

## NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

### Region 7 Sub-office

2715 State Hwy 80, Sherburne, NY 13460  
P: (607) 674-4017 | F: (607) 674-9034  
[www.dec.ny.gov](http://www.dec.ny.gov)

# 10 Year Forest Stewardship Management Plan

Southern Madison Heritage Trust

Box 117  
Hamilton, NY 13346

Property Location:

Preston Hill Road  
Town of Hamilton  
Madison County

Tax Map #:

183.-1-7

Prepared by:

Gregory Owens, Senior Forester  
NYSDEC  
2715 Rt. 80  
Sherburne, NY 13460  
email: [gregory.owens@dec.ny.gov](mailto:gregory.owens@dec.ny.gov)

Date Prepared: December 3, 2019

Field Work Conducted: August 23, 2019



Department of  
Environmental  
Conservation

## New York State Department of Environmental Conservation

### Division of Lands and Forests, Region 7

2715 State Highway 80, Sherburne, New York 13460-4507

Phone: (607) 674-4017 FAX: (607) 674-9034

Website: [www.dec.ny.gov](http://www.dec.ny.gov)

# 10 Year Landowner Forest Stewardship Management Plan **Update**

Leland Reserve  
Southern Madison Heritage Trust  
Box 117  
Hamilton, NY 13346  
[www.smht.org](http://www.smht.org)

### Introduction

Southern Madison Heritage Trust (SMHT) is a community- based organization established in 2002 to advance natural resource conservation in Brookfield, Eaton, Lebanon, Georgetown, Hamilton and Madison, New York. The organization protects land, water, unique habitats, scenic landscapes, recreational sites and historic features through stewardship, public education and support of practices that advance natural resource conservation.

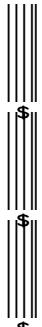
The Leland Reserve was acquired by gift from Anne Leland in 2003 and since that time land management has focused on biodiversity conservation, public access and community education. Projects undertaken by SMHT to advance these goals include development of a stewardship management plan in 2004, reforestation, grassland and shrub maintenance, bridge and trail construction and public programing including the 5<sup>th</sup> Grade Ecology Project with Hamilton Central School, now in its tenth year.

This stewardship management plan considers the entire 17.2 acre Leland Reserve owned and managed by SMHT.

### Ownership Goals & Values:

The goals of ownership are to conserve biodiversity, provide opportunities for public access and raise community awareness about natural resources.

The following goals and values had high notation of value on the 2019 landowner assessment form:



Maintain a variety of plants and animals

Provide habitat for a diversity of wildlife

Maintain forest in a healthy condition for future generations



Protect soils, wetlands, streams and water quality

Foster community-based conservation

Support public recreation and education

The organization values public access and use of the Reserve to raise public awareness about ecology, landscape history and natural resource conservation. In 20 years, the organization would like to see a significant reduction in the extent of shrub honeysuckle, the establishment of native forest regeneration, and to have approximately 10 acres in forest, 4 acres in meadow and 3 acres in shrub.

Biodiversity: manage four distinct ecological communities (meadow, shrub, riparian, and northern hardwood forest) and demonstrate conservation practices.

1. Maintain meadow through periodic mowing.
2. Maintain early successional shrub habitat through selective removal of invasive honeysuckle and buckthorn.
3. Plant trees in select locations.
4. Reduce deer herd through annual bow hunting.
5. Protect wetland and riparian zone from disturbance and sedimentation.
6. Maintain cavity trees, snags, coarse woody material, nesting boxes and other wildlife features.
7. Install fencing or cages (deer enclosures) to restrict browsing on forest plants.

Public Access: maintain and extend existing foot trails to provide access and raise local awareness about conservation and the work of SMHT.

