Forest Stewardship Plan

(10-Year Planning Period)

Town of Pelham, NH
Doreen Drive Town Forest
23.9+/- Acres
December 4, 2009

Brian E. Johnsen NH LPF #363 47 Wildwood Rd. Weare, NH 03281 (603) 731-9325 Property Owners: Town of Pelham

Location: Doreen Drive Town Forest, Pelham, NH

Total Acreage: 23.9 +/- Acres¹

Map/Lot Numbers: Map 24, Block 12, (numerous sublots starting at #100)

Date Prepared: December 4, 2009

General Description of the Property

This small area of mixedwood forestland is located in southcentral Pelham, northeast of Little Island Pond, between Doreen Drive and Spring Street Extension. This is one of only a few wooded areas left on the northeastern side of Little Island Pond that has not been swallowed up by housing developments, and is surrounded on all sides by neighborhoods. As one of the last chunks of forestland in the midst of all the houses, this parcel has particularly high value both for recreational use by those living in the area (having "green" space available to them to balance a life full of asphalt and manicured lawns), as well as wildlife populations that have found less and less room in which to live and breed. Based on the tax map parcelization, this property appears to have been a development that was drawn on paper and never actually became houses. Due to the small size and isolated location of this parcel (compared to other forest properties), very little forest management has taken place in this area in recent years.

Boundaries

Many of the boundaries are difficult to discern without a trained eye around most of this property. The northern boundary line runs along the tip of the cul-de-sac at the end of Doreen Drive, off of Webster Drive south of Route 38. Although this line is the edge of two houselots at the end of the road, no monumentation can be found to pinpoint the ownership.

The western line of the property consists mostly of stone wall down to the houselots at the northern end of Spring Street Extension. A corner bound here indicates where the line should leave the wall and shoot east along the southern boundary.

The southern boundary is a bit of a puzzle. The presence of a number of iron rods, drill holes, and even a house that appears to be on land described as being Town-owned, as well as the absence of monumentation around 2 small out-lots, are cause to call in a



surveyor to clear up ownership issues along this southern line. At some unknown point, the line heads northeast (presumably not including the house located at the end of Spring Street Ext.)

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¹ This acreage figure was ascertained using GPS field data and the latest GIS aerial photography available from the UNH GRANIT database, and may or may not match the Assessor's data exactly. Based on estimated boundary lines, which are not entirely clear without a detailed survey map.

The southeastern line is a straight line behind some houselots, with ample monumentation to be able to piece the boundary back together. The northernmost houselot is bounded by an iron rod in the ground and a drill hole found in a boulder in an abandoned surface granite quarry. Unfortunately, this neighbor appears to have mistaken the corner bound for a survey stake found further down the northwestern line, and appears to have built a shed and fence across the line, slightly onto Town property.

The northeastern line also runs behind houselots, with most of the monumentation in place, but full of stretches of open, unmarked line. As indicated earlier, this line ends near Doreen Drive at an unknown corner point at the southeasternmost house on that street. A few isolated surveys from neighboring properties have yielded some detailed information for the boundaries of this property, but there is certainly plenty of work needed to clear up these lines, particularly along the southern edge of the property. These lines should be surveyed and monuments set in place, so that the boundaries can be blazed and painted.

Access

This property has access to paved roads from the north off the cul-de-sac at the end of Doreen Drive, as well as from the south at the end of Spring Street Extension. Although the northern access point is not actually being used at this time, ATVs and foot traffic use a trail that leads northward and branches off into the interior of the property. Both of these locations have pros and cons to placing a landing.

The northern area will require a fair bit of fill coming off the high cul-de-sac to



minimize the slope for trucks to come off the pavement down to the landing. However, this means that trucks should be able to turn around fairly easily at the end of this road, and any run-off from the landing will go into the woods, not onto the town road. However, this area already receives a bit of drainage from the nearby houselots, so a landing would require ditching on the high side to minimize sheet erosion from entering the landing area. This location also is close to Rt. 38, making it more accessible to main

roads for forest products.

