

**Massachusetts Department of Conservation and Recreation
Bureau of Forest Fire Control and Forestry
Forest Management Proposal
Name: York Lake**

Date Posted: September 4, 2013
End of Comment Period: October 18, 2013

Region: West
Recreation District: Lakes
Forest Management District: Southern Berkshires
State Forest: Sandisfield
Closest Road: Rt 57
Town: Sandisfield

Contact Information: Conrad Ohman
740 South Street
PO Box 1433
Pittsfield, MA 01202
413.442.8928

Overview:

The Sandisfield State Forest/York Lake Lot is located in an extensive large block of continuous forestland in the Southern Berkshires that extends into Connecticut (See Locus Map). It is in a unique area of Massachusetts that is in a working forest landscape and home to a large variety of flora and fauna. This 246 acre proposed project area is located on the 2045 acre York Lake parcel of the Sandisfield State Forest. York Lake Road, which is owned and maintained solely by DCR, bisects the entire forest from Rt. 57 on the north to Rt.183 to the south. Idle Hour and Dodd roads also provide access into the forest from the west and east respectively but are mostly used by local residents.

The project will be composed of three separate areas of forest management. The northern stands will include the area north of Idle Hour road to the Rt. 57 intersection containing stands on both sides of the main road. The southern stands cover everything south of Idle Hour road down to the main York Lake recreational area mostly on the western side of York Lake road. The third area of proposed treatment is a 100 foot strip along each side of the 2.3 mile York Lake Forest road.

This York Lake Lot Forest Management Project will result in two or more separate timber sale entries.

The area was selected for a forest management project because:

- There are many existing dying or otherwise potentially dangerous trees along the heavily used forest road. With ash being a major component of the roadside forest, and emerald ash

borer already detected just 20 miles away, the number of hazard trees is expected to dramatically increase as the emerald ash borer spreads.

- Past forest management activities (timber sales) have created a complex forest structure consisting of multiple species, sizes and ages in the unit. This set of proposed treatments will further that goal.
- It offers an excellent opportunity to demonstrate and fulfill objectives for DCR Woodlands.

The York Lake Lot Forest Management Project endeavors to:

- Reduce the number of hazardous trees along the corridor of York Lake access Road and along portions of the York Lake Loop hiking trail
- Demonstrate silvicultural techniques such as thinning and gap expansion to create and maintain species and structural complexity in an area of multiple forest types.
- Demonstrate harvesting techniques and best management practices that protect forest productivity, soil, and water resources.
- Fulfill management approaches for Woodlands as directed by the Forest Futures Visioning Process (2010) and subsequent Management Guidelines (2012).
- Follow general guidelines of the Southern Berkshires Forest Resource Management Plan.
- Protect against significant white ash loss due to emerald ash borer.
- Prevent proliferation of American beech with beech bark disease complex.
- Accelerate growth of advanced regeneration from previous timber sales.
- Invest timber sale revenue into much needed forest road improvements.

Previous silvicultural treatments:

Since 1975 there have been more than 30 timber harvests of varying species, acreage, silviculture, and intensity on the York Lake Forest, including six in this proposed area. Outside of the current proposed area, the harvests have resulted in a variable landscape with a complex mix of species and size classes including regenerating stands with a component of young tree, and herbaceous vegetation. This has resulted in a variety of wildlife habitats. Within the proposed area most of the sales were composed of thinnings and small group harvests designed to decrease the percentage of beech, salvage dying ash, create a diversity of age classes and grow an extended rotation stand of large, high quality hardwoods. Immediately adjacent to the proposed area a 5 acre dying red pine plantation was clearcut in 2007.

In May/June of 2009 following a significant ice storm, DCR in conjunction with FEMA contracted a removal of hazardous trees and of slash adjacent to the road edge. In this project more than 250 trees greater than 7 inches diameter were removed.

Site Description:

- Topography: The topography is generally flat to gently sloping with elevation range of 1440 – 1550 feet. The proposed treatment area is bisected by York Lake road. The southern forest stands run from the road to the lake and wetland. Total elevation change is approximately 150 feet and average slope is 6 percent. The northern forest stands run both

west and east of the road. Stands to the west have an average slope of 5 percent with minimal elevation change run either to a wetland or a more recent timber harvest which will not be entered. Stands to the east of the road average 6-8% slope with an elevation change of 75 feet and run to an extensive beaver wetland and stream.