1. Maintain 1 mile of foot trails.
2. Replace bridge decking.
3. Maintain parking area by renewing annual lease.
4. Maintain kiosk and install larger property/ trail map.
5. Install and refresh “Leland Reserve” boundary signs as needed.
6. Close property during October, November and December.
7. All foot trails in meadow and shrub areas are mowed bi-weekly in spring and summer. Trails through woods are maintained periodically

Community Conservation: engage local people in property management and raise awareness about ecology, land use history and natural resource conservation.

1. Recruit volunteers for periodic workdays, 2-3/ year, to cut brush, maintain trails and plant trees.
2. Guided walks 1/ year
3. Use property as an outdoor lab to monitor conservation practices and encourage participatory research.

#### **Property Description:**

The 17.3 acre Leland Reserve is located on Preston Hill Road in the town of Hamilton, Madison County. Elevations range between 1,340' at the entrance gate on Preston Hill Road to 1,440 along the stream channel in the parcel's northwest corner. Ariel imagery from 1936 reveals that the parcel was open pasture at that time

with a 0.5 acre grove of trees along the stream channel. Today 10.5 acres of the Reserve are occupied by forest, 4.3 acres by shrub and 2.4 acres by meadow.

The stream channel is a Class C(t) protected stream requiring a permit from NYS Department of Environmental Conservation for any planned disturbance ( i.e. bridge construction, excavation)

<https://www.dec.ny.gov/permits/6042.html> . The channel flows west and enters Payne Creek and eventually the Chenango River near Middleport, combining with the Susquehanna River at Binghamton and eventually discharging into the Chesapeake Bay in Maryland.

#### Interactions with Surrounding properties:

The surrounding landscape is occupied by low density, single-family homes, open fields and small, privately-owned woodlands. Trapper's Pond is located adjacent to the Reserve and much of the adjoining pondside land has been subdivided into 4 acre building lots. The Reserve is 2.1 miles from the Village of Hamilton's main intersection and use of the parcel is primarily by local residents.

#### Known Threatened or Endangered Species:

There are no known or expected threatened or endangered species to be found on or near the property.

#### Cultural and Historic Information:

There are two listed NYS listed historic or cultural sites on or near the property. Information on recorded historic or cultural sites is retained at the NYS Museum in Albany.

#### Soils Information:

The following information, from the USDA Soil Survey of Madison County, contains brief and generalized descriptions of the soils found on this property. These descriptions may include water movement and availability, potential tree productivity, tree species to consider when planting, as well as erosion hazard potentials.

#### Bath Series (**BCE**- Bath steep):

The Bath series consists of deep well drained soils that have fragipan at a depth of more than 36 inches. These soils formed in the glacial till derived from sandstone, shale, and siltstone. Approximately 7.0 acres of the Reserve are occupied by Bath soils, primarily along the stream channel and adjacent forest areas.

Mardin Series (**MaB**-Mardin channery silt loam 3-8% slope, **MaC**-Mardin channery silt loam 8-15% slope): Mardin series consist of deep, moderately well drained soils that have a fragipan. These soils formed in the glacial till derived from sandstone, shale, and siltstone. Slow or very slow permeability in the fragipan and temporary seasonal wetness are the main limitations to some non-farm uses. Approximately 9 acres of the Reserve are occupied by Mardin soils, primarily in the meadow and adjacent shrub areas.

Stockbridge Series (**SgB**-Stockbridge channery silt loam 3-8% slope, **SgD**-Stockbridge channery silt loam 15-25% slope):

The Stockbridge series consists of deep, well-drained soils. These soils formed in glacial till that have fragments of sandstone, siltstone and limestone. Rooting depth is generally unrestricted; water availability is moderate to high. The content of lime is medium to low. A 0.9 acre site is occupied by Stockbridge soils.

#### Volusia Series (**VoB**-Volusia silt loam 3-8% slope):

The Volusia series consist of deep, somewhat poorly drained soils that have a fragipan. These soils formed in the glacial till derived from siltstone, sandstone, and shale. A seasonal high water table is perched above a very slowly permeable fragipan and substratum. A 0.6 acre wetland site on the Reserve is occupied by Volusia soils.

