

## Amherst Conservation Commission Nature Steward Guidelines

Rev: March 2023

The Amherst Conservation Commission (ACC) promotes increased opportunities for food, water, cover and space for native species in our managed habitats.

This document details ACC's guidelines for such increased opportunities through reliance on trained volunteers approved by the ACC known as *Nature Stewards* under the guidance of an ACC Nature Steward Manager. After training the nature steward will become familiar with a local area and the species both present and expected. The steward will receive initial training in species' needs, some initiatives to satisfy them and reporting tools.

### Rationale

The rationale for use of the techniques listed here revolves around the scientific approaches to biodiversity and adaptation. Habitats reportedly have an upper capacity to carry a certain set of diverse flora and fauna but often are not at that level due to outside factors; human developments, natural disturbances, etc. What we try to do is enhance the deficient habitats by techniques recommended by local experts that will, over time, adapt them to changing conditions. The habitats found in Amherst and some of the techniques to be employed by the Nature Steward follow.

### Forests

The Nature Steward enhances habitats in the understory and on edges by the following:



- Run a native plant nursery by cutting mast tree and native bush branch clippings and raise them to seedlings for planting.
- Plant brambles and fruiting bushes on the south side of meadows, disturbances edges and field margins for cover and soft mass production.

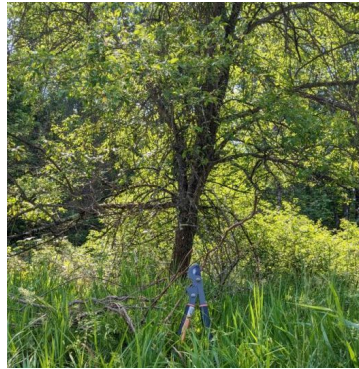


- Report density of snags, cavity trees and legacy trees in the general harvest area.
- Raptor perches should occur approximately every 100' around wetland edges and meadows, with one or two in the middle of large meadows. With ACC permission, the steward may girdle selected trees to create this density.





- Release hickories and selected mature oaks for continued hard mast production, and apple and other fruit trees for soft mast.



- “Releasing” means cutting away shading trees and/or cutting away invasive vines that will eventually pull down the tree.



- Pile slash for small mammal cover.

## Grasslands



ACC mows our grassland meadows to prevent forest succession. The Nature Steward enhances food and cover throughout the grassland and on edges by the following:

- Construct, erect and maintain bird boxes properly sized, placed and oriented for chosen bird species.
- Harvest seeds of native wildflower and seeded plants in late summer/early fall then plant in open areas for future food.
- Cut bramble or fruit tree scions in late spring, cover the cut ends with root hormone powder and plant in damp sandy soil. Replant later in the summer in southern exposures.



**Wetlands** – Wetlands are endemic throughout the properties ACC manages. They vary from deep lakes, ponds, streams, and wet meadows. The nature steward will primarily survey and report on habitat conditions and animal sightings by foot or canoe.



### Ponds

- Girdle selected trees around ponds and large open wetland edges for raptor perches.

### Headwater Streams

- Headwater stream habitat enhancement for fish can be done by adding the proper logs and branches in the right places.





## Vernal Pools

Vernal pools are a unique habitat for amphibians who have a very particular life cycle and will not survive predatory fish.

A pool can be stewarded by the following:

- Survey pool(s) annually for amphibians.
- Report removal of forest canopy.
- Cut and let lie dead trees nearby for eventual adult damp cover.



## Wet Meadows/Shrub Meadows

This is beaver territory and we want to encourage more for the huge gain in biodiversity and flood control.

- Survey and report lodges and available beaver food
- Release deciduous trees and shrubs to encourage their preferred types.



**Pollinating Insects** – Native bees, wasps and other pollinating insects are usually overlooked but absolutely necessary for the presence and abundance of higher order animals dependent on plant food supplies.



- Construct, erect and maintain “insect hotels” properly sized, placed and oriented for native bee and wasp insect species. The ACC recognizes only hand-made bee hotels built using paper straws and disposed of/replaced in summer. See [this for requirements](#).

**Soil Microbes** – Almost all soil organisms (except some bacteria) need the same things we need to live; food, water

and oxygen. They eat a carbon-based food source which provides all their nutrients; compost in the garden but usually nitrogen-fixing legume plants in the wild. The steward interested in increasing microbes in poor soil can do the following.

- Conduct sufficient testing to prove further action is needed.
- Advocate for funds to seed legume plants (rye, etc.) in the field, then hand-plant or monitor machine seeding in the area. Survey and report results.

### **Invasives**

The ACC funds removal of areas of invasives on its managed properties but there are opportunities for individuals to be eliminated before spreading.

The nature steward can accomplish the following tasks in all habitats.

- Survey, identify and report any invasive plants, especially emerging, solo plants.