- Soils: According to the Soil Survey of Berkshire County produced by NRCS in 1988, this area contains three soil associations.

PoB-Pillsbury Loam: This is a nearly level to gently sloping, very deep, poorly drained soil found at the foot of slopes and in slightly concave areas. The main management concerns are seasonal high water table, seedling mortality and wind throw.

PmC-Peru Marlow association: this association consists of very deep, moderately well drained Peru soils and very deep well drained Marlow soils. Peru soils are typically found on the lower parts of the slopes and Marlow on the upper slopes. On this proposal site the main soil type is Peru.

BmE- Berkshire Marlow association: this association is found in a band mid slope between the road and wetland. It consists of very deep, well drained Marlow soils. Both Peru and Marlow soils are rated as having moderate risk of windthrow. Peru is more likely to have a seasonally high water table.

Stand Description:

Stand types across the proposed treatment area are predominantly hardwood types with BB (beech birch maple) and OH (oak hardwood) the most common followed by HH (hemlock hardwood), WH (white pine hardwood), and one small SN (Norway Spruce) stand.

Species composition: Main overstory species are beech, (*Fagus grandifolia*), white ash (*Fraxinus Americana*), black cherry (*Prunus serotina*), sugar maple (*Acer saccharum*) and red oak (*Quercus rubra*) Other species present include black birch (*Betula lenta*), yellow birch (*Betula alleghaniensis*), and red maple (*Acer rubrum*) with some eastern hemlock (*Tsuga Canadensis*) and white pine (*Pinus strobes*). Norway spruce (*Picea abies*) is found in the small stand at the entrance to the forest and in the understory of an OH (oak hardwood) stand. In several stands where previous management opened the canopy significantly there are more oak, cherry, and birch regenerating than in the lightly-thinned or previously unmanaged stands.

The shrub/small tree understory is made up of the above tree species along with patches of hobblebush (*Viburnum alnifolium*), striped maple (*Acer pennsylvanicum*) blueberry and huckleberry (*Vaccinium* spp. And *Gaylussacia* sp.) and witch hazel (*Hamamelis virginiana*) in wetter areas. The herbaceous layer is dominated by variable densities of fern, including hay-scented fern (*Dennstaedtia punctilobula*), wood fern (*Dryopteris* spp.), Christmas fern (*Polystichum acrostichoides*) and cinnamon fern (*Osmunda cinnamomomea*). Typical populations of spring ephemerals including trout lily and red trillium (*trillium erectum*) spring

beauty (*Claytonia virginica*) are commonly found in the northern hardwood stands. Some of the more mesic (moister) soils in the northern hardwood stands support populations of blue cohosh (*Caulophyllum thalictroides*), leeks (*Allium tricoccum*) and bloodroot (*Sanguinaria Canadensis*). Beech sprouts are a problem throughout much of the forest and, in places, will need to be controlled to avoid a future forest condition where diseased beech dominates.

Ages and size classes present:

Due to the above described variety of timber harvests, variable soil and topography and also variable land use patterns this proposal area contains a range of size class and ages. Tree sizes range from seedling to very large mature trees. The larger trees present are representatives of the forest existing near the turn of the century and are at least 100 years old. In general, the stands are even aged but those with recent silvicultural treatments tend to have more varied size classes present. The Norway spruce stand planted around 1922 is approximately 90 years old.

Stand and tree vigor:

Beech bark disease has infected most beech trees, with only an occasional one not showing signs of infestation.

Ash has been steadily declining for many years and is now faced with almost certain infestation with emerald ash borer. Experience in other parts of the country has shown that most if not all ash in the infested area will die and there is little or no hope that the insect will not continue spreading.

Many trees were impacted by the recent 2008 ice storm. Cherry, which is over mature or nearing maturity, was particularly impacted by ice damage. Many of the cherries have sprouted new crowns, but experience has shown that this species rots quickly from broken crowns. While such trees may continue to produce mast for wildlife use, the economic value of the wood declines rapidly once they begin to rot.

The Norway spruce stand is declining due to a variety of causes. Since the stand has never been thinned, many trees have died or are stressed by competition. An unknown pathogen or pathogens (probably root related) has resulted in mortality in specific pockets of the stand. Signs of bark beetle, which are attracted to declining trees, are beginning to be evident. Along York Lake Rd and in the interior of the stand many trees wind have been blown over or broken mid- stem.

