Massachusetts Department of Conservation and Recreation
Bureau of Forest Fire Control and Forestry
Forest Management Proposal
Name: Horse Valley Lot

Date Posted:	**March 2, 2020**
End of Comment Period:	**April 16, 2020**

Region:	**West**
Recreation District:	**Lakes**
Forest Management District:	**Central Berkshires**
State Forest:	**Huntington State Forest**
Closest Road:	**Jourdan Road (Montgomery)**
Town	**Huntington**

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Overview:

The Horse Valley Lot Forest Management project is located on the southeastern portion of the Huntington State Forest (see Locus Map) along Jourdan Road. It comprised of approximately one hundred and seventy-four acres of Hemlock-Hardwood stands.

The conditions that led to selecting this project for forest management are:

- The project area has a high percentage of hemlock which is or may be infested with Hemlock Wooley Adelgid (HWA) and Hemlock Looper. (proper management will enhance residual dominate hemlock's ability to survive)
- Previous forestry projects by abutters to enhance wildlife populations are succeeding beyond the target age class (<10 years).
- Will provide an opportunity to demonstrate regeneration and retention of hemlock-hardwood stands by transitioning portions of the current single aged stands to multiage / mosaic conditions.
- The existing road network is in disrepair causing erosion and inhibiting access to the forest for recreation.
- This project area offers an excellent opportunity to demonstrate and fulfill objectives for DCR Woodlands including maintaining and establishing diverse and resilient native forests, building upon past management and maintenance and repair of infrastructure.

The Horse Valley Lot Forest Management Project endeavors to:

- Demonstrate multi-age silvicultural systems including irregular shelterwood.

- Demonstrate patch cutting up to 5 acres for continued early successional wildlife habitat in portions of the project area particularly where tree disease is an issue.
- Demonstrate techniques aimed to reduce stress from HWA and hemlock looper and retain healthy dominate hemlock trees.
- Demonstrate harvesting techniques and best management practices that protect forest productivity, recreation values, soil and water resources.
- Fulfill management approaches for Woodlands as directed by the Forest Futures Visioning Process (2010) and subsequent Management Guidelines (2012) including the maintaining structural and species diversity, providing positive benefits to wildlife, and adapting forestry techniques in light of climate change and carbon stocks management.

The Horse Valley Lot Forest Management Project may result in two or more timber sale entries.

Project Area Description:

Stand Information: The proposed project area consists of approximately 174 acres of hemlock-hardwood stands where composition and dominate species varies throughout. The dominant tree species that were observed are red oak (Quercus rubra), hemlock (Tsuga canadensis), sugar maple (Acer saccharum), red maple (Acer rubrum), yellow birch (Betula alleghaniensis), white birch (Betula papyrifera), black birch (Betula lenta), white ash (Fraxinus americana), black cherry (Prunus serotina), American beech (Fagus grandifolia), and white pine (Pinus strobus). Individuals of Hickories (Carya spp.), service berry (Amelanchier laevis), and hop-hornbeam (Ostrya fagales) were seen in or near the project area.

This general forest type will be broken down into individual stands for administration purposes based on topography, road and stonewall features, and species composition to assist planning in proper management decisions. Size classes in this project area range from small to large diameter trees with high density levels, generally hemlock is in the understory and intermediate crown position with hardwoods dominating the canopy.

The DCR Management Guidelines of 2012 stated that forest stands will be "classed . . . and considered for silvicultural treatments that generally fit their productivity, structural complexity (or potential thereof) and diversity". An analysis of the Horse Valley Lot site history (land use; agriculture/logging) and conditions (soil types, productivity; vegetation cover) suggests a range of moderate to high level of complexity indicating that a combination of uneven and even age methods of regeneration may be appropriate to add to the diversity of the project area.

Topography: This proposed project area is in the southeast portion of Huntington State Forest, town of Huntington. The project area is bound by current and historic (currently interior) property boundaries to the east, south and west and Horse Hill Brook to the north. Elevation within the project area ranges from 1020 – 900 feet with generally gentle slopes.

Drainage from this project area is split between the Westfield River and Connecticut River watershed basins. Westward flow collects into Horse Hill Brook which flows west into Roaring Brook then ending in the Westfield River. Eastward flow is collected into several small drainages leading to Red Brook and Tucker Brook which merge and flow into the Tighe Carmody Reservoir. There several wetland features ranging in size from 0.1 – 3+ acres within the project area. Although there are no certified vernal pools several of these wetlands may may be functioning as vernal pools.

