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| Project Name:Warwick Bass Road West | Date Proposed:April 2022 |
| Property Name:Warwick State Forest | Town(s):Warwick |
| Acres:123 | Landscape Designation:Woodland |
| Forestry District:ECV | RecComplex/District:Erving |
| Forester:Keith DiNardo | FOTL/F&P Supervisor:Steve Hubbard |

MASSACHUSETTS FOREST ACTION PLAN GOALS

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| \* Increase resistance and resilience of trees and forests to mitigate and adapt to the effects of climate change |
| \* Manage forest ecosystem health and biodiversity |
| \* Cultivate and support partnerships with forestry and conservation Stakeholders |
| \* Other Project is part of a Landscape Restoration Grant Initiative. |

GENERAL LOT DESCRIPTION

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| **Acres** | **Forest Type** | | **Stand Description** |
| 8.9 | Overstory: WP | Understory: Limited understory vegetation due to nearly 100% canopy cover, some shade tolerant regeneration is present. | Stand Number 1: This densely stocked almost pure white pine stand is likely the result of planting efforts undertaken in the 1930's. Sawtimber size, low quality white pine dominates the overstory, currently stocking levels have resulted in stagnated growth and naturally occurring mortality due to extreme competition. |
| 31.5 | Overstory: WO | Understory: Advanced regeneration is present and scattered throughout the stand and is dominated by shade tolerant species such as American beech, eastern hemlock, and black birch. | Stand Number 2: This stand is dominated by a mix of large diameter white pine and red oak. This stand is a direct result of previous management activities. |
| 4.2 | Overstory: RP | Understory: Advanced regeneration is present and appears to be dominated by black birch, American beech, and red maple. | Stand Number 3: Declining red pine stand infected with red pine scale. 100% mortality is expected within with next 5 years. |
| 34.8 | Overstory: RO | Understory: Advanced regeneration is present throughout and appears to be dominated by black birch, American beech, eastern hemlock, and red maple. | Stand Number 4: Predominantly small to medium diameter red oak and assorted hardwood species. Scattered occurrences of white pine and hemlock are also present. |
| 2.9 | Overstory: WH | Understory: Advanced regeneration is present throughout the stand, species composition and densities vary depending on overstory conditions. | Stand Number 5: White pine plantation. Some areas are densely stocked with white pine where others are dominated by naturally occurring hardwoods. |
| 5.3 | Overstory: WH | Understory: Advanced regeneration is present throughout the stand, species composition and densities vary depending on overstory conditions. | Stand Number 6: Area of white pine and mixed hardwoods on abandoned agricultural field. Large old field sugar maple and white ash legacy trees are scattered throughout. |
| 12.7 | Overstory: WO | Understory: Due to the large presence of eastern hemlock in the intermediate and suppressed crown class there is very little understory vegetation present throughout the stand. | Stand Number 7: Stand of predominantly white pine and oak with a dense hemlock component in the mid strata. |
| 22.3 | Overstory: WK | Understory: Due to the large presence and high density of eastern hemlock throughout the stand there is very little understory vegetation present. | Stand Number 8: The dominant overstory species present in this stand include a mix of white pine, hemlock, and assorted hardwood species. Although hemlock dominates the intermediate and suppressed crown classes throughout much of the stand, there are instances of large dominant and codominant individuals. |

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| Description of Project Area: This 123 acre proposed project area is in the western portion of the town of Warwick, along the Northfield town line. Portions of the project area have been historically subject to extensive agricultural and forestry use, and a fairly extensive road network is present. The above listed stand descriptions and delineations as seen on the attached map are based on preliminary reconnaissance in addition to aerial and ortho photo interpretation. These stand descriptions, including the descriptions pertaining to vegetation present, acreage, and exact delineation lines are subject to change as more information is gathered. Stand numbers as they are indicated within the above listed stand descriptions coincide with the stand numbers indicated on the attached map. At this time, no management activities are planned to occur within wetlands, with the possible exception of the establishment of wetland or stream crossings. |

