

**MASSACHUSETTS**

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September 19, 2014

Tommy Lee
Cedar Meadow Lake Watershed District
P.O. Box 320
Leicester, MA 01524-0320

**Re: Proposal for Permitting and Weed Management Program
Cedar Meadow Lake, Leicester, Massachusetts
ESS Proposal No. 15582**

Dear Mr. Lee:

ESS Group, Inc. (ESS) is pleased to present the Cedar Meadow Lake Watershed District (CMLWD) with this proposal to provide for an aquatic plant management program at Cedar Meadow Lake in Leicester, Massachusetts. This proposal includes work by ESS to prepare and submit permit applications through the Town of Leicester to conduct the weed control program as well as the actual in-lake work which is likely to include aquatic herbicide applications to the lake. The in-lake work will be performed by Aquatic Control Technologies (Aquatic Control) under our direction; the cost for these services has been included in this proposal.

SCOPE OF WORK

ESS developed the following scope of work based on our knowledge of the lake gained from mapping the lake in 2013 and from our discussions with CMLWD during the meeting in August 2014. We have also consulted with Aquatic Control to determine costs for managing the weed growth in the lake in 2015.

Task 1. Permitting

The work envisioned to bring weed growth under control within the lake includes a range of potential options including several different herbicides, algacides, diver harvesting and possibly hydro-raking. Any of these approaches performed at the lake on the scale envisioned will require a Permit (an Order of Conditions) from the town's Conservation Commission under the state's Wetland Protection Act. ESS will work to prepare a permit application (a Notice of Intent [NOI]) that includes each of the above-described options so that any one of these can be used as appropriate over the duration of the permit period (three years).

ESS will provide one electronic draft of the NOI to CMLWD for review and comment prior to submittal. ESS will revise the draft, as appropriate, based upon CMLWD's comments. The NOI will then be submitted to the Leicester Conservation Commission and to the MassDEP Regional Office for review as required. ESS will coordinate and cover costs for advertising the project in the local paper and paying necessary permit filing fees. In order to save CMLWD costs, ESS has assumed that CMLWD will be able to utilize their volunteers and mailing list to officially send notification of the project hearing (via registered mail) to all abutters to the lake. Once an Order of Conditions is issued, ESS will record this at the district Registry of Deeds.

ESS will prepare for and attend the public hearing with the Leicester Conservation Commission. We will present the project at the public hearing, describing the project objectives, potential impacts to wetland resource areas, and any proposed mitigation measures.

Assumptions:

- ESS assumes that wetland field delineation will not be required for this task and that aerial imagery mapping of the wetlands surrounding the lake will be all that will be required for this action given that there is no development proposed and that the activity is taking place within the lake itself.



- We have assumed attendance at up to two hearings to complete this task.
- ESS has budgeted for reproduction and distribution of up to 14 copies of the NOI to the Conservation Commission (requires up to 10 copies), MassDEP, NHESP, DCR, and CMLWD.

Deliverables:

- ESS will provide a copy of the NOI and all associated electronic files to CMLWD.
- ESS will provide a receipt indicating that the Order of Conditions has been recorded at the Registry of Deeds.

Task 2. Comprehensive Plant Mapping

ESS will map the lake to identify all aquatic plant species present, map the coverage and density of weed growth and map specific beds of non-native (exotic) plant species that warrant management attention. We last performed such a mapping in 2013, and although that mapping has sufficed to support planning and permitting of the proposed management actions, the plant community is likely to have changed sufficiently enough that we will need an updated map for implementing the best weed management program in 2015.

ESS will assess the lake and prepare an electronic map quantifying the areas of invasive weeds. We will work with Aquatic Control and CMLWD to identify the most appropriate areas to focus herbicide applications such that the effort maximizes control while remaining consistent with the budget available for the work in 2015.

