

# Bidwell House Museum Forest Stewardship and Trails

**Public  
Input Meeting  
Jan. 27, 2021**





# WELCOME

## Forest Stewardship and Trails Public Input Meeting

### Agenda

- Heather Kowalski: Welcome and Introductions
- Rob Hoogs: Forestry and Trail Overview
- Tom Ryan: Emerald Ash Borer impacts; why harvest?  
logging impacts; general forestry
- Peter Tucker and Adam Brown: Specifics of Museum's  
Forest Stewardship Plan; Forest Cutting Plan; how it  
meets owner objectives; work schedule
- Public Questions and Comments
- Rob Hoogs: Proposed New Trails
- Public Questions and Comments

*We would like your  
input about these  
projects to help us  
plan, and to minimize  
and mitigate adverse  
impacts*



# LAND ACKNOWLEDGEMENT

## from the Stockbridge-Munsee Community of the Mohican Tribe

*It is with gratitude and humility that we acknowledge that we are learning, speaking and gathering on the ancestral homelands of the Mohican people, who are the indigenous peoples of this land.*

*Despite tremendous hardship in being forced from here, today their community resides in Wisconsin and is known as the Stockbridge-Munsee Community.*

*We pay honor and respect to their ancestors past and present as we commit to building a more inclusive and equitable space for all.*



# PURPOSE

- **Two Projects Propose**
  - **Forestry – 2021-22**
  - **New Trails – 2021**

*We would like your input about these projects to help us plan, and to minimize and mitigate adverse impacts*





# FOREST STEWARDSHIP SHORT TERM

- INVASIVE EMERALD ASH BORERS
  - INFESTING THE FOREST
  - WILL RESULT IN TREES DYING OVER A PERIOD OF A FEW YEARS
  - HAZARDS FROM DEAD/DYING TREES FALLING ALONG TRAILS
  - MAINTENANCE OF TRAILS
  - HOPE TO SALVAGE VALUE OF TREES FOR LUMBER AND FIREWOOD