Stocking level:

Forest stocking is a measure of the area occupied by trees in relation to a desired level. Stands with high stocking can sometimes grow slower and have higher mortality due to overcrowding while stands that have low stocking do not fully capture the resources available for tree growth but may allow for establishment of young trees. At this point in the planning process stocking references are only a rough estimate designed to describe the general forest conditions. Later detailed inventories will produce accurate stocking estimates to guide the silviculture planning.

Most of the forest stands across the entire 2000 acre forest are fully stocked with the only exceptions being young forest that exists due to recent harvesting. These young forests total less than 50 acres or 2.5% of the entire forest.

Stocking levels in general are varied across the proposal landscape depending on previous silvicultural treatments and forest type. There are higher density stands of white ash, red oak, and sugar maple in the southern portion of the proposal area with basal areas over 200 sq.ft./acre. Conversely, some of the stands in the northern area have moderate to low density levels where basal area is 60-80 sq.ft./acre of large diameter oak and cherry.

Summary of existing 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 site history (land use; agriculture/logging) and conditions (soil types, productivity; vegetation cover) suggest that the majority of these stands described above have a high soil productivity and forest complexity indicating that uneven age or multiage methods of forest management are appropriate in the stands present in the project area.

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

Aesthetic:

This harvest will have a significant impact on the aesthetics of the roadside. Because of concerns over aesthetic impact, a no cut buffer zone was imposed on all harvests along York Lake Road. This policy precluded the proactive removal of declining trees or the thinning of roadside trees and has resulted in concentrations of dead, dying or declining beech; dead or declining ash; and ash which are certain to die in the near future. Where concentrations of these trees occur, their removal will result in an obviously changed, less dense tree cover directly adjacent to the road, increased amounts of downed wood and increased amounts of brush along the road. The harvest of the spruce at the entrance to the forest will expand the size of the adjacent seedling stand, will extend to Rt. 57 and will create a dramatic change in the appearance of the entrance.

Many will find these changes objectionable. In order to mitigate the impact several steps will be taken.

- Where possible trees will be felled away from the road
- Slash will be removed within 25 feet of the road edge
- All slash will be lopped to within 2 feet of the ground within 50 feet of the road edge

It should be noted that without a harvest of this type, these negative impacts will still occur. In the near term dead and declining ash, beech and spruce will continue to die and/or fall at random into or adjacent to the road. As the ash borer population increases all ash will die and begin to fall. Without a proactive approach to remove current and future hazard trees it may be necessary to close the York Lake road.

Recreation:

York Lake beach is a very popular day use swimming and fishing area and the pond loop trail which abuts this proposal is a popular hike. As described in Forest Management Guidelines, hazardous trees within one tree length of the trail may be harvested. Within 50 feet of the trail, any slash will be distributed to achieve a light natural appearance.

The road is used at appropriate times of the year for scenic driving, hiking, dog walking, hunting, snowmobiling and cross country skiing. Use of the main road for winter logging should not have negative impacts for snowmobilers and skiers as long as the edge of the road is not plowed or travelled upon. The roadway is lightly used in the winter as it isn't a major connector to snowmobile trail systems. All possible efforts will be made to maintain snowpack along the edge of the road and logs will not be moved during weekends when use is highest.

Wetlands:

Wetlands within the designated area include forested and shrub swamps, several streams and a potential vernal pool directly adjacent to the road at the northern end. A 5 acre hemlock swamp is within the hemlock stand in the project area. This wetland will be excluded from any harvest. Adjacent wetlands form the edges of the project area. There will be no timber management in wetlands. All wetlands will be clearly marked prior to the start of harvest activities. Functional vernal pools will be protected by a 50 foot buffer strip that will exclude harvesting and new skid roads. It is anticipated that all skid roads will avoid stream crossings entirely.

Cultural Resources:

Stone walls and plantations on the property indicate former agricultural use. A cellar hole exists at the intersection of Rt. 57 and the York Lake Rd. Another foundation and the small, one stone Smith cemetery is located on Dodd Rd. Stone walls are common throughout the landscape.

Rare and Endangered Species:

According to the 13th addition of the Massachusetts Natural Heritage Atlas this proposed sale contains no estimated or priority habitats and a 2008 inventory by Natural Heritage found no rare plant species.

Wildlife:

The variable topography and species composition of the forest, together with the past harvest history has resulted in a variety of wildlife habitats and therefore potential species.