# SOILS AND TOPOGRAPHIC FEATURES

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| Acres | Soil Type | Drainage Characteristic |
| 0.1 | Freetown muck, 0 to 1 percent slopes | Very poorly drained |
| 10.4 | Ridgebury fine sandy loam, 3 to 8 percent slopes | Poorly drained |
| 2.4 | Ridgebury fine sandy loam, 3 to 8 percent slopes, extremely stony | Poorly drained |
| 3.1 | Whitman fine sandy loam, 0 to 3 percent slopes, extremely stony | Very poorly drained |
| 3.3 | Canton-Chatfield-Hollis complex, 8 to 15 percent slopes, rocky | Well drained |
| 7.2 | Chatfield-Canton complex, 25 to 50 percent slopes, rocky | Well drained |
| 35 | Millsite-Chichester complex, 3 to 8 percent slopes, rocky | Well drained |
| 11.3 | Millsite-Chichester complex, 8 to 15 percent slopes, rocky | Well drained |
| 3 | Millsite-Chichester complex, 15 to 25 percent slopes, rocky | Well drained |
| 8.7 | Montauk fine sandy loam, 8 to 15 percent slopes, very stony | Well drained |
| 9.7 | Montauk fine sandy loam, 15 to 35 percent slopes, very stony | Well drained |
| 11.3 | Scituate fine sandy loam, 3 to 8 percent slopes | Moderately well drained |
| 4 | Metacomet fine sandy loam, 3 to 8 percent slopes, very stony | Moderately well drained |
| 5.5 | Canton fine sandy loam, 0 to 8 percent slopes, very stony | Well drained |
| 5.1 | Canton fine sandy loam, 8 to 15 percent slopes, very stony | Well drained |
| 2 | Newfields fine sandy loam, 3 to 8 percent slopes | Moderately well drained |
| 0.7 | Chichester fine sandy loam, 15 to 25 percent slopes, very stony | Well drained |

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| Average Slope Percent:6-10% | Terrain Consistency: Variable |
| General Aspect:Varied | Terrain Position: Multiple |
| Description of Soils and Topographic Features: Soil information, including soil type mapping and descriptions were derived using the NRCS web soil survey. It is expected that very poorly and poorly drained soils are underrepresented in the above list. The project area has varied terrain, with slopes ranging from 0 to 1% in areas, where as other areas have slopes in excess of 25%. | |

# WETLAND FEATURES

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

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| Description of Wetland Features: Several wetland features are present within the project area including one certified vernal pool, the perennial stream known as “Mill Brook”, several vegetated wetlands and possible intermittent streams. |

CULTURAL RESOURCES

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|  | Present | At Risk | Work Within Buffer |
| Stone Walls: | Yes | N/A | N/A |
| Foundation/ Cellar Hole: | Yes | N/A | N/A |
| Well: | Possible | N/A | N/A |
| Structures: | Possible | N/A | N/A |
| Cemetery: | No | N/A | N/A |
| Other: Click or tap here to enter text. | Possible | Choose an item. | Choose an item. |

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| Description of Cultural Resources: Stone walls and one cellar hole have been indented within the project area, along with at least one CCC constructed fire pond. This project proposal will be reviewed by DCR archeology staff in regard to possible restrictions around identified cultural resources. Work that is to occur within close proximity to existing cultural resources will adhere to DCR’s BMP’s pertaining to work near and around cultural resources. |

NATURAL HERITAGE / WILDLIFE-HABITAT MANAGEMENT / OTHER RESOURCES

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| Natural Heritage Polygon: No | Natural Heritage Restrictions: N/A |
| Restrictions on Harvest Description: Click or tap here to enter text. | |

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| Wildlife Specific Management: Yes | Targeted Species: N/A |
| Goals: Overall habitat management is to improve the balance of forest stage structure on the landscape by increasing seedling sapling stage cover. Habitat components such as hard and soft mast producing trees, snags, cavity trees and other retentions will be planned during the prescription and delineation phase of the project. | |