# FOREST CUTTING

## Emerald Ash Borer Issues

- Blowdowns - Safety - Maintenance



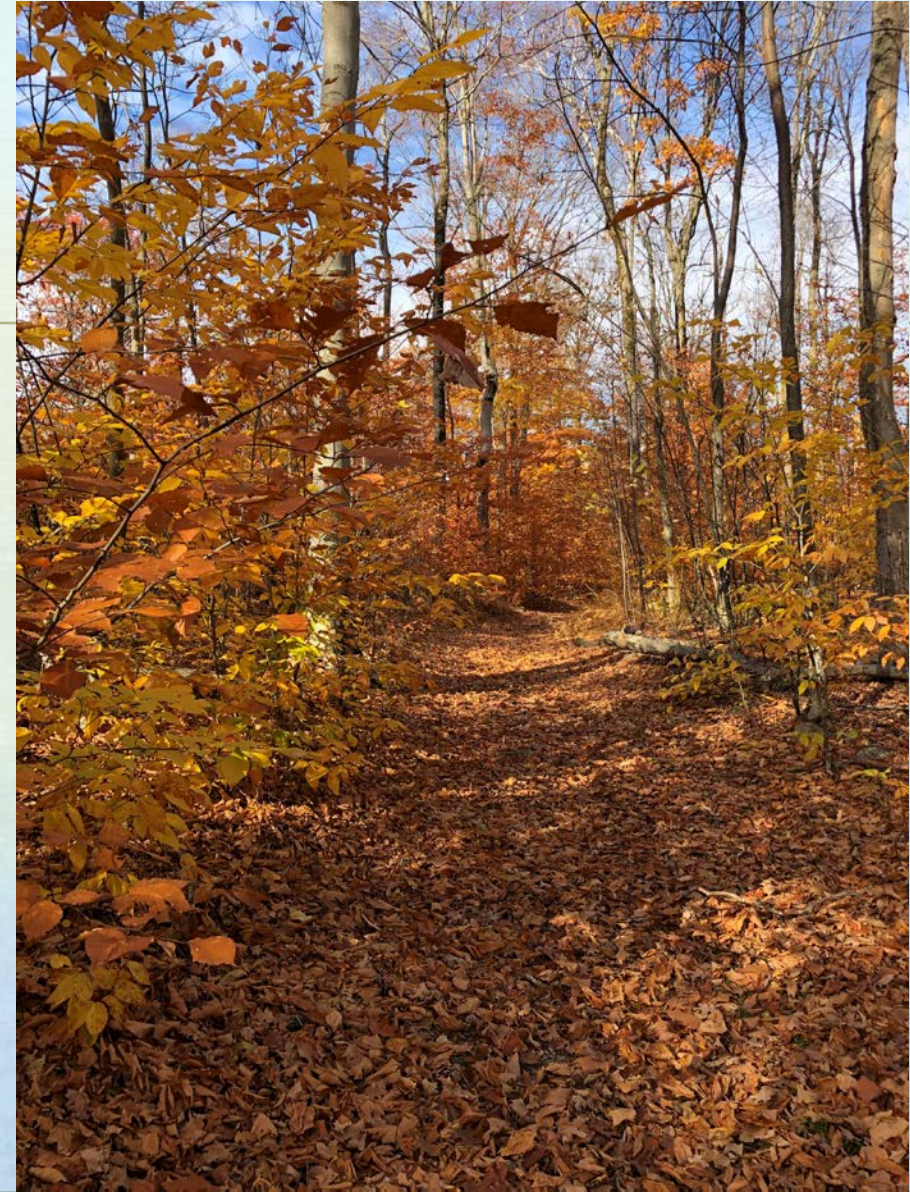
1/27/21



# FOREST CUTTING IMPACTS and MITIGATION



Slash from heavy cutting of diseased beech woods along Royal Hemlock Road in 2012



Regrowth of understory of woodlands along Royal Hemlock Road, in 2020



# FOREST CUTTING IMPACTS and MITIGATION



1/27/2021 Cutting near Saphouse in 2012 and regrowth in 2020



# FOREST CUTTING for BIRDS AND WILDLIFE

## Mass DCR “Foresters for the Birds” At the Bidwell House Museum

<https://storymaps.arcgis.com/stories/ba7bd9e3ad2a49f49b0671e22486edd1>

### Habitat Goals for the Bidwell House Museum grounds

The goals of forest harvesting on the Bidwell House Museum property over the years have included bird and wildlife habitat conservation, aesthetics along the trails (providing vistas for their visitors), and financial benefit (forest products have bolstered the museum's finances over the years).

In order to achieve these goals, silvicultural treatments have included commercial thinning (reducing the density of trees in the forest, which is beneficial to the remaining trees), individual tree selection, group selection (creating small canopy gaps of at least a quarter acre), and more. A stewardship and bird-friendly management plan was prepared in 2019. The stewardship plan includes measures to protect wetlands and cultural artifacts from damage due to harvesting activities.

The most recent harvest on the Bidwell House property was carried out in 2011. This harvest was planned to encourage regeneration of an increased diversity of shade intolerant tree species, including oak, cherry, and birch. Three stands were harvested using small group selection, and light thinning was used closer to trails. Both methods help move the forest towards an uneven age structure, so that a diversity of age classes and habitats will be present.

Thinning near the trails, as well as the removal of slash in those areas, was conducted in order to improve aesthetics. American beech, which is often in poor health due to Beech Bark Disease, and white ash, which is expected to be negatively affected by the Emerald Ash Borer in the near future, were favored for removal. Oak and sugar maple were preferentially retained as future crop and seed trees.





# FOREST CUTTING for BIRDS AND WILDLIFE

## Managing Forests for Trees and Birds in Massachusetts

A Guide to Habitat Assessments and  
Silvicultural Practices



1/27/2021

Mass DCR: <https://www.mass.gov/guides/foresters-for-the-birds-assessing-your-woods-for-bird-habitat#-other-requirements-and-toolkit->



# FOREST CUTTING for BIRDS AND WILDLIFE

## Understory Vegetation

For bird habitat purposes, understory is defined as live vegetation 0-5 feet high, including tree seedlings and saplings, shrubs, and herbaceous vegetation. High stem and foliage densities of woody plants in this layer provide nest sites, foraging substrates, and protective cover.

