

Hadlock Community Forest Harvesting Operations Plan

The Open Space Implementation Sub-Committee has proposed that the town conduct a pilot wood harvesting operation on the Hadlock Community Forest (HCF) that would begin this winter. The Sub-Committee has met with its forester, Rene Noel, to consider his recommendations and agreed on the following plan.

Goal

Our goal is to manage Falmouth's public forest land in ways that result in vigorous, healthy, productive woodlands that provide a variety of benefits, including recreational opportunities, wood products, watershed protection, wildlife habitat, and aesthetic value.

Objectives

We have established six primary objectives for the proposed harvest:

1. *Thin the forest to reduce the number of trees per acre, releasing the larger and more desirable trees so they can grow faster, taller and straighter.*
 - Trees that are losing the competitive race for light and nutrients, and diseased, deformed, damaged, over mature and defective trees will be the primary targets of the harvest. (Forester will choose and mark all trees to be harvested with paint on stem and below stump level. As part of the process of going through the woods marking trees permanent and temporary skid trails will be located.)
 - Growth and vigor of the remaining trees will be improved by improving spacing.
 - Overall volume of the harvest area will be reduced by 30%.
 - White pine, red oak, and white oak will be favored; Eastern hemlock and American beech will be targeted for thinning.
 - Patch cuts – clearings – will be created in areas that already have significant damage (wind thrown trees, lightning strikes, beech scale infestations, etc.). Most of these will be 0.5 acres or less in size. On occasion conditions may dictate larger patches be cut. (IE. Larger areas of storm damage, shallow rooted areas subject to wind throw, insect damaged stands, etc.) Ideally a total 5-10% of the total area would be patch cut. Mathematically this will result in a rotation (maximum age of trees) of between 100 and 200 years. The purpose of these cuts is to create diversity in the age of the forest, and to promote the growth of species that require sunlight for germination (i.e. – pine, oak).
2. *Establish a public access point to HCF, with parking, and create trails that can be used for recreation.*
 - Currently, there is no way for the public to easily access this large parcel of town-owned land and only one section of snowmobile trail that transects the property from north to south. As a result of this work, we will create an access point off of Hadlock Road that will include a parking area, signage and an informational kiosk. (See Map 2, page 5).
 - Future plans call for trail building on the property, first a continuation of the Central Falmouth Conservation Corridor trail that originates at River Point and now extends to the high school, then loop trails within HCF. Skid trails created by the wood harvesting operation will become part of this internal trail system.

3. *Monitor the forest for changes that will result from this harvesting operation.*
 - We will establish a series of continuous forest inventory (CFI) plots, one for every ten acres of area, on the property. The location of these plots will be tagged and GPSed so they can be easily found. Each will be approximately .1 acres (75 foot diameter) in size.
 - These CFI plots will be monitored on a regular basis, perhaps by students, to note changes in:
 - a. Growth rates.
 - b. Species change, including invasive species (what is growing on these plots?)
 - c. Canopy changes (density, species, etc.)
 - d. Wildlife usage
4. *Leave the neighbors, and the public, informed and satisfied.*
 - We will do a number of things to keep the neighbors and the public informed about this work, including:
 - a. Holding a neighborhood informational meeting for Hadlock Road residents to explain the plan and how it will unfold;
 - b. Writing letters to the immediate abutters asking for their help in determining their boundary lines.
 - c. Sponsoring a field trip to the site before and after the harvest.
 - d. Publicizing the work in the local media, the town website and perhaps through a video on Channel 2.
5. *Maximize the benefit of this work to the town. There are at least three such benefits we will focus on:*
 - Property improvements, including an access road, parking area, signage and trails for public use.
 - Obtain the highest value possible for the wood harvested.
 - Improved aesthetics: the harvest will open up the forest and improve its visual appearance.
6. *Improve wildlife habitat and protect wetlands.*
 - The harvest will create more diversity of habitat by creating openings and promoting vertical diversity. Dead snags and mast trees (nut bearing trees) will be left untouched. Large woody debris will be left on the forest floor.
 - Known vernal pools, and possible vernal pools that have not been mapped, will be flagged and avoided during the harvesting operation. Operations will also take place in winter when the ground is frozen and – we hope – snow covered.
 - Pre and post inventories of bird populations and animal track surveys will be conducted to note any changes in wildlife use. Adjacent, uncut areas of forest will be used as the control group.