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| Additional Habitat Management: Yes | Habitat Type: In thinned areas. Vertical structure in the mature forest will be improved. |
| Goals: Improve overall habitat conditions by increasing forest stage class diversity while enhancing habitat components. | |

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

FOREST HEALTH / INVASIVE SPECIES

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| Forest Health Concern: Yes | Species Affected: Red pine |
| Management Considerations: Red pine scale is expected to be present within the red pine stand. 100% mortality is expected within 5 years. | |

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| Plant Invasive Species Present: Possible | Species Present: Click or tap here to enter text. |
| Management Considerations: Click or tap here to enter text. | |

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| Insect Invasive Species Present: Yes | Species Present: Red pine scale, Hemlock wooly adelgid (HWA) |
| Management Considerations: 100% mortality is expected in the red pine stand within the next 5 years. HWA continues to apply additional stress to present hemlock trees within the region. A hemlock looper outbreak occurred within a fairly close proximity to the project area, resulting in a moderate amount of mortality in overstory and understory trees alike. | |

CLIMATE ADAPTATION AND CARBON CONSIDERATIONS

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| **Action Type** | **Identified Issue** | **Action Description** |
| Resilience | Uniform forest conditions and composition are present across the region. | Diversification of forest structure and species composition. |

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| Adaptive Management Strategies: Create more diverse forest conditions across the landscape. |

**INFRASTRUCUTRE / RECREATION/ AESTHETICS**

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| Access Road: Bass Road | Ownership: Public |
| Condition: Good | Road Repair/Upgrade:No |
| Existing Landing:Yes | Landing Repair/Upgrade:Possible |
| Project Access and Landing Site: Existing, historic landings will be utilized where possible. Main access to the project area will occur off of Bass Road. | |

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| Existing Skid Trail Network:Yes | Pre-Harvest Repair/Upgrade:Possible |
| Skid Trail Network Description: Historic skid trails will be utilized where possible. Many of these old skid trails are grown in but are still evident. Any new skid trails will be established in accordance with MGL 132 and Massachusetts Forestry BMP’s. | |

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| Shared Infrastructure: No | Road/Trail Names: Click or tap here to enter text. |
| Management Considerations: Click or tap here to enter text. | |

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| Official Trail Present:Yes | Condition: Fair |
| Illegal Trail Present:Possible | Condition: Click or tap here to enter text. |
| Existing Trail Head:No | Condition: Click or tap here to enter text. |
| Recreation Facility:No | Condition: Click or tap here to enter text. |
| Recreation and Aesthetic Concerns/Opportunities: The New England National Scenic Trail is located near the proposed project area. DCR will work closely with the AMC regarding any possible impacts to the trail. | |

SILVICULTURE

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| **Acres** | **Silviculture Type** | **Silviculture Description** |
| 79 | Irregular Shelterwood | Implementation of variably sized group openings up to 5 acres in size with the intent of regenerating up to 20% of any given stand. Application of variable density thinning within the matrix. |
| 13 | Clearcuts with reserves | Implementation of clearcuts up to 5 acres in size with retention trees. |
| 8 | Variable density thinning | Thinning to improve growing conditions for better quality trees, while removing overstory near areas with good quality advanced regeneration. |

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| General Comments on Silviculture Proposed: Greater detail will be provided during the prescription phase. |