Some birds tend to associate with particular plant species. For example, Black-throated Blue Warblers are known to nest in dense clumps of hobblebush or mountain laurel (*Holway 1991*). However, in general the overall complexity of the understory vegetation plays a more important role than plant species composition (*Hagan and Meehan 2002*).

In many forests across the state, understory is thin or lacking, and enhancing this cover is often beneficial. Well-distributed patches of understory vegetation covering 50%-80% of the stand is desirable. Care should be taken to not disturb existing areas of thick understory, especially near wetlands including small wooded swamps or streams. Canada Warbler relies on nearly impenetrable understory and midstory near wooded streams or swamps. Disturbing that habitat can result in losing Canada Warbler from a site.

INCREASING HABITAT QUALITY



HIGH FUNCTION



LOW FUNCTION



# FOREST CUTTING for BIRDS AND WILDLIFE



Black-throated Green Warbler with nesting material

1/27/2021

## MANAGEMENT OPTION I.

### Low-Intensity Harvest

A low-intensity harvest maintains a closed-canopied forest (>80%) while enhancing timber quality of existing stems. Understory and midstory layers may also be enhanced, favoring shade-tolerant tree species and understory plants. These types of harvests are meant to mimic small and infrequent natural disturbances, like wind-throw or ice storm damage, which create small scattered gaps in the canopy and increase growing space for residual crowns. Natural events would create snags and woody material, so these are appropriate considerations during harvest as well.

The decision to conduct a low-intensity harvest may represent a balance between managing for timber and mature forest habitat. Periodic harvests may occur while maintaining and gradually enhancing the habitat quality. These types of treatments favor birds that require mature, closed-canopied forests for breeding, such as Black-throated Green Warbler, Eastern Wood-pewee and Wood Thrush. Other important elements to consider are understory and midstory layers, snags, woody debris, and the softwood component.

### Attribute Enhancement

- Locate gaps to release advance regeneration, remove clusters of high-risk, low-vigor, or low-value trees, and avoid sensitive sites
- Expand crop tree definition to include:
  - Tree species with special bird value (e.g., yellow birch and soft mast)
  - Trees with novel features (e.g., cavities or large crowns for perching)
  - Underrepresented species (e.g., soft mast producers, softwood inclusions)
- Maintain or enhance an understory tree and shrub component for forage and cover (e.g., striped maple, hophornbeam, mountain laurel, hobblebush)
- Retain cavity and den trees

### Compatible Silvicultural Treatments

- Small Group (<0.3 ac) and Single Tree Selection
- Shelterwood with Reserves
- Variable Retention Thinning
- Patch Selection



# FOREST CUTTING for BIRDS AND WILDLIFE



Eastern Wood-pewees flit out into canopy gaps when hunting for flying insects

## MANAGEMENT OPTION 2.

### Moderate Intensity Harvest

When managing for birds, the moderate-intensity harvest category encompasses a broad range of silvicultural practices, all of which generally involve a regeneration event and a deliberate canopy retention somewhere between 30%-80%. Specific retention and regeneration systems will vary based on timber quality, markets, overstory species, regeneration target species, and myriad other factors. In terms of bird habitat, what these treatments all share is a marked increase in understory vegetation and widespread creation of gaps and openings of various sizes. This type of harvest may mimic a range of natural events to which birds have adapted, including widespread tree mortality due to pests or pathogens, which would create a significant number of snags and woody debris over time.

Depending on canopy retention and opening sizes, these types of treatments will benefit different birds. At the higher end of canopy retention, benefits may be kept intact for birds requiring closed-canopy forests for breeding, such as Black-Throated Green Warbler and Wood Thrush, and may in fact create optimal habitat for gap feeders like Eastern Wood-pewee. At the lower end of canopy retention, or with removals focused in larger groups or patches, young forest-obligates like Chestnut-sided Warbler will likely start to appear.

