Woodland Management Services
Green Certified Resource Managers

MID-MAINE FORESTRY

Barbara E. Brusila • Mitchell W. Kihn
Licensed Professional Foresters

1320 Western Road • Warren, Maine 04864
(207) 273-4046
email: mid-maine_forestry@juno.com

Town of Topsham
100 Main Street
Topsham, ME 04086

October 28, 2011

Dear Town of Topsham,

We are proud to let you know that we have been certified through the Forest Stewardship Council (FSC) as a Forest Resource Manager since March 1998. This forest certification program is an independent third-party validation of the sustainable management we conduct for landowners such as you. It was developed in response to growing concern about the depletion of the world's forest resources. Certification is intended to encourage the best possible forest management and to identify in the marketplace products that are derived from sustainably-managed forests.

FSC is the internationally recognized "certifier of certifiers." We chose to work with Scientific Certification Systems (SCS), of Emeryville, California, one of the few organizations in the US that works to the standards of the FSC. SCS's program includes consulting foresters working with small woodland owners such as you.

Although it is common to refer to the forester as being certified, it is actually the *lands*, managed by the forester according to the standards, that are certified as "well-managed forests". The forester, too, can claim to be the producer of certified forests/wood products. Through certification we hope to tap into "green markets", which are somewhat limited now but have, we believe, a promising future for both expanded marketing opportunities and increased stumpage prices.

We are inviting clients like you who we think would share our interest in this long-term program to enroll your land. Becoming certified involves a cost to us; we may ask you to share in part of this cost. What we do need is your permission to include your woodland in our land base of certified forests. A copy of your management plan will be shared with SCS. We will also need your commitment to us for conducting your forest management. If you would like to join our certified land base, please sign the enclosed letter of agreement and return it to us. Please call if you have any questions. Thanks for your attention; we hope to hear from you soon.

Sincerely,

Barrie Brusila

Barrie Brusila

Mitch Kihn

Mitch Kihn

LETTER OF AGREEMENT
between
MID-MAINE FORESTRY
and
the Town of Topsham, Maine

I/We, the Town of Topsham, Maine would like to include my/our woodland in the Forest Stewardship Council (FSC) certified land base managed by Mid-Maine Forestry.

I/We give permission to Mid-Maine Forestry and Scientific Certification Systems, Inc. (SCS) to enter my/our woodland for certification audits. Mid-Maine Forestry is audited yearly, and I understand that my/our land may be included in any audit, which may include evaluation and monitoring.

I/We give permission to Mid-Maine Forestry to share our forest management plan with SCS.

I/We acknowledge that certification of my/our woodland is contingent upon management being conducted by Mid-Maine Forestry.

I/We understand that information about our property may be included in an audit report. No identifying information will be given in the public summary, although such information may appear in the audit itself.

We (Mid-Maine Forestry) will upon request provide a copy of the applicable FSC Standard (currently FSC-STD-30-005 (V1-0)). It is also available online at:
http://www.fscus.org/standards_criteria/forest_management.php

We (MMF) may charge the Landowner for being included in our certified land base during years of active timber harvesting.

Upon request, we will answer questions and provide additional information to the Landowner about Mid-Maine Forestry's certification.

Landowner	Date
Barrie Busila	10-31-11
Mid-Maine Forestry	Date

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FOREST MANAGEMENT PLAN

Transfer Station Woodlot
Map R08 Lot 050
Sagadahoc County

Town of Topsham
100 Main Street
Topsham, Maine 04086

Prepared by:

Barbara Brusila
LPF #590

October 28, 2011

This plan meets standards for the Maine Forest Service's Project Canopy cost-share program.