<b>Stand #:</b> 1	<b>Tree Species:</b> black cherry, apple, sugar maple  <b>Size Class:</b> variable; saplings-mature trees (3"-24"+ dbh*)  <b>Understory Species:</b> honeysuckle, buckthorne, Rubus (aka-brambles)	<b>Mgt. Objective:</b> Hedgerow  <b>Recommendations:</b> A 575' hedgerow that begins at Preston Hill Road and defines much of the parcel's east boundary. The Village of Hamilton MUC maintains a power line right-of-way parallel to the hedgerow. Trees will be pruned by the Village periodically to maintain clearance. Follow best management practices for pruning to preserve hedgerow while maintaining clearance.  * dbh- average diameter at breast height
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<b>Stand #:</b> 2	<b>Tree Species:</b> NA  <b>Size Class:</b> NA  <b>Understory Species:</b> Goldenrod, grasses, milkweed	<b>Mgt. Objective:</b> Meadow  <b>Recommendations:</b> Mow every three years to maintain in a meadow condition. Mowing will prevent displacement of meadow species by honeysuckle and other woody plants. Mow after July 15 to protect grassland nesting birds.  Continue to plant trees along south boundary of stand to establish an east-west hedgerow to connect stands 1&3
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<b>Stand #:</b> 3	<b>Tree Species:</b> Sugar maple, black cherry, white ash  <b>Size Class:</b> 12"-24"+ dbh  <b>Understory Species:</b> shrubs and apple	<b>Mgt. Objective:</b> Hedgerow  <b>Recommendations:</b> A 850' hedgerow that begins at Preston Hill Road and defines much of the parcel's west boundary. Preserve hedgerow.
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<b>Stand #:</b> 4 <b>Acres:</b> 1.7 <b>Type:</b> Shrub <b>Soils:</b> MaB, MaC <b>Topography:</b> gentle	<b>Tree Species:</b> White ash, hawthorne <b>Size Class:</b> <6”dbh  <b>Understory Species:</b> honeysuckle, buckthorne, viburnum, multiflora rose, silky dogwood, <i>Rubus</i> , grasses and goldenrod	<b>Mgt. Objective:</b> Forest  <b>Recommendations:</b> No treatments recommended. Allow this site to naturally transition to native forest.
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<b>Stand #:</b> 5 <b>Acres:</b> 1.2 <b>Type:</b> Shrub <b>Soils:</b> MaB, MaC, <b>Topography:</b> gentle	<b>Tree Species:</b> White ash, hawthorne <b>Size Class:</b> <6”dbh  <b>Understory Species:</b> honeysuckle, buckthorne, viburnum, multiflora rose, silky dogwood, <i>Rubus</i> , grasses and goldenrod	<b>Mgt. Objective:</b> Shrub/ meadow  <b>Recommendations:</b> Recent efforts have removed buckthorn and honeysuckle while retaining native shrubs (viburnum, dogwood, hawthorne). Sections were also brush hogged in 2018. Continue to remove honeysuckle and buckthorne as labor is available and mow open areas every three years.
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<b>Stand #:</b> 6 <b>Acres:</b> 1.0 <b>Type:</b> Shrub/sapling <b>Soils:</b> MaB, MaC, SgD <b>Topography:</b> gentle	<b>Tree Species:</b> White pine, white ash <b>Size Class:</b> <6”dbh  <b>Understory Species:</b> apple, honeysuckle, buckthorne, viburnum, multiflora rose, silky dogwood, <i>Rubus</i> , grasses and goldenrod	<b>Mgt. Objective:</b> (5 <sup>th</sup> Grade) Forest  <b>Recommendations:</b> Tree planting and selective shrub removal was begun in 2007 and has continued through the current year. Reforestation species include: white pine, Norway spruce, red pine, red oak, black walnut and European larch.  Continue to remove shrubs and plant trees. Protect planted deciduous trees from browsing deer with tubes or fencing.  Maintain bench and repair as needed.
