DCR-BOFF Forest Management Proposal

Project Name: Borrow Pit Project
Property Name: October Mountain State Forest
Acres: 70.5
Forestry District: Central Berkshire
Forester: Kristopher Massini
Date Proposed: 02/21/2025

Town(s): Washington
Landscape Designation: Woodland
Rec Complex/District: Lakes District
FOTL/F&P Supervisor: C. Hajjar / M. Roche

GENERAL PROJECT DESCRIPTION

Acres	Overstory Forest Type	Understory Forest Type	Stand Description
23.3	Norway Spruce	Duff / patches of advanced regeneration	There are two Norway spruce plantations within the project area, 20 acres and 4 acres. Both were planted in 1924 and received release treatments in 1962. Currently both plantations are stagnated and failing due to overcrowding and stress from armillaria root rot. The understory varies from a deep duff layer to mixed hardwood. .
25.6	Northern Hardwoods	Northern Hardwoods	Several small stands make up this forest type. The overstory consists of red and sugar maple, black cherry, white ash, and yellow birch with understory of dense serviceberry in some locations.
21.6 (only invasive management and erosion control)	Borrow Pit and Parking Lot	Invasive Species	This is a disturbed area resulting from the construction of the Schoolhouse Reservoir and October Mountain Reservoir. The vegetation varies from planted and volunteer conifers, open gravel pit, willow/alder shrub, and dense phragmites with other invasives present.

Project Summary, Goals and Objectives:

Summary:
When implemented, this proposal will be completed in one management entry. The 70.5-acre project area will result in 49 acres of harvesting and approximately 22 acres of invasive control. The result will be the conversion of exotic Norway spruce plantations to a more natural mixture of native northern hardwoods mixed with lesser amounts white pine, red spruce and Norway spruce. The associated northern hardwood stands will be managed for a diversity of habitat goals such as promoting serviceberry, soft mast trees, and native soft woods. Within the borrow pits and landing/parking area there will be efforts to suppress invasive species during the regeneration process to prevent their proliferation and spread into forested areas. It is anticipated that some erosion control work will be complete in these areas as well.

Goals:
Improve Forest Resilience
Reduce Exotic and/or Invasive Vegetation
Improve Biological and Structural Complexity/Diversity
Improve erosion issues within borrow pits

Objectives:
Silviculture will focus on techniques that will release the existing regeneration in the understory and create conditions for additional desired regeneration. Retain native softwoods throughout project area and existing desirable hardwood species in the plantations.

MASSACHUSETTS FOREST ACTION PLAN GOALS

The goals listed below are sourced from *DCR (Department of Conservation and Recreation) Bureau of Forest Fire Control and Forestry. 2020.* ***MASSACHUSETTS STATE FOREST ACTION PLAN 2020***

- **Increase resistance and resilience of trees and forests to mitigate and adapt to the effects of climate change**
- **Manage forest ecosystem health and biodiversity**
- **Support and enhance forest economy**

CLIMATE CHANGE ADAPTATION STRATEGIES AND APPROACHES

The strategies and approaches listed below are sourced from the Response to the Report of the Climate Change Committee, 2024 and the Report of the Climate Forestry Committee: Recommendations for Climate-Oriented Forest Management Guidelines, 2024.

- **1: Sustain fundamental ecological functions.**
- **2: Reduce the impact of biological stressors.**
- **5: Maintain and enhance species and structural diversity.**
- **10: Realign ecosystems after disturbance.**

CLIMATE ADAPTATION

Action Type	Identified Issue	Action Description
Resilience	Convert Norway spruce plantation to native forest type	The removal of the overstory in plantations of Norway Spruce
Resilience	Control of Invasive species	Treat invasive species along the roadside and within cleared areas (borrow pit and parking lot) to prevent them from spreading into interior forested areas.