Soil: There are seven soil types associated with this project area, mostly associated with deep, well drained, and stony upland soils. As with topography the forest composition changes slightly with the soil types. The seven types are listed below.

- 903C – (27.9ac) Chatfield-Hollis Association
- 910C – (15.8ac) Woodbridge-Paxton Association
- 911C – (8.7ac) Ashfield-Shelburne Association
- 912E – (3.9ac) Hollis-Chatfield Association
- 916E – (61.4ac) Paxton-Charlton Association
- 921C / 921E - (46.0ac) Westminster-Millsite Association
- 923B – (10.9ac) Ridgebury-Whitman-Palms Association

Previous Silvicultural Treatments: The Commonwealth purchased the 674 acre "Hattie L. Stanton Lot" in 1930. Much of the property had be harvested shortly before Commonwealth ownership, while other portions consisted of abandoned fields. While most of the property was allowed to continue in natural succession, several of the abandoned fields were planted with red pine and Norway spruce by the Civilian Conservation Corps (CCC).

Forest management maps created in 1934 and 1940 show the project area as a young forest regenerating after the extensive cutting prior to state ownership. These young stands, averaging 2-6" in diameter, were made up mainly of pioneer species including grey birch (Betula populifolia), red maple, paper birch, yellow birch, beech and sugar maple as well as previously established hemlock. Although red oak is currently found throughout the project area in varying amounts it was not listed as a predominate species on these maps.

The most recent forest management projects conducted by DCR occurred in the early to mid-2000's, occurring in the northeastern portion of the forest. These harvests occurred in plantations, oak-hardwood, and hemlock-hardwood stands. Several forestry projects targeted at wildlife habitat improvement on private land adjacent to this project have occurred within the past 20 years. Subsequently, some of these lands have become DCR property.

Aesthetic, Recreation, Wetlands, Cultural, Rare Species and Wildlife Considerations:

Recreation: Within the Huntington State Forest there are no formal recreational features, however the forest is open to all legal forms of passive recreation. Although there are no "hiking" trails there is a substantial woods road network which created a loop though the forest with several access points. This forest has been popular in the past for hunting, hiking, and horse back riding. There has been illegal ATV on the wood roads and illegal mountain bike trail building and use has been increasing.

Aesthetic: As per the "Landscape Designations for DCR Parks & Forests: Selection Criteria and Management Guidelines", there will be a 50-foot buffer along the woods roads within the project area where a goal of no more than 50% of live basal area will be harvested and no slash will remain within 25' of the road. The Massachusetts Slash Law will be observed beyond the 25' no slash zone as required.

Water Resources: There are several water resources on this proposed project area. They will all be treated at or above the minimum standards set forth in "Massachusetts Forestry Best Management Practices Manual". There will be no timber management in regulated wetlands, vernal pool or potential vernal pools. There is no anticipated regulated stream crossing in the project area and no anticipated wetland crossings. If a stream or wetland crossing is needed it will be designed using standards of the "Massachusetts Forestry Best Management Practices Manual" and

"Landscape Designations for DCR Parks & Forests: Selection Criteria and Management Guidelines"

All regulated streams, upland drainages, intermittent streams, seeps and wetlands, and vernal pool resources found within the active project area will be mapped and protected to filter strip standards of the "Massachusetts Forestry Best Management Practices Manual" as needed.

Cultural Resources: There are several cultural resources including homestead sites, mill sites, and numerous stone walls within Huntington State Forest. The features located within the project area will be protected from disturbance during operations and will be treated according to guidelines set forth in the "Bureau of Forestry – Cultural Resource Management Protection Standards & Guidelines".

Rare and Endangered Species: According to the NHESP "Massachusetts Natural Heritage Atlas 13th Edition" there is no priority or estimated habitat sites located in this proposed project area or the immediate area. No rare plants have been identified in the field to date. Care will be taken to address the needs of any rare/endangered plant if found. There are no certified vernal pools mapped by NHESP. There are however two potential vernal pools mapped by NHESP which are in/near previously mapped wetlands.

Wildlife: No rare animals or critical habitat were noted upon the initial site visit. Over the past 20 years there have been several forestry operations located on adjacent private property including clearcuts, seed tree, shelterwood, and selection harvests. The clearcuts and heavier seed tree and shelterwood areas were completed with the goal of creating early successional habitat. As the harvested areas progress through natural succession the habitat value they created is slowly being lost. Massachusetts Fish and Wildlife will be consulted during the prescription process to aid in locating the patch clearcuts to most benefit wildlife.