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<b>Stand #:</b> 7	<b>Tree Species:</b> Black cherry, white ash, red maple, aspen  <b>Size Class:</b> 12" dbh  <b>Understory Species:</b> honeysuckle, apple, buckthorne	<b>Mgt. Objective:</b> Forest  <b>Recommendations:</b> A young forest with an almost impenetrable understory of honeysuckle making access difficult for recreation and other uses. As canopy thickens, honeysuckle will decline but this process may take decades.  Remove patches of honeysuckle and plant with native trees and shrubs. Windrow brush and create a deer exclosure to protect new planting/ natural regeneration from browsing. This is best accomplished with tractor, bulldozer or small excavator.
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<b>Stand #:</b> 8	<b>Tree Species:</b> Red maple, sugar maple, black cherry and a red oak  <b>Size Class:</b> 10" dbh  <b>Understory Species:</b> open- few plants growing in understory.	<b>Mgt. Objective:</b> Forest  <b>Recommendations:</b> Allow native forest to develop.  Maintain waterbars on foot trail
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<b>Stand #:</b> 9	<b>Tree Species:</b> White ash  <b>Size Class:</b> <6" dbh  <b>Understory Species:</b> honeysuckle, grass	<b>Mgt. Objective:</b> Apple  <b>Recommendations:</b> Scattered, mature apple trees throughout this site. Remove white ash and other trees that are beginning to shade apple. Prune and graft branches to mature apples and plant new varieties for wildlife.  Maintain wetland views at bench site through selective pruning and tree removal.  Maintain bench and repair as needed
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<b>Stand #:</b> 10 <b>Acres:</b> 0.3 <b>Type:</b> Forest wetland <b>Soils:</b> BCE, VoB <b>Topography:</b> flat	<b>Tree Species:</b> Aspen <b>Size Class:</b> <12" dbh  <b>Understory:</b> willow, skunk cabbage, sedges, rushes, fern, cattails	<b>Mgt. Objective:</b> Wetland protection area  <b>Recommendations:</b> Forest and shrub wetland with a DEC protected stream C(t) classification. Any disturbance to channel and wetland will require state permitting.  Construct an impoundment by excavating soil and establishing a dam in the west end of the stand. The objective is to retain water throughout the year and diversify wetland conditions.
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<b>Stand #:</b> 11 <b>Acres:</b> 3.6 <b>Type:</b> Northern hardwood <b>Soils:</b> BCE <b>Topography:</b> gentle	<b>Tree Species:</b> Red maple, black cherry, sugar maple, white ash, yellow birch  <b>Size Class:</b> 14" dbh  <b>Understory:</b> fern, tree seedlings, forest herbs, honeysuckle	<b>Mgt. Objective:</b> Forest  <b>Recommendations:</b> Create canopy gaps to increase sunlight and promote natural regeneration. Install two 20'x20'x8' fenced exclosures to restrict browsing deer and monitor response.  Install a bench overlooking waterfall.
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<b>Stand #:</b> 12 <b>Acres:</b> 0.8 <b>Type:</b> Riparian zone <b>Soils:</b> BCE <b>Topography:</b> steep	<b>Tree Species:</b> Hemlock, sugar maple, black cherry  <b>Size Class:</b> 20" dbh  <b>Understory:</b> fern, but generally open, exposed rock	<b>Mgt. Objective:</b> Riparian protection area  <b>Recommendations:</b> DEC protected stream with a DEC C(t) classification. A deep cut channel with cascades, pools and exposed bedrock.  Continue to plant American sycamore and winterberry in the east section of riparian zone.  Repair footbridge decking and improve grade on both approaches.
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<b>Stand #:</b> 13	<b>Tree Species:</b> Hemlock, white ash  <b>Size Class:</b> 20" dbh  <b>Understory:</b> fern, but generally open, exposed rock	<b>Mgt. Objective:</b> Riparian protection area  <b>Recommendations:</b> Similar to stand 12 but with a higher concentration of Eastern hemlock. This stand and much of the west section of the riparian zone is old forest (100 years+). .
<b>Stand #:</b> 14	<b>Tree Species:</b> Sugar maple, basswood, white ash  <b>Size Class:</b> >24" dbh  <b>Understory:</b> open	<b>Mgt. Objective:</b> Hedgerow  <b>Recommendations:</b> A 290' hedgerow that forms the southwest boundary of the Reserve. Preserve hedgerow. .

