Massachusetts Department of Conservation and Recreation
Bureau of Forest Fire Control and Forestry
Forest Management Proposal
Name: Hubbard River East Lot

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

Region:	**West**
Recreation District:	**Lakes**
Forest Management District:	**South Berkshires**
State Forest:	**Granville State Forest**
Closest Road:	**Hartland Hollow Road & Tom Hayes Road**
Town	**Granville**

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Overview:

The Hubbard River East Lot Forest Management project is located on the eastern portion of the Granville State Forest (see Locus Map) along Tom Hayes Road and a small portion of Hartland Hollow Road. It comprised of approximately three hundred and thirty acres of oak-hardwood and hemlock-hardwood stands.

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

- Emerald ash borer infestations have been found in Granville.
- Public safety concerns due to declining/dead ash trees along County Road and the associated parking areas.
- The project area has a high percentage of hemlock which is infested with Hemlock Wooley Adelgid (HWA) and Hemlock Looper. (proper management will enhance residual dominate hemlock's ability to survive)
- 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 Ore Hill trail, used for hiking and snowmobiles, needs to be moved off adjacent MDC lands onto DCR land and several illegal ORV spur trails need to be blocked.

The Hubbard River East Lot Forest Management Project endeavors to:

- Salvage and presalvage dead and dying white ash trees while converting stands to uneven aged through irregular shelterwood harvesting.
- Demonstrate techniques aimed to reduce stress from HWA and hemlock looper and retain healthy dominate hemlock trees.
- Reduce the costs and safety concerns due to the dying white ash trees along access roads and trails.
- Demonstrate multi-age silvicultural systems including irregular shelterwood.
- Demonstrate harvesting techniques and best management practices that protect forest productivity, recreation values, soil and water resources.
- Fulfill management approaches for, and provide ecosystem services from Woodlands as directed by the Forest Futures Visioning Process (2010) and subsequent Management Guidelines (2012) including maintaining structural and species diversity, providing positive benefits to wildlife and using silvicultural techniques to provide for climate change and enhance carbon stocks management.

The Hubbard River East Lot Forest Management Project will result in two or more timber sale entries.

Project Area Description:

Stand Information: The proposed project area consists of approximately 330 acres of oak-hardwood, hemlock-hardwood, northern hardwoods, and stands composed of a gradient of these forest types where composition and dominate species vary throughout. The dominant tree species that were observed are red oak (Quercus rubra), hemlock (Tsuga canadensis), white ash (Fraxinus americana), sugar maple (Acer saccharum), red maple (Acer rubrum), white birch (Betula papyrifera), black birch (Betula lenta), black cherry (Prunus serotina), American beech (Fagus grandifolia), and white pine (Pinus strobus). Individuals of yellow birch (Betula alleghaniensis), hickories (Carya), and aspen (Populus tremuloides) were seen in or near the project area.

During the silviculture prescription writing process these general forest types will be broken down into individual stands for administration purposes based on topography, road and stonewall features, and species composition to assist in planning proper management decisions. Size classes in this project area range from medium to large diameter trees at high density levels. Generally, hemlock is more prevalent in the west and southern portions of the project area.

There are several small (under 3 acre) remnant red pine and scots pine plantations within the project area. Overs the past 20 years these plantations have succumb to red pine scale resulting in near one hundred percent mortality. These are considered inclusions within the larger oak-hardwood and hemlock-hardwood stands.

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 Hubbard River East Lot site history (land use; agriculture/logging) and conditions (soil types, productivity; vegetation cover) suggests a high level of complexity indicating that uneven age methods of regeneration may be appropriate to add to the diversity of the project area.

Topography: This proposed project area is in the eastern portion of Granville State Forest, town of Granville. The project area is bound by a utility corridor and Hubbard River to the west and south, to the north by a property boundary and to the east by Tom Hayes and Hartland Hollow Road (and property boundary). Elevation within the project area ranges from approximately 1300 – 750 feet with generally gentle slopes. Along the southwestern boundary of the project there may be isolated portions where slope exceeds 40% grade.

Drainage from this project area is entirely in the Farmington River watershed basin. All but a small portion flows southwestward in intermittent streams directly into Hubbard River which flows south across the state line and into the Barkhamsted Reservoir. The remaining portion of the project area flows eastward into Pond Brook, which joins the Hubbard River just south of DCR property. There are two known wetland features (0.2 & .06 acres) within the project area. There are no certified vernal pools or potential vernal pools mapped by NHESP.

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 – (36ac) Chatfield-Hollis Association
- 911C – (70ac) Ashfield-Shelburne Association
- 912E – (72ac) Hollis-Chatfield Association
- 921C / 921E - (152ac) Westminster-Millsite Association

Previous Silvicultural Treatments: The Commonwealth purchased the original 2128 acre "Tiffany and Pickey Co. Lot" in 1920 followed by several more parcels in the 1920s, 1980s and 2000s. Much of the property had been harvested shortly before Commonwealth ownership, while other portions consisted of abandoned fields.