### Attribute Enhancement

- Locate gaps and patches to release advance regeneration, remove clusters of high-risk, low-vigor, or low-value trees, and avoid sensitive sites
- Expand crop tree definition to include:
  - Tree species with special bird value (e.g., yellow birch and soft mast)
  - Trees with novel features (e.g., cavities or large crowns for perching)
  - Underrepresented species (e.g., soft mast producers, softwood inclusions)
- Maintain an understory tree and shrub component for forage and cover (e.g., striped maple, hophornbeam, mountain laurel, hobblebush)
- Retain cavity and den trees

### Compatible Silvicultural Treatments

- Small Group (<0.3 ac) Selection
- Shelterwood with Reserves
- Expanding Gap Shelterwood
- Patch Selection



# FOREST CUTTING for BIRDS AND WILDLIFE



Clearcut 1 year post cut. What initially appears extreme will become great habitat for early successional bird species as the understory regenerates.

Either a lack of young forest habitat on the landscape, or the lack of an alternative management option for a degraded stand, may lead to the decision to conduct a high-intensity harvest. This treatment is designed to create a large area of young forest, reducing the canopy cover to 0%-30%. This option approximates stand-replacing natural events like tornadoes and forest fires, and it also replicates a historically widespread cutting practice that benefited a suite of birds that are now categorically in decline.

## Size and Shape

- An area of 2.5 acres is a minimum to be of high value for early successional birds
- Larger areas are even better, upwards of 25 acres or more
- Minimize the amount of edge relative to area. Circles are best; squares are better than long, thin strips



# FOREST STEWARDSHIP

- **Longer Term Goals:**
  - **Sustainable Forestry**
  - **Provide habitat for birds and wildlife**
  - **Nature study**
  - **Enhance selected vistas**
  - **Reclaim some historical agricultural lands including old orchard**

1/27/2021



## Woodland Enhancement Plan DCR Working Forest Initiative



For property belonging to  
Bidwell House Museum  
100 Art School Road  
Monterey, MA

Prepared June 2019 by:  
Peter W. Tucker, Consulting Forester  
90 West Road, Alford, MA 01266

Assisted by Adam Brown

The full report is available for viewing at  
[www.bidwellhousemuseum.org/forestry-at-the-bidwell-house-museum/](http://www.bidwellhousemuseum.org/forestry-at-the-bidwell-house-museum/)