After weed treatment (Task 3) has been performed, ESS will re-visit the lake to map it post-treatment to confirm the effectiveness of the treatment and to provide confirmation of the work to CMLWD and to the Leicester Conservation Commission.

Deliverables:

- ESS will prepare a GIS-based color map showing all major weed beds for use in designing and implementing the treatment program for 2015.
- ESS will prepare a post-treatment map and a brief written summary describing the results along with our recommendations for 2016.

Task 3. Herbicide Treatment in 2015

Herbicide treatments are necessary in 2015 in order to regain control of the lake and stem the expansion of invasive species. Although several options exist, ESS is recommending an approach for 2015 that focuses treatment on fanwort and milfoil using the herbicide known by the trade name Clipper[®], a contact herbicide that is still relatively new for Massachusetts and as such is still highly regulated in its application. Massachusetts will not allow for more than one-quarter of a lake to be treated in any given year and no re-treatments of an area can occur for four years.

Although this may seem extremely restrictive, this approach should work for Cedar Meadow Lake since the lake is not entirely engulfed with invasive species. We will also be able to apply Diquat herbicide within the same areas as the Clipper to obtain more effective control at a reduced cost. Furthermore, Diquat can be used independently to manage other nuisance vegetation, such as the waterweed that became problematic in 2014, throughout the pond and can be reapplied annually if necessary.

ESS has assumed a cost for us to coordinate and oversee the work of Aquatic Control in these treatments as well as the cost for treating up to 15 acres of the lake with a mix of Clipper and Diquat. Additional



Clipper/Diquat can be provided for a cost of \$550/acre while Diquat alone would be provided for a cost of \$275/acre.

Deliverables:

- Up to 15 acres of treatment with Clipper/Diquat in 2015.

COSTS

The summary table below provides an estimated breakdown of costs by task.

TASK	TOTAL COST
Task 1 – Permitting	\$5,900
Task 2 – Plant Mapping	\$2,400
Task 3 – Herbicide Treatment in 2015 (assumes up to 15 acres)	\$8,500
<i>Cost per additional acre for Clipper/Diquat</i>	<i>\$550</i>
<i>Cost per additional acre for Diquat alone</i>	<i>\$275</i>
Total	\$16,800

SCHEDULE

ESS is eager to begin this work and recommends that permitting be initiated as soon as possible. Permitting should be completed by February or March at the latest to allow for proper planning of the treatment program to follow.

CONDITIONS OF ENGAGEMENT

This Scope of Work will be completed in accordance with the contractual terms and conditions set forth in the attached Standard Terms and Conditions. ESS will perform all tasks as described above on a time and materials basis at an estimated cost of \$16,800.00. If additional efforts beyond this Scope of Work are required or requested by the client, ESS is willing to perform the additional work on a time and materials basis in accordance with our attached Standard Billing Rate Table and Standard Terms and Conditions.

ACCEPTANCE

This proposal is valid for a period of 30 days. You may accept this proposal by signing in the space provided below and returning an executed copy to us (via fax, email or regular mail). The executed proposal and the referenced attachments will serve as the entire agreement between ESS and CMLWD.

We appreciate the opportunity to serve you. Please contact the undersigned at (401) 330-1224 if you have any questions.

Sincerely,

ESS GROUP, INC.

Carl D. Nielsen, CLM
Vice President





Mr. Tommy Lee
September 19, 2014

ACCEPTANCE OF ESS GROUP, INC. PROPOSAL AND AUTHORIZATION TO PROCEED

This proposal, including the attached Terms and Conditions and ESS Labor Billing Rate and Direct Cost Table, is hereby authorized and accepted as executed below by the Cedar Meadow Lake Watershed District. The signatory below also hereby warrants that he/she has full authority to act for, in the name of, and on behalf of the Cedar Meadow Lake Watershed District to authorize this Agreement.

Signature of Client or Authorized Representative for the Cedar Meadow Lake Watershed District

Print Name/Title

Date of Authorization

