Willard's Woods

Lexington Massachusetts

Land Management Assessment and Planning

Land Stewardship Inc.

An Overview

The Initial Effort:

- Natural Communities and Resources Survey
- Invasive Plant Inventory
- Wildlife and Forest Assessments
- Infrastructure Inventory and Trails Assessment
- Challenges and Pressures
- Goals and Priorities
- Initial Recommendations

Since Our Last Meeting:

- Field Composition Assessment
- Habitat Restoration Opportunities
- Invasive Plant Management
- Universally Accessible Trail Feasibility
- Infrastructure improvements
- Public & Town Input
- Big Picture Long Term Goals

Tonight's Agenda

- Getting back into the Willard's Woods headspace
  - Infrastructure, Natural Resources and key features
  - Resident Wildlife
  - Stressors and Challenges

- Goals and Recommendations
  - Short Term Goals
  - Long Term Goals
  - Updated Invasive Plant Management
  - Field Restoration
  - Universally Accessible Trail Map

A Bird's Eye View

Structural Features

- Trails
- Boardwalks
- Stone walls
- Kiosks
- Bridges
- Bird boxes

Property Overview

Town of Lexington
Willard's Woods
Lexington, MA
December 2019

Entry points
Bird box
Bridge
Duck box
Kiosk
Sign
Boardwalk
Stone wall
Trails
Parking
Picnic