# FOREST STEWARDSHIP

## Inventory of Existing Woodlands



Adam Brown with 9" d., diseased American Chestnut

1/27/2021



# FOREST STEWARDSHIP

## Inventory of Existing Woodlands



Porcupine den in  
hollow sugar maple



Beech chewed by porcupine

1/27/2021



# FOREST STEWARDSHIP

## Inventory of Existing Woodlands



Ruffed Grouse  
scat

1/27/2021

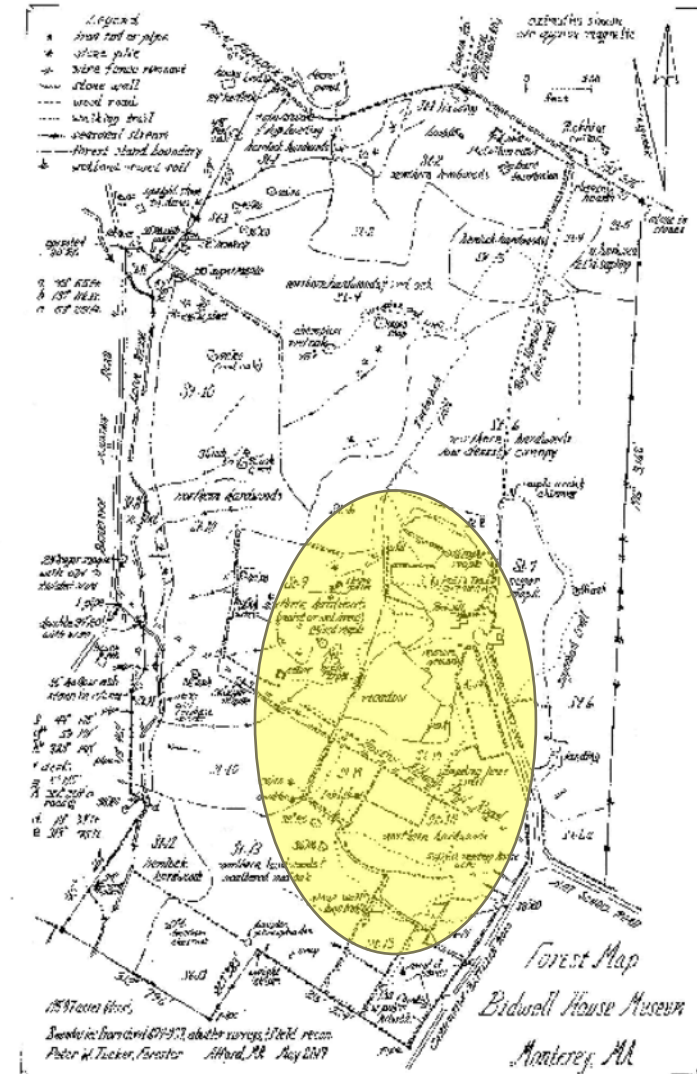


Champion Red Oak (about 4 feet diameter)



# FOREST STEWARDSHIP SHORT TERM

- HARVEST ASH TREES IN LIMITED LOCATIONS
- STANDS 13 AND 14
- NEAR EXISTING TRAILS:
  - MEETING HOUSE TRAIL, POST ROAD, CAIRN/CELLAR HOLE, STONE WALL LOOP, NORTH FIELD, ROYAL HEMLOCK







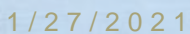
- 2019 Forest Stewardship Map
- **Stand 14 has highest density of Ash Trees**
- Some Ash in Stand 13 and Stand 8





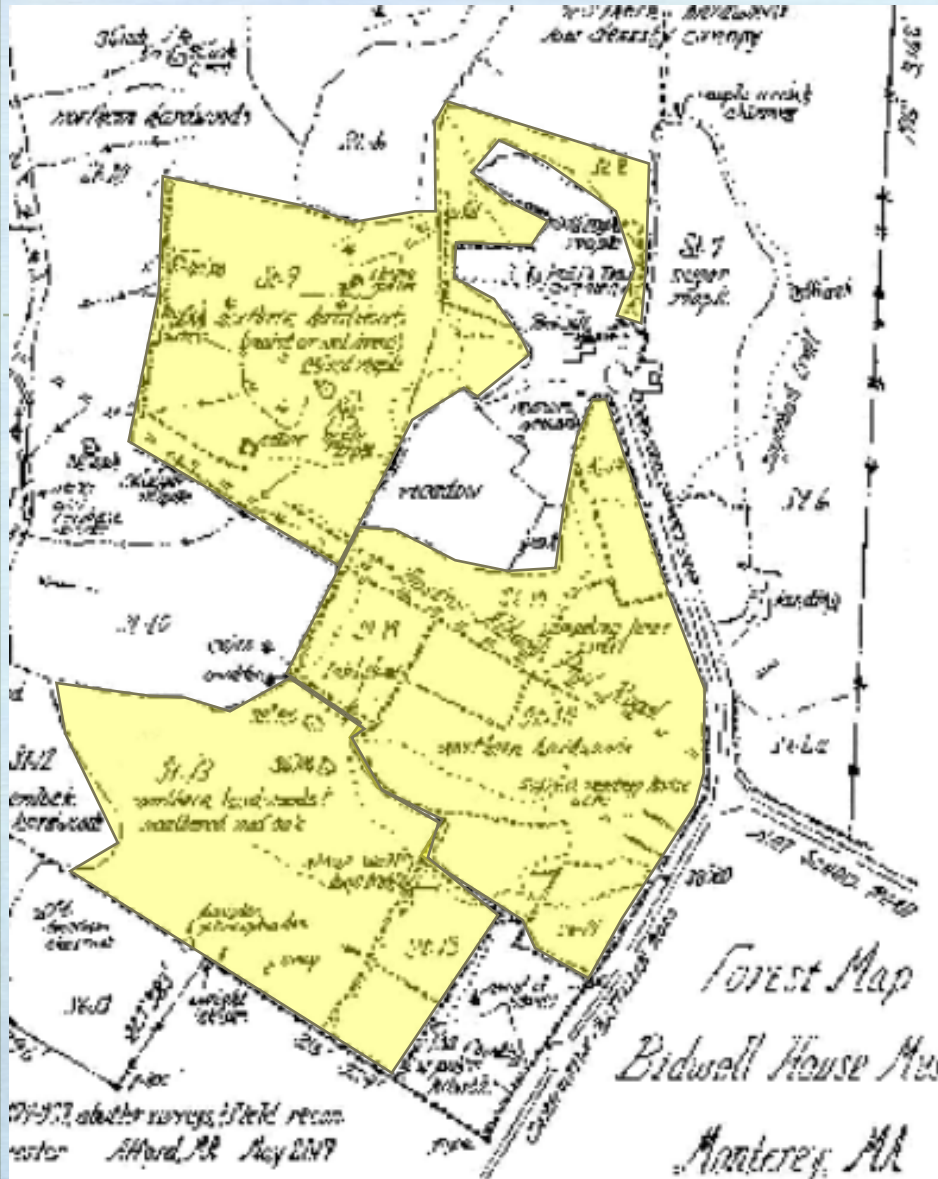
- 2019 Forest Stewardship Map
- Stand 14 has highest density of Ash Trees
- **Some Ash in Stands, 8, 9 and 13**





