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Warner, NH 03278

FOREST MANAGEMENT PLAN

MAYFLOWER HILL TOWN FOREST

Property of

TOWN OF MILFORD

Located in

Milford, New Hampshire
Tax Map 8 Lot 92
Tax Map 9 Lots 1, 1-38, 1-39, & 1-40
76.5+- Acres

PREPARED FOR:
Town of Milford
Conservation Commission

ADDRESS:
1 Union Square
Milford, NH 03055
(603) 5672-1070

PREPARED BY:
New England Forestry Consultants
Christopher J. Fox
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DATE: September, 2008

CENTER: Monadnock

TABLE OF CONTENTS

INTRODUCTION

Town of Milford's, Mayflower Hill Town Forest totaling 76.5 acres±; 75 forested acres and 1.5 non-forested acres shown as Lot 92 on Town of Milford Tax Map 8; including Lots 1, 1-38, 1-39, and 1-40 on Town of Milford Tax Map 9 in the state of New Hampshire, was cruised in April of 2008, by Daniel D. Reed, NH Licensed Forester #66, to review the general health and condition of the woodland; to inventory the timber volume by species and estimate its value; to determine the advisability of cordwood and sawtimber harvests; to evaluate the recreational and wildlife resources, and to prepare a Forest Type Map, Forest Management Plan, and Wildlife Action Plan which will assist the owners in the decision making for the management of their forest and property.

Compass lines were systematically spaced 200 feet apart throughout the property and one-tenth-acre measurement plots were taken at intervals of 500 feet along the lines to gather data for the calculation of the timber volume. A small yellow flag was hung at each plot center to allow for verification.

All merchantable trees within each plot are tallied by recording their species, diameter (DBH), and merchantable height. Notes are also taken as to regeneration, past and recommended timber harvesting, soils, wildlife, timber stocking, quality, soil drainage, slope, insect and disease damage.

Timber volumes are based on the International ¼" Log Rule with deductions for visible defects. Merchantability standards used were: minimum diameter at breast height (DBH) 4.5 feet above the ground of 12 inches for sawtimber; minimum merchantable height of 12 feet; at least 50 percent sound; and minimum top diameter of 10 inches for hardwood and 8 inches for softwood (unless limited by visible defect or form). Pulp and hardwood cordwood include all trees 6 inches DBH or larger of suitable form and not meeting sawtimber criteria. A 4.3 percent cruise, 43 sample plots per 100 acres, was used to generate tract volumes.

The stumpage values given in Table I are based on recent sales of sawtimber and cordwood comparable in size, quality and accessibility in southern New Hampshire.

FOREST STEWARDSHIP MANAGEMENT OBJECTIVES

1. Maintain the property as multiple use open space for wildlife, recreation, forestry, and education for the benefit of wildlife and the citizens of Milford.

2. Implement environmentally sound, long-term, multiple-use forest management recommendations and practices which, over time, will upgrade the quality and health of the timber resource; improve access for forest management operations and appropriate recreation; and protect, enhance, and improve the habitat for game and non-game birds and animals.

3. Conduct forestry operations to promote the reproduction and improved growth of commercially valuable hardwood and softwood species with a particular emphasis on white pine and red oak along with other high quality softwoods and northern hardwoods as appropriate to the site.

4. Assist the Town of Milford Conservation Commission with decisions regarding the management of the property for access, timber productivity, recreation, aesthetics, and wildlife.

LOCATION AND ACCESSIBILITY

This property is located in the north east part of Milford and can be accessed from Route 13 by Perkins Street, and Patch Hill Lane, and from Adams Street, Shady Lane, Falconer Ave, Lee An Drive, and Chase Lane. These are all town maintained paved roads suitable for passenger car and truck access most times of the year.

GPS Coordinates to the property are: 042° 50.98'N 071° 39.33'W NAD 27 for the Patch Hill tract; and 042° 50.57'N 071° 39.33'W NAD 27 for the Mayflower Hill tract.

The access road to the Milford water tower provides the only current vehicle access to these properties, along with trailhead parking. Maintained foot trails are also accessed from Perkins Street, Falconer Ave. and Chase Lane where parking is road side.

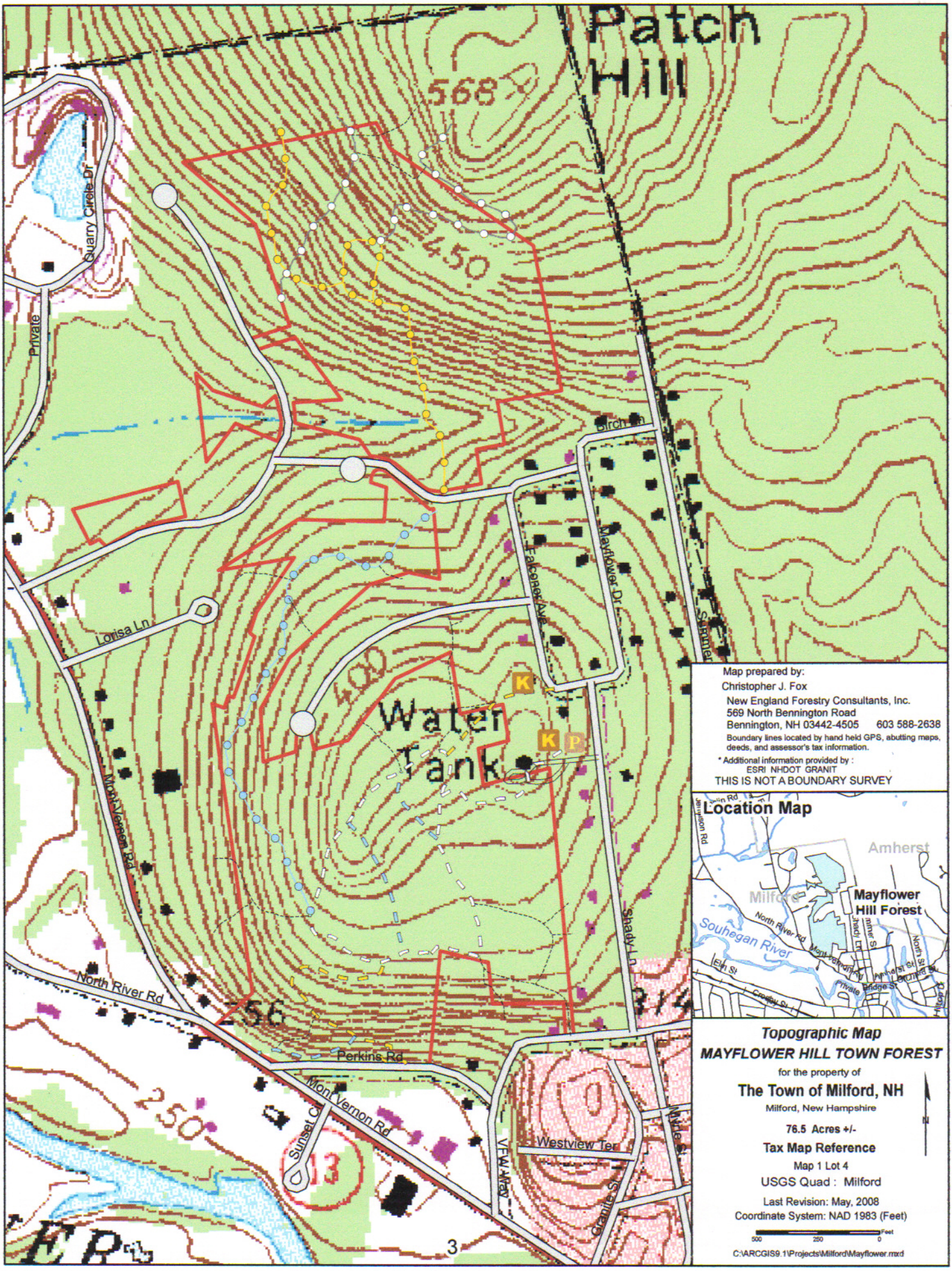
Foot trails on the Patch Hill tract currently have no maintained access points on Town Roads. A yellow painted trail runs north from Chase Lane, but this has not yet been cleared. Other trails on the property were accessed through the lots not developed or through abutting properties.

Access for timber harvesting on the Mayflower Hill lot could be developed from the water tower access road or Falconer Ave. Extension. Additional access for foot trails could also be developed from the end of Lee An Drive.

Access for timber harvesting on the Patch Hill lot needs to be created. The northern access point on Patch Hill Lane is too steep to be useable, and the southern access point and frontage on Chase Lane is wet and would be expensive to develop.

Elevations range from a high of about 500 feet above sea level near the top of Patch Hill on the north side of the property, and a high of about 440 above sea level near the top of Mayflower Hill; to a low of about 260 feet in the wetland on the small tracts east of Patch Hill Drive, and 260 feet on Perkins Street on the south west side of the property. The property is shown on the USGS map entitled Milford, N.H. Quadrangle, 1968 (Topographic) 42071-G6-TF-024. Photo revised 1985.

The brooks on the Patch Hill and Mayflower Hill Town Forest drain south into the Souhegan River in the center of Milford.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568
450
400
Water Tank
Quarry Circle Dr
Private
Lorisa Ln
Mont Vernon Rd
Falconer Ave
Mayflower Dr
Shady Ln
Birch Ln
Summer
North River Rd
256
214
Perkins Rd
Mont Vernon Rd
250
Sunset Ct
13
Westview Ter
VFW Way
Granite St
Myrtle St
3
K
K
P
Map prepared by:
Christopher J. Fox
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569 North Bennington Road
Bennington, NH 03442-4505 603 588-2638
Boundary lines located by hand held GPS, abutting maps, deeds, and assessor's tax information.
* Additional information provided by :
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THIS IS NOT A BOUNDARY SURVEY
Location Map
Amherst
Milford
Mayflower Hill Forest
Souhegan River
North River Rd
Elm St
Bridge St
Private
Topographic Map
MAYFLOWER HILL TOWN FOREST
for the property of
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76.5 Acres +/-
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Coordinate System: NAD 1983 (Feet)
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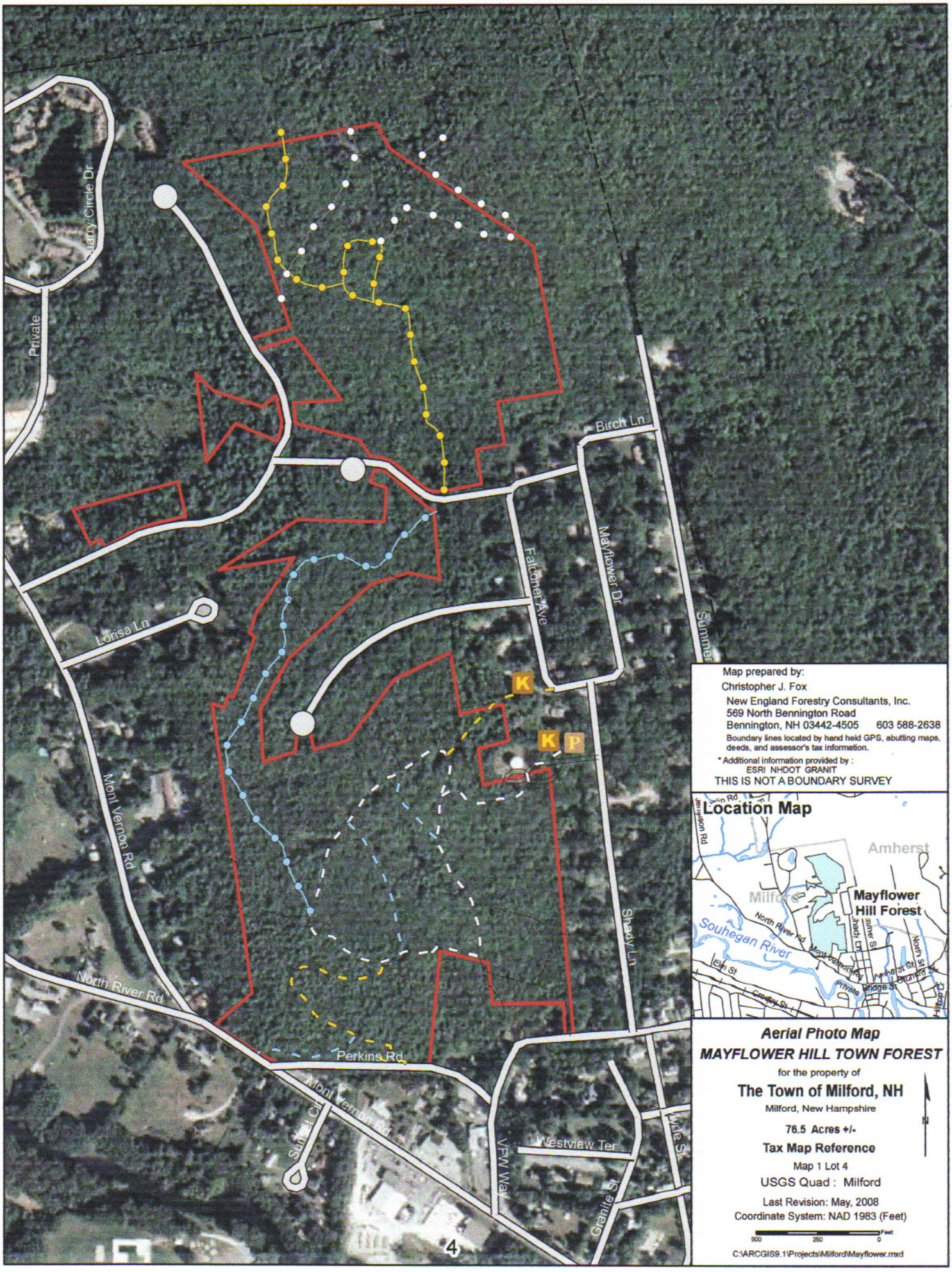

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Aerial Photo Map
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BOUNDARIES

The Forest Type Map shows the boundary lines and corner monuments. This information was developed from survey plans and the fieldwork necessary to complete this plan. However, the Forest Type Map is not a boundary survey nor should it be construed as such. Boundaries following stone walls are easily accurately identified on the ground. Some boundaries on the Mayflower lot have been previously blazed and painted in blue or yellow more than 17 years ago and the blazes are still visible, but the paint is somewhat faded. Encroachments of the boundary lines were observed in several areas. Usually where yards are expanded over the boundary lines, the location of the line is not clear, or the boundary line location is inconvenient to the development of the house and grounds around it. Most boundary corners looked for during the field work were found with the exception of markers on the Lee An Drive development and west end of the Falconer Avenue Extension. The corner markers on the Lee An Drive development are not yet set.