N

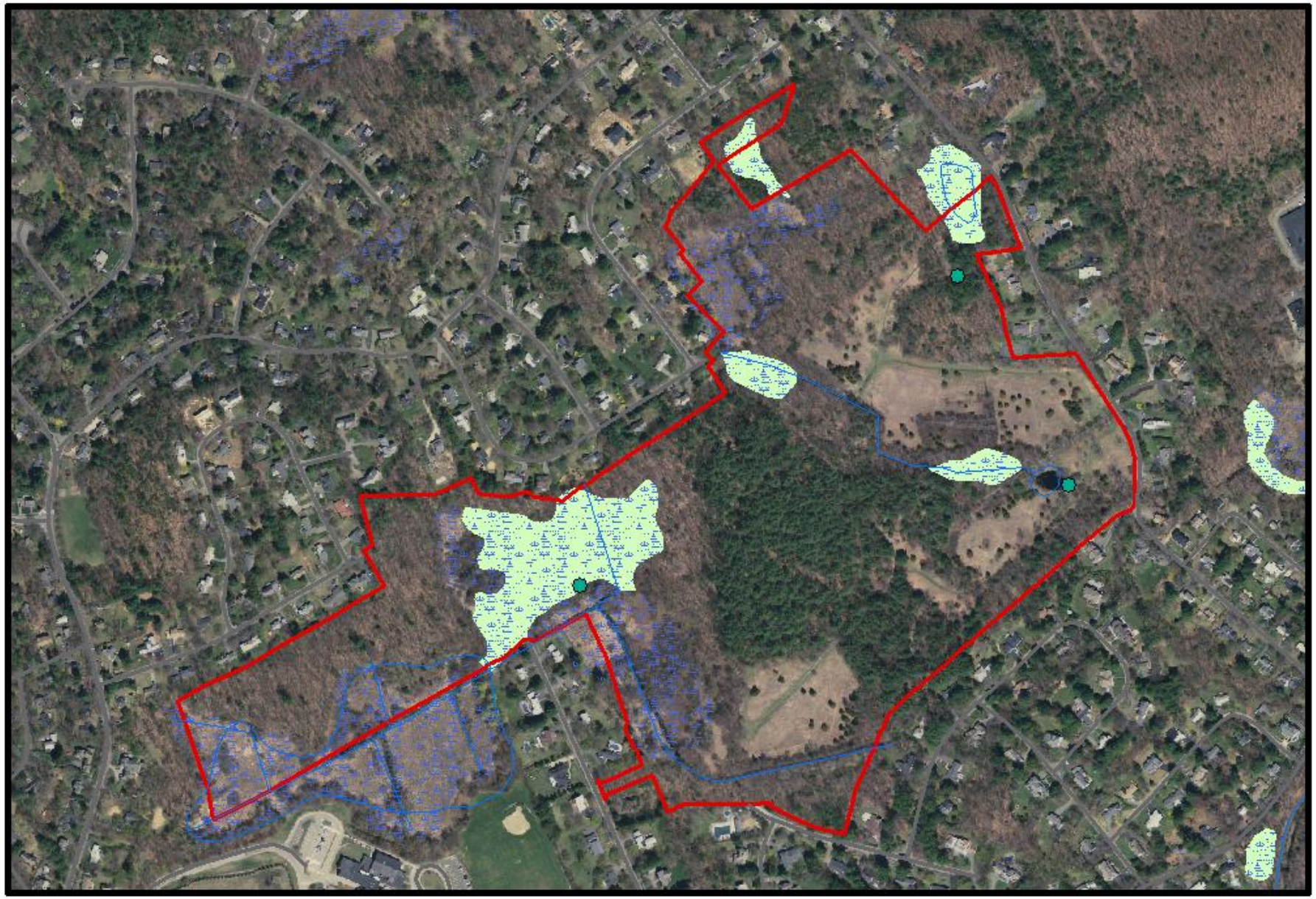
0 0.125 0.25 Miles

Map prepared by Jessica Applin,
Land Stewardship Inc.
December 2019

Natural Resources

Wetland Resources

- *Wooded marshes*
- *Streams*
- *Channels*
- *Potential Vernal Pools*
- *Old Mill Pond*



Wetland Resources

Town of Lexington
Willard's Woods
Lexington, MA
October 2019

Potential Vernal Pools
Hydrography
Marsh/Bog
Wooded marsh

N

0 0.125 0.25 Miles

Map prepared by Jessica Applin,
Land Stewardship Inc.
October 2019

Natural Communities

- *White Pine Oak Forest*
- *Transitional Oak Forest*
- *Shrub Swamps*
- *Wet Meadows*
- *Fields*

Natural Communities

Town of Lexington
Willard's Woods
Lexington, MA
December 2019

Field
Oak Hemlock White Pine Forest
White Pine Oak Forest
Shrub swamp
Wet meadow/Shrub swamp

N

0 0.125 0.25 Miles

Map prepared by Jessica Applin,
Land Stewardship Inc.
December 2019

Wildlife

Confirmed residents

Great horned owl - *Bubo virginianus*

Whitetail deer
Odocoileus virginianus

Eastern coyote - *Canis latrans*

Opossum – *Didelphis virginiana*

Raccoon - *Procyon lotor*

**Based on track and sign observation, shared photographs, auditory confirmation, and wildlife camera captures*

Wildlife

Known residents

Red squirrel
Tamiasciurus hudsonicus

Red Tailed Hawk
Buteo jamaicensis

Eastern cottontail
Sylvilagus floridanus

White footed mouse
Peromyscus leucopus

Grey squirrel
Sciurus carolinensis

Black legged tick
Ixodes scapularus

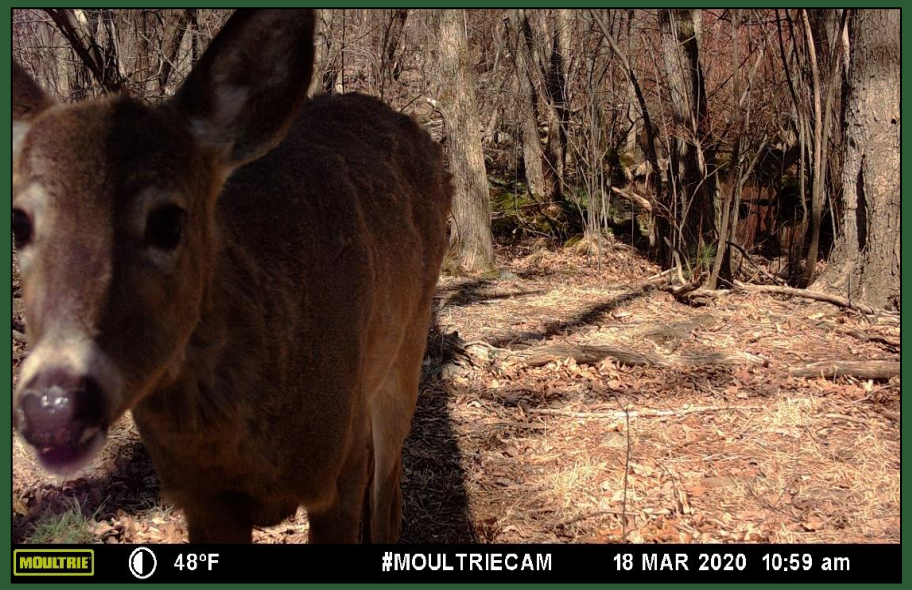
** Based on track and sign observation, shared photographs, auditory confirmation, and wildlife camera captures*