The southern location essentially is the opposite. The land slopes up from the Town road, meaning that some cut into the slope would be necessary, and the material in the cut banks could be used to level out the landing. This ground seems higher and drier, making it more suitable for a landing, but it may also be shallow to ledge, making a landing very difficult to build. A trail is already existing, meaning that the ground has already been compacted in this area to a certain extent, but any runoff from the landing would flow down the access road onto the pavement. This area is also at the lower end of the property, making it slightly easier for logging trails to run downhill, although the slopes on this property will not make or break a logging operation. Turning trucks

around at this end of Spring Street Extension may prove difficult, and the trucks would need to wind through narrow, residential streets, making this end of the property not as accessible to main roads on which to remove forest products. This end of the property currently is the area with unknown boundaries, although that problem should be solved before any cutting is done anyway. Overall, it is this forester's opinion that the northern area should be used, because of the newer, wider roads, but either landing location could be suitable.

The proposed landing could potentially be upgraded into temporary parking area (when not in use for logging) with a property map and a sign urging recreational users to self-police trash dumping and other such unsightly habits. The trail system could be upgraded and expanded to incorporate other areas of the forest, and given waterbars on steeper slopes; such a project could be undertaken by a local Eagle Scout, as has been done in the past on Town lands.

Forest Types & Harvest History

Forests with varying composition in terms of species, age, and density are able to respond with more resilience to catastrophic events than monocultures. Most trees in unmanaged, overgrown forests are chronically short of much-needed nutrients, sunlight, and water, and are therefore constantly living in a stressed environment. Pre-stressed trees are much more susceptible to disease than their healthy counterparts growing in a well-spaced, healthy forest. Forests are broken down into management units called stands, which are areas of trees with similar species composition, size, and frequency of occurrence.

This particular property has an abundance of harvest history. Judging from the stone walls and proximity to rivers, this woodlot most likely was cleared in the mid-1800s for sheep pasture, part of the movement across much of New England to increase wool production for water-powered mills along the banks of most New Hampshire waterways. When the pastures were abandoned, white pine grew in and the area was forested again. Subsequent cutting removed the white pine from some areas, and the open environment allowed red oak to seed in and become established in direct sunlight. The oldest trees on this property are likely 80-100 years old, although most are younger. Most of this land has not been harvested in the past 40 years. Overall, the forest is healthy and growing well, although it is overcrowded and growth is beginning to stagnate due to lack of nutrients and sunlight.

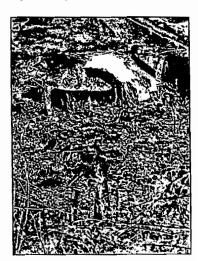
In quantitative terms, this property can be broken up into three distinct stands, with a large stand of mixed wood in the southeast, a slightly smaller stand of oak timber in the center, and a small pocket of dense white pine sawtimber in the northern area just off Doreen Drive. The approximated property area is growing about 230 MBF (thousand board feet) of timber and about 190 cords of hardwood and softwood pulp. Red oak is the dominant species in terms of volume, accounting for about 40% of the standing timber volume (about 92 MBF of timber). White pine is the second-most plentiful species (in terms of volume) making up nearly 35% of the total standing volume, just under 80 MBF. Black oak makes up 1/5 of the standing volume, about 45 MBF, with only a very small amount of white oak, red maple, and beech sawtimber. More details on the timber cruise are available below, and a complete summary is available on Page 7.

Soils, Terrain, & Hydrology

Forests are essential for preventing erosion of existing soil and maintaining clean water. Riparian and wetland areas are the places that open water and upland sites meet. A riparian zone is the general term for the area where water and land meet, whereas a wetland is an area in a riparian zone that specifically has hydric, or wet, soils as well as

vegetation that grows on that type of soil. Riparian areas are important a number of reasons. They offer critical habitat for many wildlife species, providing shelter, food, water, and travel corridors. They are also very useful for flood control by acting as a sponge during times of high water volume, and then releasing that water slowly and consistently over time. Without wetlands, streams would fluctuate greatly between periods of high flow and dry streambeds. Finally, riparian areas are key for filtering water as it travels from upland sites to the open water, keeping out many chemical impurities and keeping water silt-free.

