Massachusetts Department of Conservation and Recreation
Bureau of Forest Fire Control and Forestry
Forest Management Proposal
Name: Sykes Mountain

Date Posted:	**February 9, 2018**
End of Comment Period:	**March 26, 2018**

Region:	**West**
Recreation District:	**Lakes**
Forest Management District:	**Central Berkshires**
State Forest:	**October Mountain State Forest**
Closest Road:	**Sykes Mountain Road (off New Lenox Road)**
Town	**Pittsfield**

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Overview:

The Sykes Mountain Lot Forest Management project is on the northern portion of the October Mountain State Forest (see Locus Map) along Sykes Mountain Road which is accessed from New Lenox Road in the City of Pittsfield. It comprises approximately two hundred and eighteen acres of Northern Hardwood-Conifer Forest (mixedwood) stands.

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

- Portions of the project area have been affected by biotic agents such as emerald ash borer, beech bark disease, black knot and sugar maple borer.
- Significant portions of the project area have been repeatedly affected by abiotic agents (primarily ice storms) with major damage from the December 2008 ice storm.
- Will provide an opportunity to demonstrate regeneration/maintenance of mixed wood stands.
- This project will provide an opportunity to repair drainage and erosion issues on Sykes Mountain Road.
- Desire to capture monetary value of white ash trees prior to mortality due to EAB.
- This project area offers an excellent opportunity to demonstrate and fulfill objectives for DCR Woodlands including management for potential climate change.

The Sykes Mountain Forest Management Project proposes to:

- Demonstrate adaptive management in retaining/regenerating mixedwood forest types.
- Demonstrate/experiment with climate adaptation techniques.

- Demonstrate harvesting techniques and best management practices that protect forest productivity, soil and water resources.
- Repair drainage and erosion issues along portions of Sykes Mountain Road.
- 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.

Stand Description:

Stand Information: The proposed project area consists of approximately 218 acres of Northern Hardwood – Conifer (mixedwood) Stands where composition and dominate species varies throughout the project area. The dominant tree species that were observed are hemlock (Tsuga canadensis), white pine (Pinus strobes), red spruce (Picea rubens), 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), and American beech (Fagus grandifolia). Individuals of red oak (Quercus rubra), American elm (Ulmus americana), Hickories (Carya), service berry (Amelanchier laevis), butternut (Juglans, cinerea) and Tamarack (Larix laricina) were seen in or near the project area.

Historically this area was cleared agricultural land and homesteads. Prior to the 1960's there was considerably more pine, spruce and hemlock in the mix. Due to previous management practices the species composition became widely variable, creating a mosaic of hardwood and softwood dominated stands. The current size class in this forest type ranges from small to large diameter trees with an estimated average of 12 inches but ranging from 6-25 inches. The stocking (density) of the forest in this project is generally high but there are natural gaps in the forest canopy mostly caused by ice and wind damage. Throughout the project area white ash has been in decline for several years and is currently infested with emerald ash borer (EAB). It is anticipated that the EAB will kill the remaining stressed trees. Beech Bark Disease is also having a negative effect within this forest. The stand age is approximately 80-100 years old.

Previous Silvicultural Treatments: This project is located on the former Myers Parcel that the Commonwealth acquired in March 1997. This property had been owned and managed by the Myers family under Chapter 61 since 1971. According to the 1974 management plan much of the currently proposed project area was "heavily cut over" and in the sapling to pole size. In this plan prescribed treatments were weeding and improvement cuts for these stands, but it is not clear if this happened. The plan dated 1982 called for no treatments. The final 1992 plan called for patch and selective cutting in portions of the project area, but was not completed due to "Long skid, low product value & demand". The 1992 plan also describes the results of the harvests in the 1960's as cutting large amounts of pine and hemlock with little regeneration of those species.

Topography: This proposed project area is located in the Northern portion of the October Mountain State Forest located on both sides of Sykes Mountain Road. The project is bounded by state forest boundary in all areas except the western portion of the south line which is a forested wetland and associated stream. The highest elevation of approximately 1620' is located along the southern boundary and gradually lowers to 1320' along the southern boundary. Terrain ranges from flat near the top of the project area to slope of approximately 20% with an average slope of 10%.