Wildlife

New Camera Captures

Wildlife

New Camera Captures



Pressures & Challenges

Pressures & Challenges

Things to consider moving forward

- Field Encroachment
- Trail Deterioration
- Dogs, the Public, & Wildlife
- Visitor Management
- Forest Pests
- Climate Change
- Invasive Plants

Invasive Plants

Key players

Winged euonymus
Euonymous alatus

Glossy buckthorn
Frangula alnus

Multiflora rose
Rosa multiflora

Shrub honeysuckle
Lonicera

Oriental bittersweet
Celastrus orbiculatus

Invasive Plants

Other contenders

Norway maple
Acer platanoides

Common buckthorn
Rhamnus cathartica

Japanese knotweed
Fallopia japonica

Autumn Olive
Elaeaganus umbellata

Garlic mustard
Alliaria petiolata

Invasive Plants

Early Detection Populations

Black swallowwort
Cynanchum louiseae

Purple loosestrife
Lythrum salicaria

Goals and Recommendations

Managing for Resiliency

Promote Biodiversity

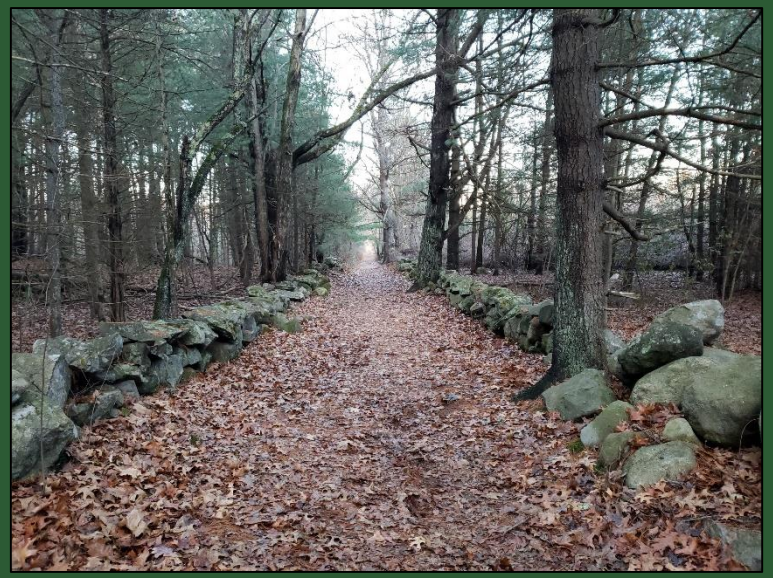
- Invasive Plant Management
- Native Plantings
- Pests and Pathogens
- Wildlife Structures
- Pollinator Support
- Monitoring

Encourage System Complexity

- Diversity of Habitats
- Functionality
- Addressing Forest Regeneration
- Carbon Sequestration
- What's missing?
- What does the system want to be?

Address Landscape Stressors

- Invasive Plants
- Dogs & Wildlife
- Human Wildlife Interface
- Erosion
- Deer Overabundance
- Climate Change



Recommendations

Short Term Goals

- Bird and Bat house installation/maintenance
- Cedar tree management
- Continued garlic mustard pulling
- Stone wall vegetation clearing – Select areas
- Invasive Plant Management
- Mill Pond Area – continued restoration
- Updated field mowing regime

Recommendations

Long Term Goals

Resources:

- Field edge reclaiming
- Apple orchard planting
- Glossy buckthorn plan
- Invasive plant management
- Field restoration