This property accepts the runoff from the higherelevation property to the north, which is mostly houselots at this point. The drainage collects into a stream channel which meanders southwest off into the adjacent parcel to the west, across the stone wall



Soils on this property vary somewhat, from very well-drained upland soils with to rather poorly-drained soils with standing water in the stream channel. Most of oak stand areas have deep, fertile soils, and with appropriate management these areas could yield increased production of quality red oaks. On the other hand, most of the mixed wood area to the south has very well-drained soils which are rocky and seem to be drought-prone. Appendix A handles the soil types found on this property in depth. Drainage on this property tends to be towards the west.

This property has gently rolling terrain in most areas, and generally the land slopes to the south, with few areas that will present any challenge for timber harvesting.

Wildlife

Biological diversity can be described as the variety of plants and animals located



in a given tract of land or landscape and the communities that are formed by that variety of species. This property has specific value for wildlife because of the presence of trees producing hard mast (acorns). While this fact does not single out this parcel as particularly unique, neither in Pelham nor in the surrounding parcels, it can be noted that this parcel maintaining a forested cover is essential to maintaining a corner of "green space" in this developed part of Pelham.

Two of the biggest threats to biological diversity today are loss of habitat to nonforest uses and invasive species. Neither of these threats is of any particular concern for this parcel, although it will provide valuable open space for forest-dwellers that may be displaced from the properties to the north and east. Overall, this property provides a very important role in offering forested habitat between housing developments.

Timber Cruise

A detailed timber cruise was completed on the property yielding 10 plots of tree data across the breadth of the parcel. This data was used to tabulate the current tree growth on the property and the field notes made during this cruise helped to create many of the maps in this management plan. A cruise is a statistical sample that is used to determine the volumes of various forest products growing on the property. This cruise generates volumes in terms of cords (for all trees 6-11" in diameter, or trees larger than 11" that are not suitable for sawtimber) and board feet (for trees 12" and greater in diameter that could be sold and sawn into boards). The diameter of a tree is measured at 4.5' above the ground, which is an industry standard referred to as diameter at breast height (DBH). From this intensive cruise, it was determined that the property could be broken down into three distinct stands. Stands are areas of trees with similar species composition, size, and frequency of occurrence.

Landowner Goals & Objectives

The Town of Pelham has been very proactive in protecting various areas around the town from development by keeping areas open for recreational use and maintaining areas of forestland for wildlife habitat and timber production. Many of these parcels are associated with wetland areas that benefit greatly from the forested buffer they have instead of having pavement and lawns in the riparian zones. The Town continues to educate citizens and developers alike, explaining the benefits of forested lands around built-up areas. The general goals of the Town can best be summed up with the key words of the New Hampshire Tree Farm System, of which the Town is a member: wood, water, wildlife, and recreation. The Town is interested in managing their woodlots for longterm, sustainable forest management. They are interested in generating periodic revenue from timber harvests that encourage quality wood growth on residual trees as well as encourage regeneration, in order to grow tomorrow's forest beneath the forest of today. The Town owns many of their properties in order to protect sensitive wetland sites and waterways by maintaining a forested buffer between the open water and built-up areas. Because Pelham is a town with many people, the municipal officials recognize that families, individuals, and schoolchildren benefit from having wooded areas for walking and nature watching. The Town hopes to keep these areas open to responsible recreation without compromising the other three goals. Finally, the Town recognizes that the native wildlife species of New Hampshire need areas for food, water, shelter, and raising young. To that end, these forests are kept as biologically diverse as possible while maintaining the other three goals as simultaneously as possible.

The goals for this specific property are to periodically thin the forest to gain some revenue over the years; maintain a trail system through the area for walking, biking, and non-motorized winter activities; maintain this block of land as a forested buffer between

housing developments surrounding Little Island Pond; and provide a diversity of species with enough cover, food, and water so as not to lose species from living in this area of Pelham. Sound forest management will be able to meet most of these goals.

Currently, the property is being used by only a small cross-section of the public, with mainly hunters and wheeled recreationists. Given the current size of this property, it may be best to maintain a lower amount of use on this public land, given the number of sizable forests that are open to the public around Pelham. This forest should be managed under the sound, proven management of field forestry professionals to help thin out the forest, increasing the growth rate on quality trees currently found here as well as encouraging more mast production and understory browse for wildlife food.