### **General discussion topics:**

In its sixteen-year history, the Leland Reserve has emerged as an important community greenspace. The Reserve provides opportunities for public recreation and is a site for raising awareness about history, ecology and land management. Many area residents use the Reserve on a regular basis and hundreds of others have participated in public programs and learned about natural resource management through planting, mulching weeding, mowing, building, cutting, and digging. Community conservation should continue to be a focus of Reserve management.

Diversity of vegetative conditions, with all stages from grasses to shrubs, or brushy growth, through all stages of tree growth provides the best overall **habitat for wildlife**. In addition, grassy openings provide excellent opportunities for viewing wildlife and provide vistas of surrounding areas if one is located on hilly ground. Many wildlife species require vegetative diversity for varying activities and seasons using one type for breeding, another for nesting, another for feeding and so on. The more diverse the vegetation, the more varied the wildlife species present. Permanent openings are retained mainly through mowing, either commercially or noncommercially. Small openings (groups or strips) up to one acre in size adjacent to shrubby growth are best for wildlife. Mast and fruit trees and shrubs on opening edges are heavily utilized by wildlife.

The one-mile trail network provides access throughout the Reserve. Sections through the open meadow and shrub areas require bi-weekly mowing during the growing season (May-August) and forest trails need to be monitored for deadfall. A footbridge over the stream channel and two benches also require maintenance.

The forests are homes to both beneficial and harmful **insects and disease** organisms. The harmful ones pose a problem only when their damage becomes extensive. Healthy, vigorous trees are not as likely to be damaged by insects or fungi. By maintaining adequate growing space, removing diseased and most weak trees, and encouraging species diversity, major epidemics can normally be avoided.

Emerald ash borer is an invasive insect that causes widespread mortality exclusively of ash trees and has been spreading throughout New York, including Madison County. Efforts such as quarantines and statewide restrictions on firewood have slowed the insects' movement but the eventual demise of white ash is inevitable.

The hemlock wooly adelgid is an invasive insect that attacks hemlock trees primarily to the southeast of this region. However, this pest has been spreading gradually northward and has been found in portions of NY State.

Beech bark disease is an invasive fungus, which has spread all across the region. It causes severe decline of beech trees and eventually proves fatal for most of the trees affected.

Fruit bearing trees such as apples provide food for deer and numerous other wildlife. Natural succession results in ash, maple, cherry and other tall tree species following the apple and eventually overtopping, shading and killing off the apple trees. To maintain the presence of apple trees, that competing vegetation must be eliminated periodically by cutting, chemical, or mechanical girdling. At the same time, pruning the apple trees can enhance fruit production.

Wetlands and riparian habitats are important for the role they play in regional hydrologic cycles and local water supplies as well as their values as diverse and productive ecosystems and unique habitats for certain plant and wildlife species. These areas should be protected, and no activity should be undertaken that would change their characteristics. Enhancements of some wetland complexes are possible through the USDA Natural Resource Conservation Service (NRCS) Wetland Restoration Program.

White tailed deer are an adaptive species that thrive on variety in habitats. Browsing herds have had a significant impact on forest regeneration and overall plant diversity. The Reserve is closed during the months of October, November and much of December to allow one extended family with exclusive rights to hunt on the Reserve. Fencing to reduce browsing impacts and promote plant diversity is proposed on select sites.

