Hardy Pond & Smith Point Trail Stewardship Handbook

For volunteer Stewardship Projects of the Waltham Land Trust
Waltham, MA
Trainings: Spring 2012, 2014, 2015, 2016, 2017, 2018, 2019, 2020

I. About This Document

The purpose of this Handbook is to:

1. Define the Hardy Pond/Smith Point Stewards of the Waltham Land Trust (WLT).
2. Explain responsibilities of the Stewards.

We wish to acknowledge that most of this instruction has been adapted from the *Lexington Conservation Stewards Handbook*, 2005, written by Ery Largay, Lexington Conservation Assistant, Keith Ohmart, Lexington Stewards, Mike Tabaczynski, Lexington Stewards, and Tom Whelan, Lexington Stewards.

Adaptations were made in this version by Sonja Wadman, WLT Executive Director. Comments and suggestions for improving this Handbook can emailed to Sonja at swadman@walthamlandtrust.org.

II. Introduction

Hardy Pond is a 43-acre pond in north Waltham. Being over 20 acres in size, Massachusetts state law declares it a "great pond." Many years of abuse from storm water runoff with no silt traps, nearby farms over fertilizing, and neglect of the effects caused Hardy Pond to eutrophy at an accelerated pace. The end result was a water depth of at most 2 feet in many places where stories of older residents said the depth was 20 feet in many areas.

The Hardy Pond Association was formed in 1992 to try to bring Hardy Pond back to life. It has accomplished much with the aid of both the City of Waltham and Commonwealth of Massachusetts. The major accomplishment is the dredging of Hardy Pond. The Hardy Pond Association joined with the Waltham Land Trust in 2009.

Smith Point is a wooded area 1/5th of an acre on the western side of Hardy Pond. It is the only property owned by the Waltham Land Trust. To the west lies some 25 acres of undeveloped upland, wetlands and red maple swamp providing habitat for area wildlife including deer, fox, opossum, raccoon and muskrat, as well as private parcels, eroded along its edges by development - still largely intact but vulnerable.

The Waltham Land Trust (WLT) encourages open space and trail enthusiasts to get outside and enjoy our natural resources whenever possible. The Land Trust regularly hosts events at Hardy Pond. This Handbook was designed for the Smith Point and Hardy Pond Stewards of the Waltham Land Trust.

III. Waltham Land Trust

The Waltham Land Trust's mission is "to create a legacy of land conservation in Waltham by promoting, protecting, restoring, and acquiring open space. We envision growth in public appreciation of natural resources, preservation and restoration of native habitat, and increased biodiversity to foster a healthier environment."

The Waltham Land Trust has several committees comprised of Directors and WLT supporters that help get the work done. The Land Committee is "responsible for planning projects and policies related to the preservation of open space assets" in Waltham, including trails that take outdoor enthusiasts to, from, and through these open spaces. **Volunteer Stewards are encouraged to attend the WLT's Stewards Subcommittee meetings every second Wednesday of the month from 6:30 – 7:30 pm at the UMASS Field Station.** The WLT Executive Director reports to the WLT Land Committee and WLT Board of Directors on the work of the Stewards Subcommittee.

IV. Volunteer Stewardship Projects

WLT's volunteer Stewardship Projects are small semi-independent teams of trained people responsible for monitoring and maintaining sections of the Western Greenway and other trails in our community. The first team to be established is the Chester Brook Greenway Stewards (CBGS), in Spring 2012, who volunteered in that area of the Western Greenway south of Trapelo Road. We now have stewards along the entire length of Western Greenway, so that group has morphed into simply the Western Greenway Stewards (but references to CB remain). The Charles River and Prospect Hill Park teams were established in Spring 2014. Teams along the Mass Central Rail Trail and at the Beaver Brook Reservations were established in Spring 2015. Stewards for Smith Point and the shoreline and wetlands of Hardy Pond are being trained in 2017.

