

June 14, 2012

Ms. Joanna Bilotta, President  
Lake Shirley Improvement Corporation (LSIC)  
PO Box 567  
Shirley, MA 01464

**Re: Proposal/Agreement for Aquatic Management Services at Lake Shirley - 2012**

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Dear Joanna:

Following up to the recent LSIC Annual Meeting that I attended on June 6<sup>th</sup> and my recent plant inspections/surveys of the lake, I'm forwarding our Proposal/Agreement for anticipated Lake Management Services during 2012. These services include; 1) chemical treatment of 45 acres of lake area with Reward (Diquat) herbicide, targeting non-native watermilfoil, curlyleaf pondweed and other invasive and nuisance vegetation; 2) microscopic algae identification/counts of water samples collected by LSIC; 3) chemical treatment of nuisance algae (if required); and 4) pre-treatment milfoil and plant survey(s) late summer watermilfoil and aquatic plant survey and a year end report.

*At this time, we are also requesting authorization to proceed with permitting/surveys/reporting and algae monitoring. The total cost for these tasks is \$4,530 or the same cost as last two years. We're also requesting authorization to proceed with chemical (Reward/Diquat) treatment of ~ 45 acres of lake area scheduled for Tuesday, June 19<sup>th</sup>. Prior to the conduct of any algaecide treatments, prior written authorization will be obtained from you.*

**Scope of Services**

***File Annual DEP permit, Pre-treatment, Post-treatment Surveys/Inspections, Data Interpretation & Reporting***

A License to Apply Chemicals permit has been filed with and received from MA DEP to cover the herbicide or algaecide treatment in 2012.

As was also performed during the past four years, Aquatic Control has recently completed multiple surveys/inspections of Lake Shirley in order to identify and map areas of the lake for treatment with Reward (Diquat) herbicide.

Within approximately 2-4 weeks of treatment, a brief inspection of those areas that are chemically treated will be performed by a representative from Aquatic Control, along with representative(s) from LSIC, to confirm that targeted areas for nuisance plant control was achieved.

A second lake-wide milfoil and plant survey would be performed during September to help guide future nuisance plant management and potential herbicide treatment needs in the lake for 2012. That survey will be qualitative in scope but will seek to document the area coverage and relative abundance of invasive milfoil and other non-native and invasive plants. A post-treatment letter/report and plant map will be submitted on or before mid-November to the LSIC. The

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report shall include application dates, locations, rates and justification for applications (plant surveys and densities), as well as any anecdotal information regarding complaints, fish kills, etc. (as required by Lunenburg OOC, Special Condition #18).

### ***Algae Monitoring & Management***

Two water samples will typically be collected from the lake by LSIC when the water clarity begins to fall below ~ 5 - 6 feet and/or windblown algae are seen to accumulate on the water surface. These samples are to be delivered by LSIC (either on the day of collection or the next day) to either my house in Lancaster or our offices in Sutton. Based upon the results of the algae counts and water clarity readings, ACT in conjunction with LSIC will jointly determine if and when an algaecide treatment is to be performed. If performed, the treatment will most likely need to be “split”, whereby one half of the lake is treated at one time, with the remaining half of the lake then treated 7-14 days later, to avoid potential oxygen loss. The treatment will be performed at a dose of 0.30 mg/l or less, as copper sulfate or less than 0.1 mg/l as metallic copper.

ACT does not guarantee to what extent or for how long the nuisance algal population may or may not be controlled in Lake Shirley post-treatment. Each lake responds differently to algaecide treatment and by virtue of the lake’s water chemistry (low alkalinity) and permit requirements, ACT is being held to a relatively “low dose”.

### **Tentative Schedule of Performance:**

- ◆ Pre-treatment inspection ..... Completed
- ◆ Reward herbicide weed treatment ..... June 19th
- ◆ Initial post-treatment pondweed inspection ..... July
- ◆ Late summer milfoil/plant lake survey ..... September
- ◆ Algal monitoring ..... Late June through early September
- ◆ Algal treatment ..... July – September (if and as required)
- ◆ Year-end report ..... December

### **Insurance**

ACT carries workmen’s compensation, property damage and liability insurance which will remain in effect throughout the duration of this Agreement (December 31, 2012). A “certificate of insurance” will be provided to LSIC upon request.