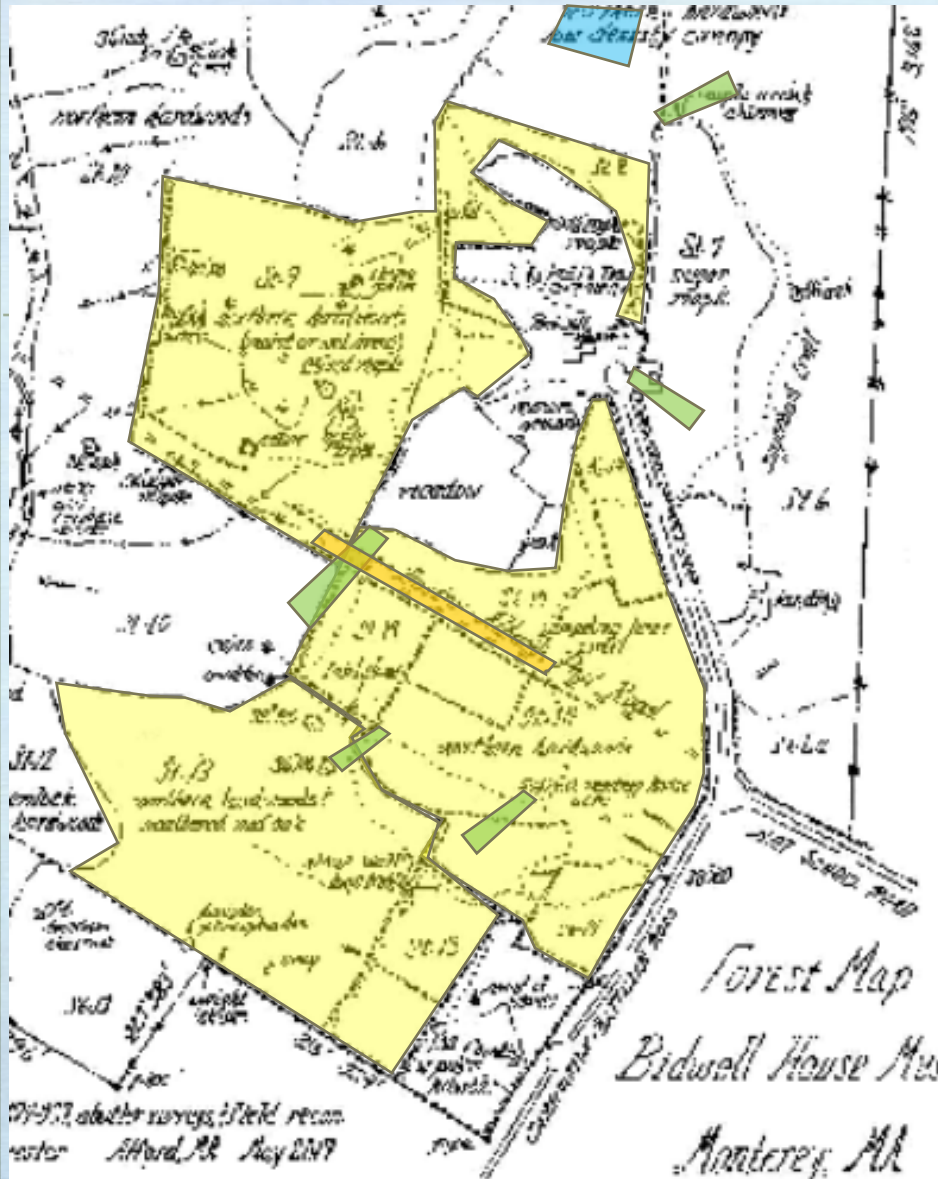
- Many of museum's trails are within or close to these areas:
  - Meeting House, Post Road, Cairn, Cellar Hole, Stone Wall, Turkeybush, Royal Hemlock, North Field





