.

BIDS MUST BE RECEIVED BY DES BY NOVEMBER 15, 2013.

KNOWN TREATMENT AREAS

Label	Acres
A	0.8
B	16.29
C	0.57
D	0.26
E	2.96
F	2.48
G	2.65
H	1.94
I	3.22
J	1.13
K	1.12

POTENTIAL TREATMENT AREAS

Label	Acres
L	0.96
M	2.36
N	0.77