Forest management maps created in 1924 with additional updates overtime show the project area as a young forest regenerating after the extensive agriculture and cutting prior to state ownership. The open areas of the project area were planted to Scots and red pine in 1926. The portions that had reforested or remained wooded averaged 2-8" 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.

The last harvest within the project area occurred in 1988 in the northwestern portion. There are records of 11 forest management projects conducted by DCR from 1982-2000 with notations on maps indicating previous management within Granville SF since state ownership. These harvests have occurred in plantations, oak-hardwood, and hemlock-hardwood stands. Several forestry projects abutting this proposed area on adjacent public and private have occurred within the past 10 years.

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

Recreation: Within the Granville State Forest there are formal hiking trails, a campground, and several picnic areas (former campground). Along with the designated hiking trails there is a substantial woods road network which with several access points. The forest is also open to all legal forms of passive recreation. This forest has historically been popular in the past for camping, hunting, hiking, and horse back riding. In portions of the forest there is illegal ATV use on the wood roads and illegal mountain bike trail building and use has been increasing.

Aesthetic: This project area is not near or visible from the campground or day use areas of the forest. Within the project area there are two mapped trails, the Ore Hill Trail (Tom Hayes Rd) and the Hubbard River Trail (Hubbard River Road). Currently both of these trails are gated woods roads. Per the "Landscape Designations for DCR Parks & Forests: Selection Criteria and Management Guidelines", there will be a 50-foot buffer along the officially designated trails and 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. All officially designated roads and trails will be restored to current or better condition upon completion of this project.

The Ore Hill Trail mostly follows the former course of the abandoned county road called Tom Hayes Road, but erosion of the old roadbed led users to move off DCR property onto private lands to the east. Much of this private land was recently acquired by the CT Metropolitan District Commission (MDC) and the section of the trail needs to be relocated back onto DCR lands to the west. Illegal ORV use, much of it coming in from the gas line right of way, is a major concern to the MDC for water quality issues and therefore, work rehabilitating the old road and a renewed design of the trail network in the area is needed. The Bureau of Forestry will work with DCR Operations staff to determine the best course of action.

Water Resources: Along with the Hubbard River, there are several intermittent streams as well as two small wetlands within the proposed project area. These areas 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 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 Granville 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 or potential vernal pools mapped by NHESP.

Wildlife: No rare animals or critical habitat were noted upon the initial site visit. Over the past 40 years there have been several forestry operations located on DCR and adjacent private property including clear-cuts, seed tree, shelterwood, and selection harvests. These habitat and food sources provided by these harvests have aiding in the diversity and amount of wildlife within Granville SF.

Sale Layout and Harvesting Limitations: The Hubbard River East Lot will be divided into multiple timber sales.

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

- Option 1 – Route 57 in Granville, to Tom Hayes Rd which enters the state forest and project area shortly after crossing the utility corridor.
- Option 2 – Route 20 in West Hartland CT, to Millstone Rd which becomes Hartland Hollow Road upon entering Granville MA. The project area is approximately one mile past the intersection with Route 20.

Landings: There are currently two existing truck landing areas that can be used during this timber harvest operation for loading trailer trucks. Several smaller forwarder/log truck landing will be needed along Tom Hayes Road or Hubbard Brook Road to concentrate logs for removal to the larger existing truck landings.

Skid Road and Trails: There are several wood roads (also listed as trails) located in the project area that will be used for transporting logs either by skidder, forwarder, and/or log truck. Skid trails will be located 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 will be designed using standards of the "Massachusetts Forestry Best Management Practices Manual".

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 or otherwise stable soil conditions.

Site Restoration: Upon completion of harvest activity in the Project area all wood roads (trails), 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: Possible in-kind services to be attached to this project are:

- 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 Granville State 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. 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 irregular shelterwood, they will be managed for a high level of structural, spatial and species diversity.

Goals: The primary goal in the treatment of the hemlock hardwood stands is to retain the hemlock and the associated forest habitat type by promoting the retention and regeneration of hemlock and other softwood species while adding structural diversity for wildlife species. The primary goal within oak-hardwood and northern hardwood stands is to salvage the ash prior to mortality while ensuring light conditions for regeneration of desirable species. Based on previous treatment results, without intervention these stands will convert to beech dominated hardwoods. Secondary goals of harvesting in this area are to capture the value of current damaged and/or diseased trees and to pre-salvage and capture the value of white ash.