### **Client (LSIC) Responsibilities**

LSIC is responsible for compliance with the Lunenburg Conservation Commission’s, Order of Conditions (OOC) permit for this project, unless otherwise agreed to by ACT as outlined below. LSIC shall also be responsible for all treatment approvals/notifications to the Town of Shirley and compliance with all permit conditions from the Shirley Conservation Commission.

### **ACT’s Responsibilities (in-whole or in-part as applicable)**

- ACT will have a copy of the Order on-site and ACT’s Supervisory Applicator on-site will have read the Order and will perform the chemical treatment(s) in a manner consistent with the NOI and the DEP License to Apply Chemicals and the chemical label.

- Special Condition 3. An algal expert will perform the algal identification and counts.
- Special Condition 9. There will be no treatment within a 5-foot wildlife habitat preservation zone around the lake.
- Special Condition 14 and 16. Reward will be applied as defined in the Sequence of Application with timetable, dosage and locations which is consistent with the Mass. GEIR (2004) for Eutrophication & Aquatic Plant Management in Massachusetts).
- Special Condition 15. Precautions shall be taken to prevent spillage of chemicals during the application.

### **LSIC is also responsible for the following**

- Conduct of all required notifications,
- Well sampling/analyses,
- Reporting requirements;
- LSIC will engage outside third party consultant (Geosyntec) for their annual Aquatic Plant Survey.
- Posting of printed signs around the entire lake shoreline prior to all treatments. ACT to provide the signs and posting instructions.
- Compliance/enforcement of the temporary water use restrictions to be imposed post-treatment.
- Providing a boat/motor and one or more LSIC members to be present during the herbicide weed treatment to verify that treatment was performed to only those areas that were designated on the map of Proposed Treatment.

### **Termination**

Either LSIC or ACT may terminate this Agreement by notifying the other party in writing. In the event of termination, LSIC shall pay ACT for all work completed or in-progress, up to the time that termination is received.

### **Cost and Payment**

#### ***Permitting/Inspections, Data Interpretation & Reporting:***

Total cost of \$3,000. Payment to be commensurate with the services performed.

#### ***Milfoil, Naiad, Pondweed and Other Invasive/Nuisance Weed Management***

The total cost for the proposed 45 acre treatment with Reward/Diquat herbicide is \$10,000. Payment to be made in full on or before the day of treatment.

#### ***Algae Monitoring***

Cost for algal monitoring is \$1,020 based on analyses of 12 samples @ \$85/sample. Payment to be commensurate with the services performed.

#### ***Algaecide Treatment***

The cost for one whole-lake treatment is \$ 7,950 plus the \$1,550 “split - treatment” surcharge outlined below. Payments for algae monitoring services will be invoiced monthly and made within 14 days of submission. Payment in full for algae treatments would be due on or before the day(s) of treatment.

#### ***Additional Services and Compensation***

In the event additional services by ACT (not specifically outlined above) are requested by LSIC or are required by either Conservation Commission, LSIC shall compensate ACT based on the hourly consulting rates provided below.

- Principal Biologist..... \$135/hr.
- Senior Biologist/Engineer..... \$115/hr.
- Biologist ..... \$85-\$105
- Field Tech/Tech. Support..... \$50/hr.
- Reimbursable Expenses.... Copying @ (\$0.15/pg; mileage @ \$0.50/mi.; additional algae sample analyses @ \$85/sample and/or water testing and other reimbursable expenses at direct cost plus 15%.)

This Proposal shall become our Contract/Agreement for the project as outlined above upon affixing the required signature(s) in the space provided below. ***This Agreement must be signed and returned to us on or before June 18<sup>th</sup>.***

We look forward to continuing our work with the Board and the LSIC.

Thank you.

**Aquatic Control Technology, Inc.**



Gerald N. Smith  
President/Aquatic Biologist

Accepted: **Lake Shirley Improvement Corporation (LSIC)**

By: \_\_\_\_\_

Print Name: Joanna Bilotta, President, LSIC

Date: \_\_\_\_\_