Soil: There are four soil types associated with this project area, ranging from very poorly drained flat bottom types to excessively drained upland soils. As with topography the forest

composition changes with the soil types. The five types are described below (excerpts from "Soil Survey of Berkshire County Massachusetts", NRCS 1988).

- LtE – Lyman-Trunbridge Association: (14.6 ac) This map unit consists of shallow, somewhat excessively drained Lyman soils and moderately deep, well drained Tunbridge soils. These soils are on the mountainous uplands.
- BmE – Berkshire-Marlow Association: (22.5 ac) This map unit consists of very deep, well drained Berkshire and Marlow soils. The soils are on the sides of hill and mountains.
- PoB – Pillsbury Loam: (20.5 ac) This is a nearly level to gently sloping, very deep, poorly drained soil on foot slopes of drainage ways and in slightly concave areas of glacial till uplands.
- PmC - Peru-Marlow Association: (109.2 ac) This map unit consist of very deep, moderately well drained Peru soils and very deep, well drained Marlow soils. Peru soils are typically on the lower parts of slopes or in slightly concave areas and Marlow soils are on the upper parts of slopes on in convex areas.

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

Aesthetics: Sykes Mountain Road is an unmaintained road owned by the City of Pittsfield, which stretches between East New Lenox Road in Pittsfield to New Lenox Road in the town of Washington both of which are municipal owned roads. Vehicle access is from New Lenox Road. There are no private dwellings located along Sykes Mountain road however there are several foundations and adjacent stonewalls.

Sykes Mountain Road currently is in poor condition and only accessible by high clearance 4x4 vehicles or by foot due to erosion issues. Many water control features of the road have failed due to lack of maintenance subsequently the road has suffered significant erosion. Coordination with the City of Pittsfield will be sought in stabilizing the road both prior to and upon completion of the project to reduce effects of erosion. There are two other unnamed woods roads within the project area which traverse both State and City Property.

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

Recreation: The project area is open to all legal passive recreation activities that are allowed on DCR properties. There are no formal recreational trails within the project area, however Sykes Mountain Road is still a public road owned by the City of Pittsfield. During winter months local snowmobile clubs maintain the roads as snowmobile trails.

Currently there is an issue with illegal trail building/riding by mountain bikes on State Forest, City of Pittsfield Watershed and adjacent private land owner's property. The extent of this illegal trail network will be evaluated as part of this project and recommendations for trail removal and site restoration will be made for State Lands.

Streams and Wetlands: The project area is located within the Upper Housatonic River Valley Area of Critical Environmental Concern (ACEC). This ACEC is especially important for containing public and private water supply, complex river ecosystems, important wetlands, and critical habitats for a wide variety of both common and rare plant and wildlife species. ACEC's provide increased protection for wetland resource areas, associated habitats and fisheries, biodiversity, public and private groundwater supplies, storm damage prevention or flood control functions, historic and archeological resources, scenic and recreational resources, and other natural

resource values of the area. Therefore, in order to minimize any impacts on the site there will be no cutting within wetlands. In addition to the variable width filter strips located along each regulated stream, a 50 foot no cut buffer from wetland resources and regulated streams will provide additional protection to these valuable areas. Within the no cut buffer white ash may be removed if it is infested or imminently infested with EAB. All stream crossings within the project area will use temporary bridges.

Along with wetland and streams along the southwestern project boundary mentioned above, there are several additional regulated and unregulated streams located in the project area. Approximately 90% of the project area drains into connector streams flowing north entering Sykes Brook which then flows west across East New Lenox Road to the Housatonic River. In the remainder of the project area water flows directly west in unnamed streams across East New Lenox Road to the Housatonic River.

There are no mapped certified or potential vernal pools by NHESP. During initial site visits one potential vernal pool was noted, there may be other seasonal seeps, intermittent streams or small forested wetlands areas located throughout the project area not seen during initial site visits which could function as one.

Due to existing access and topography there is no anticipated intermittent stream crossing within this project area. Every effort will be made to avoid creating stream and wetland crossings if additional water features are found. All operations within regulated water features found in the area will at minimum follow the guidelines of the "Massachusetts Forestry Best Management Practices Manual".