Sale Layout and Harvesting Limitations: The Horse Valley Lot may be divided into multiple timber sales.

Project Access: Access to the proposed project area will be from one of two routes.

- Option 1 – Route 112 in Huntington, Montgomery Road which turns into Main Road in Montgomery, to New State Road, to Jourdan Road which enters the state forest and project area after crossing the town line into Huntington.
- Option 2 – Route 66 to Tucker Road, thought then intersection onto Sampson Road to the entrance of the state forest. The project area is approximately one mile past the entrance on an existing woods road of poor condition.

Landings: There are no currently existing landing areas large enough to support a modern timber harvest operation. Currently two landing will be proposed along Jourdan Road at intersections with existing wood roads.

Skid Road and Trails: There are several wood roads located in the project area that will be used for transporting logs either by forwarder or skidder. Skid trails will be laid to avoid stream crossing and to account for slope, grade. Throughout the project area there are existing skid trail segments still visible from the previous harvests. These existing segments will be evaluated and connected as needed to gain access to necessary portions of the project area.

Wetland & Stream Crossing: No wetland or stream crossing are planned or anticipated. Skid road and trails will be laid out to minimize the number of crossings throughout the project area. All regulated stream and wetland crossing will be bridged and/or corduroyed.

Road and Trail Buffers: As per the "Landscape Designations for DCR Parks & Forests: Selection Criteria and Management Guidelines", there will be a 50-foot buffer along the existing woods roads

where no more than 50% of live basal are will be harvested and no slash with in 25' of the road will remain. The Massachusetts Slash Law will also be observed along the State Forest boundary. There are no other formal single-track recreation trails in the project area.

Equipment Limitations: Currently there are no harvesting equipment limitations or restrictions, it will be determined upon completion of field work if any limitations or restriction are necessary for this project.

Excluded Areas: Within the project all wetland areas will be excluded from harvesting. Regulated streams within the project area will have marked filter strips restricting equipment access per the "Massachusetts Forestry Best Management Practices Manual". There may be additional portions of the project area removed from active management due to excessive slope, wet ground or rocky ground. These exclusions will be documented and mapped within the Silvicultural Prescription and the Forest Cutting Plan.

Erosion and Sedimentation: Unwanted movement of soil will be controlled by following recommendations in the "Massachusetts Forestry Best Management Practices Manual". All work will be limited to dry or frozen soil conditions.

Site Restoration: Upon completion of harvest activity in the Project area all wood roads, skid roads and skid trails will be left in a stable state by grading and installing water bars as needed. All landings will be clear of debris, graded and seeded with "Berkshire Conservation Mix" and straw.

In-kind Services: There are no definitive in-kind services to be attached to this project to date. Below is a list of possibilities:

- Mechanical and/or Chemical control of beech, to help these stands retain a diverse northern hardwood forest type.
- Equipment time and materials to maintain/restore roads and trails within Huntington State Forest.
- Installation of a gate on Jourdan Road at the southern entrance of the Forest.

Proximity to Designated Forest Reserves: There is no forest reserve located adjacent or near this project area.

Sensitive Public Issues: There are no anticipated highly sensitive public issues. In the past there has been illegal ATV use on the existing woods roads as well as off trail mountain bike use.

Silviculture: Silvicultural practices in these stands will demonstrate a mix irregular shelterwood and patch clearcuts. This project area will be managed for a high level of structural, spatial and species diversity.

Goals: The primary goal of treatment in these stands will be to ensure future diversity of tree, shrub and herbaceous layer.

- Create new young forest habitat through patch clearcuts up to five acres to replace previous clearcuts which are growing out of the young forest stage. This will promote tree species which require full light for regeneration such as paper birch, pin cherry, black cherry and poplars.
- Retain the current Hemlock-Hardwood forest habitat type by promoting the retention and regeneration of hemlock. Follow guidelines to provide hemlock desirable conditions to withstand HWA and hemlock looper.
- Regenerate red oak and other mast trees to ensure its retention on the landscape as a food source for wildlife.

Silviculture Methods: The anticipated practice used in these stands will be irregular shelterwood and patch clearcuts of up to 5 acres. This method of management will begin the transformation of the current even aged forest into one with multiple age classes represented.

The irregular shelterwood area will remove an average of 30 - 80% of the basal area based on conditions such as species composition, crown condition, and health of trees. The patch clearcuts will remove all trees over one inch in diameter. These patch clearcuts will not exceed 20% of the project area. Mechanical and/or chemical control of beech may be used in these groups to ensure the desired native species can emerge.