Silviculture Methods: All stands will be treated using an irregular shelterwood method, with a focus on removing ash, stressed hemlock, and diseased beech a while maintaining dominate hemlock, oak, hickory, sugar maple and cherry in the overstory to promote their retention and regeneration. Mature hardwoods will be removed where tree spacing, crown density and species diversity dictates it necessary to meet the regeneration goals. Harvesting should also occur with little to no snow cover to allow for scarification of soils to provide an adequate seed bed for germination of softwood species. Generally between 20 and 80% of the volume within each stand will be harvested based on species composition, with lower volume removal generally occurring in portions of the treatment dominated by shade-tolerant hardwoods such as sugar maple and yellow birch, and higher volume removal generally occurring in portions of the treatment dominated by shade-intolerant hardwoods such as black cherry and white birch. Due to the mosaic patchwork of species distribution, geological features, and elevation changes, portions of this project area may not be treated while other areas may have opening upwards of a third acre.

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. To maintain species diversity, it is important to prevent the proliferation of diseased American beech and therefore mechanical or chemical control of beech may be used in these stands where Beech Bark Disease is prevalent.

Desired Future Conditions: Ten years after this treatment it is anticipated that these stands will have greater diversity in size and structure. Regeneration in areas of heavier cutting should have a softwood species component equally competing with hardwood species.

Anticipated Future Treatments: These stands should be looked at in approximately 5-7 years to ensure regeneration techniques have worked. If there is acceptable regeneration no further treatment is needed, if the density of beech regeneration becomes a concern, chemical control may be prescribed. If adequate softwood regeneration is not attained planting with thinning of hardwood regeneration may be needed.

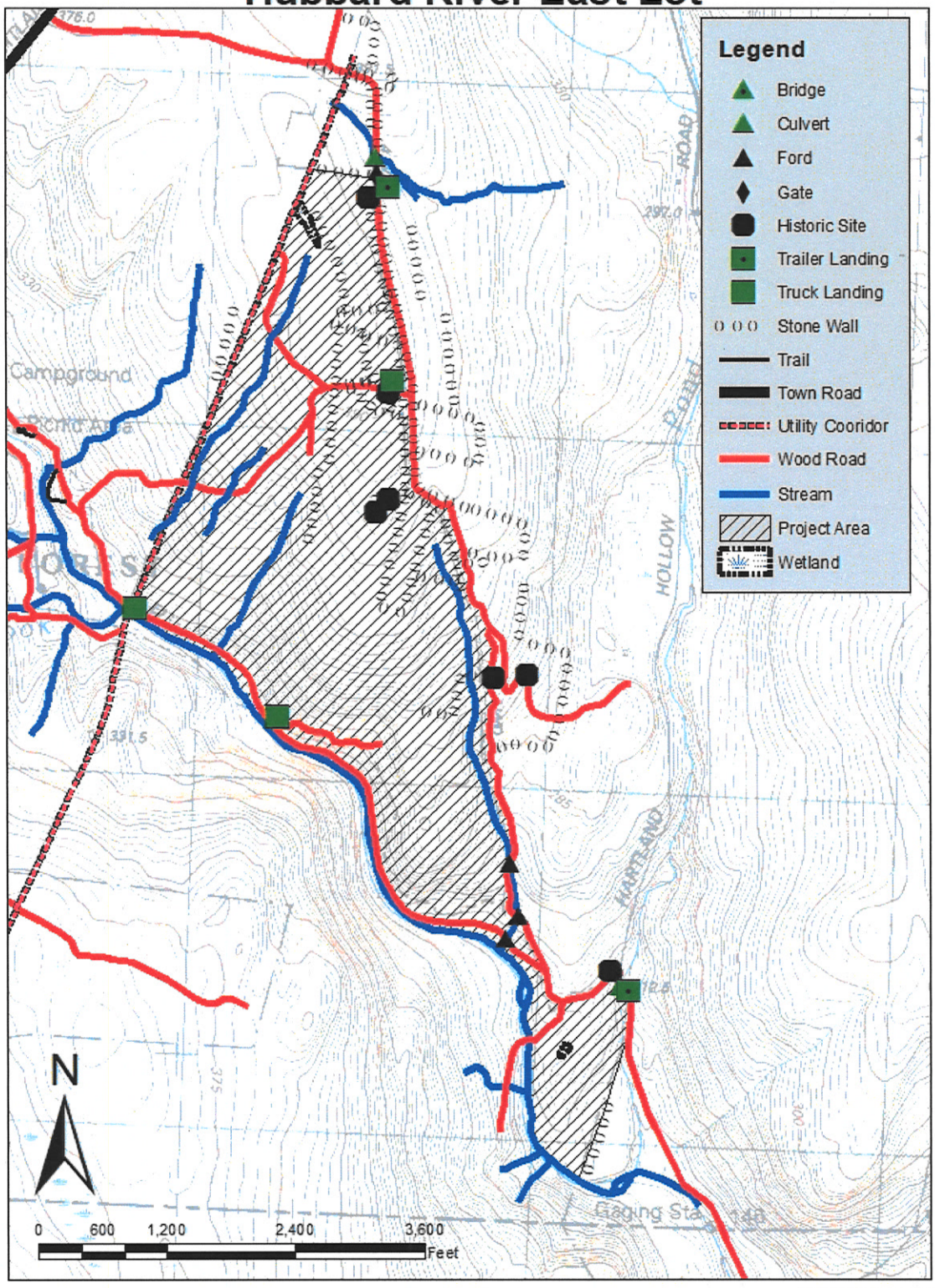
District Forester: _____ **Date:** 1/31/20