PERMIT REQUIREMENTS / OPPORTUNITIES

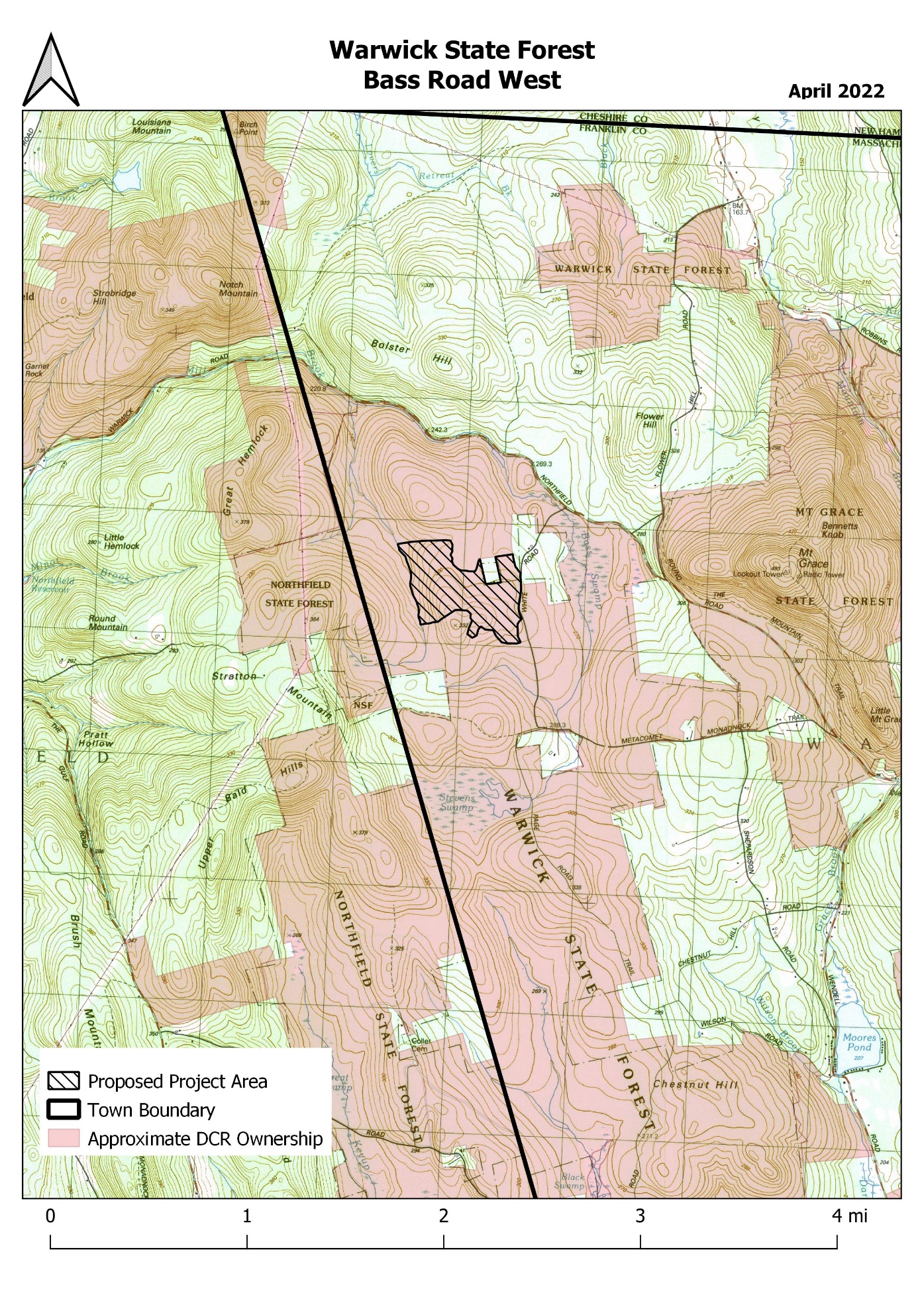
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| --- | --- |
|  | Description |
| Seasonal Restrictions: Possible | Site scarification will be required for portions of the project area. |
| Equipment Restrictions: Possible | Click or tap here to enter text. |
| Recreation Restrictions: Possible | DCR will coordinate with the Appalachian Mountain Club in regard to possible impacts to the New England Scenic trail. |
| Green Docket: N/A | Green docket review does not apply to projects that fall under the jurisdiction of M.G.L. 132 |
| In-kind Services: Possible | Click or tap here to enter text. |