The boundary lines not bounded by stone wall should be blazed and painted. Blazing and painting boundaries bounded by stone walls would also help to clearly identify that the stone wall is the boundary line. Signs at the points of entrance to the Patch Hill and Mayflower Hill Town Forest where roads or trails enter the property would help the public to identify the boundary line, and gain a better understanding and appreciation of the Town Forest. Small signs could also be used along boundaries near yards and dwellings where a blazed line may not be well received by the abutter and when there are few trees to blaze.

Blazing and painting is done by first determining the exact location of the boundary line. The trees along the line are then blazed by cutting through the bark on the tree with an axe at about 4.5 feet above the ground leaving approximately a 4" by 6" patch of bare wood. This creates a permanent mark or scar on the tree called a blaze that will be observable for years into the future. The blazes are then painted to make them more visible. Boundary paint is available in red, yellow, orange, light green, white, light blue, and light purple

Trees along the side the boundary line are blazed facing the line. Where the boundary line passes through a tree, the tree is blazed on both sides. Trees near corner markers are triple blazed facing the marker and are known as witness trees.

Blazing and painting boundary lines clarifies the location of the boundary and helps to guard against timber trespass, boundary disputes and other unauthorized activity. Well-maintained boundary lines enable not only the owner, but also adjoining owners to easily locate and identify the common boundary. This is especially important where the lines are not marked by stone walls or fences.

The acreage as shown on the Forest Type Map was determined from survey plans.

WEATHER DAMAGE

No significant weather damage was observed.

Evidence of the 1938 hurricane can occasionally be observed in areas on the property. While this storm occurred over sixty years ago, it had a tremendous impact on the forest

throughout New England. Storms of this magnitude occur at a frequency of one in a hundred years and represent the most extensive natural disturbance to our forests. Damage from hurricanes and other, more localized severe windstorms represents a major risk as timber reaches mature size classes.

The most severe areas damaged by the Hurricane of 1938 were wet, poorly drained and shallow soils. Trees were easily uprooted by the high winds since the roots could not develop well in such growing conditions. Other evidence of damage is still visible as curved trunks and mounds of earth created as trees were uprooted and blown over.

INSECTS AND DISEASE

Evidence of past forest fire damage was observed on the Mayflower Hill and Patch Hill tracts. This fire probably occurred sometime before 1960's with a small area of less than an acre that lightly burned just south of the Lookout Point within the last few years. Trees that were damaged show fire scars in the trunk and evidence of interior decay. Intense or prolong heat from the fire damages the bark allowing decay to enter the tree. The tree over time attempts to heal over the damage, but as the interior decay expands through the tree more evidence of the decay becomes observable, and the tree eventually becomes structurally unsound.

Fire scared white pine

Trees with extensive decay have benefits to wildlife for cavities for nesting and shelter and food for wildlife that feed on insects and wildlife that occupy the decaying wood.

Salvaging by harvesting trees that are damaged from decay is recommended when there are more trees than can be well utilized by wildlife. Harvesting trees that will not be productive for timber or wildlife allows other trees that will be productive to regenerate in their place.

Damage from past gypsy moth defoliation was observed in some of the oaks and hardwoods as evidenced from dead trees and limbs. No significant number of egg masses were noted which would be an indicator of a potential outbreak. Oaks on dry sites are more susceptible to damage than are white pines. Damage from gypsy moth is best controlled by maintaining well managed vigorous stands of timber. Natural predators and pathogens have helped to control gypsy moth outbreaks in more recent years since the outbreaks of the 1980's.

Gypsy moths go through four development stages, egg, caterpillar (larva), pupa, and moth (adult). The caterpillar (larva) stage is when damage occurs to the forest. The caterpillars (larvae) hatch in the spring from the eggs laid by the moths the previous fall. The caterpillars feed on the leaves of trees leaves for about seven weeks before entering the pupa stage. The adult moths emerge from the pupa stage in 10 to 14 days. In the fall, the female moths will lay a tan colored egg mass of 500 to 1,000 eggs to over winter and hatch in the spring.

During infestations of gypsy moth caterpillars consume as much as one square feet of leaves per caterpillar per day. Oak is one of the more preferred tree species of the feeding

caterpillars. Hardwood trees completely defoliated become more susceptible to disease and other insects. Mortality often results is trees that are already stressed from drought or disease, or are repeatedly defoliated is consecutive years.

WILDLIFE

The variety of the timber types, regeneration, cover, swamps, and drainages create desirable habitat for game and non-game wildlife. Evidence and sightings of squirrels, deer, coyotes, porcupine, hawks, turkeys, and grouse were observed during fieldwork. .

Maintaining a dynamic diversity of timber types and age classes on varied soils will provide good habitat for a large variety of wildlife.

Wildlife Action Plan

This section of the plan briefly explains the portions of the NH Wildlife Action Plan (NH WAP) that are applicable to the Milford Town Forests and indicates how management can be applied to accomplish the stated strategy goals of the plan. The plan was required for federal money to be distributed to the states for wildlife conservation and management. The plan addresses eight specific elements required by the National Advisory Acceptance Team (NAAT) in order for the plan to qualify for federal aid. This section of the forest management plan will discuss portions of Chapters 2, 3 and 5 which address what habitat elements are present, what species of concern are potentially present and how to manage the land to maintain or enhance current and future habitat elements. This section contains extensive information and quotes from both the NH Wildlife Action Plan by New Hampshire Fish and Game and Natural Communities of New Hampshire by The New Hampshire Natural Heritage Bureau and The Nature Conservancy. These elements may or may not be specifically cited in the text.

Dead snag with cavity

Forest Types

In order to accomplish Element 1 of the NAAT Guidelines requiring, "information on the distribution and abundance of species of wildlife", an inventory of the current habitat types present throughout the state was needed. This can be used to predict the potential for populations of wildlife species by knowing where their habitat exists.

In order to get an idea of the distribution of the important habitats present in the state, New Hampshire Fish and Game identified 19 different critical habitat types that could be mapped throughout the state. These habitat types are based on the needs of all species and species of greatest conservation need and were established by the Project's Scientific Advisory Group and modified by the Project's Wildlife Working Group. Included within each of these habitat types are several natural communities which may occur. These communities are thought to "contain a unique set of environmental conditions that support certain species adapted to those conditions." Sperduto and Nichols, 2004. The plan indicates that by mapping and managing these

communities, the species depending on them can be managed and conserved. GIS modeling was used to create a map of the predicted locations of these habitat types throughout the state. Inputs into the models included information about soils, topology, and hydrology. It is important to understand that models are only as good as the information and assumptions used to develop them. Specific details of the needs of many species whether considered endangered or threatened can be limited. Thus, the models give us a starting point and help to indicate were future work should be focused. Often, they indicate potentials, but must be augmented by specific information from a given site. Managing for a diversity of forest structure and composition can help to provide habitat for the greatest number of species.

Mayflower Hill Forest Critical Habitat Types

Using the WAP Forest Types data layer and data from the forest inventory conducted by NEFCo foresters, a map of the predicted habitats and forest types can be created. These two classifications are unique in their focus: habitat types for wildlife management or conservation purposes and forest types for timber management purposes. Using these two systems, a forest management planning system can be created which allows the forestry activities to enhance the habitat elements on the property.

The WAP Habitat Types layer indicates that the Mayflower Hill Forest contains a combination of two categories: Hemlock-Hardwood-Pine and Appalachian Oak-Pine. The majority of the property is classified as Appalachian-Oak-Pine with small patches designated Hemlock-Hardwood-Pine. Within these types, the forest on the Mayflower Hill Forest contains mostly the drier communities with a combination of northern and southern species of trees and shrubs.

Appalachian Oak-Pine /Hemlock-Hardwood-Pine

The habitat type maps classify the majority of the area as Appalachian Oak-Pine with a small amount of Hemlock-Hardwood-Pine. While the forest is dominated by white pine and red oak, there is a significant component of Appalachian Oaks such as chestnut oak and white oak. Many of these Appalachian tree species are at the northern limits of their range and are more common in drier, warmer, climates with well drained soils. According to the forest inventory, the majority of the area most closely resembles the Appalachian-Oak-Pine Habitat type. This evidence suggests that any of the natural communities associated with Appalachian-Oak-Pine habitat types could be located on the property.

Within the area, a few specific natural communities were observed. Portions of this area contain Appalachian Oak Mountain Laurel Forest, which can be plainly observed in areas where the understory is dominated by dense mountain laurel thickets.

Species

The following species of special concern are found to depend on natural communities found in the Appalachian-Oak-Pine habitat types. These species have the potential to be present based on

the variety of possible natural communities present on the property. This list does not include all of the species listed for each type, but a subset taking into account that certain species are very unlikely to occur in the area.

Amphibians:

- Blue-spotted Salamander
- Fowler's Toad
- Jefferson Salamander
- Marbled Salamander

Of the amphibians listed as occurring in either Appalachian-Oak-Pine habitat types, these four have had either current or historic populations in the Milford area. The likelihood of them occurring on the property is limited by the fact that most of the property is upland with well drained soils. Fowler's toads use dry upland areas, but prefer to breed in large perennial watercourses. This species could still occur given its closeness to the Souhegan River to the south. Vernal pools or other significant wetlands have been created or enhanced by the past mining of stone on the property. Following the removal of the stone, these areas filled with water and are now valuable to many amphibian and other wildlife species that use these types of wetlands. All three of the salamander species use semi permanent and permanent wetlands for breeding, but spend much of their life in upland areas surrounding these wetlands.

Reptiles:

- Black Racer
- Eastern Box Turtle
- Eastern Hognose Snake
- Timber Rattlesnake

Many of the listed snake species use open forests and ledgy areas for feeding, basking and hiding. The above snakes feed on frogs and toads which are present on the property. The eastern box turtle is mainly an upland species, but uses wet areas and could be found using the semi-permanent wetlands located on the property.

Birds:

- American Woodcock
- Canada Warbler
- Cerulean Warbler
- Cooper's Hawk
- Northern Goshawk
- Veery
- Wood Thrush

Hawk Nest

These bird types use various forest types and often need a combination of different forest structures which is common in a managed forest.

Mammals:

Bobcat

Bobcats are widely distributed throughout the state and can use the dense stands created by regenerated forest for hunting small mammals that use these areas and the rocky ledgy areas for den sites.

Managed forests have value to game species as well. Evidence of a deer, turkey and grouse was observed on the property during the inventory. Moose are probably also present on the property with numbers comparable to regional averages. Periodic entries for timber harvesting will maintain some level of browse and cover for these species.

These specie lists indicate potential habitat for species of concern. In order to determine the actual presence of such animals, a field survey conducted by knowledgeable people would be necessary. DES and NH Fish and Game staff are available to take field visits with no cost to the landowner. The Natural Heritage Bureau staff is always looking for sites to do surveys, but may have to charge for their visits. Another good resource is local amateur enthusiast groups. While the members may have varying degrees of knowledge, they often have a certain number of very experienced members who can help to locate and identify rare or interesting wildlife on the property as part of their regular club activities.

Conservation Strategies

Chapter Five of the WAP identifies some general strategies for conserving certain habitat types considered limited in scope in New Hampshire. Section 500 concerns Habitat Management and contains several objectives that can be accomplished through the forest management program. Many of the objectives are general in that they focus on the maintenance of certain stand conditions and do not require certain species compositions or locations. Through the forest management program, a greater diversity of habitats can be maintained for the greatest diversity of species.

Objective 501 Reclaim or maintain grassland and shrubland habitats

There are no shrubland or grassland habitats currently present on the property.