Operations

This will be the first of three harvests planned over the next three years for the Hadlock Community Forest. This operation will focus on the northern most ± 55 acres of the property (see Map 1) and take about three to six weeks to complete during January and/or February 2010.

Prior to the harvest, an access road will be created following the route of an older, existing logging road that enters the property from upper Hadlock Road off an existing school bus turn around (see Map 2). This road will extend about 800 feet into the forest, where a $\pm 75'$ x $150'$ landing will be cleared. The landing is where the harvested trees will be transported for handling and transport. The road will cross a stream on the property at a point where that stream is about 3 feet wide. A culvert will be put in to allow equipment and trucks to cross the stream, with all required permits obtained from the Department of Environmental Protection. Gravel will likely be added to this road at various points to bring the road up to the required standards. This road and the landing will also be used in future years. The road will be chained off after the operation to prevent unauthorized use, with a parking pad and signage created at the Hadlock Road end for public access.

Year 2 operations, if pursued, will be directed at the ± 55 acres south of the landing. A Year 3 operation would access the property through Autumn Way to complete the thinning operation on this property. Future harvests on the same three areas would be scheduled on a 10-year cutting cycle.

Harvesting itself will be done with a tree-harvesting machine, not an individual logger with a chainsaw. Limbs will be left on the trees, which will be dragged to the landing by a grapple skidder for delimiting and sorting according to their intended use. [The trade off here is little slash left on the ground, but wider than normal skidder trails. Since a great deal of the harvested wood is coming from low quality trees, is likely to result in a large quantity of biomass (wood chips burned for fuel), but some saw logs and pulpwood will also be produced.

Biomass wood (trees and limbs) will be chipped at the landing and loaded into trailer trucks for delivery to the Sappi mill in Westbrook. Logs and pulpwood will be loaded on trucks for delivery to area mills.

The steps required to prepare the Hadlock Community Forest for the harvest include:

1. Locating the boundary lines. Most of these are obscure – the property really needs to be professionally surveyed – so consultation with the abutters will be necessary to be sure we avoid any encroachment. Once determined, these boundaries will be marked with boundary signs.
2. Establishing the actual route of the access road and landing, “on the ground.”
3. Marking the trees to be cut to achieve the proper Silvicultural treatment and preserving environmental or aesthetically sensitive areas, estimating volume of timber to be cut, and laying out skid trails.
4. Preparing the prospectus, inviting certified loggers to bid on the purchase of timber to be cut, and determining the cost of road and landing construction.
5. Executing a sales contract with successful bidder, supervising the harvest, collect stumpage fees.

6. Closing out the harvest area, installing soil erosion barriers if needed and reseeded and mulching the landing area to deter encroachment by invasive species.

Invasive plants are not a problem in the Hadlock Community Forest, so other than monitoring the harvest area for the introduction of such species, no special treatment is needed at this stage of the work. Whether such species get introduced to the site as a