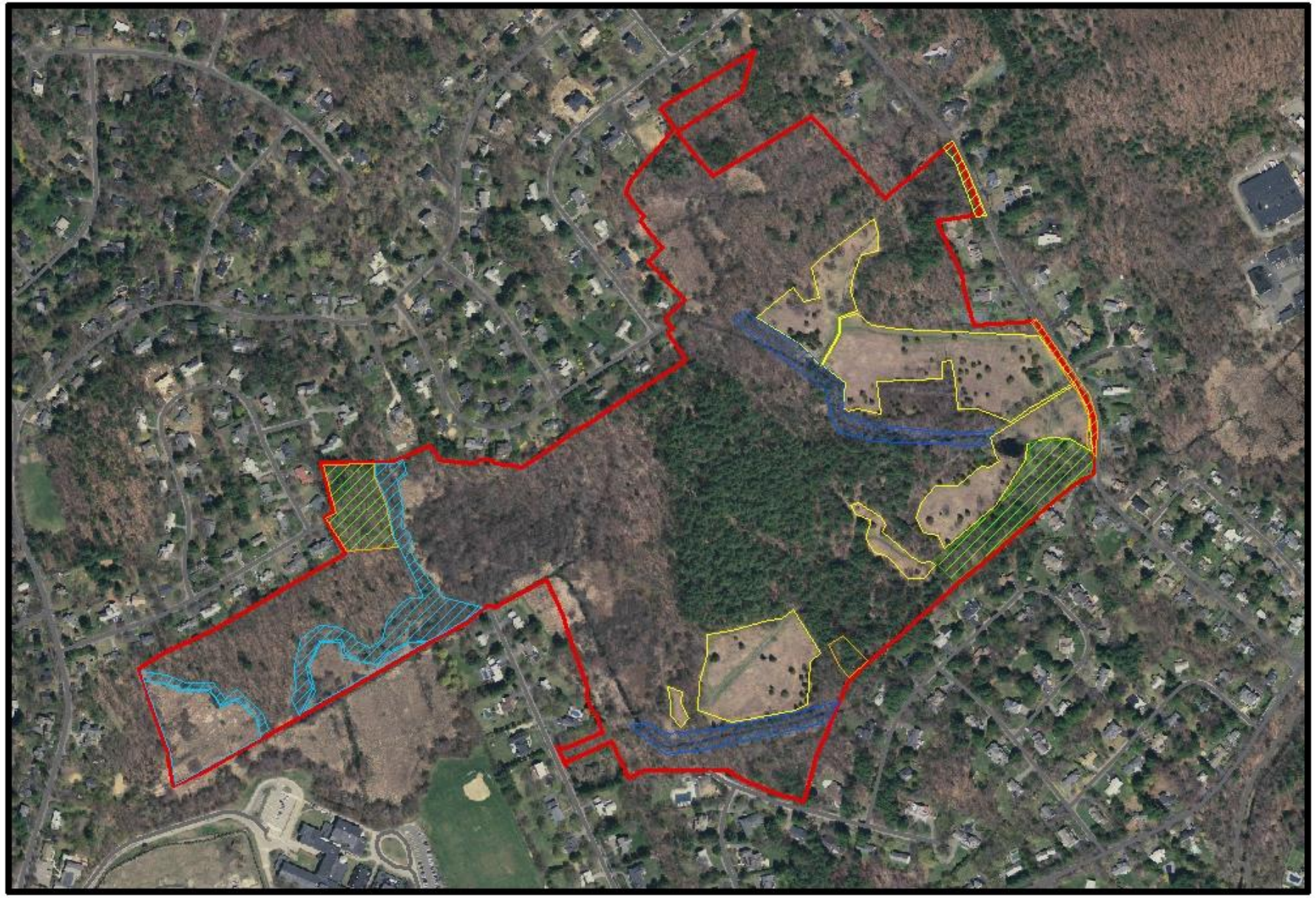
Infrastructure:

- Kiosk and sign revitalization
- Parking area improvements
- Trail repair and improvements
- Picnic area upgrades
- Universally Accessible Trail

Recommendations

Invasive Plant Management Priority Areas

- Safety Concerns
- Climbing bittersweet
- Potential Vernal Pools
- Wetlands & Buffers
- Early Action Populations
- Fields & Encroachment



Invasive Management Priority Areas

Town of Lexington
Willard's Woods
Lexington, MA
December 2019

Japanese knotweed
Roadside Invasive Plants
SW wetlands
SW wetland edges
Field/Field edges
Brook edges
Bittersweet/Euonymous
Mill pond woodland
Winged euonymous patch