Objective 502 Generate early successional and young forest habitats

During management, early successional and young forests are created when a stand is regenerated. In an even aged system, this is most effectively done through clearcuts of varying sizes. This creates large openings in the forest followed by a flush of dense young forest which maintains its effectiveness for some species needing these thick habitats for 12 to 15 years. After this time, most native forests become significantly less dense and the value of the young forest is diminished.

Objective 503 Restore and maintain late-successional forests

Late successional forests are thought to provide unique habitat elements for some species of wildlife. The WAP suggests that these stands are mainly important for mosses, lichens, and

some invertebrates. These stands often contain a larger number of cavity trees and coarse woody debris than managed stands where dying and rotten trees are often removed to maintain the growth of the healthiest and best quality trees. Maintaining reserves of unmanaged forest can lead to an overall diversity of forest structure while providing areas for recreation that are unique from the managed forest.

Objective 504 Develop and implement an urban wildlife management plan

This objective applies mainly to adjacent land as the vast majority of town forestland is undeveloped with the exception of picnicking areas and parking lots. This objective could be used to get adjacent landowners involved and interested in the habitat management program through the planting of species valuable to wildlife. On a regional or town-wide basis, cultivated or garden plants that provide significant habitat elements can supplement habitat management efforts within the property.

Objective 505 Restore rare habitats and natural communities

This objective is very specific and requires certain rare natural features to be present or able to be created on the property. None were noted during the inventory. If rare natural communities are noted on the property in the future, steps can be taken to enhance these areas if sufficient evidence is available to suggest that unique management techniques will be effective.

Objective 506 Develop and implement a terrestrial invasive species control program.

Invasive species are often, but not always, non-native species which are prolific enough to out compete sensitive or slowly growing species in their natural habitat. These species were often originally selected for propagation for their heartiness as well as their specific aesthetic or utilitarian qualities. In order to protect susceptible species, it is often desirable to prevent the unchecked growth of these species.

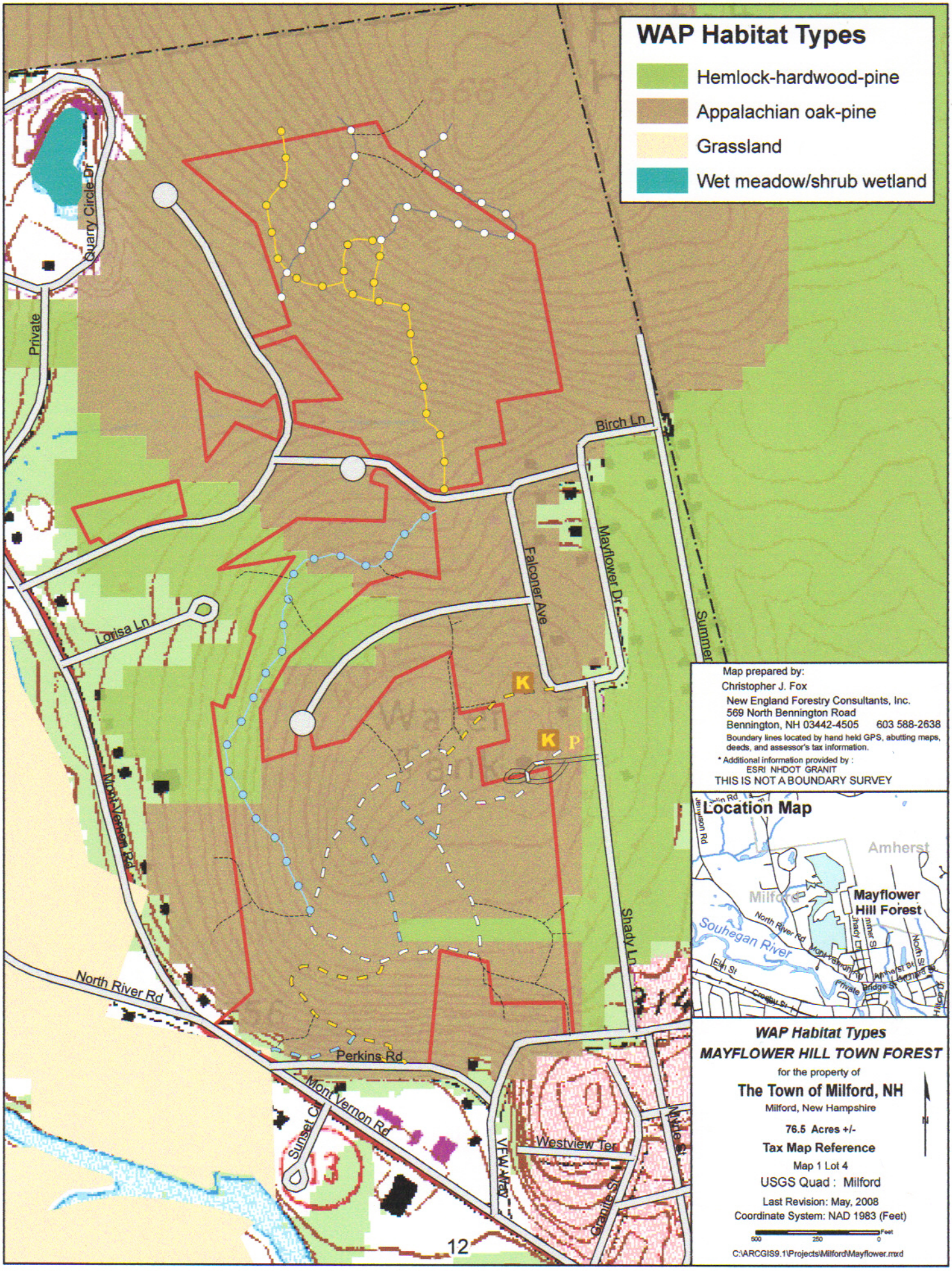
No invasive species were noted during the inventory. If invasive species are found in the future, a combination of mechanical and chemical methods can be used in order to manage the possible spread of this species.

Objective 507 Restore or maintain natural flow regimes

This objective is not applicable to the Mayflower Hill Town Forest since it applies mainly to large perennial watercourses with significant aquatic wildlife.

Objective 508 Restore and maintain watershed continuity

This objective is also of limited applicability to the Mayflower Hill Forest since it also applies mainly to larger aquatic habitats. Following BMP's for Timber Harvesting in New Hampshire can limit any disturbance to the small watercourses during timber harvests.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Hemlock-hardwood-pine
Appalachian oak-pine
Grassland
Wet meadow/shrub wetland
Quarry Circle Dr
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Birch Ln
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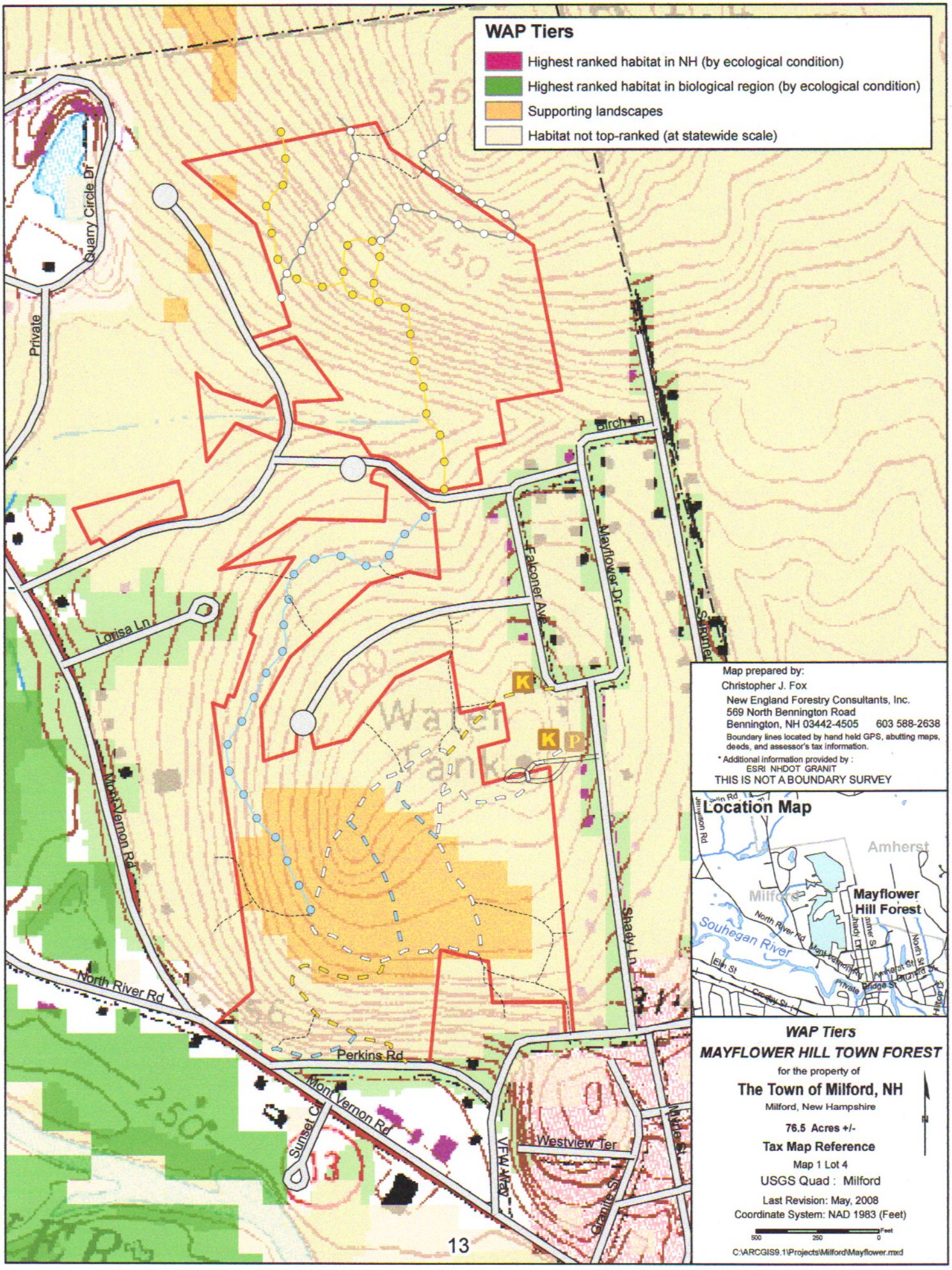
WAP Tiers
Highest ranked habitat in NH (by ecological condition)
Highest ranked habitat in biological region (by ecological condition)
Supporting landscapes
Habitat not top-ranked (at statewide scale)
Quarry Circle Dr
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Birch Ln
Falconer Ave
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Highest Ranked Wildlife Habitat by Ecological Condition

This map coverage provided by the WAP indicates areas of high value based on two main attributes: quality of the habitat risk of degradation. For example, a shrub swamp bordering a river, with surrounding forestland that is on public land is ranked more highly than a common upland hardwood forest located just outside of Manchester. The ranking takes into account the needs of species of special concern and the likelihood that these features would continue to exist in the future. An important thing to note is that most of these rankings are based on remote sensing data and what data is available about species and habitats on the property. This data is limited to what the framers of the model had available, which is quite limited. Thus, these rankings are general and require verification to locate specific types not readily observed.

The Mayflower Hill Forest is generally ranked very low, but contains a small area of supporting landscape in the southern portion of the property. This is likely due to the fact that the forest types are fairly common and no large wetlands are present on the property. Wetlands score high because of their association with many species of concern and the fact that they are not likely to be developed. While the Mayflower Hill Forest is not likely to be developed, it does not have any significant rare natural features that can be detected by remote sensing data. The examination of the vernal and other semi-permanent wetlands on the property could change the status of this area, especially if these areas are found to support rare, threatened, endangered or species of special concern.

Conclusions

Inventory data and data available from the WAP and Natural Diversity Data Base do not indicate that the Mayflower Forest contains significant habitat features on a statewide basis. However, forests under long-term forest management commonly contain a range of forest characteristics that are valuable to many game and non-game species common to New Hampshire. Getting hard data on the presence of animals takes long-term, on the ground monitoring efforts since they are mobile and may not be present at the time of any one visit. The data and recommendations of the NH WAP are necessarily general due to the large regional and statewide areas considered. Considering the habitat management recommendations during forest management work can begin to develop habitat for the greatest diversity of species. If specific species are located, the management can be altered to benefit these species. Maintaining a data base of sightings or evidence of species in a trail kiosk or through local wildlife clubs can help to gather information on what species may use the property. Coordinating with state agencies can also help to identify rare species and provide advice and resources for maintenance of significant habitats.

WETLANDS

Wetland and water features are shown on the Forest Type Map. The Patch Hill tract has a small perennial brooks flowing west on the south side of the tract, and there is a small intermittent brook on the northwest side. West of Patch Hill Drive these brooks flow into a semi open and wooded swamp. An intermittent brook on the south east side of the Mayflower tract flows south directly in the foot trail and access point to Adams Street. Several of the quarry sites

on the Mayflower tract contain shallow pools of water which could be considered vernal pools.

Any brook or wet soils crossings during timber harvesting require proper crossing structures such as pole fords, culverts, skidder bridges or brush corduroy. This minimizes the impact to the wet soil or water body, and requires a permit from the NH Wetlands Bureau. Water bars should be installed on any steep skid roads following timber harvesting to prevent erosion.

