

DCR-BOFF Forest Management Proposal

Project Name: Two Cubs
Property Name: Windsor State Forest
Acres: 38
Forestry District: Western Connecticut Valley
Forester: Nicholas Anzuoni

Date Proposed: 2/25/25
Town(s): Savoy
Landscape Designation: Woodland
Rec Complex/District: Mountain
FOTL/F&P Supervisor: Luke Labendz

GENERAL PROJECT DESCRIPTION

Acres	Overstory Forest Type	Understory Forest Type	Stand Description
23.0	Norway spruce plantation	Mix of northern hardwoods such as White ash, Yellow birch, Red maple, Eastern hemlock, Red spruce, Eastern white pine and Norway spruce.	The project area consists of dense plantations with 90% or more Norway spruce and some Eastern white pine. Age is approximately 100 years with heights over 80'. The Norway spruce plantations were strip cut in the past resulting in long, narrow stands of spruce with strips of young forest 20'-30' in height.
15.0	Red spruce	Red spruce, northern hardwoods, hobblebush viburnum.	The red spruce stands are naturally developed red spruce established after the cleared pastures were abandoned. These stands are younger than the Norway spruce plantations and have a major overstory component of red spruce with associate species of eastern hemlock, yellow birch, red maple, beech and white ash. Stand density is also much lower than the spruce plantations.

Project Summary, Goals and Objectives:

Summary: The Two Cubs 2025 project is a portion of a proposal submitted in 2019 to remove many of the existing non-native and native overstocked and declining plantations. This project will focus on the Norway spruce plantations and adjacent native red spruce stands on the northern section of the forest in the town of Savoy. The Norway spruce stands were treated in the 1990's and these stands are in decline due to several root rot diseases and impacts of snow, ice and wind events. A combination of techniques will be used to remove most of the Norway spruce overstory and release existing softwood and hardwood regeneration. Norway spruce will continue to be in the understory and managed to acceptable densities as it matures and becomes part of the next overstory. Many of the problems associated with non-native or off-site species in plantations are a function of unregulated stand densities and a lack of species diversity. This results in poor root and crown development, and this will eventually lead to trees with poor vigor, form development and vulnerability to root diseases. The proposed silvicultural treatments will release existing regeneration that resulted from the last harvest, retain any desirable hardwood trees such as yellow birch and black cherry and remove declining Norway spruce.

Goals: Improve Forest Resilience; Reduce Exotic and/or Invasive Vegetation; Improve Biological and Structural Complexity/Diversity

Objectives: Release existing desirable regeneration.

Retain desirable hardwood and softwood trees. Remove most of the Norway spruce overstory and only retain what is needed for required buffer and filters strips, or to provide shelter to retained overstory trees from prevailing winds. Discussions will be held with the local service forester and tree warden to remove or limit any roadside buffers that will allow potent windthrow to create hazardous roadside conditions. A distance of 150' would be considered adequate. Protect desirable understory species such as Shadbush or Mountain ash.

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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*

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

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.**
- **3: Reduce the risk and long-term impacts of severe disturbances.**
- **6: Increase ecosystem redundancy across the landscape.**
- **10: Realign ecosystems after disturbance.**

CLIMATE ADAPTATION

Action Type	Identified Issue	Action Description
Resilience	Convert plantations to native vegetation	Remove plantations and create favorable conditions for shade intolerant native tree regeneration.
Resilience	Assist red spruce stands to regenerate	Create ground conditions for regeneration of red spruce by retaining healthy, vigorous red spruce seed trees in the overstory
Resilience	Invasive species onsite	Control invasive species using a variety of mechanical and/or chemical techniques.

Adaptive Management Strategies:

This project is focused on removing non-native plantations from the forest. Resilience to climate change will be increased by diversifying the species composition of the current monoculture. Resilience to future climate stressors, such as wind and ice will be enhanced by creating vertical spatial gaps in the forest canopy and creating young age classes of native trees that are less likely to be as heavily damaged by a high wind event, such as the Hurricane of 1938 or a microburst. Resilience of the native species will also be enhanced by the control of invasive species which compete for available nutrients and growing space.

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.	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

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	climate-smart practice by NIACS and other climate adaptation 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.
Invasive plant control, including pre- and/or post-harvest and follow up treatments.	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.

SOILS AND TOPOGRAPHIC FEATURES

Acres	Soil Type	Drainage Characteristic
38	Tunbridge-Lyman	Soils are moderate to well drained and very rocky. Found on or near hilltops. Good for tree growth and stable for operating equipment.

Average Slope Percent:6-10%
General Aspect:Varied

Terrain Consistency: Constant
Terrain Position: Top of Slope

Description of Soils and Topographic Features: The soils are moderate to well drained, rocky and located near the top of a series of low hills. This is the northern portion of the forest and on the top of the Berkshire plateau. Elevation in this area averages 1700' above sea level.

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WETLAND FEATURES

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

Description of Wetland Features: Known wetland features are a stream on the western boundary of the project area and a series of wetlands to the eastern edge. A detailed inventory of the project area will be carried out as the project progresses.