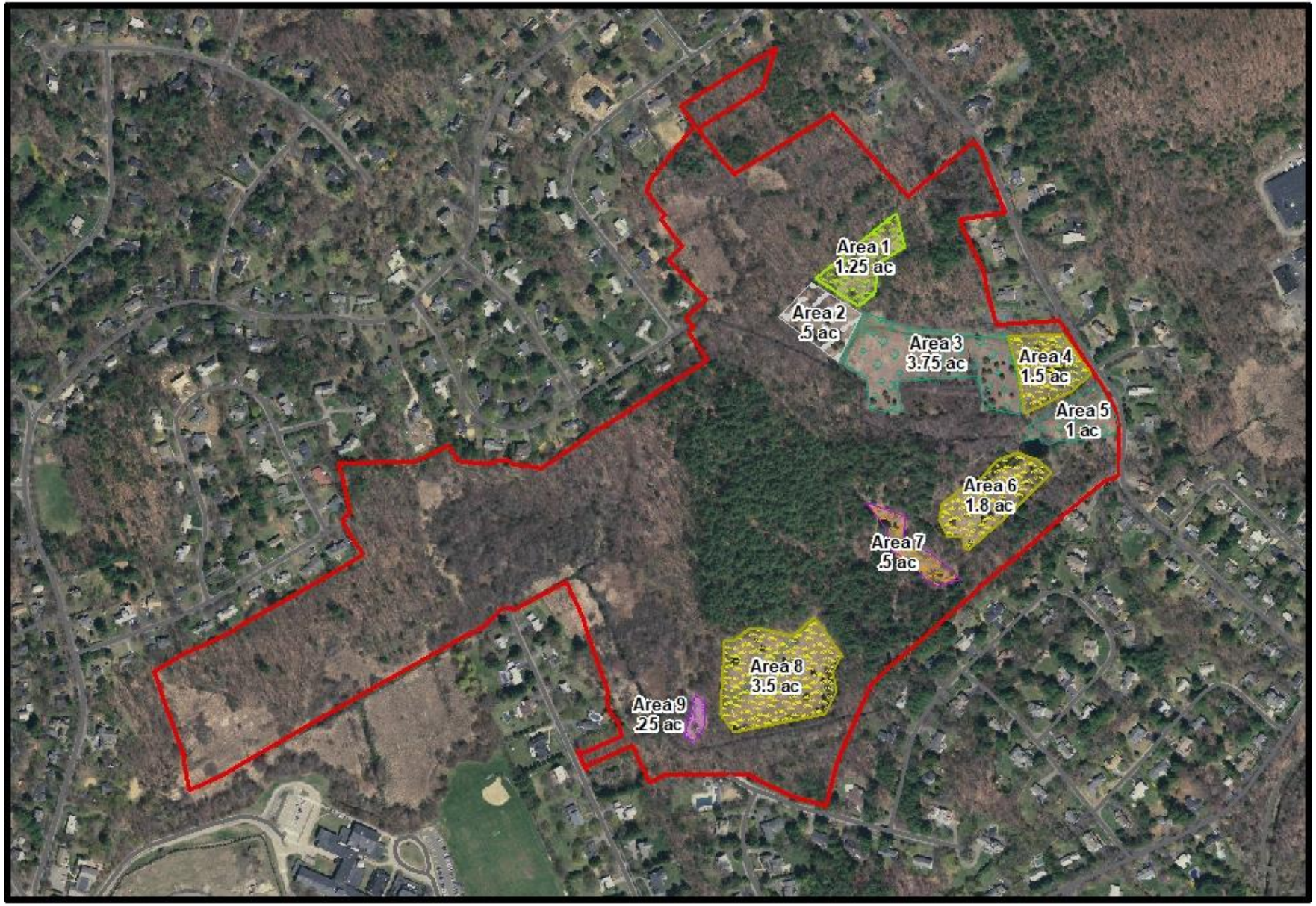
N

0 0.125 0.25 Miles

Map prepared by Jessica Applin,
Land Stewardship Inc.
December 2019

Recommendations

Field Restoration



Field Restoration

Town of Lexington
Willard's Woods
Lexington, MA
July 2020

Warm Season Grassland
Warm Season Grassland/Apple orchard
Warm Season Grassland/Sedge Meadow
Pollinator/Sedge Meadow
Native Meadow
Shrubland

0 0.125 0.25 Miles

Map prepared by Jessica Applin,
Land Stewardship Inc.
July 2020

Recommendations

Field Restoration

Shrubland (0.5-ac.)

Recommendations

Field Restoration

Warm Season Grassland

(7.3-ac.)

Warm Season Grassland Management

Recommendations

Field Restoration

Native Meadow (4.75-ac.)

