

<p style="text-align: center;">TOWN OF WESTON COMMUNITY PRESERVATION COMMITTEE Project Submission Form – FY17</p>

Submitter: Weston Conservation Commission

Submission Date: 1/8/16

Submitter's Address: PO Box 378, Weston, MA 02493

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Purpose: (Check all that apply)

- Acquisition, creation, or preservation of open space or the rehabilitation/restoration of open space if acquired or created with CPA funds

Project Name and Brief Description:

Preservation of the Charles River – Harvesting Invasive Water Chestnut.

This multi-year project in Weston is part of a larger effort to rid the Lakes District of the Charles River of invasive water chestnut. The Massachusetts Department of Conservation and Recreation (DCR) in cooperation with the Cities of Waltham and Newton, the Town of Weston, the Charles River Watershed Association (CRWA), and local residents have begun a 3-5 year effort to harvest this weed. Water chestnut can completely cover the water surface crowding out native surface plants and blocking sunlight from reaching underwater plants. Dissolved oxygen decreases during the summer and the water quality is further compromised when the great mass of vegetation decays in the fall. In addition to the detrimental effect on flora and fauna, boating and fishing become impossible.

Fortunately, since water chestnut reproduces by seed, harvesting it before seeds mature in late July can halt spread. Unfortunately, seeds can remain viable for up to 12 years (most germinate in a few years) so this is a multi-year project.

Kingsbury Cove in Weston was almost 100% covered by water chestnut. The water is shallow which limits the use of mechanical harvesters. Hand and mechanical removal commenced in the summer of 2015 and cleared the majority of water chestnut in Kingsbury Cove. \$8,560 of FY15 and FY16 CPA funds were used to pay hand-pullers to clear about 40% of Kingsbury Cove. ACT harvesters cleared about 5 acres leaving 1 acre in the shallow southeast corner.

See attached report from Charles River Recreation, Inc.

For the past two years DCR has committed about \$200,000 per year and the Cities of Waltham and Newton have funded harvesting along their shores. CRWA organizes about 500 volunteers per year to hand-pull in shallow areas which are hard to access by machine.

Funding from Weston would support paid workers to assist CRWA volunteers so that their efforts are more productive and will pay for hand harvesting to clear isolated plants and shallow areas which cannot be reached by machine.

How This Project Helps to Preserve Weston's Character:

Removing the water chestnut along the Weston portion of the Charles River will greatly improve and preserve the health and ecological integrity of the Charles River in this stretch of the river.

Numerous residents enjoy canoeing and kayaking this section and in recent years, sections of Kingsbury Cove have been nearly impassable.



Weston High School Environmental Science Class conducts water quality and dissolved oxygen sampling on the Charles River in Weston annually

Projected Cost:

Fiscal Year	Total Project Cost	CPC Funds Requested	Other Funding Sources
2014	\$200,000	0	DCR, State Budget, Waltham and Newton city funds
2015	\$35,000	\$5,000	DCR, State Budget, Waltham and Newton city funds
2016	\$35,000	\$10,000	DCR, State Budget, Waltham and Newton city funds
2017	\$35,000	\$10,000	DCR, State Budget, Waltham and Newton city funds
Total	\$305,000	\$25,000	

For Community Preservation Committee Use:

Received on:

Associated Town Department/Committee:

Reviewed on:

Determination:

DRAFT

2015 Water Chestnut Harvest Report

In 2015 over 95% of the water chestnut was cleared from the Lakes District of the Charles River by machine and hand as compared to 74% last year. Growth occurred in the same areas as previously but due to lower plant density the volume harvested mechanically decreased significantly. More effort was directed to hand-pulling to clear the shoreline and shallow areas. The consensus is that this was a very productive and successful year in our effort to eradicate water chestnut. As usual, this was a group effort supported by many volunteers and funding sources. Hopefully in 2016 there will be a significant decrease in new growth.

Aquatic Control Technology (ACT) arrived in early June with three machines to clear new growth when the plants were emerging after a long, cold winter. By the end of June they had cleared about 45 acres with only a few dense patches remaining in Kingsbury Cove and south and west of Fox Island where the water was too shallow for the harvesters to work.