Forest Products Summary Table for All Stands

Town of Pelham Doreen Drive Town Forest Total Acreage: 23.9 +/- acres

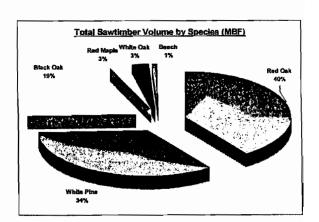
Board Feet
91,986
78,083
44,596
6,466
5,786
1,800

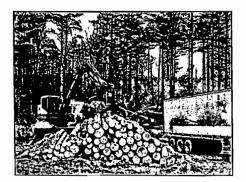
18²
18

Hardwood Cordwood 136 Cords

Softwood Pulpwood 52 Cords

Total Cordwood 188 Cords³



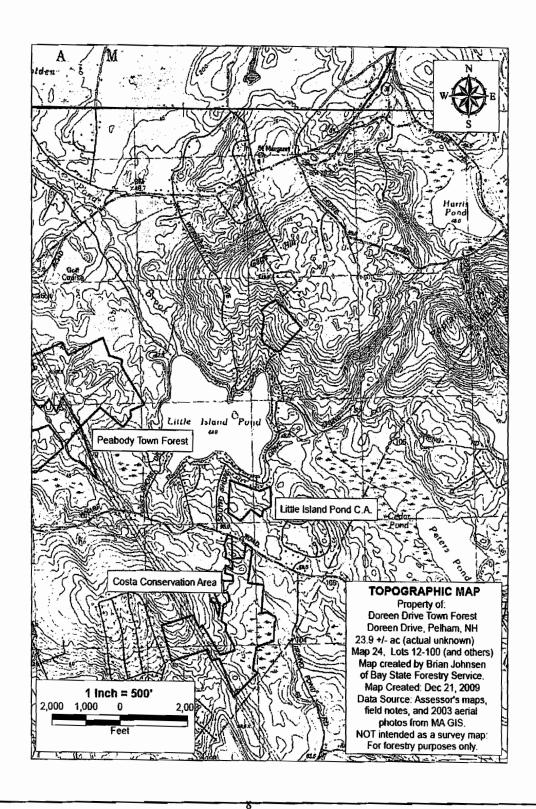


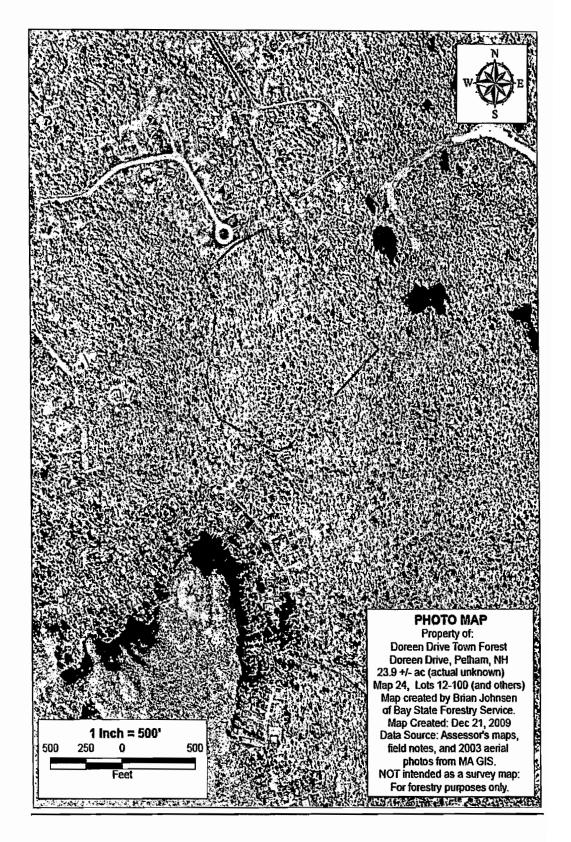
A basal area factor 10 prism was used to conduct the inventory sample. A total of 10 plots, distributed across the entire property, were taken to arrive at this cruise summary.