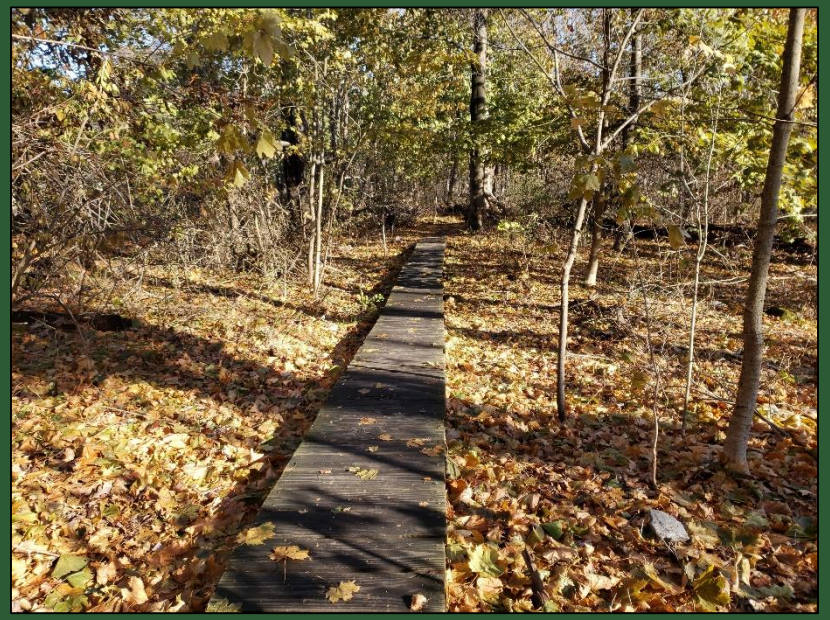
Recommendations

Field Restoration

Pollinator Meadow(0.25-ac.)

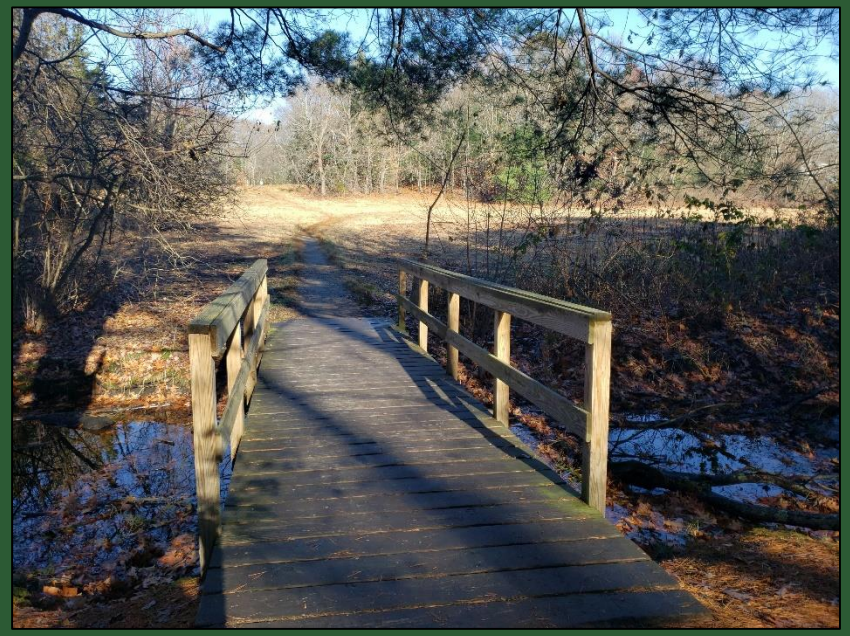
Grassroots Wildlife Conservation Program
http://www.grassrootswildlife.org/