- Final Decision about which areas to harvest and how intensively will be made after a detailed “cruise”
- Some other trees may also be harvested within the designated areas





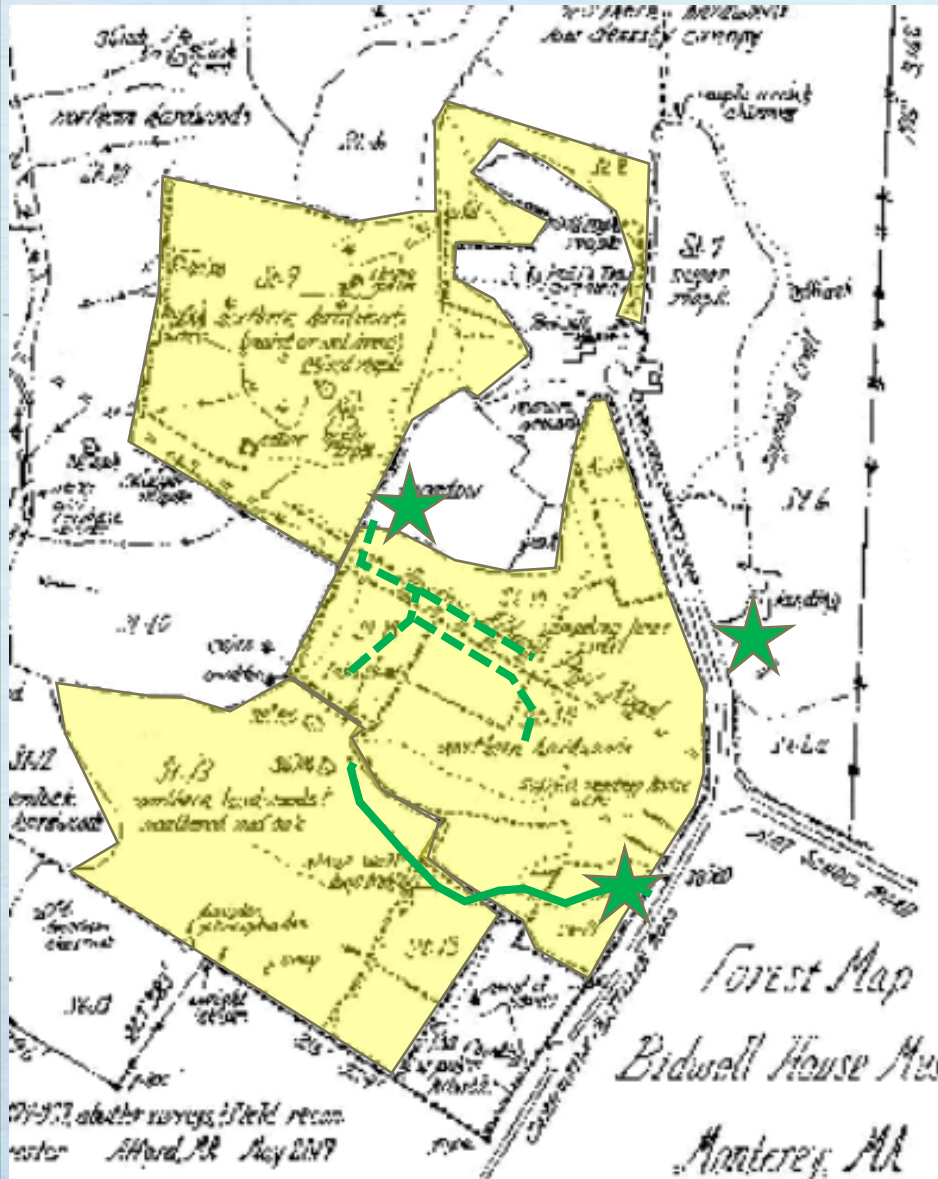
- **SCOPE**
- Harvest primarily Ash
- Include some nearby trees that might otherwise be damaged by the work
- Possibly include selective clearing of a few areas for Bird and Wildlife Habitats
- Vista corridors
- Post Road