Adaptive Management Strategies: This project will begin the conversion of the Norway Spruce plantations to mixed northern hardwood/spruce forest type. Norway spruce is an exotic species, that is being treated to establish additional native seedlings to join advanced regeneration in the understory. This will form the species composition for the next, more diverse and resilient forest. This practice will also improve the diversity of age classes and improve physical complexity in the overall forested landscape of October Mountain.

An investment in the treatment of invasive species during the critical time of regeneration, procurement and release will give the native tree seedlings a chance to become established without the threat of being overtaken by invasive species.

CLIMATE CHANGE CONSIDERATIONS

The Department of Conservation and Recreation, Division of State Parks and Recreation has determined that the decision to implement this project is consistent with EEA climate goals and guidelines and agency land management objectives.

Activities proposed	Carbon and climate change considerations
Full overstory removal, complete stand, plantation conversion to native species. Examples: Partial plantation removal (strips, patches) to stimulate regeneration, followed by removal of remainder of plantation.	Long considered a critical practice on agency lands to improve biodiversity and forest resilience, the **conversion of single-species conifer plantations** to more diverse mixes of native species has also been encouraged as a climate-smart practice by Northern Institute of Applied Climate Science (NIACS) and other climate adaptation

As discussed in Forest Health / Invasive Species section on page 5-6 and Silviculture section on Page 6-7	experts. Tree monocultures, intensively managed throughout the world to produce much of the wood we all use, are **highly vulnerable** to the kinds of **pest and disease** impacts that are likely to worsen as climate changes. Conversion of monoculture plantations aligns with many climate-smart forestry practices highlighted in the CFC report, including but not limited to: • Improving **resistance to pests and pathogens**. • Increasing resiliency by promoting **diversity of plant species**. • Providing age class/**structural diversity**. • Improving conditions for a wide variety of local wildlife through the creation of temporary **young forest** habitat. • Promoting **future-adapted tree species** in the regeneration mix.
Invasive plant control, including pre- and/or post-harvest and follow up treatments. Example: The manual, mechanical, or chemical treatment of non-native, invasive, or interfering plants prior to or following a forestry operation. As discussed in Silviculture section on Page 6-7	Strong consensus exists among land managers and climate science experts regarding the **threat to future forest health** posed by the introduction and spread of invasive plants. **Invasive plants** can: • aggressively **outcompete native plant species,** • dominate understory communities, and even climb, kill, and topple mature trees, • threaten overall **biodiversity**. • threaten **soil health** and long-term **carbon storage**. **Monitoring and controlling** invasive and interfering plant populations prior to and following forestry operations is a critical practice for **minimizing the risk of further impacts** inadvertently (though not unexpectedly) spread by harvesting-related activities.
Diffuse overstory removal, partial cut, mid-rotation thinning. As discussed in Wildlife Specific Management section on page 5 and Silviculture section on Page 6-7	Classic thinnings are partial cuts implemented during the 'middle years' of stand development ('intermediate treatments') to **adjust species composition**, shift growth towards desirable and more vigorous trees, and maintain desired density and stocking levels. Stands may be thinned multiple times prior to initiating the regeneration phase near the end of a planned rotation. Time intervals between thinnings are generally considerations between rotation lengths and the response of the trees on the site. Climate-smart practices that agency foresters keep in mind when conducting thinnings include:

	• **Retaining higher residual densities** that maintain higher levels of carbon stocks on the landscape. • Retaining better-formed and more vigorous individuals which will improve **carbon sequestration capacity**. • Taking the opportunity to favor **desired species**, especially those species that are better adapted to **future climate scenarios**.

SOILS AND TOPOGRAPHIC FEATURES

Acres	Soil Type	Drainage Characteristic
61 acres (51/20)	PmC (905C) PoB (922B)	These types may be considered the same for forestry use. The soils are loamy, moderately deep, well drained, considered moderate to excellent for forest growth, low risk for erosion, and have few equipment limitations. (Excerpts from "Soil Survey of Hampden County Massachusetts", NRCS 1995 & "Soil Survey of Berkshire County Massachusetts", NRCS 1988)

Average Slope Percent: 0-5%
General Aspect: Varied
Terrain Consistency: Constant
Terrain Position: Flatland

Description of Soils and Topographic Features: This portion of the forest is generally flat with little change in slope or aspect. The October Mountain Reservoir, which includes the Day Use Area, borders the project area to the north and the School House Reservoir is located to the Southeast beyond the project area. There is approximately 30+ acres of disturbed land including two borrow pits and landing/parking area which were used as fill and staging areas for Dam construction.