Native Plant Trust
https://www.nativeplanttrust.org/



Recommendations

Infrastructure

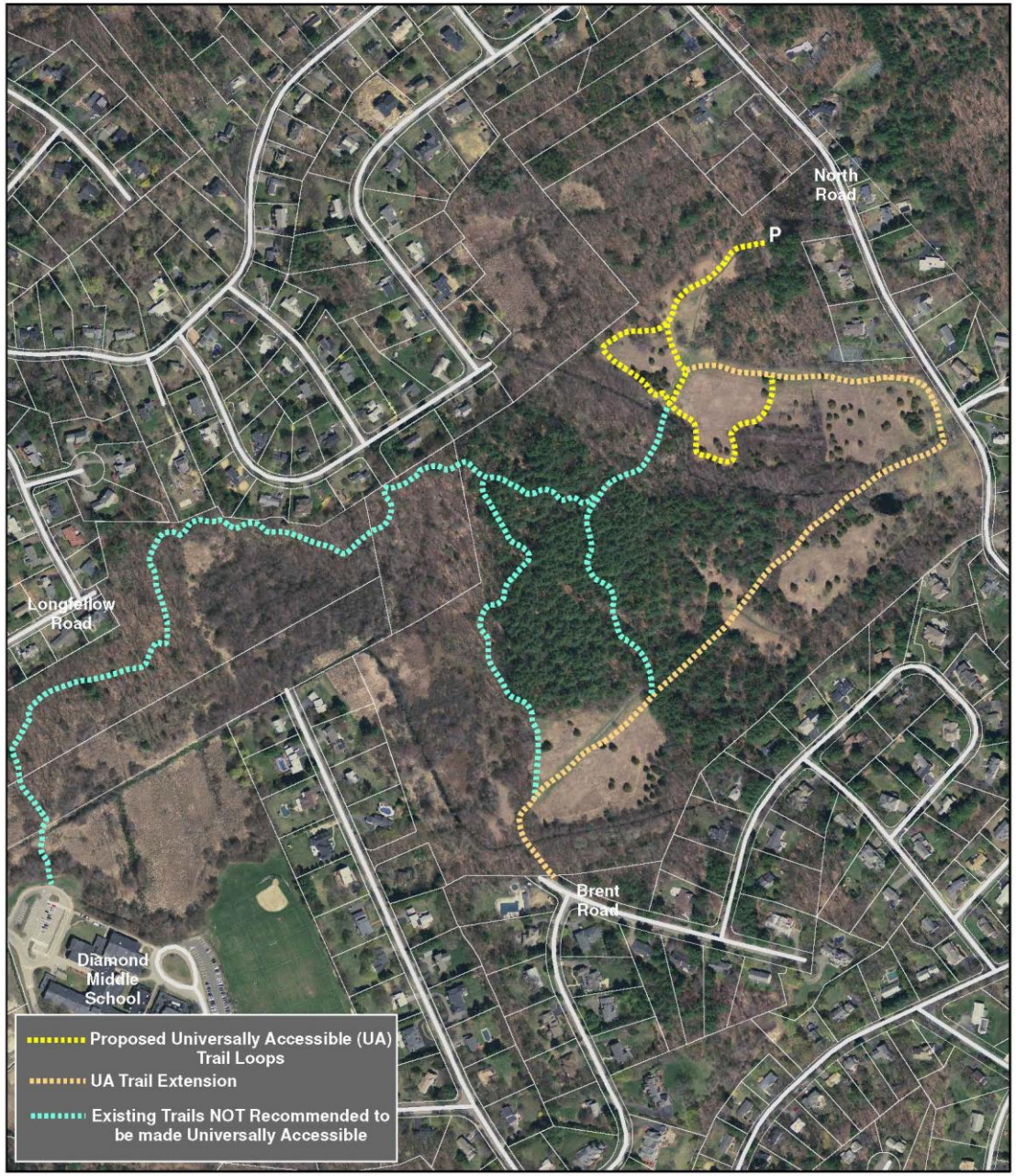


- Boardwalk upgrades
- Minor bridge upgrades
- Kiosk/signage revitalization
- Trail signage
- Bike path upgrade
- Wildlife interpretive signage
- North St. Parking lot & Brent Hill Rd. Trailhead upgrades

Recommendations

Infrastructure

Universally Accessible Trail



Willard Woods Trail Plan Map

0 125 250 500 750 1,000 Feet

Conservation Works - June 2021

Aerial Photo from MassGIS 2014

N W E S

In Conclusion

Willard's Woods already hosts an impressive diversity of natural communities and resources.

By paying attention to what these areas naturally want to be and considering the stressors that they face, we can improve and encourage their overall health, functionality and resiliency with as little impact as possible. This strategy is key for successful long-term management, especially when faced with an ever-changing climate.

The continued engagement and support from the public will go a long way in maintaining the overall health of this landscape and keeping the balance necessary to sustain it.

Thank you!