Basically speaking, each Steward "adopts" a stretch of trail and monitors it on a regular basis, to be determined as appropriate for that particular trail stretch according to level of its of use, time of year, etc. The Steward is asked to complete a Field Report after each visit, particularly when there are issues to report or resolve. submit it to the WLT Executive Director via **the online Field Report, found on the WLT website. WLT homepage>Projects> Trail Stewards>Hardy Pond Area.**

VI. Steward Responsibilities

A. Basic Do's and Don'ts

Do

1. Visit your stretch of the trail on a regular basis.
2. Pick up trash and litter. No permission is needed.
3. Complete a Field Report if conditions warrant it.
4. Communicate with people, including site visitors, neighbors, other Stewards, and WLT.
5. Express your ideas and ask questions.

Don't

1. Don't do any maintenance tasks that are too big or too dangerous.
2. Don't rake trails. Leaves, pine needles, and other organic matter build forest soil, absorb water, and prevent erosion.
3. Don't trim or open up an overgrown or blocked trail until you have confirmed with WLT that the trail is not closed or slated for closure.
4. Don't build new trails, however "small." If you have a new trail idea, contact WLT.
5. Don't mark or blaze trails inappropriately.
6. Don't dump fill or wood chips on trails.
7. Don't apply herbicides or pesticides.

B. Monitoring

People who join Stewardship Projects are generally regular users of our trails, either through casual walking or jogging. This is great! Monitoring combines outdoor recreation with practical public service**. Stewards are the eyes of natural open space management** because the WLT and the City have limited resources.

What to Bring

Bring a notebook, *Keep It Hardy* care guides, **WLT Steward business cards that have been personalized with your name,** and digital camera when you visit your site to document issues and nature scenes. Don't photograph people unless you have permission. Also carry a wireless phone and the contact information of other Stewards, **WLT (781-893-3355), Public Works (781-314-3800), Police non-emergency (781-893-3700), and Fire non-emergency (781-893-4105).**

What to Look For

- Any unusual changes in natural or manmade features.
- Presence of unusual wildlife (you are not looking for just *problems*).
- People committing illegal activities, or evidence of such, particularly underage drinking, fires, operation of motor vehicles, hunting, trapping, shooting, and disposal of hazmats or pollutants.
- Trees and brush being cut in ways that are not proper trail trimming (see below).
- Large deposits of trash or junk.
- Vandalism of natural or manmade objects.
- Digging of holes.
- Any type of construction.
- Overgrown trails.
- Trails that are becoming progressively eroded.
- Trails that are very wet or muddy outside the spring wet season (roughly March—April).

C. Trimming Trails

Appearance

The most important rule of thumb to observe in performing routine trail maintenance involving

trimming or cutting of branches, etc., is to leave as little evidence in the form of visible cuts as possible. The end result of your endeavors should ideally be a trail that is free of protruding branches and looks as natural as possible. This is not always achievable, especially in areas with heavy brambles that must be sheared, but the overall goal should be to make the evidence of trimming as unobtrusive as possible.

The most often forgotten part of the trimming job is the removal of excess cuttings from the trail.

Trail Width

If in doubt about whether a trail is singletrack or doubletrack or how wide it should be, trim it narrower. A wider trail can be quickly created if necessary from a narrower one, but the reverse takes years of growth. Trail width in the Western Greenway is generally 6 feet.

Why Pruning Technique Matters

The pruning of limbs of woody plants must be done properly so that the cuts made heal correctly. Improper cuts, especially where limbs meet the trunk of the plant can lead to disease and the eventual weakening and death of the plant.

The area of the plant where the limb meets the trunk is called the branch collar. This is the zone where branch collar tissue develops from the branch ends towards the trunk, turning abruptly downward at the branch base. Trunk collar tissue develops later in the life of the branch, growing up and over the branch collar tissue. The branch collar is the zone where these two types of tissue overlap. The branch bark ridge is the raised bark that develops in the branch crotch where the branch meets the trunk.