RECREATION

The Mayflower tract is within easy walking distance of many Milford residents, and with its well established trail system, quarries, and Lookout Point is used extensively for walking, jogging and recreation. In the past few years, trail head parking and a kiosk have been installed near the water tower access road and on Falconer Ave. New trails are currently being redesigned and cleared connecting to Perkins Street and Chase Lane, and dead trees that could pose a hazard have been cut and the view from Lookout Point improved.

The Patch Hill tract also has an extensive foot trail system, but is less used being more remote and the lower elevations recently developed for residential dwellings blocking the formerly used trails. A trail from Chase Lane to the existing trails on Patch Hill has been designated with yellow paint, but has not yet been cleared. The top of Patch Hill in on the abutting property to the north east and is also access from trails from the north.

The Forest Type Map shows the location of official and unofficial trails, quarries, ledges, open land, brooks, and boundaries, and may be used for locating features on the ground and expanding the trail net work. The most used trails are generally well designated and maintained. Lesser used trails, mostly on the Patch Hill tract, have become somewhat overgrown or were never cleared and are not clearly designated.

Suggested trails that may enhance hiking are:

A parking area and or trail connecting Lee An Drive with the Main Loop Trail on the Mayflower Town tract.

The Patch Hill tract should be reviewed for a possible site for a parking area and or landing site. There is not easy access to this tract. A loop trail linking the brook and Patch Hill from this site could be developed and a timber harvest could clear a view.

See the work map for these suggested routes.

All layout and construction of new hiking trails and parking areas should take into consideration future timber harvesting operations to prevent conflicts of use when timber is next

harvested. All harvesting activities should also be conducted not only to improve the productivity of the forest, but also to enhance opportunities for recreation and minimize the negative impact to existing recreational improvements. Included with this could be clearing of views if and timber harvesting is done on Patch Hill.

Threats to the recreational and aesthetics values on this property are mainly abuse by the public using the property. The public has occasionally left litter, drink containers, clothing and tents, and built campfires. Although those causing the problem are probably less than one percent of those who pass through the property, they can create a substantial impact, if not cleaned up. Limiting access of off road vehicles, a clear understanding by the public of activities not permitted on the property, and a willingness of the public to pick up after the careless few will prevent most problems.

TRACT HISTORY

The property has a long history of land use since the time of the American Revolution. Stone walls found on the property were built as a permanent replacement to the temporary brush fence during in the mid to late 1700's and early 1800's when land throughout Milford and the surrounding towns were used for pasture and agriculture. Most of this property was probably pastured as open fields in the mid 1800's, and the less rocky land was cultivated on the south part of Burns Hill.

No evidence was found of a dwelling having existed on the property.

When the West was opened in the 1860's and 1870's, much of New Hampshire's farmland was abandoned, particularly the less productive and/or more remote areas, and trees reclaimed the land. Barbed wire was developed in the second half of the 1800's which replaced the brush fence and ended the construction of stone walls.

White pine easily seeds into grassy or exposed fields and is often the first species to reclaim abandoned farmland. The quality of the pine can be quite variable, depending on the number of stems per acre, the attack of the white pine weevil, soil type, and the number of years a tree grew without competition from nearby stems. As the white pine reaches merchantable size, and is harvested, a variety of hardwood trees usually become dominant on the more fertile loamy soils by sprouting from existing root systems, or from the advanced growth of existing saplings. Loamy soils are generally more suited to hardwood than white pine.

Based on poor soils, timber types and other evidence found on the ground, it is estimated that most of this tract was never cultivated and has been out of any agricultural production since the early 1900's. The areas of better soils, and more conducive for agriculture, were probably farmed up until the early 1940's.

Evidence of extensive quarrying of granite can be observed on the Mayflower Hill tract. The Patch Hill tract has no evidence of quarrying even with the extensive exposed ledge on the tract.

The 1938 hurricane probably damaged much of the larger white pines on the property and salvage operations in the following few years cleaned up much of the severely damaged timber. Little evidence of this storm can be seen today. Hurricanes on the magnitude and damage of the 1938 hurricane occur in New England on average once every hundred years. The last timber harvesting on the property probably occurred before the 1960's.

The WP 1,2 stand on the south part of Mayflower Hill show evidence of past timber stand improvement and pruning in the 1970's or 1980's. Timber stand improvement is a pre-commercial thinning of overcrowded immature high quality trees and cull removal of trees that will not develop into quality saw timber. This was done by girdling the trees to be eliminated with a chain saw. The first 17 feet of the most productive trees are pruned of limbs so that that log will grow clear lumber.

Mayflower Hill and Patch Hill Town Forest was acquired by the Town of Milford in several parcels that were mostly remnants of residential subdivisions.

Norwood Lot, 6.59 acres, HCRD Volume 2639 Page 345 – 1977, Plan #10,378.

Ferguson Lot, 18.1 acres, HCRD Volume 2889 Page 342 – 1981, Plan #14,443.

Roach Lots, 9.65 acres, HCRD Volume 5092 Page 122 – 1989, Plan #24,572.

Crawford Lot, 0.63 acres, HCRD Volume 5276 Page 737 – 1991, Plan #3,005.

Benjamin Lots, 6.57 acres, HCRD Volume 7229 Page 2728 – 2004, Plan #33,149.

Patch Hill Lots, 34.65 acres, HCRD Volume 7651 Page 2019 – 2006, Plan #32,772.

ENDANGERED SPECIES

No evidence of rare or endangered plants or animals was noted during fieldwork. Evidence of rare or endangered plants and animals can be determined by consulting the New Hampshire Natural Heritage Inventory, the New Hampshire Fish and Game Department and the New Hampshire Audubon Society. These groups maintain information about the location of threatened, rare or endangered species. A review of the Natural Diversity Data Base did not locate any rare or endangered plants or animals on the Mayflower Hill Town Forest.

FOREST PROTECTION

The property is not subject to a Conservation Easements which would restrict the Town's owner's potential use or development of the property.

No serious forest fire, insect, or disease risks were noted during fieldwork.

SOILS AND PRODUCTIVITY

The soil types shown on the Soil Type Maps, and the following soils information is based on: The 1981 USDA Soils Survey of Hillsborough County Eastern Part. Information given on forest productivity is based primarily on this book and should not replace the actual examination, working knowledge and experience. Soils in some areas vary distinctly from what is shown in the USDA Soils Survey. Observed variances are described in the individual Stand Descriptions.

FOREST SOILS PRODUCTIVITY

Forest soils are rated in five category groups: Loamy (IA), sandy loam (IB), outwash sand and gravel (IC), Soils with physical limitations (IIA), and poorly drained soils (IIB). Most all of the forest land on this property is (IB), sandy loam. The area on Patch Hill labeled as (IIA) physical limitations, for its slopes and rock outcrops. West of Patch Hill Lane is (IIB) poorly drained.

A description of these sandy loam forest soils found on this property is as follows:

Open Ledge on Patch Hill

Group IB

The soils in this group are generally sandy or loamy over sandy textures and slightly less fertile than those in Group IA. These soils are moderately well and well drained. Soil moisture is adequate for good tree growth, but may not be quite as abundant as in Group IA soils.

Soils in this group have successional trends toward a climax of tolerant hardwoods, predominately beech. Successional stands, especially those which are heavily cut over, are composed of a variety of hardwood species such as red maple, aspen, paper birch, yellow birch, sugar maple, and beech, in combinations with red spruce, balsam fir, and hemlock.

Hardwood competition is moderate to severe on these soils. Successful softwood regeneration is dependent upon hardwood control.

Map Symbol	Soil Name
CmC	Canton stony fine sandy loam, 8 to 15 % slope.
CmD	Canton stony fine sandy loam, 15 to 25 % slope.
CsC	Chatfield – Hollis complex, 8 to 15 % slope.

This soil type is found on Mayflower Hill and the north west corner of the Patch Hill tract.

Group IIA

This diverse group includes many of the same soils as in Groups IA and IB. However, these mapping units have been separated because of physical limitations which make forest management more difficult and costly, i.e., steep slopes, bedrock outcrops, erosive textures, surface boulders, and extreme rockiness.

Usually, productivity of these soils is not greatly affected by their physical limitations. However, management activities such as tree planting, thinning and harvesting are more difficult and costly.

Due to the diverse nature of this group, it is not possible to generalize about successional trends or to identify special management opportunities.

Map Symbol Soil Name

CtD – Chatfield – Hollis – Rock outcrop complex, 15 to 35 % slope.

This soil type is found on all but the northwest corner of the Patch Hill tract

Group IIB

The soils in this group are poorly drained. The seasonal high water table is generally within 12 inches of the surface.

Productivity of these poorly drained soils is generally less than soils in other groups.

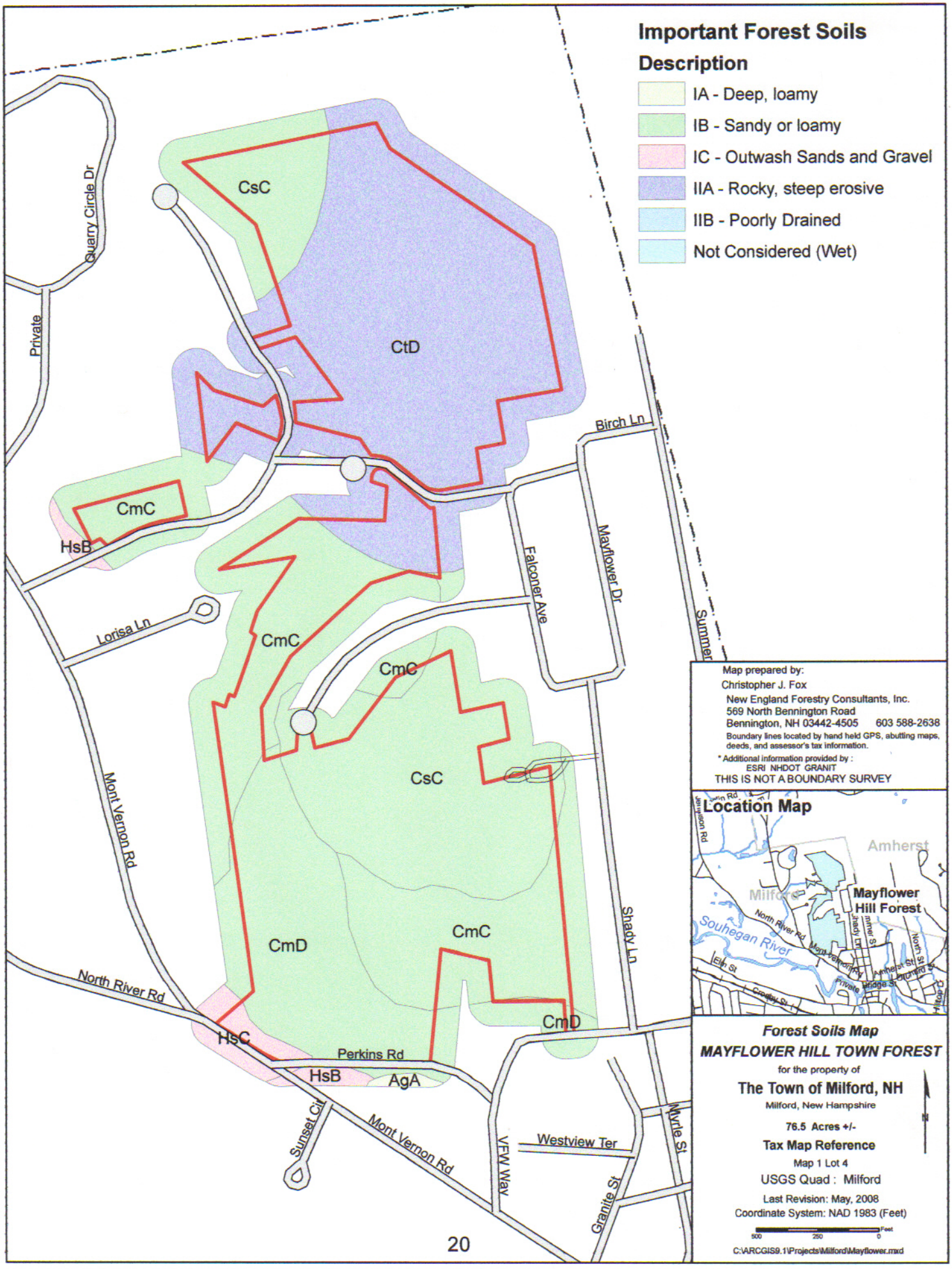
Successional trends are toward climax stands of shade tolerant softwoods, i.e., spruce in the north and hemlock further south. Balsam fir is a persistent component in stands in northern New Hampshire and red maple is common on these soils further south.

Due to abundant natural reproduction in northern New Hampshire, these soils are generally desirable for production of spruce and balsam fir, especially pulpwood. Red maple cordwood stands or slow-growing hemlock sawtimber are common in more southerly areas. However, due to poor soil drainage, forest management is somewhat limited. Severe wind throw hazard limits partial cutting, frost action threatens survival of planted seedlings, and harvesting is generally restricted to periods when the ground is frozen.