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

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

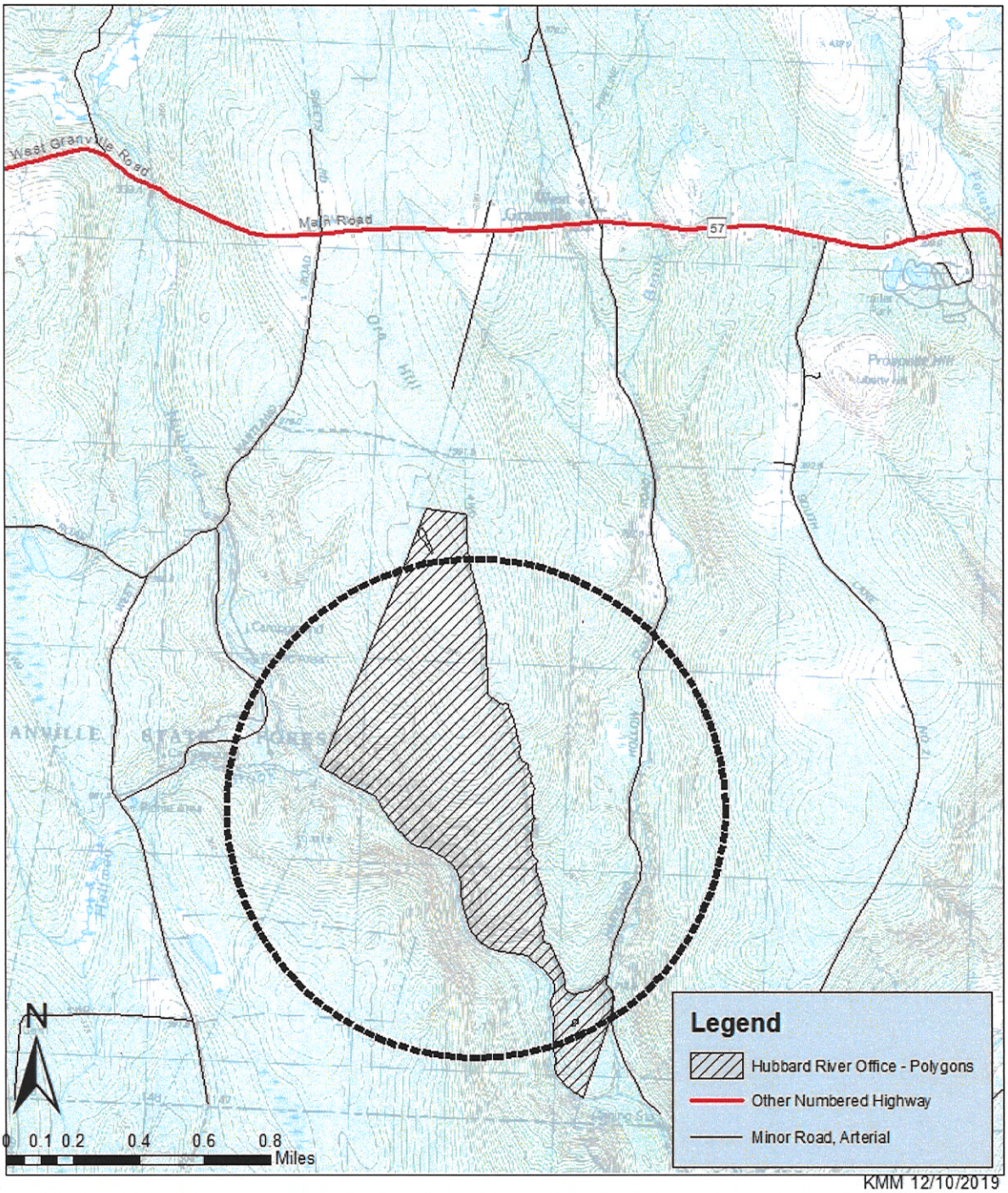
Management Forestry
Program Supervisor: William Hall **Date:** 2/24/2020

Granville State Forest
Hubbard River East Lot



KMM 01/07/2020

Granville State Forest
Hubbard River East Lot - Locus Map



KMM 12/10/2019