Cultural Resources: There are no known pre-contact sites within the proposed project. There are several foundations, one old camp site and stone walls within the harvest area and several foundations located off of state property. These known features as well as any other features found within the project area will be protected from disturbance during any operation 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 habitats located in the proposed harvest area. No rare plants have been identified in the field to date. Care will be taken to properly report and address the needs of any state-listed rare plant or wildlife species if found on the site. Any invasive species will be documented and treated within the project area as well.

Wildlife: No rare animals or critical habitat were noted upon the initial site visit. Large mammals noted by observed sign were moose, turkey, deer and coyote. Small mammals noted were squirrel and porcupine. It has been observed in previous forestry operations nearby that large herbivore pressure is a minor concern. Due to the deteriorating nature of the forest types in this project area there is an abundance of large diameter coarse woody debris (CWD) and both live and dead wildlife trees (snags). The portions of the harvest areas that undergo 70-80% canopy removal will provide substantial benefits for wildlife species noted in the state Wildlife Action Plan as being associated with young forest habitat (see Chapters 3-4 at https://www.mass.gov/service-details/state-wildlife-action-plan-swap).

Sale Layout and Harvesting Limitations:

Through the prescription process, timber sales will use subdivisions or units of the project/contract area to effectively control logging operations. Divisions will be determined by location, topography, species composition, and/or operational needs.

Project Access: Access to the proposed project area is from the intersection of East New Lenox Road and New Lenox Road in the town of Lenox, east on New Lenox Road for 1.5 miles towards the Town of Washington then north towards the City of Pittsfield for one mile to the project boundary on Sykes Mountain Road. This road continues north through the project area back onto private land.

Alternate access to the project area may be available from several other parcels (public and private) to the north and east of the project area. As this project moves forward permission for temporary access with abutters may be sought.

Landings: There are no currently existing landing areas large enough to support a modern timber harvest operation on DCR property. Currently four landing will be proposed off of Sykes Mountain Road to support a variety of equipment setups. Effort will be made to set the landings back approximately 50 feet from the road to ensure the required buffer strip is kept intact where feasible. Permission to utilize several existing landings located on the Pittsfield Watershed may be sought to help facilitate logging operations.

Skid Road and Trails: All main forwarder and skidder trails will be designated during the timber marking of the project area by the forester. Existing woods roads and trails that are in good condition will be utilized when possible and new trails will be laid out as directed in the "Massachusetts Forestry Best Management Practices Manual" and "Landscape Designations for DCR Parks & Forests: Selection Criteria and Management Guidelines".

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 these two roads where no more than 50% of live basal area will be harvested and no slash within 25' of the road will remain. The Massachusetts Slash Law will be observed beyond the 25' no slash zone.

Equipment Limitations: Until further field work is completed there are no anticipated equipment limitations.

Excluded Areas: Wetlands in the project area will be clearly identified and excluded from harvest. Equipment will be excluded from areas of sustained 40% or greater slopes if found.

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. Restoration of existing roads and trails will help mitigate current and future erosion of the Sykes Mountain Road and the unnamed woods roads.

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

Proximity to Designated Forest Reserves: The Reserved portion of October Mountain State Forest is located approximately 1 mile south of the project area. The project area and the reserved portion of the state forest are separated by private land and New Lenox Road.

In-kind Services: Proposed in-kind services to be attached to this project to date.

- Repair and restoration of drainage features on Sykes Mountain Road and other woods roads.
- Repair and restoration of illegal mountain bike and ATV use. To protect any restoration work completed an attempt to block access to illegal trails will be made.

Silviculture:

Primary/Secondary goals: The primary goal in the treatment of these stands is to retain the current mixedwood forest habitat type by promoting the regeneration of softwood species while adding structural diversity for wildlife species. Based on previous treatment results, without intervention these stand will convert to 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: These stands will be treated using an irregular shelterwood method, maintaining predominately softwood species in the overstory to promote their retention and regeneration. This project should be planned and executed during a good "seed year" for the dominate softwood species, otherwise potential planting of native conifers may be needed to retain this forest type. 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.

