



March 11, 2013

To Rhode Island Coastal Resources Management Council:
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From Friends of Canonchet Farm

About Restoring Habitat at Lake Canonchet
R.I. CRMC Assent W2011-11-056

This memorandum is a review of the first year of the Friends of Canonchet Farm invasive management project at Lake Canonchet in Narragansett (Assent W2011-11-056) and a request for a permit to apply herbicide in selected segments of the project area to treat long established infestations of Japanese knotweed and large Oriental bittersweet roots. We understand that in addition to a permit from the Coastal Resources Management Council, these herbicidal applications also require a permit from the Rhode Island Department of Environmental Management.

During the first year of the project, the Friends of Canonchet Farm:

- Recruited and trained 64 volunteers to identify and remove invasive vegetation from the east edge of Lake Canonchet. The volunteers worked a total of 772 hours on site in 24 work sessions.
- Sponsored Invasive Manager re-certification of four project leaders and certification for a fifth volunteer.
- Purchased and maintained tools, safety equipment and first aid supplies, an investment of \$1,467.36.
- Managed the 926 linear feet of the project area, mechanically removing knotweed, swallowwort, bittersweet and other invasive species, and allowing bayberry, clethra, marsh mallow and other native species already present to flourish. More than two tons of unwanted vegetation were removed from the project area.
- Established relationships with the URI Master Gardener Association, Rhode Island Natural History Survey, and other non-profit organizations to share experience and tools and recruit volunteers.

- Publicized the project through signage, web content, press contact, a video, and presentations to educate the general public on the problem of invasive vegetation and promote sustainable practices.
- Organized volunteer work parties to assist the Town of Narragansett in its post-Sandy cleanup at Lake Canonchet and Little Neck Pond to the north. In four work sessions, 68 volunteers worked 162 hours to remove inorganic and organic debris from the Sandy overwash.



Volunteers selectively remove swallowwort from edge of Lake Canonchet on July 24, 2012

Work Schedules

The Friends of Canonchet Farm began work at Lake Canonchet under Assent W2011-11-056 on March 30, 2012, the first of eight scheduled four-hour spring work sessions in which volunteers mechanically removed invasive vegetation, predominately knotweed. The sessions were on Friday and Saturday mornings.

On May 29, we began a summer work schedule with volunteers working every other Tuesday evening from 5:00 to 7:00. These sessions were designed to maintain the progress we made against the knotweed and begin treatment of then emergent Black swallowwort. There were ten work sessions.

In September, we returned to scheduling four-hour work sessions on Friday and Saturday mornings (8:00 a.m. to noon). There were five of these fall sessions, the last of which was on October 5. In September and October, we focused on the removal of honeysuckle and bittersweet and maintenance of the already treated areas.

On October 18, we held a reception at the South County Museum to thank our many volunteers and mark the end of the first year of the project.

On October 29, Superstorm Sandy extended our first year, by washing over the project area and the edge of Little Neck Pond to the north. We put out an all-call to the volunteers and under the supervision of the Town of Narragansett Parks and Recreation Department, held four additional work sessions, during which we removed organic and inorganic debris from the seaside edges of Lake Canonchet and Little Neck Pond.

Initial Assessment of the Invasive Problem

The focus of the first two spring sessions (March 30 and 31) was training and removal of debris from previous years' growth (mostly dead knotweed stalks, but not a small amount of litter and refuse from storm overwashes).

The clearing of debris enabled us to identify an encouraging number of emergent native species including bayberry, clethra and shadbush, which we tagged with green flags.

The clearing also enabled us to refine our initial assessment of the non-native infestations. Here is what we found:

- The Japanese knotweed was just launching its spring offensive and showed in about 75% of the project area with long-established clumps at the northern and southern ends of the area. The knotweed is clearly the dominant problem at Lake Canonchet.
- Black swallowwort was present in multiple locations and there were two or more instances of Porcelain berry, which we marked with red flags.
- Oriental bittersweet and European honeysuckle were growing at a slower rate. It was easy to locate the main roots of these plants, some of which are helping to hold the embankment.
- As noted in our original application, there is a significant Phragmites problem (which will require a separate plan and permit) and a 30-foot run of Rosa rugosa, to which we assigned a lower priority as it is less aggressive than the other invasives and is holding the embankment near the north end of the project area.
- Finally, there is the native problem of poison ivy, which presents a danger to our volunteers and will require management when the area is eventually converted to a public park. For now, we have marked areas of poison ivy growth with orange flags and included identification of the plant (roots and leaves) in volunteer training.