WETLAND FEATURES

	Present	Crossing	Work within Filter/Buffer
Wetlands:	Yes	No	No
Regulated Streams:	Possible	No	Possible
Non-Regulated Streams:	Yes	No	Possible
Vernal Pools:	Possible	N/A	No
Seeps:	Possible	No	No

Description of Wetland Features: There are no known water features within the treated stands, however there are several features within the borrow pits created by illegal ORV use that will need to be addressed for remediation. There will be a buffer along October Mountain Reservoir.

CULTURAL RESOURCES

	Present	At Risk	Work Within Buffer
Stone Walls:	Yes	No	Yes
Foundation / Cellar Hole:	Yes	Yes	Yes
Well:	Possible	No	Yes
Structures:	No	N/A	N/A
Cemetery:	No	N/A	N/A
Other: N/A	No	N/A	N/A

Description of Cultural Resources: There are two known foundation sites within the project area, Norway spruce and other trees which pose a threat to these structures will be removed. Care will be taken by the operator to remove designated trees without causing ground disturbance. Stone walls will be avoided by equipment.

NATURAL HERITAGE / WILDLIFE-HABITAT MANAGEMENT / OTHER RESOURCES

Natural Heritage Polygon: Yes
Natural Heritage Restrictions: Possible
Restrictions on Harvest Description: Anticipated restriction of harvesting certain species within northern hardwood stands. Further consultation with the Division regarding quantities proposed for harvest may be required.

Wildlife Specific Management: Yes
Targeted Species: Serviceberry
Goals: There are several areas within the northern hardwood stands with high percentages of serviceberry. One goal in these stands will be to promote this species, which due to the forest age, has started to succumb to being overtopped by taller, more dominant species. Due to their early spring bloom, they are an important food source for bees, butterflies, and other pollinators while also serving as a larval host to several butterflies. Through the remainder of the year numerous birds and mammals rely on the fruit.

Additional Habitat Management: Yes
Habitat Type: Cleared Areas (borrow pit and Parking area)
Goal: Treat invasive species and repair ORV damage.

State Forest Action Plan: Yes
ACEC: No
BIO Map2: Yes
State Wildlife Action Plan: Yes
Public Water Supply: Yes
Current Resource Management Plan: No
Additional Detail: **Click or tap here to enter text.**

FOREST HEALTH / INVASIVE SPECIES

Forest Health Concern: Yes
Species Affected: Norway spruce
Management Considerations: The Norway spruce is experiencing Armillaria (root rot) and is in a state of decline.

Plant Invasive Species Present: Yes
Species Present: Japanese barberry, oriental bittersweet, multiflora rose, autumn olive, and garlic mustard, and others
Management Considerations: Will treat as much of the roadside, borrow pit areas, and landing/parking area as possible to prevent further expansion of invasive species into the forested areas.

Insect Invasive Species Present: Yes
Species Present: Emeral Ash Borer, Beech Bark Disease, Beech Leaf Disease
Management Considerations: White ash within the project area are succumbing to emerald ash borer. American beech has been suffering from beech back disease and has recently been affected by beech leaf disease.

INFRASTRUCTURE / RECREATION/ AESTHETICS

Access Road: County Road
Ownership: Town of Washington
Condition: Fair
Road Repair/Upgrade: Yes
Existing Landing: Yes
Landing Repair/Upgrade: No
Project Access and Landing Site: County Road has been the access for many projects over the last 20 years. This landing was last used for forestry purposes during the winter of 2015-2016. Coordination with park staff will minimize impacts with recreation.