Proper pruning allows the trunk collar tissue to grow over the cut made, eventually walling off the living trunk tissue with a protective layer of bark. Cuts into either the branch collar tissue or the branch bark ridge tissue will not heal properly, allowing for disease organisms to enter the plant's trunk tissue leading to disease and premature death of the plant.

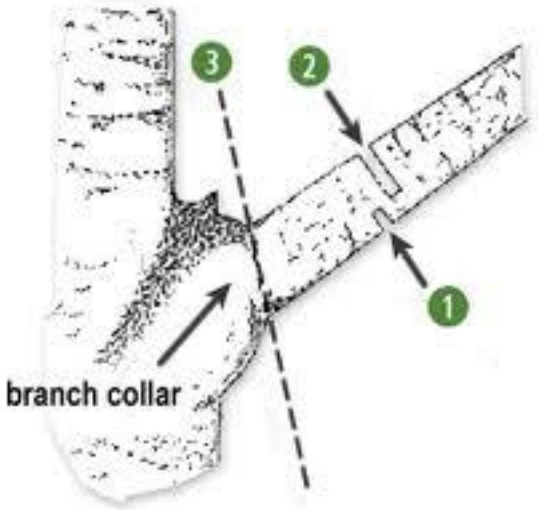
Proper Cuts

Cuts must be made *outside* of the branch bark ridge and branch collar area angling away from the trunk, but as close as possible to the collar.

There is no set or standard angle for a proper collar cut. Whether a branch collar is obvious or not, the final cut should:

1. Minimize the branch stub.
2. Leave the branch bark ridge and branch collar intact.
3. Minimize the overall size of the pruning wound.

Always stub cut the branch first. This technique uses a minimum of three cuts, the first two cutting off most of the branch but leaving a portion of 1-2' feet remaining for the final finish cut. It minimizes the chance of the bark tearing down the trunk, creating a wound that is difficult to heal.



1. The first cut undercuts the branch 1-2' out from the parent branch or trunk. A properly made undercut will eliminate the chance of the branch's peeling or tearing bark as it is removed.

2. The second cut is the Top Cut, which is usually made slightly further out on the branch than the under cut. This allows the branch to drop smoothly when the weight is released.

3. The third or finish cut is to remove the stub.

Each finish cut should be made carefully, outside of the branch bark ridge and branch collar areas, leaving a smooth surface with no jagged edges or torn bark.

Painting of Cuts

Painting of pruning cuts with wound dressing is, in general, a questionable practice. Wound dressings will not prevent decay, and in fact have been found to often promote wood decay.

Proper Timing

The ideal or optimal times to prune most woody plants are either late in the dormant season or well into the growing season, after leaves are fully formed and expanded. Cuts or wounds in certain species during the growing season may attract insects that carry diseases, or allow fungus invasion. Avoid pruning woody plants undergoing bud break and early leaf expansion.

Tools

- Minimum: folding hand saw and a pocket sized pruner, preferably one with increased leverage to cut thicker branches.
- Heavy duty loppers with long handles are generally the most productive trimming tool.
- Garden rake to remove non-woody cut stems from the trail.
- Old hand saw to cut saplings close to the ground without dulling a new one with sand.
- Pole pruner to for cut overhead braches.
- For most trimming, a chainsaw is not needed.

D. Removing Invasive Plants

Eradication efforts to control and eliminate invasive species requires careful planning in order to be successful. All efforts are labor intensive and time consuming. Some require repeated efforts over two or more growing seasons in order to be successful. Nevertheless, progress is possible and the work important in order to retain and expand the potential for native species to thrive. This is a brief overview of recommended procedures for a few of the most prevalent invasive species in Waltham.