Treatment of the Knotweed

In the work sessions during April and May, we made a concerted effort to remove knotweed by cutting the plant at ground level with bean hooks and other tools, which, of course, stimulated plant growth, requiring more cutting two weeks later. We have made at least ten passes at the knotweed along the entire east shoreline of Lake Canonchet. With each cutting, the knotweed showed less vigor, and we believe that we have exhausted most of the root stock. During the summer work sessions, volunteers were able to pull knotweed by hand, and in some cases, uproot the plant entirely, as they policed previously treated areas. With continued management in the fall, the knotweed was undernourished going into the cold weather and will

be significantly diminished for the next growing season. ***However, as mentioned earlier, there are two severe infestations at either end of the project area, which will require herbicidal treatment to be brought under complete control.***

Bittersweet and Honeysuckle Removal

Our treatment of the Oriental bittersweet consisted of removing vines from the oaks and other trees, pulling roots of newer growth (with care not to disrupt the soil and adjacent vegetation), and cutting the main trunks about a foot above ground level. ***About 20 of these large roots are marked for re-cutting and painting with herbicide this year.***

We removed smaller honeysuckle plants as we were treating the knotweed, but left large bushes in place. These plants will be relatively easy to remove this fall. We can take necessary precautions to protect the embankment.

Treatment of the Swallowwort

With each work session, Black swallowwort became a greater concern. We began by digging up and removing individual plants, a very labor-intensive project. As the swallowwort started its major offensive in June, we began cutting the plants at ground level before they could flower and spread seed, but did not uproot them. ***Herbicidal treatment will be required to bring the swallowwort under control.***

Management of Rosa Rugosa

In our site assessment in the spring, we decided not to treat the Rosa rugosa during the first project year. However, by the fall sessions we had willing and properly trained volunteers who took on the arduous task of cutting the Rosa rugosa shrubs at ground level and providing access to swallowwort that was mixed in with the shrub. We fully expect the Rosa rugosa to rebound in the spring, but there will be sufficient clearing to treat the swallowwort as it emerges.

Return of the Natives

As the project progressed in the late spring and early summer, native plants such as bayberry and clethra were exposed to greater sunlight and began to thrive. And with ongoing training and coaching, the volunteers recognized what should be pulled and what should be left to flourish.



Marsh mallow is among the native species present at Lake Canonchet

There are large stretches of the pond edge where the native plants will be able to out-compete managed invasives and will not require plantings. However, there are sections, particularly at the southern most end of the project area, where plantings will be required.

The Friends of Canonchet Farm has hired Kate Venturini to develop a plan for the entire project area. We will seek a review of the plan by CRMC and the Town before implementing it.

Impact of Superstorm Sandy

It is not known whether the overwash from Superstorm Sandy will have a long-term impact on the project area, and whether the inundation with seawater did more harm to the invasive vegetation or to the native species. The pond water will be re-tested for salinity. We do know that in the early spring, we will need to do additional policing of the area for inorganic debris.

Educational Objectives

In additions to our accomplishments on the ground, we have had success in the public education aspects of the project, with signage along Boston Neck Road, press coverage, cooperation of other local non-profits and the production of a short documentary film. The Lake Canonchet project has been adopted by the URI Master Gardeners and Master Gardeners receive volunteer credits for working on the project.

Proposed Herbicidal Treatment

The Friends of Canonchet Farm plans to contract with Nickerson Tree and Landscape Service, a Rhode Island licensed chemical applicator, to chemically treat selected infestations in the project area.

Japanese Knotweed

Herbicidal treatment is required for the two knotweed infestations of approximately 100 square feet each at the northern end of the project area. During the spring and early summer we will continue to punish the plants with cutting and pulling, but then in late summer, allow the knotweed to leaf out so that there will be sufficient surface area for foliar spraying. The herbicide, glyphosate (Rodeo) or triclopyr (Garlon), or a combination of the two, will be applied by the licensed applicator using a backpack sprayer. Foliar spraying of knotweed may be used in other sections with appropriate protection of adjacent native species.

Black Swallowwort

Black swallowwort is present in several sections along the edge of Lake Canonchet. So far we have been able to prevent it from flowering and seeding, but now need to treat it with herbicide to bring it under control. We plan to treat the swallowwort with Argon using the “bloody glove” technique, as the plant is mixed in with desirable native species.

Oriental Bittersweet

We plan to chemically treat all instances of bittersweet in the project area under the supervision of the licensed chemical applicator. We propose to paint re-cut bittersweet stumps with Rodeo in late summer.

Please advise us as to what is required to have a permit to apply herbicide in place by mid-July.

Next Steps

This month, the Friends of Canonchet Farm will be developing work schedules and communicating with our volunteer base to begin our second year of invasive plant management. As always we encourage you and other CRMC staff, Narragansett Town staff and other interested parties to visit the site and assist in our assessment of the work to be done.