Map Symbol Soil Name

PiA – Pipestone loamy sand, 0 to 3 % slope.

This soil type is found on the low areas of the two small tracts west of Patch Hill Lane.


Important Forest Soils
Description
IA - Deep, loamy
IB - Sandy or loamy
IC - Outwash Sands and Gravel
IIA - Rocky, steep erosive
IIB - Poorly Drained
Not Considered (Wet)
CsC
CtD
CmC
HsB
CmD
HsC
AgA
Quarry Circle Dr
Private
Birch Ln
Falconer Ave
Mayflower Dr
Summer
Lorisa Ln
Mont Vernon Rd
North River Rd
Perkins Rd
Shady Ln
Sunset Cir
VFW Way
Westview Ter
Myrle St
Granite St
Map prepared by:
Christopher J. Fox
New England Forestry Consultants, Inc.
569 North Bennington Road
Bennington, NH 03442-4505 603 588-2638
Boundary lines located by hand held GPS, abutting maps, deeds, and assessor's tax information.
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ESRI NHDOT GRANIT
THIS IS NOT A BOUNDARY SURVEY
Location Map
Amherst
Milford
Mayflower Hill Forest
Souhegan River
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Forest Soils Map
MAYFLOWER HILL TOWN FOREST
for the property of
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76.5 Acres +/-
Tax Map Reference
Map 1 Lot 4
USGS Quad : Milford
Last Revision: May, 2008
Coordinate System: NAD 1983 (Feet)
500 250 0 Feet
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THE FOREST RESOURCE

DISCUSSION OF TABLE I

This table, developed from the cruise data with the aid of a computer spreadsheet program, shows the volume and value of sawtimber by species and diameter group as well as the volumes of pulp and cordwood. While the stumpage prices shown are based on sales of comparable timber, they also reflect the value of both immature and mature timber, its quality and volume per acre, market conditions, and logging chance. As such, they should not be used as the basis for any specific sale of timber on this or any other property. The timber liquidation value is given to show the gross stumpage value in the Spring of 2008. The value available for harvest under proper forestry practices at any time is usually considerably less than the timber liquidation value since this value includes many stems which are economically immature and their harvest would not be in the long-term interest of the owner. The final silvicultural decision, though, rests with the landowner and must balance forest health, ownership objectives, aesthetic impact, recreation, and a host of other factors.

SAWTIMBER DIAMETER GROUPS

The majority of the 12 to 14-inch DBH group should be considered immature sawtimber and growing stock. This timber is the forest capital necessary to yield sawtimber two, three or more decades into the future. Only the lower valued species and the unhealthy, poorly formed, or salvageable dead trees in this group are ready for harvest. An uncontrolled or diameter limit harvest of this immature timber is shortsighted and would have significant, detrimental impact on the long-term management objectives. A minor amount of the sawtimber timber recommended for harvest would come from this group during the coming decade.

The next group, 16 to 20 inches DBH, contains both mature and immature sawtimber depending on tree species, stem quality, and vigor. Certain species in this group, such as hemlock, white birch, beech, and red maple, can be considered mature. Above average quality and healthy white pine, red oak, and other species should be reserved for additional rapid growth in both volume and value. Some volume recommended for harvest would come from this group, but many individuals should be reserved for subsequent harvests in the decades ahead.

The timber in the last group, 22 inches and up DBH, can be considered economically mature. Much of the volume typically recommended for harvest would come from this group.

These groups illustrate diameter distribution by species. Many other factors, other than diameter, contribute to the decision to harvest or grow a particular tree. Some of these are: landowner objectives, aesthetics, wildlife requirements, the presence or absence of desirable regeneration, evidence of poor health, quality or overcrowding, and the potential for improvement with additional growth. Careful selective marking takes all these factors as well as market and logging considerations into account.

TABLE I: ESTIMATE OF VOLUME AND VALUE BY SPECIES AND SIZE GROUP

MAYFLOWER HILL TOWN FOREST

OWNERSHIP: Town of Milford
TOWN OF: Milford
TAX MAP: 8 LOT: 92
TAX MAP: 9 LOT: 1, 1-38, & 1-40

TOTAL ACRES: 76.5
FOREST ACRES: 75

SPECIES	VOLUME MBF 12"-14" GROUP	VOLUME MBF 16"-20" GROUP	VOLUME MBF 22" & UP GROUP	MBF** TOTAL VOLUME	AVERAGE VALUE PER MBF	MBF** TOTAL VALUE	CORD WOOD VOLUME	VALUE PER CORD	CORD WOOD VALUE	**TOTAL VALUE**
WHITE PINE	84.800	214.900	81.300	381.000	$165	$62,865	415	$2.5	$1,038	$63,903
HEMLOCK	3.800	8.900	10.500	23.200	$35	$812	35	$15	$525	$1,337
TOTAL SOFTWOOD	88.600	223.800		404.200		$63,677	450		$1,563	$65,240
RED OAK	64.200	92.400	5.000	161.600	$275	$44,440	445	$10	$4,450	$48,890
CHESTNUT OAK	5.600	18.500		24.100	$100	$2,410	120	$10	$1,200	$3,610
BEECH	5.000	2.500		7.500	$30	$225	15	$10	$150	$375
WHITE OAK		4.400		4.400	$35	$154	20	$10	$200	$354
RED MAPLE	2.500			2.500	$100	$250	30	$10	$300	$550
BLACK BIRCH							10	$10	$100	$100
TOTAL HARDWOOD	77.300	117.800	5.000	200.100		$47,479	640		$6,400	$53,879
TOTAL SAWTIMBER	165.900	341.600	5.000	604.300		$111,156	1,090		$7,963	$119,119

TOTAL TIMBER LIQUIDATION VALUE: $119,119 ***

PER FOREST ACRE
MBF: 8.057
CORDS: 14.5
VALUE: $1,588

**MBF = THOUSAND BOARD FEET

*****THE VALUE AVAILABLE UNDER SOUND FORESTRY PRINCIPLES IS LESS THAN THE TIMBER LIQUIDATION VALUE.

ALL VOLUMES BASED ON INTERNATIONAL 1/4" LOG RULE AND STANDARD CORDS.
STUMPAGE PRICES BASED ON RECENT SALES OF TIMBER COMPARABLE IN SIZE AND QUALITY.

TIMBER TYPE STAND DEFINITION

Distinct timber types have been identified within each management area. They vary in species composition, size class, and stocking levels. Because of these differences, the recommended treatments will vary between types.

Descriptions of the timber types are listed under each management area, with a Table II Stocking and Volume by forest type.

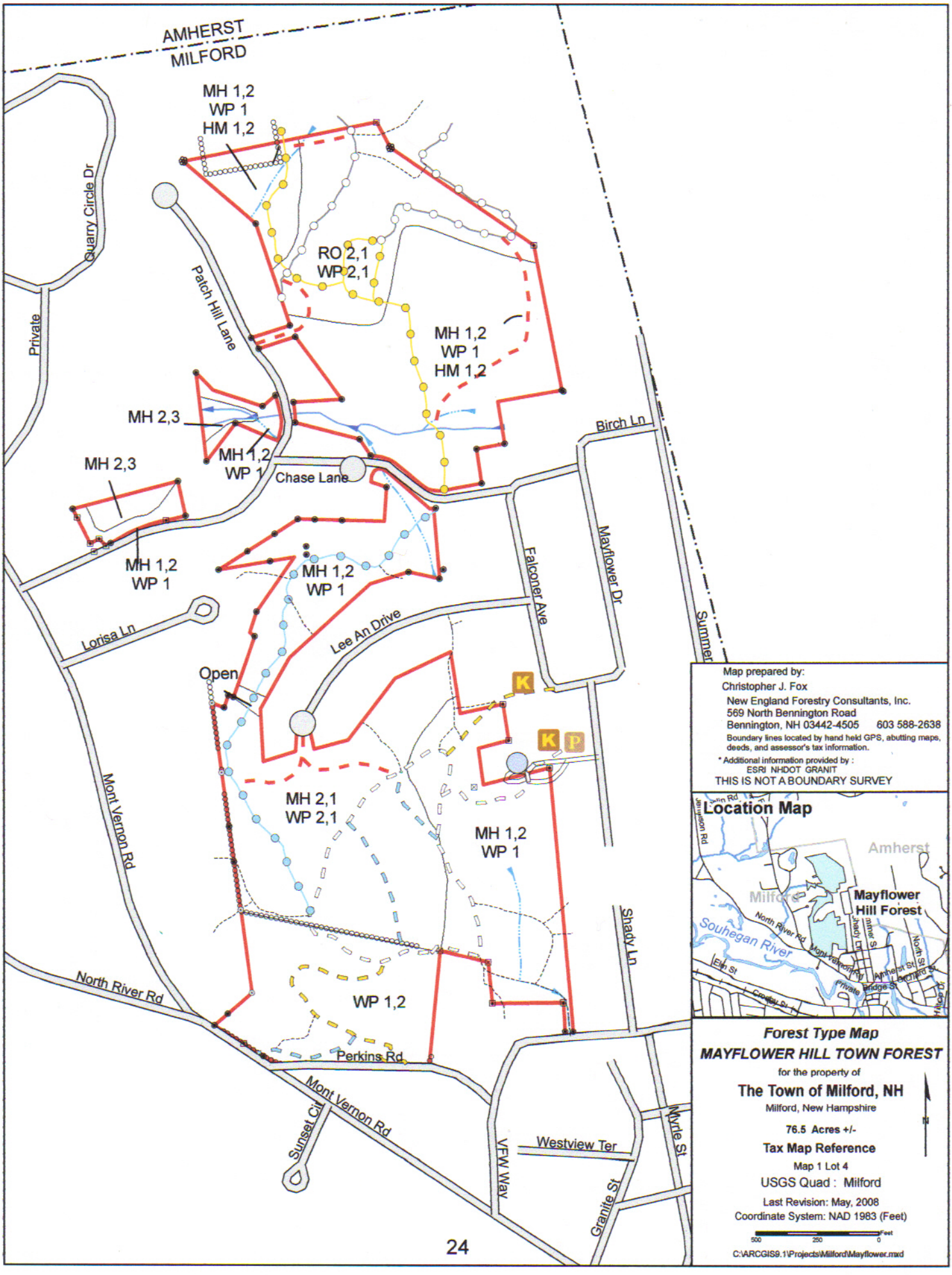
The timber types are coded using a letter and number system. The first letters indicate the species composition: (MH) mixed hardwood, (HM) hemlock, (WP) white pine, (RO) Red Oak, (PP) Pitch Pine, etc. The number indicates size class: (3) saplings 0-4 inches DBH, (2) poletimber 5-10 inches DBH, (1) sawtimber 11 inches and up DBH.

DISCUSSION OF TABLE II: Stocking and Volume

This table, developed with the aid of a computer program from the data collected in the field, shows the number of trees and volume per acre by species and diameter size group, and the average diameter for pulpwood. The average height of merchantable timber for each species and size group is also shown. Height is shown in number of 16' lengths. These numbers are expanded to show overall number of trees and volume per acre, average height of the timber, and basal area by species. Basal area is the per acre sum of the cross-sectional area of all stems at DBH. i.e., the square feet of stem per acre at 4.5 feet above the ground. The final three columns show the total number of trees and board feet volume in the entire stand.

MANAGEMENT RECOMMENDATIONS BY AREA and FOREST TYPE

Specific data and recommendations for each forest type in each area are given below. This data, together with field notes, observations made within each type, accepted silvicultural practices for the species and conditions involved, and the owner's management objectives, form the basis for the recommendations.