A partial list of species, based on casual observation and conversation with park staff and visitors includes yellowed belly sapsucker, downy woodpecker, veery, chestnut-sided warbler, wood thrush, barred owl, red tailed hawk, sharp-shinned hawk, turkey, bobcat, fisher coyote, fox, moose, deer and bear.

The irregular shelterwood harvest proposed for this site is unlikely to have significant impacts on most species of wildlife. Species associated with mature forest habitat will continue to use these stands and will benefit from the food and cover provided in regenerating patches.

Extensive patches of young forest habitat found on other parts of the State Forest and preferred by a variety of declining shrubland and young forest birds will not increase and will in fact significantly decline in the next 10-15 years under the management strategy summarized here. Within this limited time frame this type of habitat will continue to be found in nearby sections of the forest in the long run these stands will provide vibrant and relatively consistent habitat for a variety of wildlife. To an increasing extent private and non-profit property owners within the surrounding landscape are taking advantage of state and federal programs to increase young forest/early successional habitat.

Past management and natural disturbance has resulted in an abundance of large cavity trees which will remain for many years. Mortality resulting from natural events will continue to add to the number of available cavity trees.

Sale Layout and Harvesting Limitations:

It is anticipated that the harvest will be divided into two or more sales to be conducted over the next 5 years.

Areas of hydric soil and small forest seeps will be excluded from the harvest.

Landings and skid roads:

There are several existing log landings along York Lake Rd. that have been used at various times for past timber harvests and it's probable that they will be used again (see Proposal MAP). If any new landing areas are needed they will be carefully located away from wetlands and hydric soils. The main road can be used as a forwarder road in the winter to bring logs closer to the entrance of the forest so that excessive snow plowing will not be needed. The York Lake road has been partially plowed in the past for timber harvests. There are no-planned stream crossings as of yet and it's anticipated that skid roads will be able to reach the main road/landing area without them.

Equipment restrictions:

Restrictions on types of equipment used are not anticipated, but sizes of equipment will be restricted. The lot is probably best suited to a combination of cable skidder and forwarder and a mechanical harvester would be suitable on much of the area. Grapple skidders, if allowed would be limited to use on main skid roads.

In-kind services:

Road work to be done through in-kind services will include grading, ditching, adding gravel, and basic erosion control along all forest roads. Additional work done with in-kind services could include tree trimming and beach restoration in the day use area.

Silviculture:

Goals and objectives:

Within the roadside corridor, defined as a strip 100 feet from each side of York Lake Rd, Dodd and Idle Hour, the goal is a safer and maintenance free road, with roadside aesthetics enhanced.

Outside this corridor, the primary goal is the continuation of a varied and complex stand capable of buffering future disturbance, providing a variety of wildlife habitats, and maintaining the current species, size and genetic diversity and the demonstration of a system which can obtain these goals.

Secondary goals include supporting local wood products industry, salvaging the value of damaged and diseased trees, providing income to the town and to the general fund. Another goal is the establishment of ash regeneration which might survive the expected borer infestation and provide seeds for a future population.

Methods used to accomplish these goals:

Within the road corridor all ash and beech will be removed. In addition any other dead or otherwise hazardous tree which is tall enough to reach the road may be removed.

In the remainder of the proposal area, the method used will be an irregular shelterwood system, including thinning to promote very large trees, reduction of overstory density to release existing young trees and creation of small group harvests centered on mature or declining trees to encourage regeneration or to release existing trees. In some sections of the proposal area specific silviculture techniques will be dictated by density and spacing of ash and beech. Large disease free beech trees will be retained to maintain a variety of mast producing trees and to improve the genetics of the existing beech forest.

Selective chemical treatment of beech stumps will be necessary to retard the expansion of diseased beech.

Short and long term desired conditions:

The most important desired condition is a safer roadside corridor with fewer hazard trees.

Both the short and long term desired condition is a forest composed of a variety of tree, shrub and herbaceous species, size classes and overstory densities. This forest will have a component of very large trees (26+” diameter) and will primarily be composed of medium to large trees (16-26” diameter). Smaller trees, seedlings and saplings will be found throughout the area and in scattered small patches and will provide a varied level of vertical structure. The desired species mix is one with a lesser percentage of beech. Reduction in beech will provide for a forest which is healthier, with a wider variety of tree and shrub species, and perhaps more suited to long term projected temperature increases.

Future silvicultural treatments:

It is anticipated that future management will continue these types of harvesting methods (multiage regeneration systems) with the possible addition of small shelterwood removal harvests to help restore the missing component of young forested habitat.