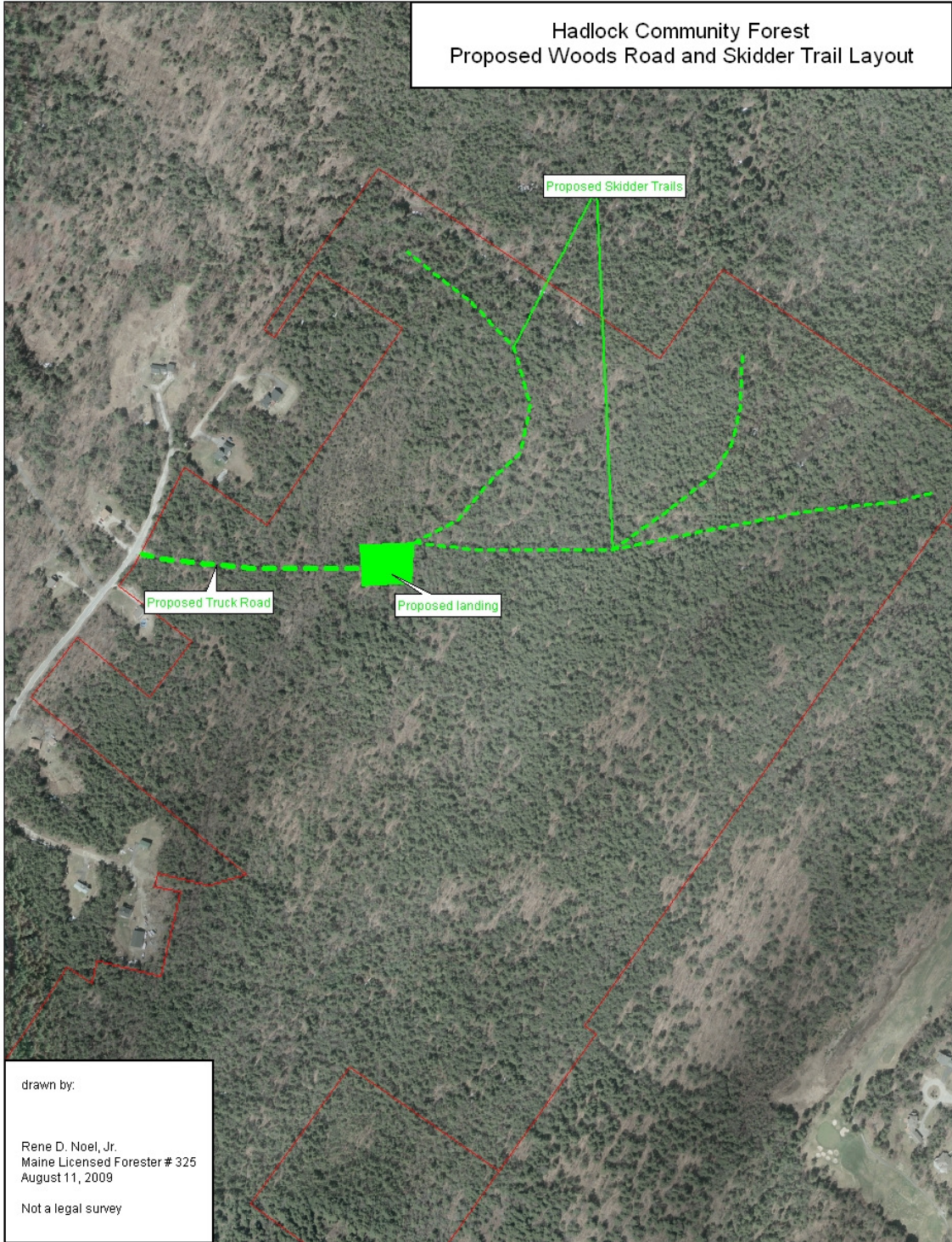
Financial Plan

Based on the anticipated volume of wood to be harvested, and current market prices for biomass, pulpwood and saw logs, the forester has estimated that the total value of the stumpage – the net amount due the town after the loggers and truckers have been paid – is approximately \$17,000. The forester's fee is 15% of that amount, or \$2,550. A more accurate estimate will be available calculated from measurements taken of trees when they are marked.

Normally the cost of the road and the landing is assumed by the logger, but since our access road is so far into the woods – 800 feet, to avoid conflicts with neighbors – the town will be responsible for the road and culvert, estimated to be \$3,000, but also amortized across the many years in can be used.

Assuming all these figures to be accurate, the net income to the town from this initial operation is estimated to be \$11,500. However, since the U.S. Department of Agriculture moves forward with a planned program to match the value per ton of biomass – currently \$24 – we might increase the net income to the town by another \$10,000 or more. The details of that program are still being worked out, so that revenue cannot be counted on.

Hadlock Community Forest Proposed Woods Road and Skidder Trail Layout



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