Desired Future Conditions: Ten years after this treatment it is anticipated that these stands will have greater diversity in species composition, size and structure. Regeneration in the patch clearcuts will be reaching the sapling stage.

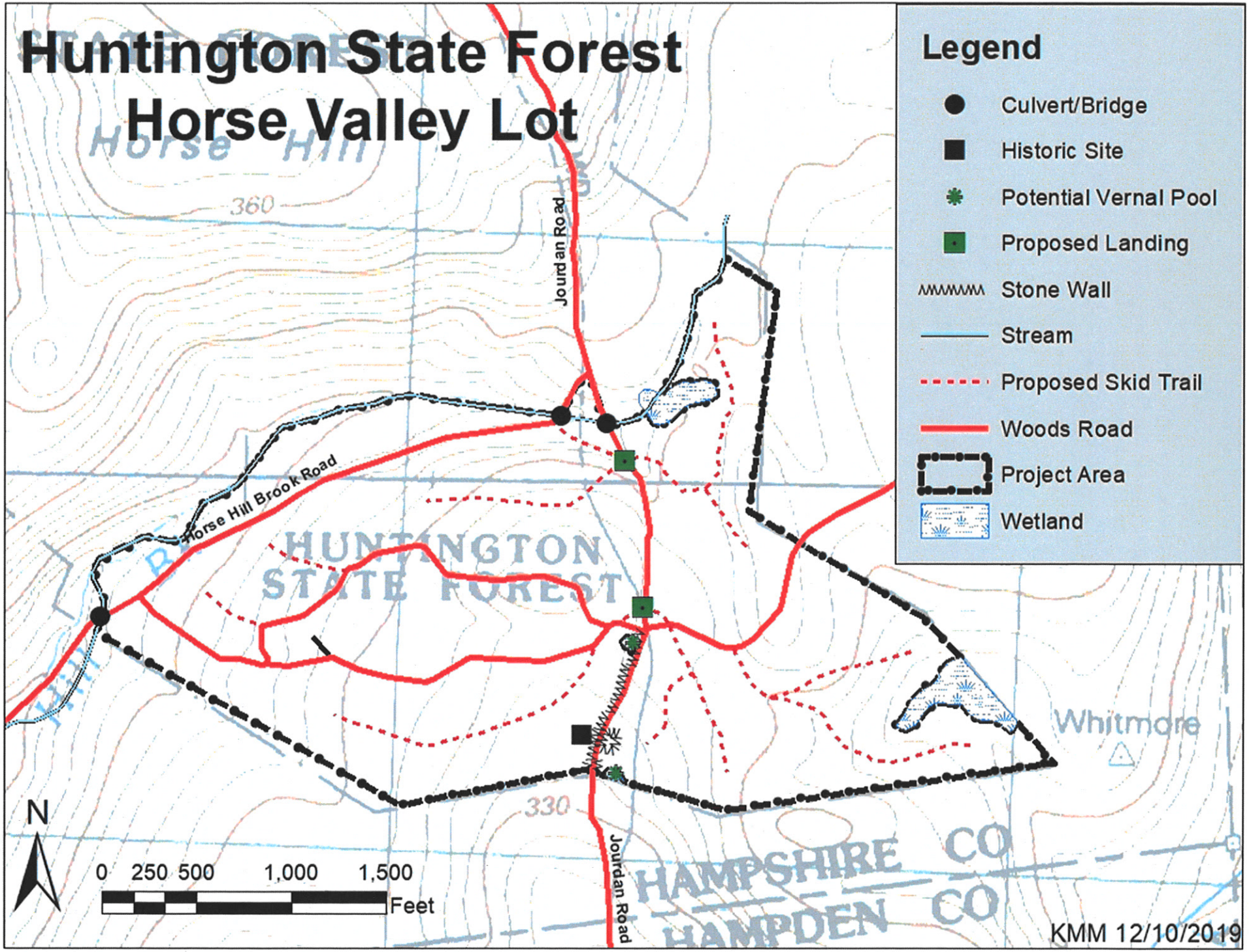
Anticipated Future Treatments: This stand should be looked at in approximately 10-15 years for reentry. It is anticipated that the next silvicultural treatment will be to expand and create new patch clearcuts to retain this age class in the local landscape.