Boundary Line maintenance is very important. Well-marked lines can prevent trespass, , eliminate future surveys, and address possible boundary or ownership questions. Continue to post "Leland Reserve" signs at 100' intervals along property boundary lines.

## **OTHER AGENCIES AND ORGANIZATIONS**

The following agencies and organizations can also be very helpful in managing a property to meet specific landowner interests and objectives.

- USDA Natural Resources Conservation Service (NRCS): Hamilton 315-824-9849  
<https://offices.sc.egov.usda.gov/locator/app?service=action/1/ServiceCenterSummary/5/agencyToOfficeLink>
- Madison County Soil and Water Conservation District (SWCD): Hamilton 315-824-9849  
<http://www.madcoswcd.com/>

- Cornell Cooperative Extension of Madison County (CCE): Morrisville 315-684-3001  
<http://madisoncountycce.org/>
- New York Forest Owners Association (NYFOA): PO Box 541, Lima, NY 14485, 1-800-836-3566,  
<http://www.nyfoa.org>
- NYSDEC stream crossing permits <https://www.dec.ny.gov/permits/49060.html>
- NYSDEC emerald ash borer <https://www.dec.ny.gov/animals/7253.html>
- NYSDEC hemlock wooly adelgid <https://www.dec.ny.gov/animals/7250.html>
- NYS Invasive Species Info: honeysuckle [http://nyis.info/invasive\\_species/honeysuckle/#Habitats](http://nyis.info/invasive_species/honeysuckle/#Habitats)
- NYS Invasive Species Info: buckthorn [http://nyis.info/invasive\\_species/commonbuckthorn/](http://nyis.info/invasive_species/commonbuckthorn/)

The following recommendations are based on the goals, interests and priorities identified by the owners  
Priority: 1 = High, 2= Medium, 3 = Low.

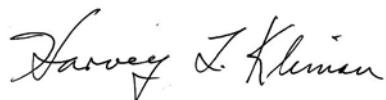
<b>Year</b>	<b>Stand</b>	<b>Activity</b>	<b>Priority</b>
Annually, May-August	2,4,5,6	Mow trails bi-weekly	1
Annually, September, February & June	Reserve	HCS 5 <sup>th</sup> Grade Ecology Project	1
Annually, April, September	Reserve	Annual Volunteer Work Day	1
Annually, September	Reserve	Annual Public Hike	2
Annually	5	Remove honeysuckle and buckthorne	1
Annually	6	Remove honeysuckle, plant trees	1
2020	12	Repair bridge	1
2021	11	Install bench	2
2022	2	Mow meadow	1
2022	10	Construct impoundment	1
2023	11	Install fencing	3
2024	Reserve	Refresh boundary signs	1
2025	2	Mow meadow	1
2026	7	Remove honeysuckle, create exclosure	3
2027	5	Brush hog and mow	2
2028	2	Mow meadow	1
2029	Reserve	Update management plan	1

The property is owned by the Southern Madison Heritage Trust, Inc.

This management plan was adopted by resolution of the Southern Madison Heritage Trust

Board of Directors on date: November 20, 2019 as noted in the minutes of that date.

Authorized Signature:



