Massachusetts Department of Conservation and Recreation  
Bureau of Forest Fire Control and Forestry  
Forest Management Proposal  
Name: South County Road

Date Posted: February 16, 2017  
End of Comment Period: April 2, 2017

Region: West  
Recreation District: Mountain  
Forest Management District: Northern Berkshires  
State Forest: Florida State Forest  
Closest Road: South County Road  
Town: Florida

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Overview:

The proposed project area is located in Florida State Forest north of South County Road. The sale contains 6 +/- acres of Norway spruce plantation and 84 +/- acres of mixed northern hardwood and softwoods (mixed-wood).

Conditions that led to selecting the area for active management

- The Norway spruce plantations are in decline and are being colonized by northern hardwoods.
- Mixed-wood components within the project area have reached a point in their development allowing residual trees to respond well to additional growing space and reduced competition provided by a silvicultural treatment.
- Beech bark disease complex (BBD) is rampant within the stand, reducing biodiversity.
- On a spatial scale, this treatment fits well with other anticipated treatments in and around Savoy Mountain State Forest
- Provides an opportunity to fulfill MA DCR objectives for Woodland Zones.

Goals and Objectives of the South County Road Sale

Goal 1: Increase biological diversity and introduce more complexity into existing stands
Objective: Install gaps within the existing stand in order to create early successional habitat and begin a new age class of trees.

**Goal 2:** Improve wildlife habitat, specifically browse and cover.
Objective: When establishing gaps ensure that they are large enough to have full sunlight on the forest floor. Gaps will not exceed 1/3 acre in size and will be located a minimum of 100’ apart. Beech brush or exotic vegetation that is disturbance driven will be mitigated through treatments that could occur prior to harvest, during the harvest, or post-harvest.

**Goal 3:** Improve recreational experiences primarily associated with hunting and wildlife viewing.
Objective: Maximize the number of gaps to be installed based on site conditions and current and/or anticipated vegetation. This will be accomplished through further investigation on-site and in consultation with the site productivity complexity analysis developed in 2012.

**Goal 4:** Improve the distribution of early successional habitat and younger age classes
Objective: Distribute group selection openings, where appropriate, throughout the stand.

**Goal 5:** Increase the distribution and density of sugar maple to combat sugar maple decline
Objective: Sugar Maple will be favored for retention over other tree species. Regenerating areas of sugar maple will have competing overstory trees removed provided that the removal(s) does not violate the Landscape Designations for DCR Parks & Forests: Selection Criteria and Management Guidelines (2012).

**Goal 6:** Remove beech infected with Beech Bark Disease Complex (BBD)
Objective: Beech that show clear signs of BBD will be biased for removal, while adhering to the guidelines established in the Landscape Designations for DCR Parks & Forests: Selection Criteria and Management Guidelines (2012). Particularly those guidelines relating to legacy trees and opening sizes.

**Goal 7:** Create and provide ecosystem services from this Woodland as directed by the Landscape Designations for DCR Parks & Forests: Selection Criteria and Management Guidelines (2012).
Objectives:
- Provide locally grown forest products to the local economy
- Create a more diverse forest structure that is resilient to disturbance through improvement thinnings and group selection
- Sequester carbon in retained overstory trees, permanent forest products produced from the harvest, and in the vigorous regenerating forest.
- Provide the conditions within the stand for early seral or regenerating forest that will support diverse species.

**Goal 8:** Commence the process of removing the off-site Norway spruce plantation

**Objective:** Approximately \( \frac{1}{2} \) of the existing Norway spruce plantation will be removed through a combination of group selection openings and improvement thinnings.

**Goal 9:** Demonstrate harvesting techniques and best management practices that protect forest resources.

**Objectives:**
- Ensure harvesting contractor compliance with all BMP’s
- Frequently monitor operations to minimize and/or mitigate damage to the site
- Ensure full understanding of contractual requirements by the harvesting contractor
- Develop a comprehensive silvicultural prescription

**Stand Description:**

**Species Composition**

**Norway Spruce Plantation:** a single 6 +/- acre plantation that is even-aged with little or no understory or ground cover, save for areas with canopy gaps. The canopy gaps have been caused by weather events, and have been colonized by highly desirable hardwood species; most notably red oak and sugar maple. This site occupies the lowest category of the site productivity complexity analysis developed in 2012. The plantation is in decline showing evidence of windthrow and potential root disease. Techniques that expand colonized sites, and reduce the presence of Norway spruce will be strongly considered.

**Mixed-Wood Stands:** These stands are approximately 84 +/- acres in size, and are even-aged. The density of trees in these stands ranges from approximately 110 ft\(^2\)/acre - 140 ft\(^2\)/acre of basal area.