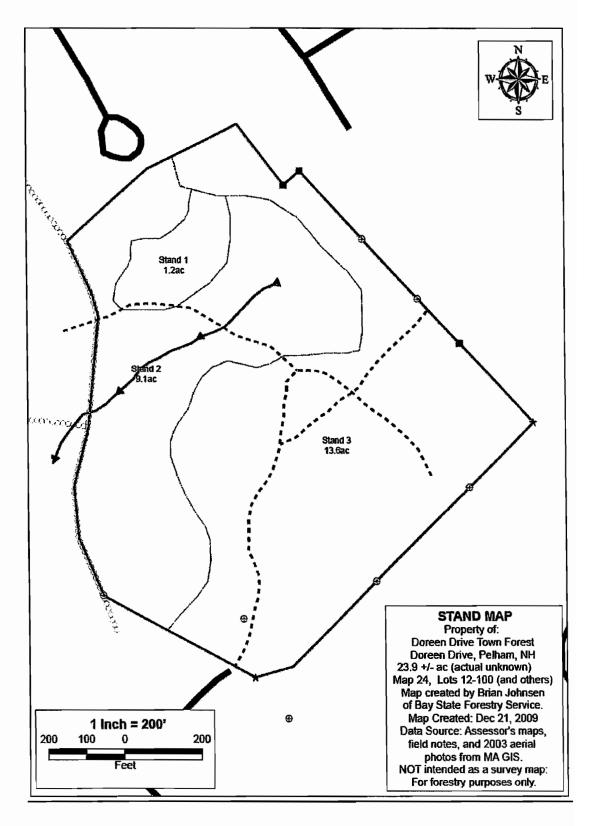
² This sawtimber total represents all the trees of sawtimber quality 12 inches and greater in diameter found in this block. In order to capture this total volume, all trees of this specification would have to be harvested.

harvested.

These cordwood totals, both softwood and hardwood, represent all the standing trees with diameters of 611.9 inches found in this block, as well as trees of larger diameters that do not meet sawtimber quality specifications. In order to capture this total volume, all trees of this specification would have to be harvested.



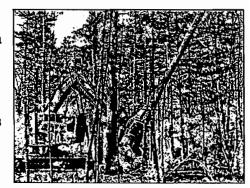




General Management Strategies

Timber – One of the main goals for this property is sound timber management in order to produce a periodic income. A list of management strategies on a stand-by-stand basis is discussed later in this plan.

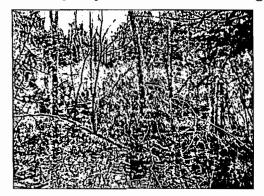
Fish/Wildlife Habitat — Although some activities can manage for a specific plant or animal (species specialists), most forest management activity focuses on habitat generalists by managing for a diversity of species, protecting existing critical



habitat, and enhancing existing habitat. Keeping large browsers in mind, there will be some areas that are opened up to sunlight to encourage young growth on the forest floor. Harvesting methods will minimize damage to young saplings to provide food low to the ground. Some large mast trees (oaks) will be maintained despite poor quality as lumber as a food source for small mammals; their presence will, in turn, help to feed the raptor population that frequents this area for food.

Soil – Care will be taken to not harvest in mud season, when the ground is too soft, or on excessive slopes, to minimize rutting and erosion during harvest operations. Landings will be located in appropriate areas on the parcel and seeded with a conservation mix and limed at the conclusion of the job to stabilize the soil, and waterbars will be installed on skid trails where necessary. All these erosion controls will not prevent erosion, however, if OHRV's are not controlled. The Town will need to decide the best way the handle this situation.

Water Quality - Buffers will be left along streams and the wetland edges to avoid



removing too many trees at once; this will provide soil stabilization along waterways and adequate shade. This shade will decrease water temperature and therefore increase the water's oxygen-holding capacity. The wetlands and steams will be left intact to keep the water clean and silt-free. Poled fords will be used when crossing smaller steams to further prevent siltation. Fueling of machines will not take place near the water's edge to prevent pollution.

Wetlands – Although no wetlands exist on this particular property, care will be taken during harvest operations to protect the riparian zone around the stream in the northeast.