AMHERST
MILFORD
MH 1,2
WP 1
HM 1,2
RO 2,1
WP 2,1
MH 1,2
WP 1
HM 1,2
MH 2,3
MH 1,2
WP 1
MH 2,3
MH 1,2
WP 1
MH 1,2
WP 1
MH 1,2
WP 1
Open
MH 2,1
WP 2,1
MH 1,2
WP 1
WP 1,2
Quarry Circle Dr
Private
Patch Hill Lane
Chase Lane
Birch Ln
Falconer Ave
Mayflower Dr
Summer
Lorisa Ln
Lee An Drive
Mont Vernon Rd
North River Rd
Perkins Rd
Mont Vernon Rd
Sunset Cir
Shady Ln
VFW Way
Westview Ter
Myrle St
Granite St
K
K P
24
Map prepared by:
Christopher J. Fox
New England Forestry Consultants, Inc.
569 North Bennington Road
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for the property of
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76.5 Acres +/-
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500 250 0 Feet
C:\ARCGIS9.1\Projects\Milford\Mayflower.mxd

TABLE II STAND STOCKING AND VOLUME BY TIMBER TYPE
MAYFLOWER HILL TOWN FOREST

Owner: **Town of Milford** **FOREST ACRES +/-:** **75**

Lot: **Milford, Tax Map 8 Lot 92; and Map 9 Lot 1, 1-38, 1-39 & 1-40** **Number of plots:** **30**

Plot size: **0.10 Acre**

	SAWTIMBER 12" - 14" DBH			SAWTIMBER 16" - 20" DBH			SAWTIMBER 22"+ DBH			CORDWOOD AND PULP			TOTAL PER ACRE					STAND TOTAL		
SPECIES	TREES ACRE	AVG. HGT.	BF ACRE	TREES ACRE	AVG. HGT.	BF ACRE	TREES ACRE	AVG. HGT.	BF ACRE	AVG. DBH	TREES ACRE	AVG. HGT.	BASAL AREA	AVG. DIA.	TREES ACRE	BF ACRE	CORDS ACRE	# TREES	BF	CORDS
WHITE PINE	12.3	1.7	1,131	10.4	3.0	2,865	1.8	3.0	1,084	9.2	13.7	1.7	36.4	13.2	38.1	5,080	5.5	2,855	380,973	416
HEMLOCK	0.6	1.3	51	0.6	1.8	119	0.3	2.0	140	8.7	4.5	1.1	4.0	10.8	6.1	310	0.5	459	23,228	38
TOTAL SOFTWOOD	12.9	1.7	1,182	11.0	2.9	2,984	2.1	2.9	1,224	9.1	18.2	1.6	40.4	12.8	44.2	5,389	6.05	3,313	404,200	454
RED OAK	12.1	1.1	856	7.7	1.4	1,232	0.3	1.0	67	9.4	34.5	1.3	39.7	11.4	54.6	2,155	5.9	4,097	161,609	443
CHESTNUT OAK	1.1	1.1	75	1.9	1.1	247				9.7	13.3	1.3	10.2	10.7	16.2	321	1.6	1,215	24,104	119
BEECH	0.6	1.5	67	0.3	1.0	34				8.0	1.0	1.3	1.3	11.3	1.9	100	0.2	143	7,505	15
WHITE OAK				0.3	1.5	58				8.6	3.6	1.2	2.0	9.4	3.9	58	0.3	293	4,370	23
RED MAPLE	0.3	1.5	33							8.8	5.1	1.3	2.5	9.1	5.5	33	0.4	409	2,494	31
BLACK BIRCH										9.0	1.7	1.3	0.7	9.0	1.7	0	0.1	124	0	9
TOTAL HARDWOOD	14.2	1.1	1,030	10.2	1.3	1,571				9.3	59.1	1.3	56.4	11.0	83.7	2,668	8.53	6,280	200,082	640
TOTAL SAWTIMBER	27.1	1.4	2,212	21.2	2.1	4,555	2.1	2.9	1,224	9.3	77.2	1.4	96.8	11.6	127.9	8,057	14.58	9,593	604,283	1,094

HGT. = Number of 16 foot lengths BF = Board feet. DBH = Diameter breast high (4.5'). BASAL AREA = Square feet of stem per acre.

STAND DESCRIPTION

TIMBER TYPE: MH 1, 2 Acres: 20
WP 1

COMPOSITION AND SIZE CLASS:

Mixed hardwood sawtimber and pole timber and with pockets and scattered white pine sawtimber.

UNDERSTORY VEGETATION AND REGENERATION:

A variety of hardwood species: maple, birch, and oak; hemlock, white pine, witch hazel and mountain laurel.

LOCATION:

On the south east and north west sides of Mayflower Hill and the dry edges of the two small tracts on the north and west sides of Patch Hill Lane.

STAND HISTORY:

These stands were at one time pasture land. The pastures were over time not maintained, then abandoned and became overgrown with trees, mostly white pine. As the pine became merchantable for saw timber, it was harvested and a mixture of hardwoods with white pine regenerated.

Prior harvesting last occurred more than 50 years ago.

TIMBER QUALITY:

Moderate and low quality hardwoods. Good quality white pine sawtimber.

INSECT AND DISEASE DAMAGE:

Some gypsy moth damage was observed in the oaks.

WILDLIFE HABITAT VALUE:

Cavity trees, squirrel nests, and hawk nests were observed. Acorns from oaks are abundant.

SOIL TYPE:

CmC – Canton stony fine sandy loam, 8 to 15 % slope.
CmD – Canton stony fine sandy loam, 15 to 25 % slope.
CsC – Chatfield – Hollis complex, 8 to 15 % slope.

Generally sandy or loamy over sandy textures. Moderately well and well drained, but adequate moisture for good tree growth. Hardwood competition is moderate to severe and the successional trend is toward a climax of tolerant hardwoods.

MANAGEMENT PRESCRIPTION:

FORESTRY:

Harvest mature and low quality red oaks, white pine, and hardwoods for sawtimber and cordwood within the next 10 years if access is possible and harvesting does not conflict with recreational use.

WILDLIFE:

Reserve cavity trees and snags where they are not a hazard along trails. Reserve cavity trees if harvesting timber.

RECREATION:

Coordinate trail and parking locations not to conflict with landing and skid road locations. When harvesting timber, leave visual buffers and areas of unique aesthetic value as appropriate.

TABLE II STAND STOCKING AND VOLUME BY TIMBER TYPE

MAYFLOWER HILL TOWN FOREST

Owner: Town of Milford **TIMBER TYPE: MH 1,2; WP 1** **ACRES +/-:** 20

Lot: Milford, Tax Map 8 Lot 92; and Map 9 Lot 1-38, 1-39, & 1-40 **Plots:** 10

	SAWTIMBER 12" - 14" DBH			SAWTIMBER 16" - 20" DBH			SAWTIMBER 22"+ DBH			CORDWOOD AND PULP			TOTAL PER ACRE					STAND TOTAL		
SPECIES	TREES ACRE	AVG. HGT.	BF ACRE	TREES ACRE	AVG. HGT.	BF ACRE	TREES ACRE	AVG. HGT.	BF ACRE	AVG. DBH	TREES ACRE	AVG. HGT.	BASAL AREA	AVG. DIA.	TREES ACRE	BF ACRE	CORDS ACRE	# TREES	BF	CORDS
WHITE PINE	10.0	1.8	868	12.0	3.3	3,785	1.0	3.5	664	10.9	7.0	2.2	33.9	14.4	30.0	5,317	5.42	600	106,340	108
HEMLOCK	0.0									7.3	3.0	1.0	0.9	7.3	3.0		0.11	60		2
TOTAL SOFTWOOD	10.0	1.8	868	12.0	3.3	3,785	1.0	3.5	664	9.8	10.0	1.9	34.8	13.8	33.0	5,317	5.53	660	106,340	111
RED OAK	16.0	1.1	1,175	12.0	1.3	1,915				10.7	15.0	1.6	42.7	13.5	43.0	3,090	6.46	860	61,800	129
CHESTNUT OAK	2.0	1.3	161	3.0	1.0	413				9.3	11.0	1.4	11.3	11.4	16.0	574	1.73	320	11,480	35
WHITE OAK										9.3	3.0	1.2	1.4	9.3	3.0		0.18	60		4
RED MAPLE										8.8	5.0	1.2	2.1	8.8	5.0		0.30	100		6
BLACK BIRCH										8.8	5.0	1.3	2.1	8.8	5.0		0.34	100		7
TOTAL HARDWOOD	18.0	1.1	1,336	15.0	1.3	2,328				9.7	39.0	1.4	59.6	12.2	72.0	3,664	9.00	1,440	73,280	180
TOTAL SAWTIMBER	28.0	1.3	2,204	27.0	2.2	6,113	1.0	3.5	664	9.7	49.0	1.5	94.4	12.7	105.0	8,981	14.53	2,100	179,620	291

BF = Board feet. DBH = Diameter breast high (4.5'). BASAL AREA = Square feet of stem per acre.

STAND DESCRIPTION

TIMBER TYPE: MH 1,2
WP 1
HM 1,2 Acres: 19

COMPOSITION AND SIZE CLASS:

Mixed hardwood sawtimber and pole timber, scattered white Pine sawtimber, and patches of hemlock sawtimber and pole timber.

UNDERSTORY VEGETATION AND REGENERATION:

Hemlock with hardwood and some white pine.

LOCATION:

In the south and north west sides of Patch Hill.

STAND HISTORY:

This stand was at one time pasture land. The pastures were over time not maintained, then abandoned and became overgrown with trees, mostly white pine. As the pine became merchantable for saw timber, it was harvested and the mixture of white pine and hardwood regenerated.

Prior harvesting last occurred more than 50 years ago.

TIMBER QUALITY:

Moderate to good quality in the lower more fertile soils and lower quality in the higher more shallow soils.

INSECT AND DISEASE DAMAGE:

Some evidence of past forest fire and Gypsy moth damage was observed.

WILDLIFE HABITAT VALUE:

Cavity trees are present, and acorn mast from mature oak trees.

SOIL TYPE:

CtD – Chatfield – Hollis – Rock outcrop complex, 15 to 35 % slope.
Generally sandy or loamy over sandy textures. Moderately well and well drained, but adequate moisture for good tree growth. Hardwood competition is moderate to severe and the successional trend is toward a climax of tolerant hardwoods.

MANAGEMENT PRESCRIPTION:

FORESTRY:

Harvest mature and low quality red oaks, white pine, and hardwoods for sawtimber and cordwood within the next 10 years if access is possible and harvesting does not conflict with recreational use. Because of limited truck access, access to the sale area is difficult. Inquire if temporary access can be gained through abutting property, Tax Map 9 Lot 4.

WILDLIFE:

Reserve cavity trees and snags where they are not a hazard along trails.

RECREATION:

Coordinate creation of trail head parking not to conflict with landing and skid road locations.

TABLE II STAND STOCKING AND VOLUME BY TIMBER TYPE

MAYFLOWER HILL TOWN FOREST

Owner: **Town of Milford** **TIMBER TYPE: MH 1,2; WP 1; HM 1,2** **ACRES +/-:** **19**

Lot: **Milford, Tax 9 Lot 1** **Plots:** **8**

	SAWTIMBER 12" - 14" DBH			SAWTIMBER 16" - 20" DBH			SAWTIMBER 22"+ DBH			CORDWOOD AND PULP			TOTAL PER ACRE					STAND TOTAL		
SPECIES	TREES ACRE	AVG. HGT.	BF ACRE	TREES ACRE	AVG. HGT.	BF ACRE	TREES ACRE	AVG. HGT.	BF ACRE	AVG. DBH	TREES ACRE	AVG. HGT.	BASAL AREA	AVG. DIA.	TREES ACRE	BF ACRE	CORDS ACRE	# TREES	BF	CORDS
WHITE PINE				1.3	1.5	179	2.5	3.3	1,993	9.0	2.5	1.5	10.1	17.2	6.3	2,171	1.95	119	41,254	37
HEMLOCK	2.5	1.3	201	2.5	1.8	470	1.3	2.0	551	9.1	11.3	1.2	13.4	11.9	17.5	1,223	1.75	333	23,228	33
TOTAL SOFTWOOD	2.5	1.3	201	3.8	1.7	649	3.8	2.8	2,544	9.1	13.8	1.3	23.5	13.3	23.8	3,394	3.70	451	64,481	70
RED OAK	20.0	1.1	1,464	15.0	1.5	2,511	1.3	1.0	264	10.3	25.0	1.7	57.7	13.1	61.3	4,239	9.35	1,164	80,536	178
CHESTNUT OAK				2.5	1.3	363				10.3	8.8	1.9	8.5	11.8	11.3	363	1.66	214	6,888	31
BEECH	2.5	1.5	263	1.3	1.0	133				8.0	3.8	1.3	5.3	11.3	7.5	395	0.81	143	7,505	15
WHITE OAK				1.3	1.5	230				10.0	2.5	1.8	3.3	12.7	3.8	230	0.62	71	4,370	12
RED MAPLE	1.3	1.5	131							10.0	5.0	1.8	4.0	10.8	6.3	131	0.75	119	2,494	14
BLACK BIRCH										10.0	1.3	1.5	0.7	10.0	1.3	0	0.11	24		2
TOTAL HARDWOOD	23.8	1.2	1,858	20.0	1.4	3,236				10.1	46.3	1.7	79.4	12.6	91.3	5,358	13.30	1,734	101,793	253
TOTAL SAWTIMBER	26.3	1.2	2,059	23.8	1.4	3,885	3.8	2.8	2,544	9.8	60.0	1.6	102.9	12.7	115.0	8,751	17.00	2,185	166,274	323

BF = Board feet. DBH = Diameter breast high (4.5'). BASAL AREA = Square feet of stem per acre.

STAND DESCRIPTION

TIMBER TYPE: MH 2,1
WP 2,1 17 Acres

COMPOSITION AND SIZE CLASS:

Mixed hardwood poletimber and sawtimber, with white pine poletimber and sawtimber.

UNDERSTORY VEGETATION AND REGENERATION:

White pine and mixed hardwood with some areas of mountain laurel and hemlock.

LOCATION:

The west part of the Mayflower Hill tract.

STAND HISTORY:

Old pasture land that was allowed to convert to forest in the early 1900's. Significant granite quarrying occurred in this stand in several locations. Evidence was observed of damage from forest fire probably in the 1950's as evidenced from fire scared trees. A small forest fire of less than an acre occurred in the last few years just south of Lookout Point. Little damage to the forest stand occurred.

Prior significant harvesting last occurred more than 50 years ago.

TIMBER QUALITY:

Mostly low quality hardwoods and low to moderate quality white pines. The low quality is a result of the shallow soils, trees species composition, and past fire damage.