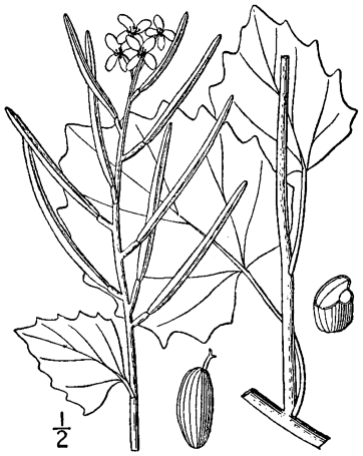
Offsite Disposal

Species that cannot be left to decompose cannot be sent to public landfills or compost stations where they would regenerate and spread. To dispose of these plants:

1. Use thick black plastic bags.
2. If a reasonable number of bags of plants are collected, they can usually be distributed to volunteers to be left at the curb for weekly TRASH pickup one bag at a time.
3. If an impractical number of bags are collected, contact the DPW to arrange for the bags to be picked up *as trash, not compost* at the site.
4. If trash collection personnel refuse to take them, contact the DPW to arrange to deliver the bags to one of their trash dumpsters.

Species

a) Garlic Mustard (*Alliaria petiolata*)



Garlic mustard is a biennial with first year plants setting small rosettes of leaves that lie close to the ground and are often unnoticed until much later in the season or over the winter when snow cover is light. It is the second year plants that raise their flower stalks to set seed and are most recognizable. While perhaps the easiest of our common invasive species to physically remove by hand, it can be one of the most frustrating to control in that its seeds remain viable for up to five years in the soil. The absolute key in tackling this species is to adopt a multi-year plan, returning each year to the same treatment areas for continued removal until all evidence of the plant is gone. Once a program of eradication of garlic mustard is begun in a given area, a commitment should be made to return to this area on an annual basis until there is no further sign of this species returning.

The best method to remove this plant is by hand removal in the spring from mid to late April until mid to late May. This is the time of year when pulling the plant by the roots is easiest as the soil is typically moist from spring rains. Once the plant has finished flowering and set seed, it is best to not disturb it as the seeds disperse very easily and can cling to clothes, shoes, etc, which will spread the seeds over a far wider area than if left alone.

The best method for hand removal is to grasp the plant at the base of the stalk and gently pull the roots from the ground. With practice, the whole root is easy to remove in most soils. Do try and pull the root even if the flower stalk breaks off, as the plant is often able to generate new growth from imbedded roots and finish its flowering and seed production cycle either later in the year or the following season.

When clearing an area, make every effort to remove every specimen visible. Leaving only a few plants will generate enough seed to repopulate a cleared area the following season. If first year growth plants are noticed during removal of the second year plants, it is often best to leave them until the following season. The root structure of the first year plants is not as robust, often resulting in removal of the leaf rosettes only, leaving the roots in the ground. Second year plants are far easier to remove in their entirety, roots and all.

Discard the entire plant, roots and all, in plastic garbage bags which should be sealed and disposed of either with your curbside trash pickup or if in large quantities, contact WLT to arrange for DPW disposal. Do not attempt to compost this plant as its recuperative powers to finish its flowering cycle and generate seed are nearly miraculous.

b) Japanese Knotweed (*Polygonum cuspidatum*)

Japanese knotweed is the familiar, bamboo-like perennial, often growing to heights in excess of 6’ or more in dense stands. It spreads via rhizomes making it particularly hard to eradicate.

Digging or attempting to uproot the plant is not recommended as even small pieces of the rhizomes are capable of regeneration. The best method for control is to cut the plant to ground as many as three times a season and covering the rhizomes with heavy gauge black plastic film and a heavy mulch on top of the film. When cutting the stalks, cut flush with the ground leaving no protruding stumps. Use the cut stalks to pile on top of the black plastic film to hold it in place, along with any other mulching materials at hand. Depriving the rhizomes of light is key to preventing their regeneration.