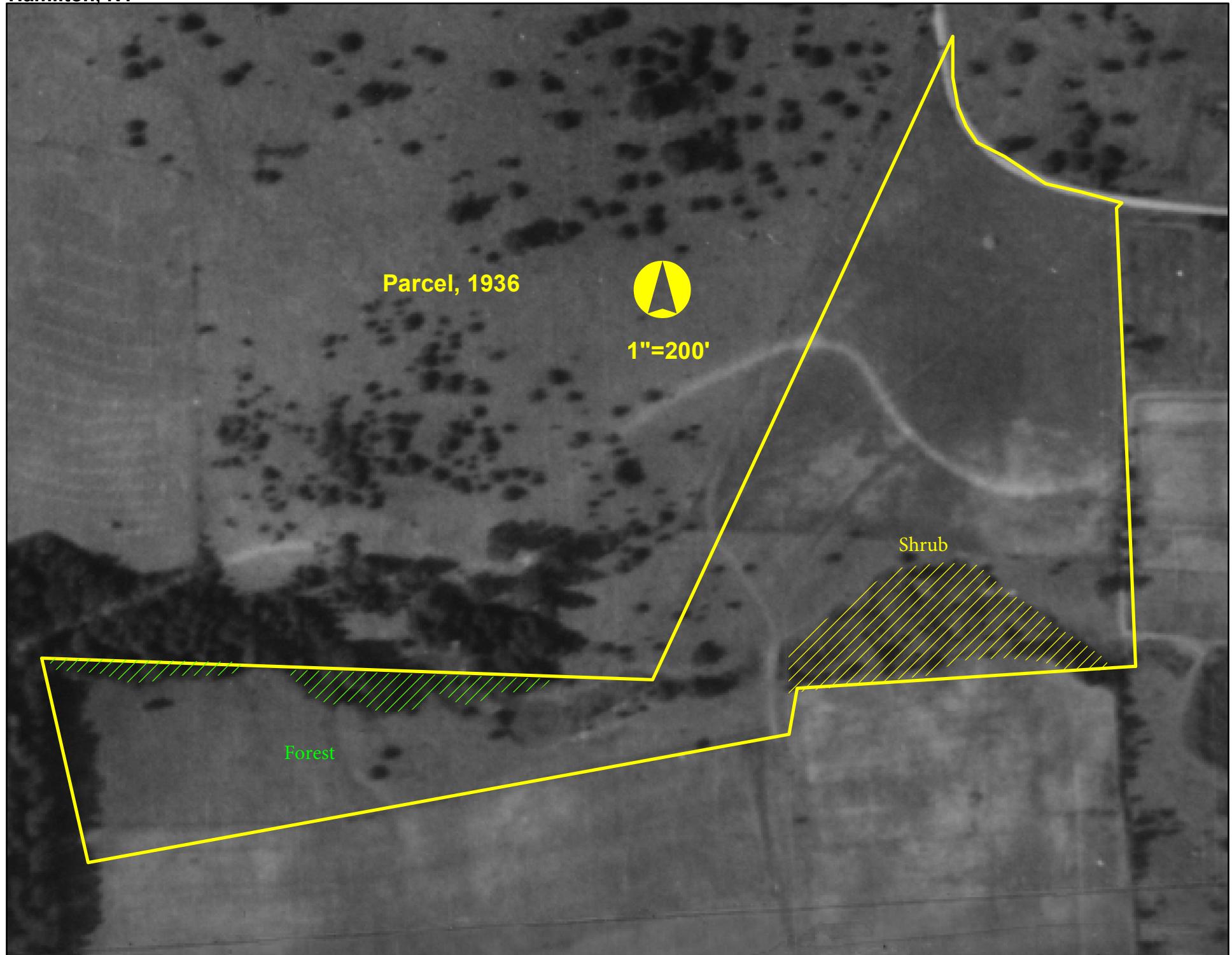
Date: December 3, 2019

Harvey L. Kliman, President SMHT

Prepared by:

Gregory Owens  
Senior Forester  
NYSDEC  
2715 State Hwy 80  
Sherburne, NY 13460-4507  
607-674-4017 ext 638  
[gregory.owens@dec.ny.gov](mailto:gregory.owens@dec.ny.gov)

**Sothern Madison Heritage Trust**  
**Leland Reserve**  
**Hamilton, NY**



Southern Madison Heritage Trust  
Leland Reserve  
Hamilton, NY

Open Land Management



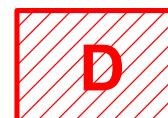
Meadow (2.4 acres) mow on a 3 year rotation