Stands are considered mixed-wood when not more than 80% of the stand is composed of a specific wood type. For instance some of the stands may be 80% mixed northern hardwood, while others may be 80% softwood with a variable constituency across the spectrum; i.e.: 50/50, 60/40, etc. The primary tree species associated with this stand include American beech, red maple, sugar maple, yellow birch, white birch, red oak, eastern hemlock, white pine and red spruce. The distribution and density of the individual species is variable throughout the stand with areas that are of a single species, and others that may contain all of those listed above. The distribution gradient is such that it is not uncommon to find red oak growing right next to red spruce.
The stand is healthy and would be considered young mature. The stand falls within the mid ranges of the productivity analysis developed in 2012, have the moderately deep soils (approx. 20”), and are healthy. The area is of average productivity so a combination of limited uneven-aged management, and classical even-aged management techniques may be most appropriate.

Groundcover in the mixed-wood stands consists mainly of ferns, *Lycopodium spp.*, partridgeberry, and mayflower. Other components that are expected to occur include wood sorrel, *Rubus spp.*, striped maple, pin cherry, *Impatiens spp.*, etc.

**Previous Silviculture Activity**

The mixed-wood stand and the Norway spruce plantation demonstrate typical land-use patterns consistent with the northeast. This area is noted for having sheep farms, and the land was most likely cleared for livestock with the last 100 +/- years. Further evidence of the cleared lands is present via stone walls, and scattered, very old open-grown trees. At some point the farms were abandoned and the land was left to reforest naturally. The fact that the area had been completely deforested within roughly the same time frame as the efforts by the Civilian Conservation Corps to perform reforestation work, likely drove the decision install the Norway spruce plantation. Since that time active harvesting has occurred on Savoy Mountain State Forest, and surrounding private lands. However, it appears that the Commonwealth has not conducted any previous harvesting activities in this particular area of Florida State Forest.

**Topography and Soils**

The primary soil associations included within the project area is the Tunbridge-Lyman association. This soil association is characterized as extremely stony with a mica schist parent material, and located on slopes of 3% - 15%. The soils are found at elevations between 10’ and 2,500’, receive between 34” and 52” of precipitation each year, and are subjected to a mean annual temperature between 37º F and 45º F. The site index for this association is between 50 and 60 depending on species and microsite.

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

**Aesthetics**

Roads/trails that will be impacted by the harvest are South County Road and an unnamed snowmobile trail. Though none of these are designated scenic byways, maintaining the visual experience for the users of these roads and trails is a high priority. In order to ensure that this occurs, slash management guidelines outlined in the 2013 2nd Edition of the Massachusetts Forestry Best Management Practices Manual will be followed. Additionally, marking techniques designed to limit visual impacts will be employed.

**Recreation**

There are a number of resource based recreational activities that forest users participate in throughout the sale area, and include: snowmobiling, hiking, biking, hunting, fishing, and
wildlife viewing. The purpose of this project is to have either no impact or improve the experiences of users and visitors to the forest. None of the activities associated with harvesting are anticipated to restrict known, legal, recreation.

Wetlands

Wetlands within the project will be thoroughly identified during the stand exam process and when the timber marking has concluded. A review of the DEP wetlands map (Map 3) does not indicate the presence of any certified vernal pools; or major streams, rivers, or lakes. The streams that are currently shown on the map have been located, and filter strips will be installed during the marking process. Currently, no stream crossings are anticipated, however this may change over the course of project development. If additional wetlands such as non-certified vernal pools, additional intermittent streams, upland wetlands, etc. are encountered; standards outlined in the most recent edition (currently 2013 2nd edition) Massachusetts Forestry Best Practices Manual will be followed as they relate to harvesting requirements, crossings, filter strips, water bars, slash management, etc.

Cultural Resources

A stone wall has been located five chains north of the intersection of South County Road and the Cold River tributary that is located within the sale (Map 1). Stone walls and cellar holes are to be protected from damage due to harvesting. If a stone wall does need to be crossed, it will be done at a designated crossing, and rehabilitated to the condition it was in prior to harvesting. Additional cultural resource protection measures may be necessary once the area is cross referenced with the master site file for the Commonwealth of Massachusetts.

Listed Species

The Massachusetts Natural Heritage Atlas, 13th Edition, was referenced for this project. There are no known or identified priority habitats of rare species or estimated habitats of rare species occurring within the project area. However, the southwest corner of the sale abuts priority habitat and is bounded by reserve to the south. Additionally, no listed plants are known to occur within the project area.