Existing Skid Trail Network: Possible
Pre-Harvest Repair/Upgrade: No
Skid Trail Network Description: Use and restoration of illegal trails will occur during this project where appropriate. Additional trails will be added as needed, however due to the small size of the project area no permanent trails will be created. Coordination with Park Operations will determine which existing trails and access points to close and restore.

Shared Infrastructure: Yes
Road/Trail Names: October Mountain Reservoir Access Road and the School House Road Parking Area
Management Considerations: No recreational conflict is anticipated.

Infrastructure Present

Infrastructure	Present	Condition
Official Trail	Yes	School House Road/Trail
Illegal Trail	Yes	ATV, ORV, Truck Trails in Borrow Pit
Existing Trail Head	Yes	School House Parking Area
Recreation Facility	No	N/A

Recreation and Aesthetic Concerns/Opportunities: No recreational conflict is anticipated.

SILVICULTURE

Acres	Silviculture Type	Silviculture Description
23.3	Seed Tree	Beginning the transition from a Norway spruce plantation to native hardwoods mixed with Norway spruce, red spruce and white pine. Most Norway spruce will be harvested leaving behind mature seed trees of white pine, sugar maple, yellow birch and black cherry which occur in the stand. This will release the existing advanced regeneration and promote the establishment of seedlings in the remaining area. The harvest will be timed to occur during dry and snow free

		conditions to accomplish enough disturbance to the forest floor to create a desirable seed bed.
25.6	Irregular shelterwood with small gaps (1/3 acre)	These stands will be treated using an irregular shelterwood method, maintaining softwood species and serviceberry in the overstory to promote their retention and regeneration. 1/3-acre gaps will be used near groups of existing desired advanced regeneration. Generally, between 20% and 80% of the volume within each stand will be harvested based on species composition. Generally lower volumes will be removed in areas dominated by shade-tolerant hardwoods such as sugar maple and yellow birch. Higher volumes will be removed in portions of the treatment area dominated by shade-intolerant hardwoods such as black cherry and white birch. Due to the mosaic patchwork of species distribution portions of this project area may not be treated.