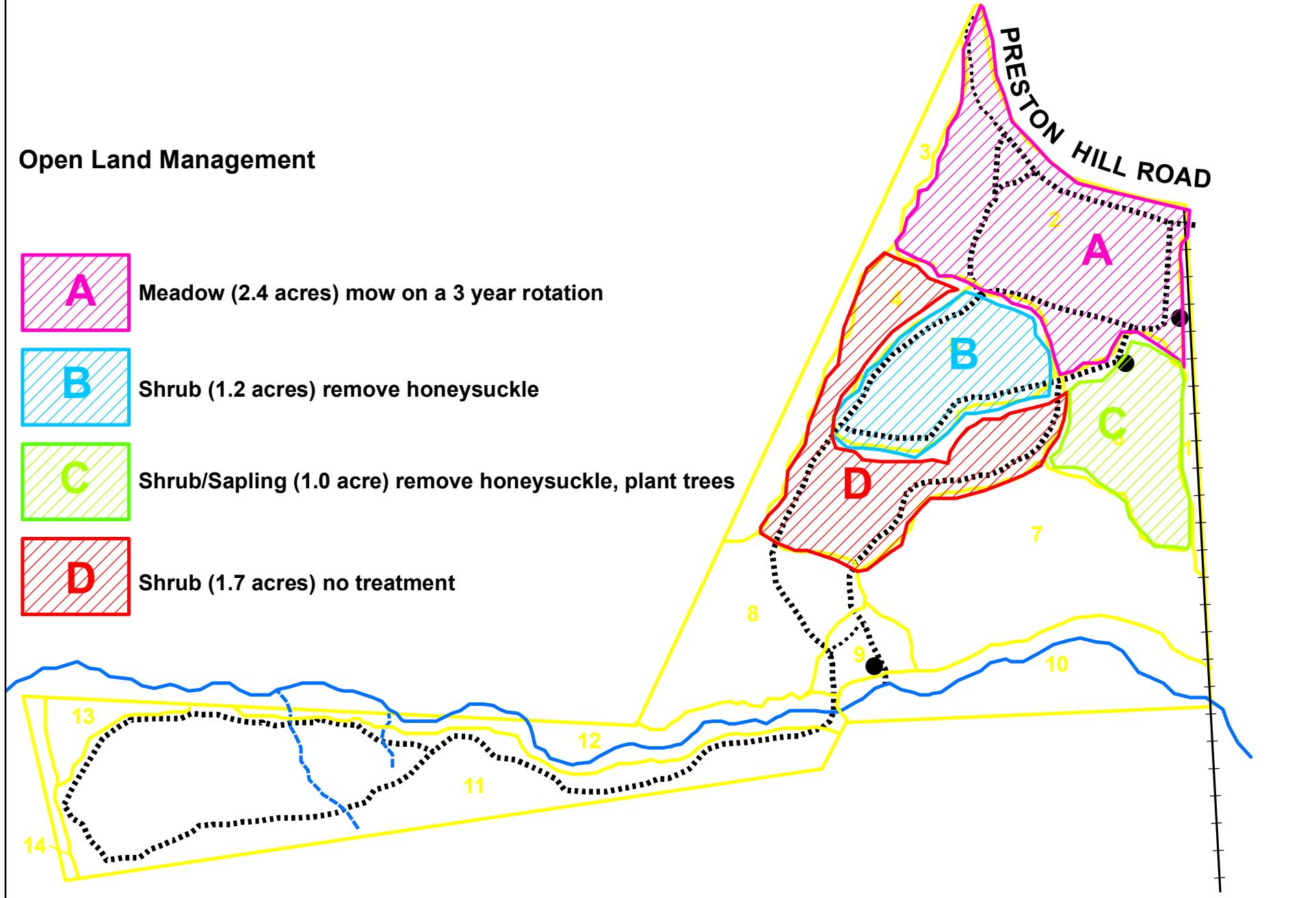
Shrub (1.2 acres) remove honeysuckle



Shrub/Sapling (1.0 acre) remove honeysuckle, plant trees



Shrub (1.7 acres) no treatment



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