

PROJECT APPLICATION FORM – 2015

Applicant: Natural Resources Department, Town of Acton

Submission Date: 11-17-14

Applicant's Address:

Town Hall, 472 Main Street, Acton, MA 01720

Phone Number: 978-929-6632

E-mail: nr@acton-ma.gov

Purpose: (Please select all that apply)

- Open Space
- Community Housing
- Historic Preservation
- Recreation

Town Committee (if applicable): Conservation Commission

Project Name: Remove Invasive Water Chestnuts from Two Ponds/Nashoba Brook

Project Location/Address: Ice House Pond, Robbins Mill Pond

Amount Requested: \$36,000 (\$12,000 per year for 3 years)

Estimated Date for Commencement of Project: July 2015 year one of three

Estimated Date for Completion of Project: August 2015

Leveraged funding: Volunteers and the NR Department will contribute labor and materials to assist by hand-pulling water chestnuts. NR will collect the harvested organic matter and take to N. Acton to compost.

Project Summary:

Two impounded sections of Nashoba Brook in Acton are Ice House Pond and Robbins Mill Pond. Both sites have scenic, recreational, and ecological benefits. Robbins Mill Pond is within a listed NHESP Endangered Species Habitat (See Attached Map).



Water Chestnut (*Trapa natans*) is covering the surface and building up detritus on the bottoms of the waterways. Without annual intervention, these impoundments develop anaerobic conditions destroying the aquatic ecosystem. "Non-native (or exotic) species are plants and animals that were brought to an area from another region. Many of these species do not have natural predators in their new homes to keep their populations in check, and they often spread rapidly. A species that is able to invade and disrupt an ecosystem, often out-competing the native flora and fauna, is considered invasive." -OARS Website www.oars3rivers.org

Volunteers have been working to hand pull the plants from the surface of Ice House Pond each summer since 2010. Teams of volunteers have been working on Robbins Mill Pond since 2013. The volunteer process to remove plants by hand has proven enormously labor intensive. Recruitment is a year long planning process. Gathering volunteers, providing them with waivers to sign, pick up and deliver boats, life jackets and paddles, gloves and food require coordination for each session.

Hiring a licensed environmental company to utilize a mechanical harvester at each site will cost \$12,000 per year. Mechanical harvesting must be done for 3 years in a row, in addition to volunteer hand-pulling at the edges, where conditions are too shallow for the harvester. The combined effort will keep ponds clear for 7 years.

Mechanical harvesters are utilized at the Assabet River National Wildlife Refuge in Sudbury. Water chestnuts can be found in the Assabet, Sudbury and Concord Rivers, as well as many tributaries and streams throughout the SuAsCo Watershed. Acton Natural Resources has been working with "OARS," a non-profit organization whose mission it is to protect, preserve, and enhance the natural and recreational features of the Assabet, Sudbury, and Concord Rivers, their tributaries and watersheds.

The Acton Conservation Commission will be notified and appropriate permits obtained for the removal of non-native invasives, for work in a resource area.

Acton, like many communities, has not been able to keep up with the growth of water chestnuts with our human volunteer efforts on two ponds. If nothing is done, the birds, mammals, amphibians, fish and turtles will lose this open water habitat they depend on. To restore the natural riverine characteristics of this unique ecosystem and open pond habitat, extensive work needs to be done now. It is more prudent to invest \$12,000 per year for the next three years, so that we have hard data on what can be accomplished using this technology.

Jeffrey J. Castellani
Project Manager | Field Biologist
Lycott Environmental
office: 508-885-0101 | cell: 774-402-4846
jcastellani@lycott.com | www.lycott.com



Lycott Environmental has harvesters that can float in 1 foot of water. Lycott's small harvester weighs 4,500 lbs. and is carried on a tilt trailer. It does not need a crane to launch, rather a truck just backs it down to the edge of water. Since both ponds are located nearby to each other, Lycott will only charge the \$3,000 deployment cost once.

Please see below, the price quote from Lycott Environmental. He has penciled us in for July 2015, in hopes we get funding.

RE: Lycott Environmental Online Contact Submission

Jeff Castellani [jcastellani@lycott.com]

You replied on 11/6/2014 2:47 PM.

Sent: Wed 9/24/2014 2:56 PM

To: Bettina Abe

Hi Bettina,

Great to catch-up with you regarding the Water Chestnut projects on Ice House Pond and Robins Mill Pond. As we discussed, the harvester rate is \$1,500 per day. If the combined acreage of the two ponds is 6-acres, the price for on-water operation would be \$9,000 (6-days). The only other cost would be \$3,000 for the transportation / assembly / launch and subsequent removal /disassembly / transportation of the harvester. The harvester would place the plant material at the designated off-load location at each pond. Hand harvesting of Water Chestnut not accessible to the harvester would be removed by volunteer efforts. Attached is a photo of the harvester, Aquamarine H5-130 that would be employed. Example: Fiske Pond in Natick is a 40 acre pond and it was covered. It cost \$110,000 per year for 3 years to clear.