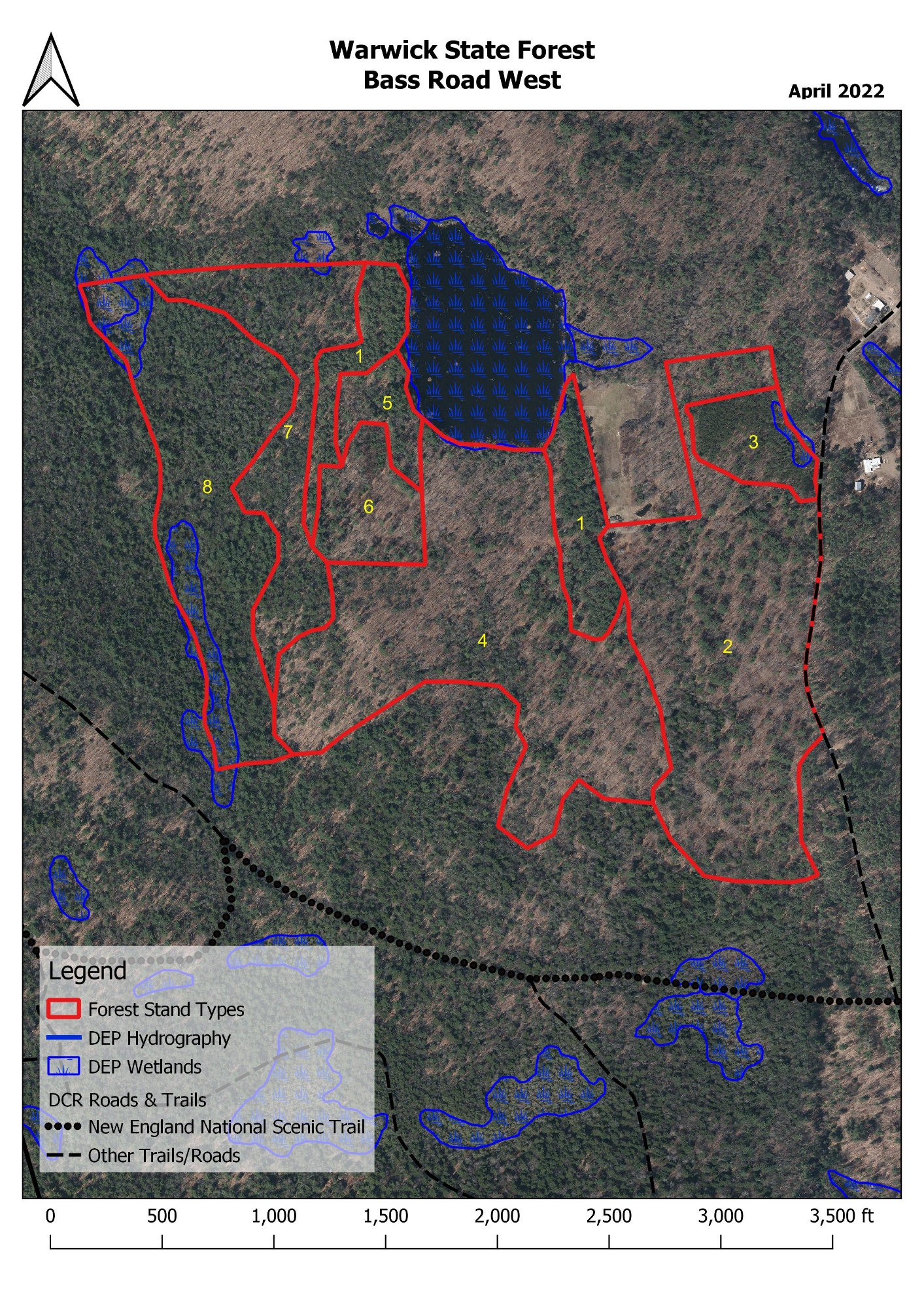
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| Potential Local Economic Benefits: Provide a source of sustainable, locally harvested forest products and employment. |

**Attachments:**

**Locus Map**

**Proposal Map**

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