- **SCHEDULE**
- Most Likely during Dry Months
- Depends on Market Conditions and Availability of Loggers
- Earliest possible Fall 2021
- More likely Summer-Fall 2022?
- Only a few months actual work





## • OPERATIONAL ISSUES

- Skidder trails - existing for most part —  
- follow Old Post Road for new --
- Logging Landings — use existing★
- Cleanup
  - Cut slash and coarse woody debris close to ground for wildlife and bird habitat



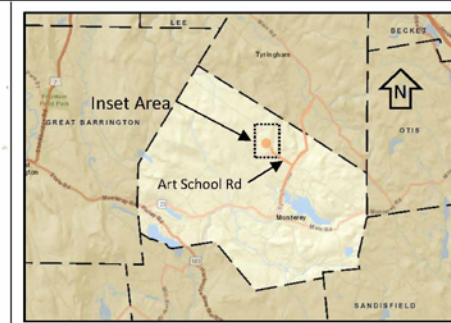
## **PUBLIC INPUT ABOUT FOREST STEWARDSHIP QUESTIONS, COMMENTS, SUGGESTIONS:**

- 
- 
- 
- 
- 
- 

**Please send any additional comments to [bidwellhouse@gmail.com](mailto:bidwellhouse@gmail.com)**



# EXISTING TRAILS



## LEGEND

- Hiking Trail
- Cross Country Skiing
- Stone Wall
- Property Boundary
- Interpretive Exhibit

## THE BIDWELL HOUSE MUSEUM TRAIL MAP

## TRAIL KEY

1. Meeting House Trail - 3/4 Mile Loop
2. Stone Wall Loop Trail - 3/4 Mile Loop
- 2A. Stone Wall-Meeting House Connector - 200 yds
3. Cairn Trail - 50 Yards Side Trail
4. Cellar Hole Trail - 200 Yard Side Trail
5. Barn Loop - 200 Yard Loop
- 5A. Three Wives - Barn Loop Connector - 1/10 Mi
6. Royal Hemlock Trail - 1/2 Mile one way
7. Turkeybush Trail - 1/2 Mile one way
- 7A. North Field - Turkeybush Connector - 2/10 Mile
8. Champion Oak Trail - 2/10 Mile out and back
9. Sugarbush Loop Trail - 1/4 Mile
10. McCollum Trail - 1/10 Mile to Royal Hemlock Loop
11. Charcoal Hearth Trail - 200 Yds to Royal Hemlock
12. Native American Interpretive Exhibits - 200 Yds



30th Anniversary

100 Art School Road, Monterey MA 01245  
413-528-6888 [www.bidwellhousemuseum.org](http://www.bidwellhousemuseum.org)

Rev. April 2020







## PROPOSED TRAILS

- Generally 2 ½' to 3' Wide – for walkers, snow shoeing, etc
- Champion Oak Extension follows existing wider woods road
- Small swales crossed by step stones, “bog bridges” or footbridges
- Open to public for free year round, daylight hours
- No living trees cut >4” diameter





# PROPOSED TRAILS

- Subject to Permitting by Conservation Commission
  - (Wetlands and Scenic Mountains)
- All direct abutters and nearby neighbors have been contacted
- Schedule:
  - Greenagers will construct trails starting about May, complete late summer or early fall





## PUBLIC INPUT ABOUT TRAILS

### QUESTIONS, COMMENTS, SUGGESTIONS:

- 
- 
- 
- 
- 
- 

Please send any additional comments to [bidwellhouse@gmail.com](mailto:bidwellhouse@gmail.com)





*Thank you for your interest and input!*