INSECT AND DISEASE DAMAGE:

Scars and internal decay was observed from past fire damage.

WILDLIFE HABITAT VALUE:

Cavity trees for birds and mammals. Den sites in quarries and ledge outcrops for snakes and bats. Acorn mast.

SOIL TYPE:

CmC – Canton stony fine sandy loam, 8 to 15 % slope.
CmD – Canton stony fine sandy loam, 15 to 25 % slope.
CsC – Chatfield – Hollis complex, 8 to 15 % slope.

Generally sandy or loamy over sandy textures. Moderately well and well drained, but adequate moisture for good tree growth. Hardwood competition is moderate to severe and the successional trend is toward a climax of tolerant hardwoods.

MANAGEMENT PRESCRIPTION:

FORESTRY:

Harvest merchantable low quality hardwoods as cordwood in combination with harvesting in adjacent stands.

WILDLIFE:

Reserve cavity trees and snags where they are not a hazard along trails. Reserve cavity trees if harvesting timber.

RECREATION:

Coordinate trail and parking locations not to conflict with landing and skid road locations. When harvesting timber, leave visual buffers and areas of unique aesthetic value as appropriate. Consider additional clearing for views

TABLE II STAND STOCKING AND VOLUME BY TIMBER TYPE

MAYFLOWER HILL TOWN FOREST

Owner: **Town of Milford** **TIMBER TYPE: MH 2,1; WP 2,1** **ACRES +/-:** **17**

Lot: **Milford, Tax Map 8 Lot 92** **Plots:** **8**

	SAWTIMBER 12" - 14" DBH			SAWTIMBER 16" - 20" DBH			SAWTIMBER 22"+ DBH			CORDWOOD AND PULP			TOTAL PER ACRE					STAND TOTAL		
SPECIES	TREES ACRE	AVG. HGT.	BF ACRE	TREES ACRE	AVG. HGT.	BF ACRE	TREES ACRE	AVG. HGT.	BF ACRE	AVG. DBH	TREES ACRE	AVG. HGT.	BASAL AREA	AVG. DIA.	TREES ACRE	BF ACRE	CORDS ACRE	# TREES	BF	CORDS
WHITE PINE	3.8	1.5	359	5.0	2.1	1,000	2.5	2.3	1,003	8.5	21.3	1.5	22.7	11.3	32.5	2,361	3.51	553	40,141	60
HEMLOCK										9.0	2.5	1.0	1.1	9.0	2.5	0	0.11	43	0	2
TOTAL SOFTWOOD	3.8	1.5	359	5.0	2.1	1,000	2.5	2.3	1,003	8.5	23.8	1.5	23.8	11.1	35.0	2,361	3.62	595	40,141	62
RED OAK	6.3	1.0	378	1.3	1.5	179				9.0	52.5	1.1	29.5	9.5	60.0	556	3.72	1,020	9,456	63
CHESTNUT OAK	2.5	1.0	140							9.7	28.8	1.2	16.5	9.8	31.3	140	2.34	531	2,380	40
BEECH																				
WHITE OAK										6.8	6.3	1.0	1.6	6.8	6.3	0	0.19	106	0	3
RED MAPLE																				
BLACK BIRCH																				
TOTAL HARDWOOD	8.8	1.0	518	1.3	1.5	179				9.1	87.5	1.1	47.6	9.4	97.5	696	6.26	1,658	11,836	106
TOTAL SAWTIMBER	12.5	1.2	876	6.3	2.0	1,179	2.5	2.3	1,003	8.9	111.3	1.2	71.4	9.9	132.5	3,058	9.88	2,253	51,978	168

BF = Board feet. DBH = Diameter breast high (4.5'). BASAL AREA = Square feet of stem per acre.

STAND DESCRIPTION

TIMBER TYPE: WP 1, 2 Acres: 9.5

COMPOSITION AND SIZE CLASS:

White Pine sawtimber and poletimber.

UNDERSTORY VEGETATION AND REGENERATION:

Low stocking of mixed hardwood and white pine.

LOCATION:

On the south part of Mayflower Hill.

STAND HISTORY:

This stand was at one time cultivated for agricultural crops and was probably farmed or grazed until the late 1930's. Some evidence of past forest fire was observed. Timber Stand Improvement was done in 1970's or 80's to girdle the less desirable trees and allow the better straighter trees improved growth. Dead snags have been recently cut.

TIMBER QUALITY:

Mostly good quality white pine with low or moderate to low quality hardwoods.

INSECT AND DISEASE DAMAGE:

Some fire scar damage was observed.

WILDLIFE HABITAT VALUE:

Squirrel and hawk nests were observed.

SOIL TYPE:

CmC – Canton stony fine sandy loam, 8 to 15 % slope.
CmD – Canton stony fine sandy loam, 15 to 25 % slope.
CsC – Chatfield – Hollis complex, 8 to 15 % slope.

Generally sandy or loamy over sandy textures. Moderately well and well drained, but adequate moisture for good tree growth. Hardwood competition is moderate to severe and the successional trend is toward a climax of tolerant hardwoods.

MANAGEMENT PRESCRIPTION:

FORESTRY:

Thin out suppressed and low quality white pines in combination with harvesting in adjacent stands. Reserve immature high quality timber for continued growth.

WILDLIFE:

Reserve cavity and mast producing trees.

RECREATION:

Maintain trails.

TABLE II STAND STOCKING AND VOLUME BY TIMBER TYPE

MAYFLOWER HILL TOWN FOREST

Owner: Town of Milford **TIMBER TYPE: WP 1,2** **ACRES +/-:** 9.5

Lot: Milford, Tax Map 8 Lot 92 **Plots:** 4

	SAWTIMBER 12" - 14" DBH			SAWTIMBER 16" - 20" DBH			SAWTIMBER 22"+ DBH			CORDWOOD AND PULP			TOTAL PER ACRE					STAND TOTAL		
SPECIES	TREES ACRE	AVG. HGT.	BF ACRE	TREES ACRE	AVG. HGT.	BF ACRE	TREES ACRE	AVG. HGT.	BF ACRE	AVG. DBH	TREES ACRE	AVG. HGT.	BASAL AREA	AVG. DIA.	TREES ACRE	BF ACRE	CORDS ACRE	# TREES	BF	CORDS
WHITE PINE	62.5	1.7	6,083	45.0	3.0	12,505	2.5	3.5	1,380	9.5	40.0	1.9	146.2	13.4	150.0	19,968	21.17	1,425	189,691	201
HEMLOCK										8.0	2.5	1.0	0.9	8.0	2.5	0	0.10	24	0	1
TOTAL SOFTWOOD	62.5	1.7	6,083	45.0	3.0	12,505	2.5	3.5	1,380	9.4	42.5	1.8	147.0	13.3	152.5	19,968	21.27	1,449	189,691	202
RED OAK	7.5	1.0	420							10.3	20.0	1.2	17.3	10.7	27.5	420	2.16	261	3,990	20
CHESTNUT OAK										10.0	2.5	1.5	1.4	10.0	2.5	0	0.23	24	0	2
BEECH																				
WHITE OAK										10.0	2.5	1.0	1.4	10.0	2.5	0	0.13	24	0	1
RED MAPLE										8.3	20.0	1.2	7.4	8.3	20.0	0	1.16	190	0	11
BLACK BIRCH																				
TOTAL HARDWOOD	7.5	1.0	420							9.3	45.0	1.2	27.4	9.7	52.5	420	3.67	499	3,990	35
TOTAL SAWTIMBER	70.0	1.7	6,503	45.0	3.0	12,505	2.5	3.5	1,380	9.4	87.5	1.5	174.5	12.4	205.0	20,388	24.94	1,948	193,681	237

BF = Board feet. DBH = Diameter breast high (4.5'). BASAL AREA = Square feet of stem per acre.

STAND DESCRIPTION

TIMBER TYPE: RO 2,1
WP 2,1 9.5 Acres

COMPOSITION AND SIZE CLASS:

Red oak poletimber and sawtimber with white pine poletimber and sawtimber.

UNDERSTORY VEGETATION AND REGENERATION:

White pine, hemlock and mixed hardwood.

LOCATION:

The northeast part of the Patch Hill tract.

STAND HISTORY:

Old pasture land that was allowed to convert to forest. Evidence was observed of damage from forest fire. No evidence of past timber harvesting was observed. No evidence of past quarrying activities was observed on the exposed ledge.

TIMBER QUALITY:

Mostly low quality pine and hardwoods. The low quality is a result of ledge outcrops, shallow ledge, poor quality soils, and past fire damage.

INSECT AND DISEASE DAMAGE:

Evidence of gypsy moth damage and internal decay from past fire damage was observed.

WILDLIFE HABITAT VALUE:

Cavity trees for birds and mammals. Den sites in ledge outcrops for snakes and bats. Potential Timber rattlesnake habitat. Acorn mast.

SOIL TYPE:

CtD – Chatfield – Hollis – Rock outcrop complex, 15 to 35 % slope.
Generally sandy or loamy over sandy textures. Moderately well and well drained, but adequate moisture for good tree growth. Hardwood competition is moderate to severe and the successional trend is toward a climax of tolerant hardwoods.

Most of stand is shallow bedrock and ledge outcrop.

MANAGEMENT PRESCRIPTION:

FORESTRY:

Poor quality shallow soils make this stand less productive for growing timber than other stands on the property. Steep slopes and poor quality timber present difficult timber harvesting challenges. Harvesting mature and non productive trees would allow for regeneration of white pine and other tree species and make this stand more productive than it is currently. Carefully planned harvesting may have additional benefits for wildlife and recreation.

WILDLIFE:

Consider having a herpetologist review this site for potential Northern Rattlesnake habitat. If any timber harvesting is done, reserve good cavity trees, mast trees, and nesting sites.

RECREATION:

If any timber harvesting is done, consider clearing for views.

TABLE II STAND STOCKING AND VOLUME BY TIMBER TYPE

MAYFLOWER HILL TOWN FOREST

Owner: **Town of Milford** **TIMBER TYPE: RO 2,1; WP 2,1** **ACRES +/-:** **9.5**

Lot: **Milford, Tax Map 9 Lot 1** **Number of plots:** **3**

Plot size: **0.10 Acre**

	SAWTIMBER 12" - 14" DBH			SAWTIMBER 16" - 20" DBH			SAWTIMBER 22"+ DBH			CORDWOOD AND PULP			TOTAL PER ACRE					STAND TOTAL		
SPECIES	TREES ACRE	AVG. HGT.	BF ACRE	TREES ACRE	AVG. HGT.	BF ACRE	TREES ACRE	AVG. HGT.	BF ACRE	AVG. DBH	TREES ACRE	AVG. HGT.	BASAL AREA	AVG. DIA.	TREES ACRE	BF ACRE	CORDS ACRE	# TREES	BF	CORDS
WHITE PINE	6.7	1.0	373							8.7	10.0	1.3	9.1	10.0	16.7	373	0.98	158	3,547	9
HEMLOCK																				
TOTAL SOFTWOOD	6.7	1.0	373							8.7	10.0	1.3	9.1	10.0	16.7	373	0.98	158	3,547	9
RED OAK	3.3	1.0	260	3.3	1.0	353				8.6	76.7	1.3	37.8	9.1	83.3	613	5.52	792	5,827	52
CHESTNUT OAK				3.3	1.0	353				9.3	10.0	1.0	8.8	11.0	13.3	353	1.15	127	3,357	11
BEECH																				
WHITE OAK										10.0	3.3	1.5	1.8	10.0	3.3	0	0.30	32	0	3
RED MAPLE																				
BLACK BIRCH																				
TOTAL HARDWOOD	3.3	1.0	260	6.7	1.0	707				8.7	90.0	1.2	48.4	9.4	100.0	967	6.97	950	9,183	66
TOTAL SAWTIMBER	10.0	1.0	633	6.7	1.0	707				8.7	100.0	1.3	57.5	9.5	116.7	1,340	7.95	1,108	12,730	76

BF = Board feet. DBH = Diameter breast high (4.5'). BASAL AREA = Square feet of stem per acre.

STAND DESCRIPTION

TIMBER TYPE: MH 2,3 Acres: 1

COMPOSITION AND SIZE CLASS:
Hardwood poletimber and saplings.

UNDERSTORY VEGETATION AND REGENERATION:
Red Maple, brush, and black ash.

LOCATION:
On the west side of the two small lots east of Patch Hill Lane

STAND HISTORY:
Probably farmed as meadow land through the 1800's. Now flooded.

TIMBER QUALITY:
Low. Little of the timber growing in this stand can be considered merchantable.

INSECT AND DISEASE DAMAGE:
None noted.

WILDLIFE HABITAT VALUE:
Amphibians and associated species.

SOIL TYPE:
PiA – Pipestone loamy sand, 0 to 3 % slope
These soils are poorly drained or flooded.

MANAGEMENT PRESCRIPTION:

FORESTRY:
Little timber is available as cordwood. Make potential wildlife benefits a priority.

WILDLIFE:
Review for wetland and aquatic and wetland species. Consider duck boxes.

RECREATION:
Flooded soils make access for recreation difficult.