CRWA organized about 400 volunteers to hand-pull plants in shallow areas and along the shoreline. For the first part of the summer their efforts were spent in Kingsbury Cove from which the volunteers gathered over 140 cubic yards or about 21 tons. This effort was facilitated by paid workers who transported the filled baskets to the disposal site and emptied the weeds into dumpsters.

From mid July through early August the volunteer groups progressed downstream clearing along the shoreline. An additional 160 cubic yards or 24 tons were removed. This cleared most of the shore to the east of E-Island (both sides of the cut through), around the outflow from Flowed Meadow and at the end of the Charlesbank Peninsula.

Charles River Recreation (CRR) employed their small harvester to clear 284 cubic yards of water chestnuts from Quinobequin Bay, the shoreline on both sides of Angleside Peninsula, parts of Roberts Bay, the edge of the lilies along Fox Park, and around Fox Island in Waltham. 34 cubic yards of weeds were removed from Wares Cove and near the pump house in Newton and 66 yards around Kingsbury Cove in Weston. Overall, this was less than half of the volume of the previous year due primarily to lower plant density. Paid hand-pullers cleared much of the Waltham and Newton shoreline from Wares Cove to downtown Waltham for a total haul of 108 cubic yards (16.5 tons).

ACT returned in early August to harvest re-growth in the areas which had been cleared in June. Fortunately a layer of boards had been added to the dam in Waltham and some timely rain raised the water level which enabled the machines to reach most of the water chestnut which had been out of reach earlier. This allowed the harvesters to clear about half of Kingsbury Cove and most of the growth south and west of Fox Island.

By mid August almost all of the dense growth areas were clear. About 1.4 acres remained, most of it in the southeast corner of Kingsbury Cove and a bit along Fox Park. The majority of the shoreline was clear

except for some scattered plants not reached by hand-pullers and floaters which had drifted downstream from the mechanical harvesting.

All this is due to the efforts of many volunteers and workers and the support of State Senators and Representatives, DCR, CRWA, CRR, The Village Bank, Boating in Boston, Lasell College, the Town of Weston, and the Cities of Newton and Waltham.

- Neighbors and local businesses including The Village Bank, Charles River Recreation, and Boating in Boston contributed \$10,000 for paid workers to assist volunteers from CRWA.
- A line item introduced by local State Representatives Khan, Lawn, and Stanley and Senator Creem in the 2016 budget enabled the DCR to commit \$? to aquatic harvesting in the Lakes District of the Charles River.
- DCR hired Aquatic Control Technology for mechanical harvesting. ACT spent approximately \$? during the summer of 2015 to remove ? tons of water chestnut. This came from both the fiscal 2015 and 2016 State budgets. This was a significant effort which cleared over 50 acres of infestation leaving only about 1.4 acres heavily infested. Unfortunately, much of the cleared area will experience re-growth in 2016 from old seeds remaining in the river bed, although the density and total area should decrease significantly. About two thirds of the 2015 budget has been reserved for harvesting in June of 2015. A full report is available upon request.
- Charles River Watershed Association recruited over 400 volunteers who along with neighbors hand-pulled 45 tons of water chestnut plants. Their report is found at: <http://www.crwa.org/canoeing-for-clean-water?>
- Charles River Recreation mechanically harvested 382 cubic yards, about 57 tons of weeds. Most of this was under contract with ACT. CRR hand-pulled an additional 108 yards or 16.5 tons.
- Lasell College paid for dumpsters at Forest Grove which removed over 600 cubic yards of weeds (about 98 tons before de-watering).
- The City of Waltham contributed \$4,880 for weed clearing along Mt. Feake Cemetery, Roberts Bay, and outside Purgatory Cove in Waltham. Quinobequin Bay was completely cleared.
- The City of Newton paid for \$4,900 of weed removal from Ware's Cove and the Newton shoreline around the Flowed Meadow pump house.
- The Town of Weston paid \$8,560 to assist volunteers from CRWA and for paid hand-pullers to clear about 40% of Kingsbury Cove. ACT harvesters cleared about 5 acres leaving 1 acre in the shallow southeast corner.
- Riverfront residents in Newton and Waltham cleared tons of weeds from their shorelines throughout the summer.

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9/15/15