Sincerely,

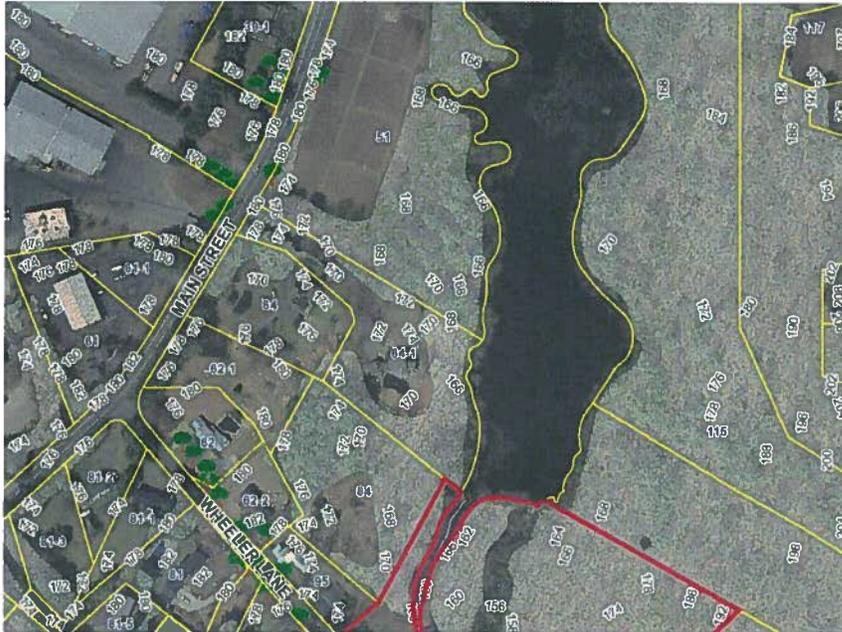
Jeff

Jeffrey J. Castellani

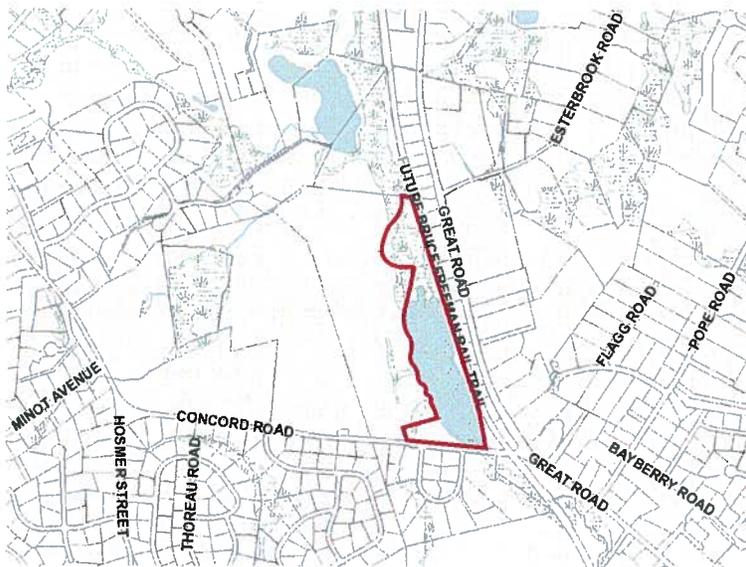
Project Manager | Field Biologist

Lycott Environmental



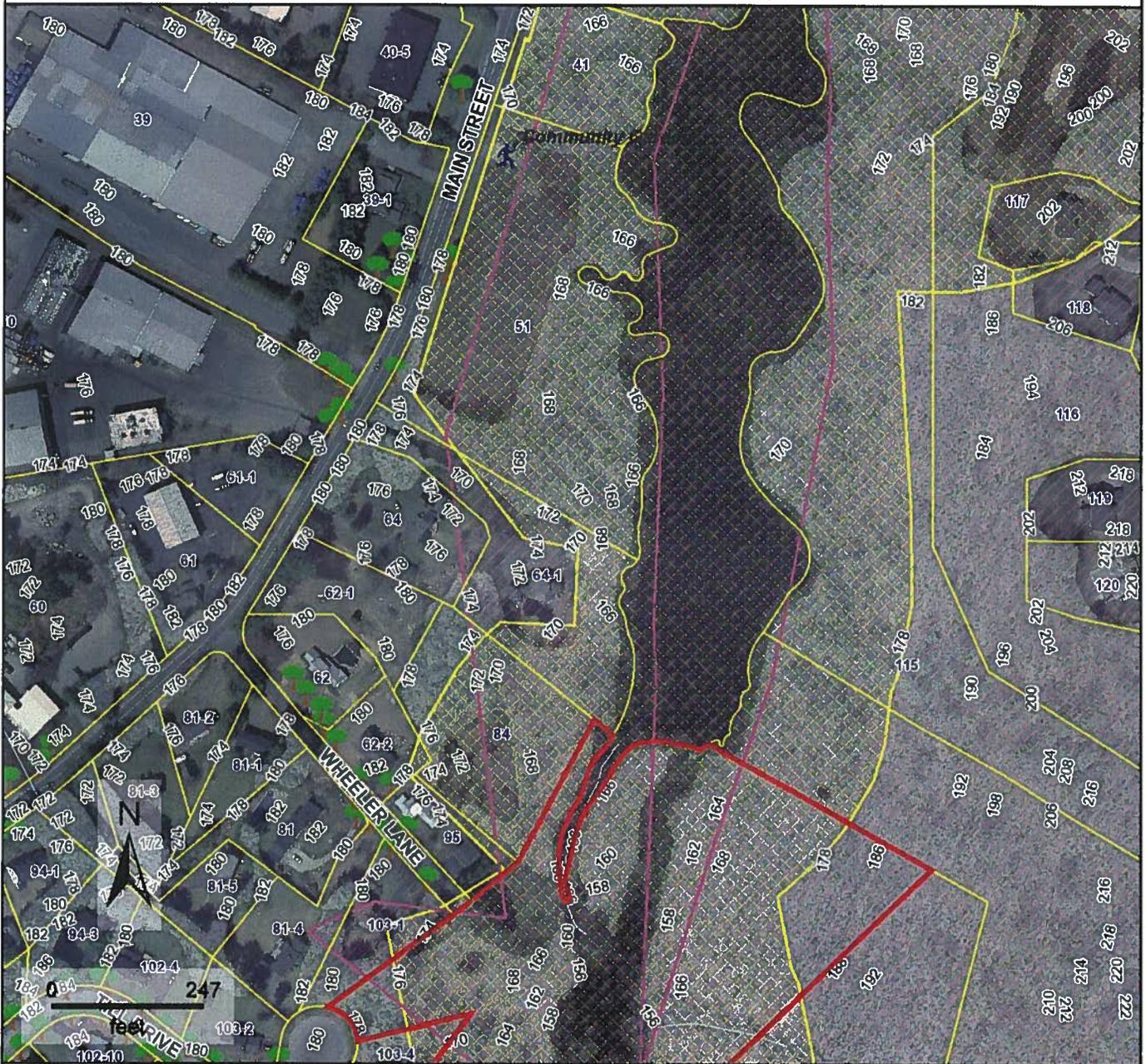


Robbins Mill Pond Location



Ice House Pond Location

Robbins Mill Pond



Property Information

Property ID D5-22
Location DAVIS RD



**MAP FOR REFERENCE ONLY
NOT A LEGAL DOCUMENT**

This data set/map is for planning purposes only and should not be used for larger scale analysis. The Town of Acton shall not be held liable for any use of the data or images shown on this map, nor is any warranty of accuracy expressed. All uses of this data set/map are subject to field verification.



NATURAL RESOURCES

-  STREET TREES
-  DEP RIVERS & STREAMS
- DEP WETLANDS
 -  WET AREAS
 -  PONDS
-  VEGETATED AREAS

NATURAL HERITAGE FEATURES

-  CERTIFIED VERNAL POOLS
-  POTENTIAL VERNAL POOLS
-  BIOMAP CORE HABITAT
-  BIOMAP SUPPORTING NATURAL LANDSCAPE
-  ESTIMATED HABITATS OF RARE WILDLIFE
-  LIVING WATERS CORE HABITATS
-  LIVING WATERS CRITICAL SUPPORTING WATERSHED
-  NATURAL COMMUNITIES
-  PRIORITY HABITATS OF RARE SPECIES

TOWN DATA

- POINTS OF INTEREST
 -  CONSERVATION
 -  HISTORICAL
 -  MUNICIPAL
 -  OTHER GOVERNMENT
 -  PUBLIC SAFETY
 -  RECREATION
 -  SCHOOL
- EASEMENTS
 -  CONDO
 -  EASEMENT
-  PARCELS (AERIAL OVERLAY)
-  PARCELS
- HISTORIC DISTRICTS
 -  ACTON CENTRE
 -  SOUTH ACTON
 -  WEST ACTON
-  TOWN BOUNDARY