Recreational Resources – The skid trails will provide a nice network of trails for recreational opportunities, both for walking and wildlife viewing. To this end, trails will

be kept free of slash where possible. A walking trail system could be designed and completed during this 10-year period, along with a temporary parking area and kiosk describing the natural features of the Town Forest as well as the beneficial outcomes of timber harvesting. Access issues include building an access road and landing area for harvesting and emergency purposes.

Aesthetic Values – To maintain good aesthetics, logging operations will not rut up the soils and will cut up the tops so they lay close to the ground for rapid decay. Logging crews may specifically leave high brush, rocks, and log barricades along trails that should be closed to OHRV's, but this will be an exception, following the landowner's goals to prevent erosion and maintain the integrity of steep slopes or loose soil.

Cultural Features — Care will be taken to avoid breaching or breaking the stone walls during timber harvests unless no openings exist to allow the trees to be skidded to the landing. To accomplish this, loggers will use existing barways for skidding.

Forest Protection — This forest would benefit from some more diversity, to prevent a forest pest looking for a monoculture. This diversity should be encouraged to the extent that appropriate trees are growing in appropriate soils and conditions by keeping logging slash low to the ground, decay is speeded up; this prevents too much of a buildup of fuels as a fire hazard.

Threatened/Endangered Species and Unique Natural Communities – During all the walks through this forestland, no species were identified as either threatened or endangered. If at some time any flora or fauna are identified on this property as such, appropriate measures will be taken to prevent disturbing that species.

Invasive Species Considerations – During all the walks through this forestland, no species were identified as either exotic, invasive, or toxic. If at some time any species are identified on this property as such, appropriate measures will be taken to prevent the spread of that species.

Forest Management Plan

Stand 1 - White Pine Sawtimber

Standing Volum	es Stand 1	1.2 Acres		
Species	Average BA/acre (sq. ft./ac.)	Average Height (16' sticks)	Volume per acre (bd. ft./ac.)	Total Volume (bd. ft.)
White Pine	100	3.6	20,250	24,300
Beech	20	1.0	1,500	1,800
Red Oak	10	1.0	750	900
Sawtimber Total:	130	1.9	22,500	27,000
	_	8' sticks	Cords/ac.	Total Cords
Cordwood	20	4.5	6	7
Total BA/acre	150			•

Description:

This small stand, located near the northern boundary line by the Doreen Drive cul-de-sac, consists almost exclusively of large white pine sawtimber 16-28" in diameter, with a smattering of individual hardwoods scattered throughout the stand. The understory consists of some red maple and beech pole-sized trees mixed with some suppressed 10" white pines. Regeneration varies through the stand, with some areas of beech saplings 2-4" in diameter diameter growing closely together, and other areas with very little growing under this heavy pine overstory. Soils are moderately well-drained, with few surface boulders, gently sloping to the south with grades of 2-5%. Access to this stand is good off of Doreen Drive. Currently, this stand receives very little use.

Recommendations:

This stand would benefit greatly from a thinning that would space out the white pine sawtimber, allowing residual trees to grow better and allowing sunlight to reach the forest floor to begin establishing regeneration on the ground. This harvest should remove any low-quality hardwoods (such as beech) to maximize the growth of white pine on these good soils. Most of the poor-quality white pines, as well as the largest ones, should be removed, to give the more intermediate trees a chance to add on diameter to their straight boles. Depending on how much of this stand is cut for access, such a thinning should yield about 7-10 MBF of sawtimber.

Part of this stand may be cleared and prepped for building a landing off of Doreen Drive. Care should be taken not to leave large trees isolated from their neighbors near the edge of the landing to reduce blowdown – it would be a waste to lose such large trees to wind damage.