Wildlife

Species

The wildlife occurring in this area is typical of a northern hardwood forest. Observed species include black-capped chickadee, white-tail deer, blue jay, and common crow. Other species expected to occur are black bear, moose, various songbirds, ruffed grouse, snowshoe hare, raccoon, various fur bearers, grey squirrel, red squirrel, various raptors, and other small mammals such as bats and rodents. Additionally various reptiles and amphibians are expected to occur in the area since there is a known ephemeral stream within the sale area.
Snags and Retained Live Trees

All snags will be retained on-site provided that they do not pose a hazard to humans during or after operations, and a minimum of 5 snags greater than 10” dbh where they exist. Live trees that appear to be a den or nest site either currently or in the recent past will also be retained. Beech that have evidence of bear foraging, or are in excess of 14” in diameter and showing no signs of beech bark complex and in good health, will not be designated for removal.

Sale Layout and Harvesting Limitations:

Infrastructure

Landings will be selected based on a number of factors to include existing vegetation, slope, and access by haul vehicles, wetland proximity, etc. During harvesting operations excess slash building up at the landing will be evenly distributed back through the sale area within the skid trails. Prior to the conclusion of the sale, all landings will be cleared of any debris that will inhibit seeding to grasses and forbs. Map 1 shows the tentative locations of the landings.

Primary skid roads will be identified following the stand exam, and confirmed upon the completion of timber marking. Existing skid trails or agricultural trails will be utilized when possible. Skidding will occur along contours, and sharp pitch or grade changes by skidding equipment will be avoided. Skid trails that experience excessive disturbance will be rehabilitated prior to the conclusion of the sale. Map 1 shows the tentative locations of skid trails.

Harvesting Equipment

This operation is anticipated to be hand felling with mechanical skidding and forwarding. Whole tree harvesting will most likely be precluded due to the small size of the plantation and the installation of group selection openings and individual tree thinning. All equipment and activities will comply with the most recent version of the Massachusetts Forestry Best Management Practices manual, currently the 2013 2nd Edition.

Areas Excluded From Harvesting

Any areas that are identified as having cultural significance will be excluded from the sale area, as well as areas that are considered sensitive and will be negatively impacted for a prolonged period post-harvest. Currently, no such areas have been identified but may present themselves during the stand exam and/or marking phases of the project.

Erosion and Sediment Control

The unwanted movement of soil and sediment across the landscape will be minimized by following and exceeding the requirements and guidelines of the most recent edition of the Massachusetts Forestry Best practice Manual, currently the 2013 2nd Edition.
In-Kind Services

Specific items have not been identified, however, as the project progresses needs may arise. Those items identified will be evaluated on a case-by-case basis.

Proximity to Forest Reserves

The project area shares a bounding road with a preserve. The north side of South County Road is where the sale is proposed to occur, while the south side of the road is a Reserve boundary.

Silviculture:

Norway Spruce

Encouraging further hardwood colonization within the plantation will be the primary goal of silvicultural treatments.

- Methods: Expanding existing gaps where colonization is occurring with 3(three), 1 acre openings. Within the openings all Norway spruce and hardwoods that are diseased, have poor form, low vigor, or are of a species that can dominate a site such as beech or striped maple will be removed. Healthy hardwoods of species such as birch, maple, oak, aspen, black cherry, etc. and native softwood trees that are healthy, vigorous, and of good form will remain. This will reduce the size of the plantation by approximately 50% and accelerate the processes that are already occurring.

- Future Silvicultural Entries: The next entry into the stand will focus on removing the remaining Norway spruce, and thinning the hardwoods that have colonized the site allocating growing resources to the most healthy and vigorous trees.

- Desired Future Conditions: The desired future condition of the current Norway spruce plantation is a hardwood stand with occasional softwoods such as white pine and/or hemlock, and some residual Norway spruce. The former plantation will become two-aged (due to the low site productivity), healthy, vigorous, fully stocked, and have an increase in both vertical and horizontal complexity. Depending on site conditions, it may be possible to move this stand to a fully uneven-aged system in the future.

Mixed – Wood

Limited uneven-aged silvicultural techniques will be used to introduce complexity into the stand. Thinning will be used in most of the stand to improve the quality and health of the residual stand by freeing-up resources that were otherwise being utilized by inferior stock.
During operations diseased beech will be biased for cutting while sugar maple; disease free beech over 14” in diameter, and superior white ash between 14” and 16” in diameter will be biased for leaving.

- **Methods:** 1/3 acre openings will be centered on dominant and/or codominant trees. In between gaps the area will be thinned to a range of densities to include no thinning at all in spots.

- **Future Silvicultural Treatments:** Future treatment will include expanding on installed gaps, and thinning for continued improvement in quality and quantity of desirable tree species. Herbicide application to control beech regeneration may also be required in order to ensure a diversity of desirable growing stock in the gaps and/or expanding gaps.

- **Desired Future Condition:** The desired future condition for this stand is a healthy, vigorous, fully stocked stand free of insect and disease issues. Noxious weed issues will be minimal, and over the course of time the stand will be well diversified in ages so as to include early successional stages in certain areas of the stand and old growth characteristics in others.
Attached: Topographic map showing project details. Locus map showing project location within regional context.