Returning to the treated area several times during the season and for several seasons in subsequent years, each time cutting any new growth and then reapplying the black plastic film and mulch as needed is required.

c) Oriental Bittersweet (*Celastrus orbiculatus*)

Oriental Bittersweet vine is the familiar vine with the attractive fall berries that open from orange to red as they ripen and are a sometimes favorite for creating eye-catching fall wreath displays. The vine itself, if left unchecked can eventually bring down trees and blanket an area with vigorous growth that covers everything in its path.

Young vines can be uprooted by hand with care to pull out as much of the root as possible. The uprooted vines can be dispersed in the surrounding underbrush to decompose. Return visits to the cleared area later in the season and for the following 2-3 years are necessary to determine if all root stock has been eradicated.

Older, woody plants that have succeeded in climbing nearby trees should be cut at the base. Cut the climbing vines up as high as you can reach, but leave the remaining vines that have climbed into the tree canopy in place as pulling them down will likely cause damage to the trees themselves. Disperse the cut vines in the adjacent undergrowth for decomposition. The root stock will re-sprout, often in the same season if cut before late summer/early fall. If cut in the fall, they will re-sprout the following season. Repeat visits are necessary to continue cutting back the new growth and eventually depriving the main root stock of any remaining ability to regenerate.

E. Dealing with Hazardous Materials (Hazmats)

Examples of familiar hazmats:

• Household pesticides and fertilizers	• Paint	• Batteries	• Oil filters
• Refrigerators and air conditioners	• Oil containers		•Heating oil tanks

These can generally be removed by volunteers if done carefully to prevent spillage. Bring them to the Minuteman Household Hazardous Products Facility, 60 Hartwell Ave, in Lexington. Call the Waltham Recycling Department (781-314-3390) with questions. If fresh leakage is evident or if you

are in doubt about what to do, mark and record the location of the item and contact the Recycling Department and the Waltham Land Trust for follow-up.

If you encounter any unfamiliar materials or containers, do not go near them. Mark and record the exact location and immediately contact the nonemergency Fire Department (781-893-4105) and the Waltham Land Trust for follow-up.

F. Meeting Others

Stewards are the "front line" of conservation public outreach. You are very likely to encounter other trail users when walking your stretch of the trail. This type of face-to-face outreach is one of the best ways to encourage responsible behavior and reinforce public support of natural open space preservation.

Information

- Explain your Stewardship Project and Waltham Land Trust.
- **Give them a WLT Steward Business card with your name written on it!**
- Refer them to the Hardy Pond Association page and Keep It Hardy care guide on the WLT website https://walthamlandtrust.org/hardy-pond-association/, also to the "trails" tab for trail guides.

"Irresponsible" Visitors

- Visitors who are doing something they shouldn't usually respond positively if politely told why their actions adversely affect natural open space and its visitors.
- Don't argue with anyone.
- **Don't approach anyone you feel might be threatening or dangerous**. Move to a safe distance and contact Police (911 or 781-893-3700 nonemergency) or WLT.

Follow Up

Carry a notebook to take the contact information of people you talk to and **give personalized WLT Steward cards to folks you meet**. Try to always follow up with them and ask if they are interested in joining the Waltham Land Trust or the stewardship effort, in general.

Have Fun

Enjoy your time at the pond; others will feel the pleasure it brings you and join the movement!!!!!

SMITH POINT & HARDY POND STEWARDS

Important Phone Numbers:

Police non-emergency	781-893-3700
Fire non-emergency	781-893-4105
Waltham Land Trust	781-893-3355
Waltham Public Works	781-314-3800
Waltham Recycling	781-314-3390

Important Addresses:

Waltham Land Trust office	240 Beaver St, Waltham
Waltham Land Trust mailing	PO Box 541120, Waltham, 02454
Waltham Land Trust website	www.walthamlandtrust.org
Hardy Pond online field report	**hpstewardreport.walthamlandtrust.org/**
Police/Fire Department (main)	175 Lexington St, Waltham
Waltham Public Works	167 Lexington St, Waltham
Hazardous Waste Facility	60 Hartwell Ave, Lexington