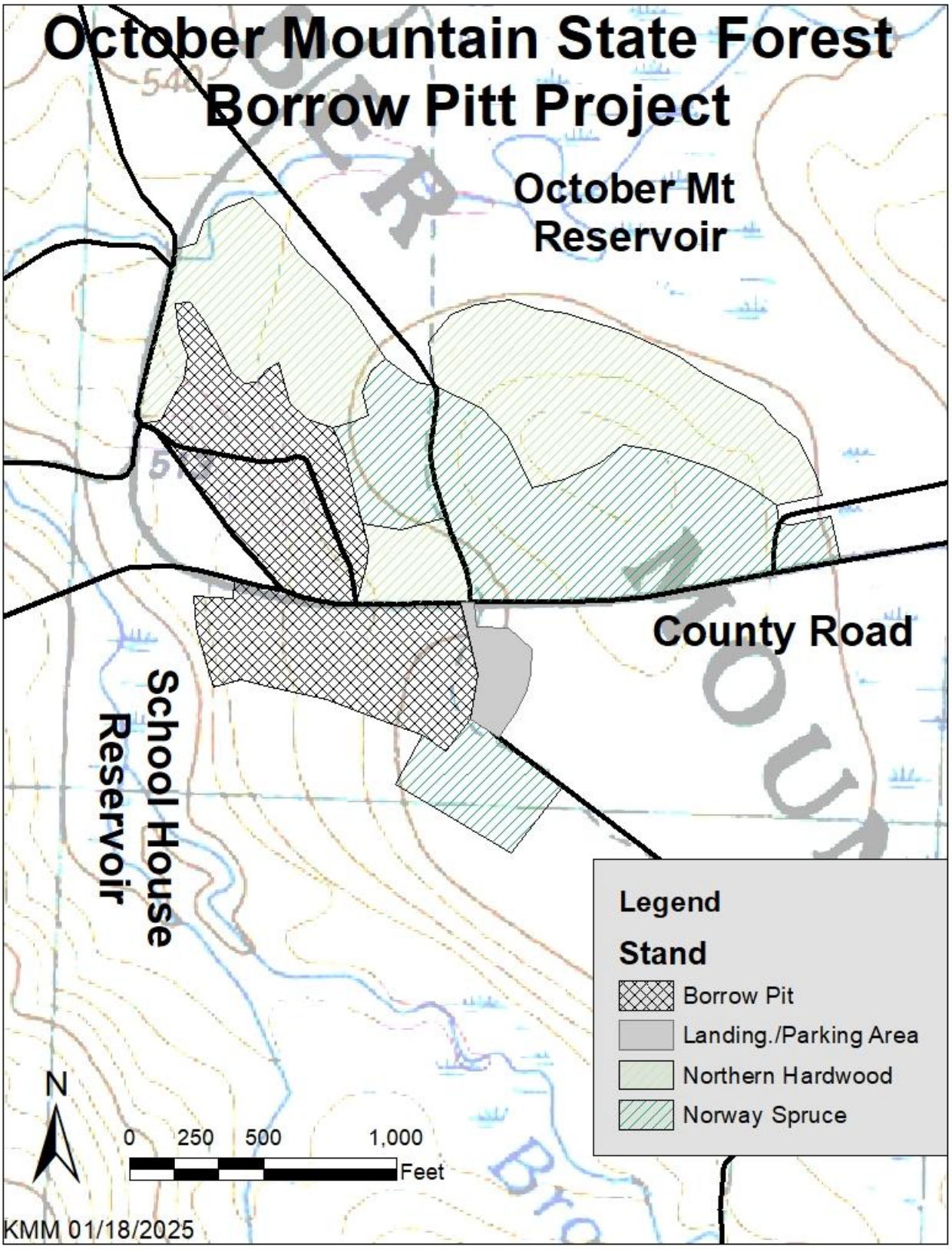
General Comments on Silviculture Proposed: For added wildlife value hardwood trees to be retained will be prioritized for mast production capacity (e.g., large crowned, wind-firm oak, cherry, hickory, and/or non-diseased beech trees, and potential den trees. Efforts to maintain white ash will focus on retaining healthy small diameter (under 8" dbh) stems, healthy female seed producing stems, and establishment of seedling by allowing ample light to reach to reach the forest floor for seed germination. American beech trees free of beech bark disease will be retained. The suppression of invasive species along the road and in adjacent disturbed areas will be required to prevent their expansion into harvested areas.

PERMIT REQUIREMENTS / OPPORTUNITIES

Restrictions	Description
Seasonal Restrictions: No	Operation under dry non-snow conditions
Equipment Restrictions: Yes	A mechanized cut to length harvester and forwarder will be required for work within the Norway spruce plantations.
Recreation Restrictions: No	Click or tap here to enter text.
Green Docket: No	
In-kind Services: Yes	Invasive control along roadsides, borrow pits, and landing/parking area will be required. Gravel to maintain County Road in coordination with the Town of Washington. Erosion control/restoration work may be completed to address OHV damage in the borrow pits.

Potential Local Economic Benefits: This project will aid the local community with road repairs, hazard tree removal, and payment from the Forest Products Trust Fund. The harvesting of wood products also provides opportunity for many of the trees harvested to be utilized locally for home heating fuel, reducing the burden on fossil fuels. Benefits for the visiting public include better access to recreational facilities, improved hunting opportunities, and improved birding and wildlife viewing.

Attachments:
Locus Map
Project Map


October Mountain State Forest
Borrow Pitt Project
October Mt
Reservoir
County Road
School House
Reservoir
Legend
Stand
Borrow Pit
Landing./Parking Area
Northern Hardwood
Norway Spruce
N
0 250 500 1,000
Feet
KMM 01/18/2025

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