Stand 2 - Mixed Oak Sawtimber

Standing Volume	es Stand 2	9.1 Acres		
Species	Average BA/acre (sq. ft./ac.)	Average Height (16' sticks)	Volume per acre (bd. ft./ac.)	Total Volume (bd. ft.)
Red Oak	98	1.4	9,188	83,606
Black Oak	18	1.4	1,688	15,356
White Pine	10	3.3	1,875	17,063
White Oak	3	1.0	188	1,706
Red Maple	3	1.0	188	1,706
Sawtimber Total:	130	1.6	13,125	119,438
		8' sticks	Cords/ac.	Total Cords
Cordwood	5	5.0	1.5	14
Softwood Pulp	5	4.0	1.2	11
Total BA/acre	140			_

Description:

This stand, located south and west of Stand 1, consists mostly of red oak sawtimber 14-28" in diameter, mixed with some black oak 12-18" in diameter and isolated white pines 16-28" in diameter. The understory consists of some pole-sized hardwoods and white pines 8-10" in diameter, generally growing under the oak overstory. Regeneration varies across the stand, with some patches of white pine 1-2" in diameter and 10-20' tall (20-30 years old), as well as other areas with only some white pine seedlings 1-3" tall. Soils are generally moderately well-drained and slope to the south with grades of 3-8%. Some surface boulders can be found throughout this stand. The stream from the north meanders through this stand and flows out the western boundary. Access to this stand is fair, given the easy terrain, although no formal access to this timber has been created as yet.

Recommendations:

This stand would benefit greatly from a sawtimber harvest that would remove some of the over-mature and crowded sawtimber, allowing more room for the codominant and intermediate trees of better vigor and form to grow and develop. This harvest would specifically target black oaks, since they appear to be dying out, as well as poorly-formed trees of all species. Such a harvest would remove some of the most mature timber, creating growing space for residual timber stock as well as providing sunlight on the forest floor to encourage growth from the advance regeneration found here. Such a harvest would remove about 50 MBF of timber, as well as some hardwood sawtimber, bringing the residual basal area down closer to 90 square feet per acre.

Stand 3 - White Pine/Oak Upland Small Sawtimber

Standing Volumes Stand 3			13.6 Acres	
Species	Average BA/acre (sq. ft./ac.)	Average Height (16' sticks)	Volume per acre (bd. ft./ac.)	Total Volume (bd. ft.)
Black Oak	28	1.0	2,150	29,240
White Pine	16	2.9	2,700	36,720
Red Oak	6	1.3	550	7,480
Red Maple	4	1.3	350	4,760
White Oak	4	1.0	300	4,080
Sawtimber Total:	58	1.5	6,050	82,280
		8' sticks	Cords/ac.	Total Cords
Cordwood	44	3.0	8.5	116
Softwood Pulp	14	3.3	3.0	40
Total BA/acre	116			-

Description:

This stand, located in the southeastern half of the property, consists of a mixture of black oak and white pine sawtimber mixed with red oak, red maple, and white oak individuals scattered through the stand. The overstory is made up of this general mixture of species 12-20" in diameter, along with hardwood poles 6-12" in diameter, including black oak, red oak, black gum, white pine, and white oak. Regeneration is comprised of decent white pine patches 2-8' tall in patches. The northeastern corner of this stand has an old stone quarry, and the stand itself consists of rolling terrain with hollows in which turkeys like to feed. Soils are generally very well-drained in this rocky, upland soil, sloping generally to the south with grades of 5-12%. Access to this stand would either come from a landing off Spring Street Extension, or through the woods from Stand 2.

Recommendations:

This stand would benefit from a light thinning that would remove most of the poorly-formed trees of all species, reduce the amount of black oak in the stand, and focus on releasing the quality sawtimber of all species. Since little can be done about the soils found in this stand, the recommendation is not to attempt to grow more red oak in this stand, but rather to release it where it is currently found. White oak should also be released, as in Stand 2, in order to maximize mast production from this wildlife-friendly species. Such a harvest would remove about 20 MBF of timber and more than 30 cords of fuel chips, bringing the basal area down to about 90 ft² per acre.

Management Schedule

2010

- Prepare the forest management plan.
- Blaze and paint identifiable boundary lines and survey unknown boundaries.

2010

- Conduct a timber harvest in harvestable areas, using either biomass or conventional
 equipment. Seed and lime the landing at the conclusion of the timber harvest.
- · Construct a parking area and kiosk in conjunction with the timber harvest.