CULTURAL RESOURCES

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

Description of Cultural Resources: This section of the forest has minimal cultural features as the areas of heavy settlement were to the south of the project area, Stone walls, wells and other features will be identified and protected according to DCR guidelines.

NATURAL HERITAGE / WILDLIFE-HABITAT MANAGEMENT / OTHER RESOURCES

Natural Heritage Polygon: No

Natural Heritage Restrictions: Possible

Restrictions on Harvest Description: Unknown at this time

Wildlife Specific Management: Yes

Targeted Species: Host of species utilizing open fields and abandoned orchards to the south.

Goals: To maintain open fields and edge habitat. Keep apple trees on the landscape as a food source for birds and mammals.

Additional Habitat Management: Choose an item.

Habitat Type: Click or tap here to enter text.

Goals: Click or tap here to enter text.

State Forest Action Plan: Yes

ACEC: No

BIO Map2: Possible

State Wildlife Action Plan: Yes

Public Water Supply: No

Current Resource Management Plan: No

Additional Detail: Click or tap here to enter text.

This DCR-BOFF Forest Management Project Proposal is intended for public review

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FOREST HEALTH / INVASIVE SPECIES

Forest Health Concern: Yes

Species Affected: Declining Norway spruce, American beech.

Management Considerations: Remove the declining Norway spruce due to Armillaria root rot

Plant Invasive Species Present: Yes

Species Present: Japanese barberry and Oriental bittersweet, Glossy buckthorn.

Management Considerations: Possibly treat with herbicides.

Insect Invasive Species Present: Yes

Species Present: Emerald Ash borer, hemlock woolly adelgid, Beech scale, Beech Leaf Disease

Management Considerations: Minimal intervention with the exception to remove any large ash trees prior to mortality caused by Emerald Ash borer.

INFRASTRUCTURE / RECREATION/ AESTHETICS

Access Road: Bush Road and Old Main Road

Condition: Good/Poor

Existing Landing: Yes

Project Access and Landing Site: Access will be from the old landings used in the previous harvest when suitable. New landings may be required in order to reduce any potential adverse environmental impacts.

Ownership: Town of Savoy

Road Repair/Upgrade: Possible

Landing Repair/Upgrade: Yes

Existing Skid Trail Network: Yes

Pre-Harvest Repair/Upgrade: No

Skid Trail Network Description: Existing roads from previous may be used when appropriate.

Shared Infrastructure: No

Road/Trail Names: [Click or tap here to enter text.](#)

Management Considerations: Access roads used by this project are not part of any trail system.

Infrastructure Present

Infrastructure	Present	Condition
Official Trail	No	N/A
Illegal Trail	Possible	Unknown
Existing Trail Head	No	N/A
Recreation Facility	No	N/A

Recreation and Aesthetic Concerns/Opportunities: None at this time.

SILVICULTURE

Acres	Silviculture Type	Silviculture Description
23.0	Irregular shelterwood/small patch	A combination of irregular shelterwood and small patch cuts will be used to remove most of the Norway spruce. Favorable conditions will be created for a mixture of red spruce, eastern hemlock and northern hardwoods.
15.0	Irregular shelterwood/precommercial thinning and crop tree release.	The irregular shelterwood will be used to create growing conditions favorable for regeneration of red spruce and northern hardwoods. Areas not suitable for the irregular

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		shelterwood due to stocking levels or site difficulties will be treated using timber improvement practices including thinning precommercial trees and releasing potential crop trees. Any suitable patches of desired regeneration will also be released using these methods.
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General Comments on Silviculture Proposed: The proposed silviculture seeks to build on previous treatments in the Norway spruce. Past silviculture used long, narrow strip cuts which removed a third of the stand and created strips of native species regeneration. The irregular shelterwood will create a series of small and large gaps to release existing regeneration, create new regeneration and remove much of the overstory spruce. The concept is to leave the spruce canopy in an irregular appearance as seen after a major storm event.

PERMIT REQUIREMENTS / OPPORTUNITIES

Restrictions	Description
Seasonal Restrictions: Possible	Click or tap here to enter text.
Equipment Restrictions: Possible	Forwarder and cut-to-length harvester
Recreation Restrictions: Possible	Click or tap here to enter text.
Green Docket: Possible	Click or tap here to enter text.
In-kind Services: Yes	Gravel road repair, control of invasive species, field mowing and improvements, hazard tree removal.

Potential Local Economic Benefits: Potential local benefits may include contributions to the Forest Products Trust Fund, which is distributed to the local towns. Firewood may also be used by local people for home heating and hazard reduction (along with reduced town maintenance costs) along roadways near the failing spruce plantations. Removal of hazard trees along road corridors on DCR land will reduce emergency response by town crews.

Attachments:

Locus Map

Project Map

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Two Cub Timber Sale -Locus Map Windsor State Forest Savoy and Windsor, Massachusetts



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Two Cubs Management Proposal Windsor State Forest Windsor and Savoy, Massachusetts North Section