District Forester: Jeff [Signature] asst. Forester Date: 8/30/13

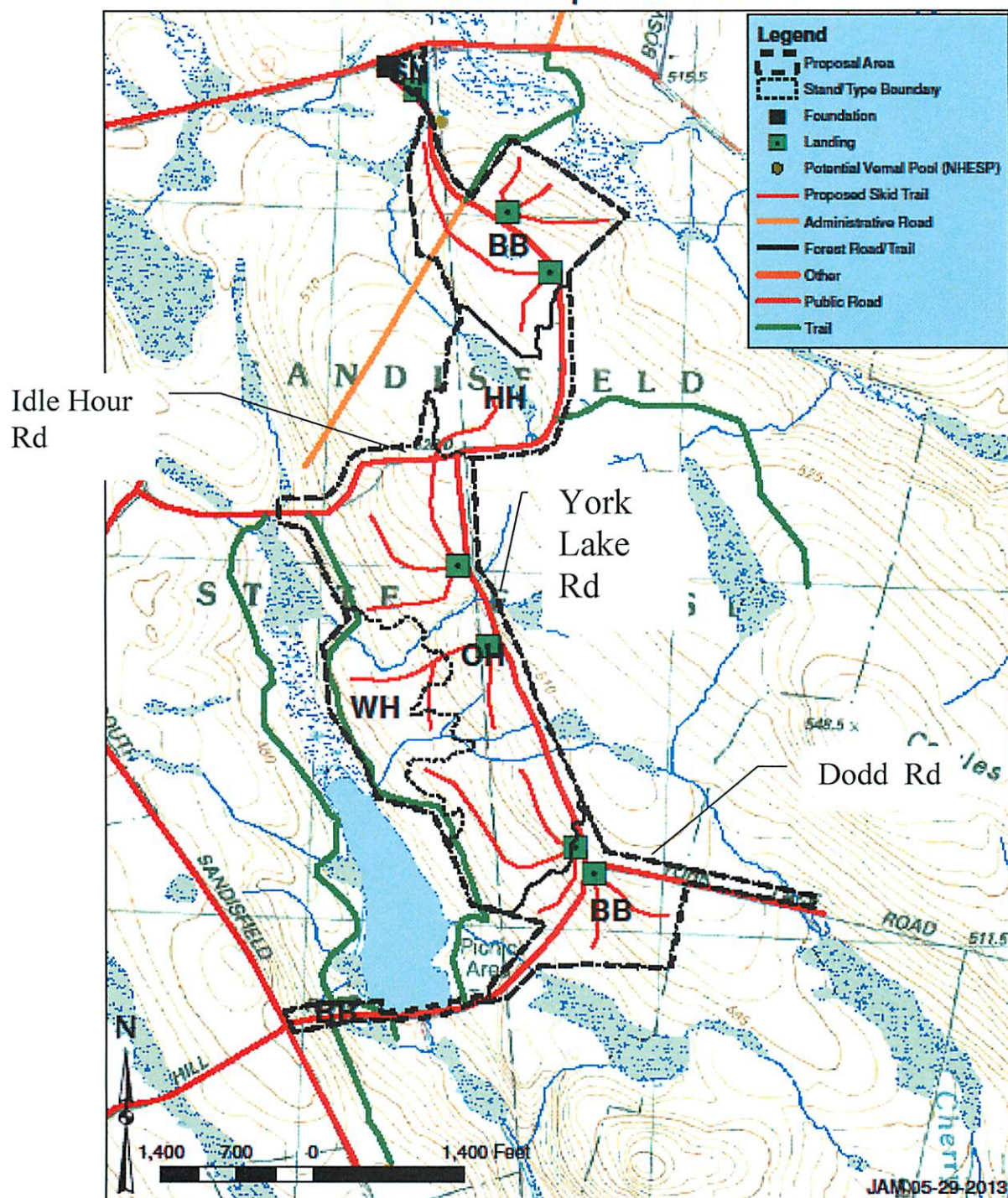
Field Operations Team Leader
Or Park Supervisor: John Kovich Date: 8-29-13

Regional Director: Robert S. Mellan Date: 8/29/13

Management Forestry
Program Supervisor: [Signature] Date: 8/30/2013

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

York Lake Proposal - 2013



York Lake Forest Mangement Proposal

Sandisfield Forest - Locus Map