2010-20

- Monitor the woodlot for wind damage, ice damage, fire, or disease and take
 appropriate corrective actions as needed to ensure the continued health of this forest
 block.
- Address parking issues for trailheads, and trail creation and maintenance.
- Re-assess the woodlot in 10 years and write a new 10-year management plan, specifically looking at TSI potential and another harvest midway through the next management period.
- (Recommended Item) Make this property available for Project Learning Tree excursions for the local schools.

Concluding Remarks

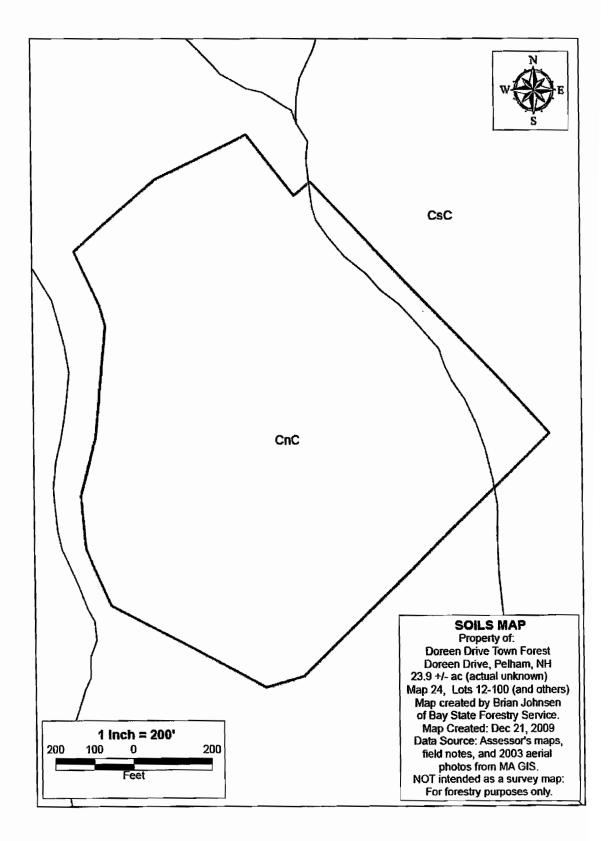
The recommendations proposed in this 10-year management plan should be implemented within the next 10 years, although timing will depend on landowner priorities, market conditions, and environmental conditions such as pest outbreaks and weather. Through sound silvicultural practices and using best management practices (BMP's), mature, diseased, and defective trees will be harvested to allow residual trees to grow in their place. This forest should be monitored for pest outbreaks and destructive weather events; corrective action should be taken as needed over the next 10 years in response to any such events. These recommendations are silviculturally and operationally sound and should result in meeting the landowners' objectives for their woodlot. Implementing these recommendations will help ensure that this forestland is being managed with long-term sustainability in mind.

Respectfully Submitted,

Brian E. Johnsen, Consulting Forester N.H. License #363

Appendix A.

SOILS INFORMATION



Hillsborough County Soils Profiles

CnC - Canton very stony fine sandy loam, 8-15% slopes

Suitability for growing wetland plants for wildlife habitat - Very poor.

Suitability for growing coniferous and hardwood trees - Good.

Suitability for area as habitat for wetland wildlife - Very poor.

Suitability for area as habitat for woodland wildlife – Good.

Suitability for area as habitat for woodland wildlife – Good.

Suitability for area as habitat for openland wildlife – Poor.

Has a good site index (greater than 60) for red pine.

Has only slight erosion hazard and slight windthrow hazard.

Well-drained, moderate permeability, low productivity as forestland, steep slopes can limit logging.

CsC - Chatfield-Hollis complex, 8-15% slopes

Suitability for growing wetland plants for wildlife habitat - Poor.

Suitability for growing coniferous and hardwood trees - Fair.

Suitability for area as habitat for wetland wildlife - Very poor.

Suitability for area as habitat for woodland wildlife - Fair. Suitability for area as habitat for openland wildlife - Good.

Has a good site index (greater than 60) for sugar maple, white ash, red oak, white pine.

Has only slight erosion hazard and slight windthrow hazard.

Well-drained, granite bedrock within 2', high permeability, high drought susceptibility,

moderately productive as forestland.