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:** 02/09/18

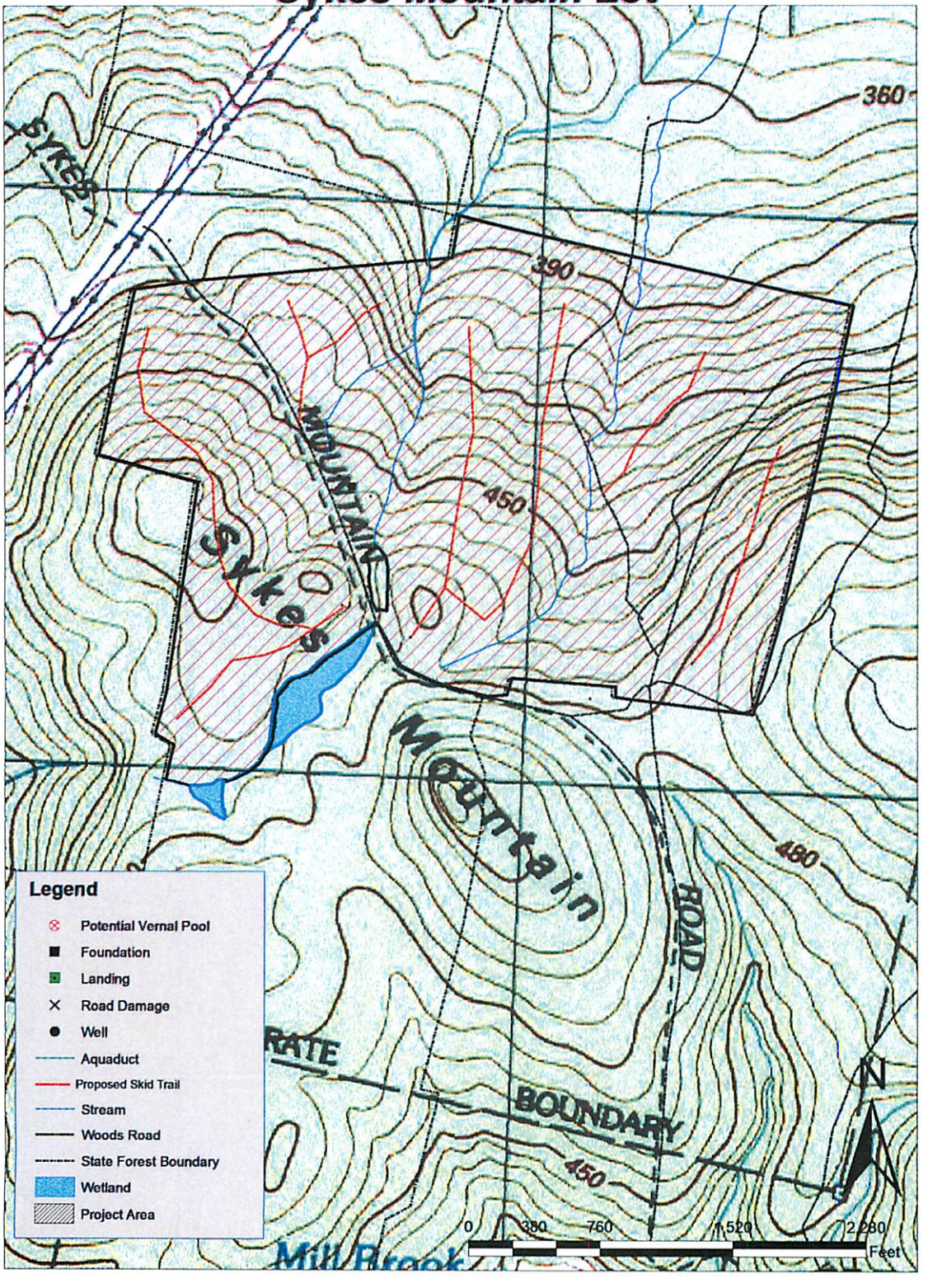
Field Operations Team Leader Or Park Supervisor: _____ **Date:** 2/9/18

Regional Director: Doug F. Sacco **Date:** 2/9/18

Management Forestry Program Supervisor: _____ **Date:** 2/9/2018

Attached: Topographic map showing project details. Locus map showing project location within regional context.

October Mountain State Forest
Sykes Mountain Lot



KMM 11/10/2017

Sykes Mountain Lot - Locus Map
October Mountain State Forest