District Forester: _____ **Date:** 1/31/20

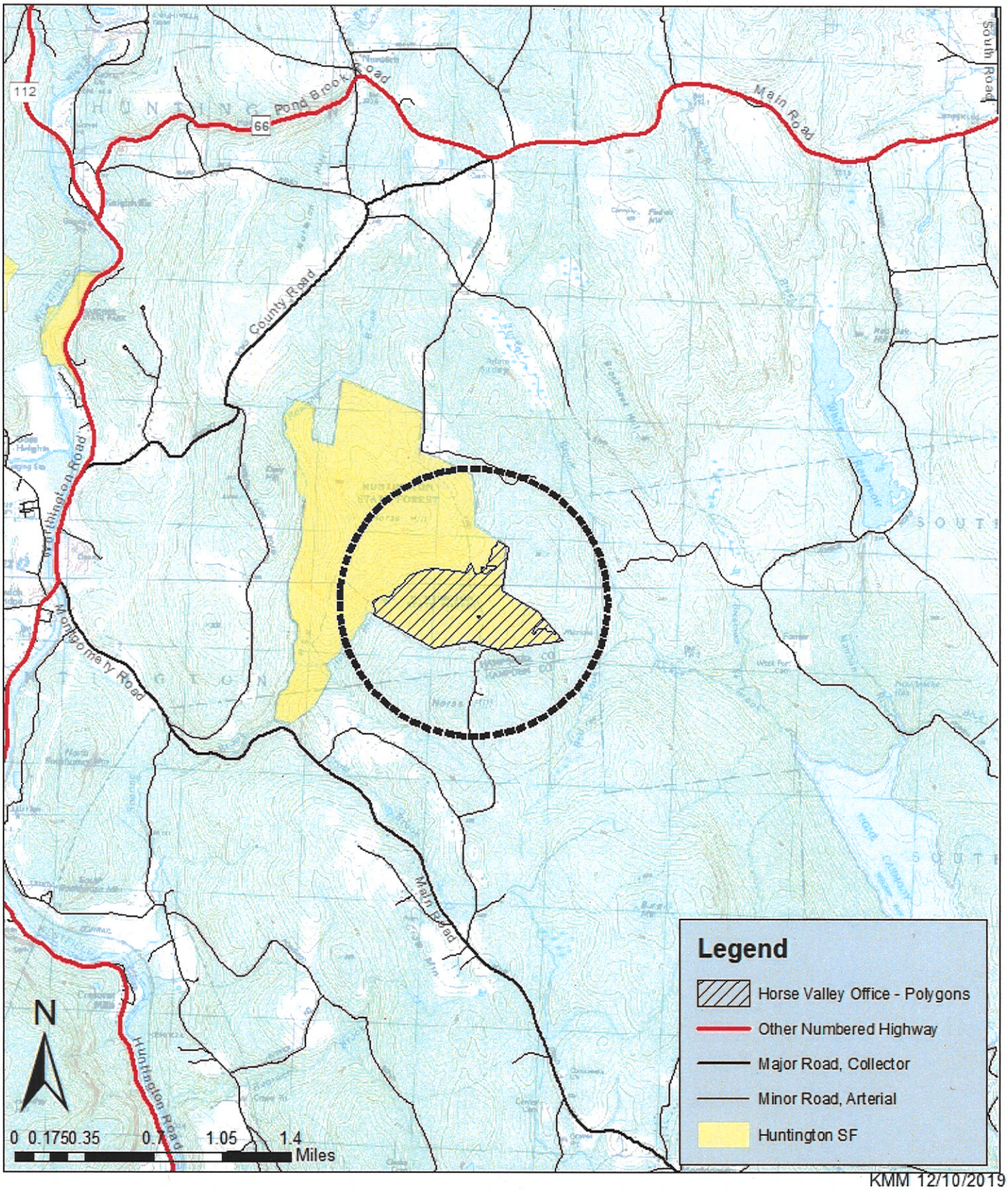
Field Operations Team Leader
Or Park Supervisor: Robert Moon **Date:** 1/31/20

Regional Director: Dom F. Sacco **Date:** 1/31/20

Management Forestry
Program Supervisor: William Hall **Date:** 2/24/2020


Huntington State Forest
Horse Valley Lot
Legend
Culvert/Bridge
Historic Site
Potential Vernal Pool
Proposed Landing
Stone Wall
Stream
Proposed Skid Trail
Woods Road
Project Area
Wetland
Horse Hill
360
Jourdan Road
Horse Hill Brook Road
HUNTINGTON
STATE FOREST
Whitmore
330
Jourdan Road
HAMPSHIRE CO
HAMPDEN CO
N
0 250 500 1,000 1,500
Feet
KMM 12/10/2019

Huntington State Forest
Horse Valley Lot - Locus Map



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