STAND DESCRIPTION

TIMBER TYPE: Open Field 0.5 Acres

COMPOSITION AND SIZE CLASS:

Non forest

UNDERSTORY VEGETATION AND REGENERATION:

Grass.

LOCATION:

North east part of tract.

STAND HISTORY:

Cleared for drainage easement.

TIMBER QUALITY:

None.

INSECT AND DISEASE DAMAGE:

None.

WILDLIFE HABITAT VALUE:

Grazing, small mammal cover, hunting for hawks and foxes.

SOIL TYPE:

CmD – Canton stony fine sandy loam, 15 to 25 % slope.

MANAGEMENT PRESCRIPTION:

FORESTRY:

None.

WILDLIFE:

Install bird and bat houses. Continue to mow at least once every three years.

RECREATION:

Maintain trail.

TIMBER SALE RECOMENDATION

The MH 1,2; WP 1; HM 1,2 stands on the west and south sides of Patch Hill and the MH 1,2; WP 1 stands south east and north west sides of Mayflower Hill have not been harvested since the 1960, and may be considered for a harvest.

Before a harvest, access to the sale area on Patch Hill must be found or developed. The road frontage along Patch Hill Lane and Chase Lane does not provide a point of practical access. Combined with steep slopes, shallow soils, low quality timber, and the consideration of wildlife and recreational features may combine to make this harvest undesirable or unfeasible.

A harvest on the south east side of Mayflower Hill may be accessed from the water tower access road. Access to the areas northwest on Mayflower Hill are limited by the abutting development. The impact of any harvesting on recreational use and features may make this harvest undesirable or unfeasible.

The harvest recommendations are based on the management objectives given earlier in this plan. Any harvesting should remove mature, and low quality low value timber which will allow improved growth of high quality valuable immature timber, and create conditions favorable to the regeneration of white pine, red oak, and other valuable commercial species. At the same time, wildlife habitat and the aesthetic quality of recreational areas such as trails, brooks, and vistas should be protected.

Improvement harvesting has multiple goals:

1. Upgrading stand quality by removing diseased, over-topped, and poorly formed stems of all sizes and species.

2. Release of well-formed, high quality stems of valuable species capable of growing rapidly to larger size.

3. Release of advance regeneration of a more desirable quality or species.

4. Creation of openings allowing full sunlight to reach the forest floor so that seeds can germinate, and seedlings and sprouts to grow without being suppressed by the shade of larger trees.

As a harvest is carried out, stems of value to wildlife are reserved and the needs of wildlife, both birds and animals, are carefully considered

The proposed harvesting should remove low quality and damaged white pines, low-valued pole-sized hardwood as cordwood / hardwood pulp, or chips plus high valued species which are reduced in value as a result of poor form or over-crowding. Sawtimber size trees that are of low or decreasing value from rot, branching, or poor form should also be removed. Areas that are opened to sunlight will regenerate naturally, and high quality, high valued trees will benefit from improved growth from additional sunlight and better spacing.

Areas where all trees have been removed allowing full sunlight to reach the soil quickly regenerate from the germination of seeds and the sprouting of hardwoods. This regeneration generally will trend toward a better stocking of white pine and red oak than areas that have been lightly thinned. These areas do not need to be planted as this natural regeneration generally will

out grow any planted trees.

While timber harvesting may have an unwanted visual impact, communication with those impacted by the harvesting and careful logging, appropriate to the site, can minimize negative impact. Also, it must remembered that the visual impact is temporary. Improvement harvesting is extremely important to the long-term health, productivity and quality of the woodland. Proper stewardship requires periodic harvesting to give the best trees improved growing conditions and regenerate new stands of timber providing for an excellent forest resource now and many decades into the future.

A harvest as outlined above and described in the Stand Descriptions can be expected to generate approximately the following volumes and income.

Patch Hill
Estimated Harvest Volume and Value:

Species	Estimated Cut Volume	Value	Total
White Pine	12 MBF*	$170.00	$2,040.00
Red Oak	10 MBF*	$275.00	$2,750.00
TOTAL	22 MBF*		
Cordwood	35 cords	$10.00	$350.00
*MBF = Thousand board feet		Total	$5,140.00

Estimated gross value of timber sale: ~~$8,230.00~~

Mayflower Hill
Estimated Harvest Volume and Value:

Species	Estimated Cut Volume	Value	Total
White Pine	25 MBF*	$170.00	$4,250.00
Hemlock	15 MBF*	$30.00	$450.00
Red Oak	12 MBF*	$150.00	$1,800.00
Hardwood	8 MBF*	$100.00	$800.00
TOTAL	60 MBF*		
Cordwood	90 cords	$10.00	$900.00
Hemlock Pulp	60 tons	$0.50	$30.00
*MBF = Thousand board feet		Total	$8,230.00

Estimated gross value of timber sale: ~~$5,140.00~~

FOREST MANAGEMENT RECOMENDATIONS

1. Blaze and paint boundary lines or otherwise clearly delineate all the boundary lines. Most of the boundaries not bounded by stone wall are not clearly defined on the ground and in some areas near houses and associated yards; the Mayflower Town Forest has been encroached on. All lines will also need to be accurately defined prior to harvesting timber. Clearly defining the boundary lines on the ground would prevent accidental

encroachment by the Town on abutting land, or by the abutting landowners on the Town land. Small signs designating the Mayflower Town Forest boundary near abutting houses and yards could be installed where blazing and painting could be considered unsightly. Proper blazing and painting the boundaries would accurately define the boundary lines now, and make the lines identifiable years into the future. Signs designating the Mayflower Town Forest boundary could also be installed at entrances to the property and around the perimeter, so that the public would know when they are entering the Mayflower Town Forest.

2. Review for expansion of hiking trails and access. Examine possibilities for access on the Patch Hill tract and from Lee An Drive. Access onto the Patch Hill tract is difficult because of steep slopes or wetlands. Examine creating a larger loop trail on the Patch Hill tract extending the trails into other parts of the property. Take into consideration trail location in regards to future timber harvests.

3. Consider having a herpetologist review the rock outcrops on Patch Hill for potential Northern Timber Rattlesnake habitat.

4. Timber Sale. Consider harvesting mature and non productive timber in the MH 1,2; WP 1; HM 1,2 stand on the south and north west sides of Patch Hill; and the MH 1,2; WP1 stands on Mayflower Hill. Harvesting may extend into abutting stands as appropriate. Harvesting would allow for regeneration of white pine and other tree species and make this stand more productive. Take into consideration, unique wildlife habitats, and recreational use. Views could be cleared in combination with this harvest. Access will need to be reviewed to determine where landings for the sale areas could be developed.

Whole tree chipping harvesting may be used to remove most of the tops and limbs and utilize otherwise un-merchantable timber, but would require a larger landing and more room for tractor trailers. Conventional harvesting with chainsaw and cable skidder would require less room to operate but leave un-merchantable portions of the trees where they are cut.

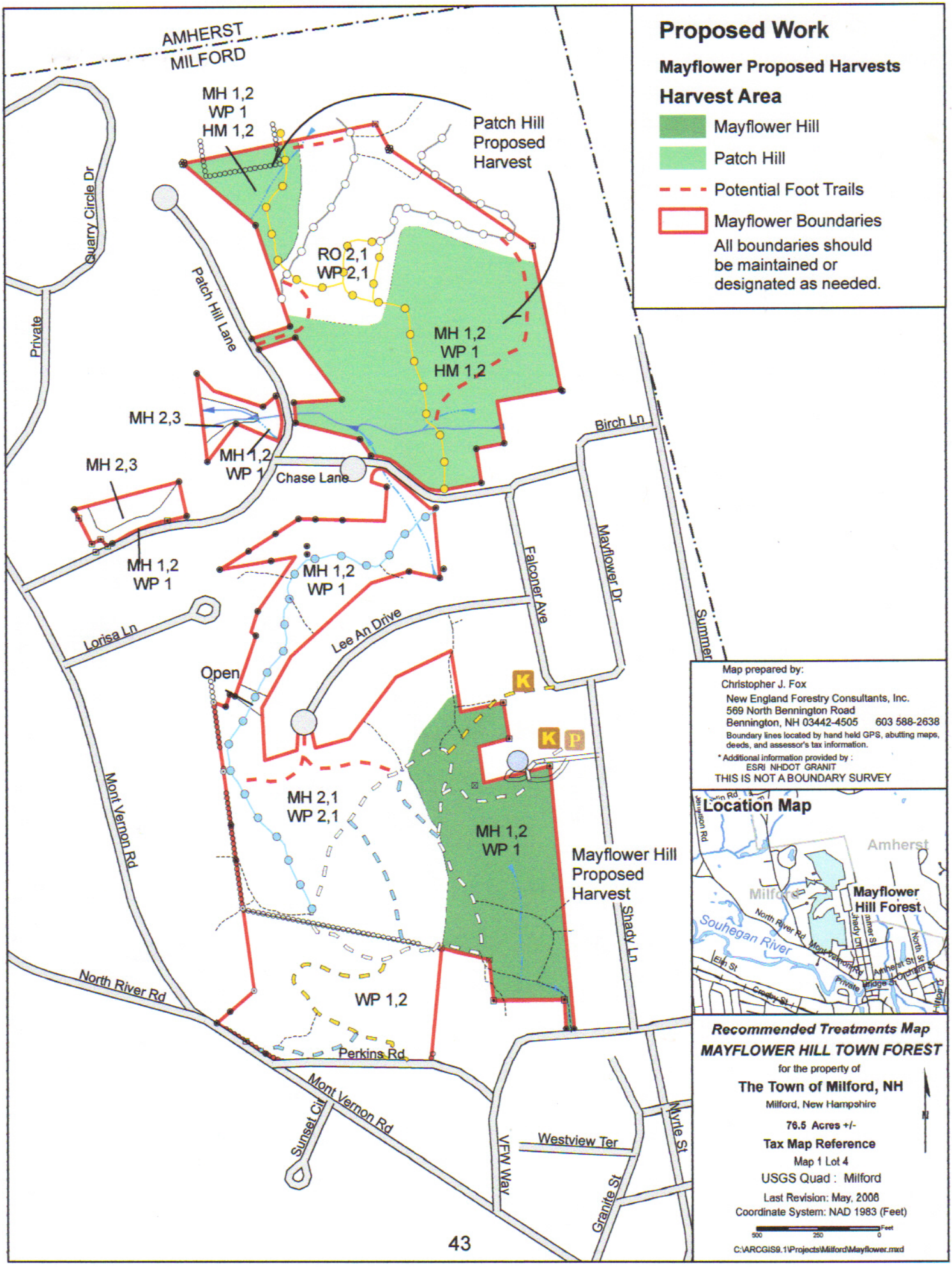
5. Tree Farm certification.

6. Re-evaluate the property in 10 to 15 years to assess the timing of harvesting timber, and to update and revise the Forest Management Plan.

New England Forestry Consultants is ready and able to continue management of this timberland and looks forward to implementing these recommendations.

CONCLUSION

Present timber volumes and stand conditions, productive soils, and varied vegetation; wildlife and recreational use and potential, all combine to produce a property with excellent management potential for timber, recreation, and wildlife into the future. By following the recommendations as outlined, this plan will meet the owner's objectives and enhance the open space values of the property.


AMHERST
MILFORD
Proposed Work
Mayflower Proposed Harvests
Harvest Area
Mayflower Hill
Patch Hill
Potential Foot Trails
Mayflower Boundaries
All boundaries should be maintained or designated as needed.
MH 1,2
WP 1
HM 1,2
Patch Hill
Proposed
Harvest
RO 2,1
WP 2,1
MH 1,2
WP 1
HM 1,2
MH 2,3
MH 1,2
WP 1
MH 2,3
Chase Lane
MH 1,2
WP 1
MH 1,2
WP 1
Open
MH 2,1
WP 2,1
MH 1,2
WP 1
Mayflower Hill
Proposed
Harvest
WP 1,2
Quarry Circle Dr
Private
Patch Hill Lane
Birch Ln
Falconer Ave
Mayflower Dr
Summer
Lorisa Ln
Lee An Drive
Mont Vernon Rd
Shady Ln
North River Rd
Perkins Rd
Mont Vernon Rd
Sunset Cir
VFW Way
Westview Ter
Myrle St
Granite St
K
K
P
Map prepared by:
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New England Forestry Consultants, Inc.
569 North Bennington Road
Bennington, NH 03442-4505 603 588-2638
Boundary lines located by hand held GPS, abutting maps, deeds, and assessor's tax information.
* Additional information provided by :
ESRI NHDOT GRANIT
THIS IS NOT A BOUNDARY SURVEY
Location Map
Amherst
Milford
Mayflower
Hill Forest
Souhegan River
North River Rd
Mont Vernon Rd
Elm St
Recommended Treatments Map
MAYFLOWER HILL TOWN FOREST
for the property of
The Town of Milford, NH
Milford, New Hampshire
76.5 Acres +/-
Tax Map Reference
Map 1 Lot 4
USGS Quad : Milford
Last Revision: May, 2008
Coordinate System: NAD 1983 (Feet)
500 250 0 Feet
C:\ARCGIS9.1\Projects\Milford\Mayflower.mxd