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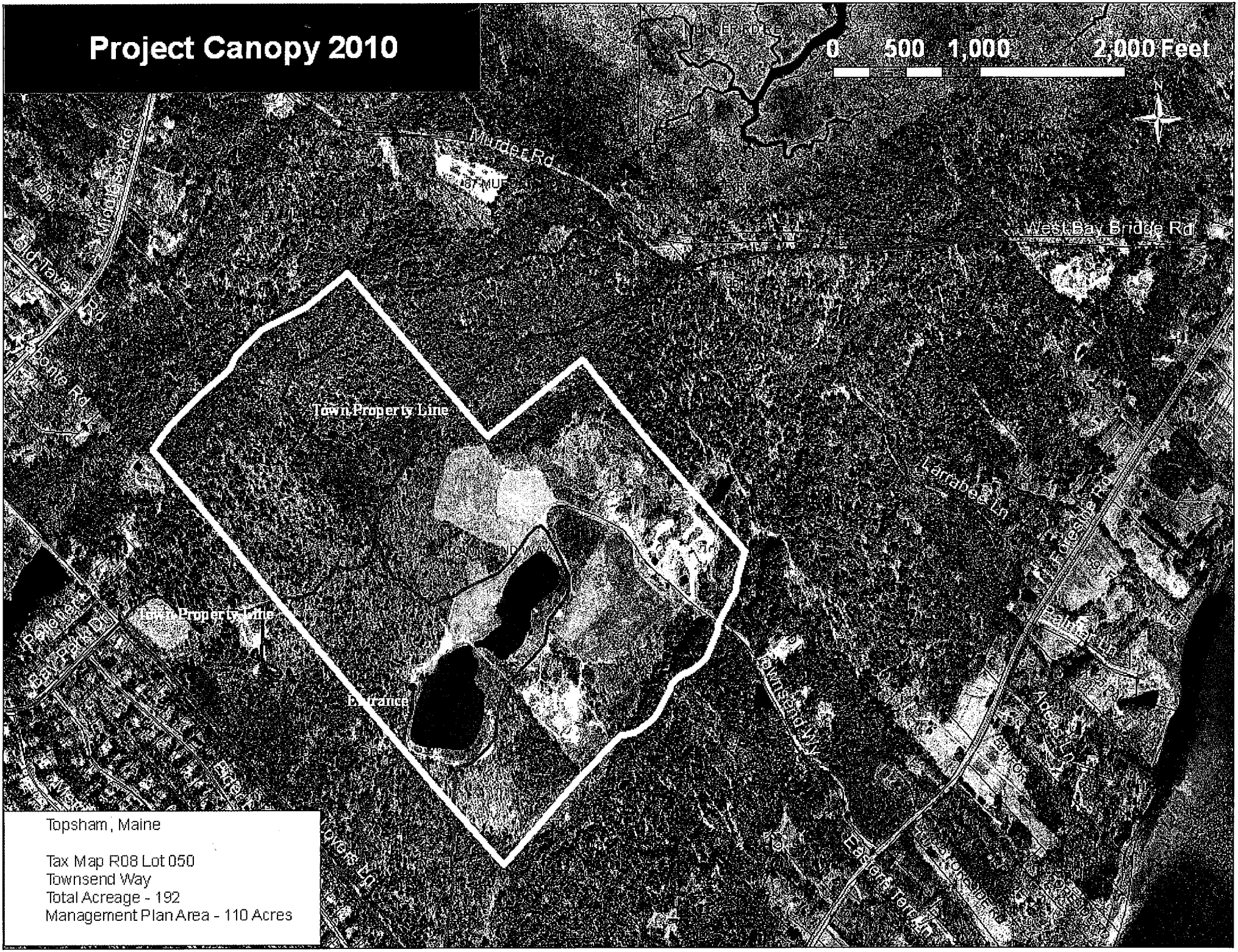

Project Canopy 2010
0 500 1,000 2,000 Feet
Murder Rd
West Bay Bridge Rd
Town Property Line
Town Property Line
Entrance
Topsham, Maine
Tax Map R08 Lot 050
Townsend Way
Total Acreage - 192
Management Plan Area - 110 Acres

MANAGEMENT OBJECTIVES

Maintaining/improving wildlife habitat and providing recreation opportunities are the top priorities for this property. Soil and water resources should be protected with any activity. Any timber harvesting should improve the quality, species composition, stocking, health, and growth of the remaining forest. Timber production for income is not a priority, but is an accepted activity as long as it complements or does not interfere with the primary objectives. Production of firewood for low-income citizens is a possibility. Large management projects will most likely be done by contractors.

The objectives for this property easily fit into the larger framework of the vision of the Topsham Natural Areas Plan (4/27/10). To quote from that document, "*...Most of the important wildlife habtats, wetlands, water bodies and scenic areas in this part of our town* [rural] *will be protected and access to them, especially our town's many rivers and forests, will be improved. Recreational trail networks will expand and connect town resources and neighborhoods...Also, of high importance will be maintaining the working farms and forests.*"

PROPERTY DESCRIPTION AND LAND USE HISTORY

The transfer station woodland is located around two ponds and the more intensively managed part of the property. It is significant as part of the larger surrounding landscape because of its relatively large size and undeveloped nature in a rapidly developing part of mid-coast Maine. This property is within the Muddy River watershed, a town-identified focus area as well as a statewide focus area that encompasses Merrymeeting Bay.

The Town has owned the land since 1958. Included in the property is a firing range, fields that are mowed, shrub land that provides excellent wildlife habitat, and ponds that are used for fishing, recreation, and wildlife. Much of the property was once agricultural land. Gravel was dug here. Burning and timber harvesting are both part of the property's history. It includes 114 wooded acres (the focus of this plan), along with a firing range (6 acres), two ponds (10 acres), wetland (2 acres), 3 mowed areas (a-b-c on the property map, 24 acres), 2 shrub growth areas (d-e on the property map, 20 acres), and the building area (8 acres), for a total of 184 acres.

Although many human-induced changes have occurred in the transfer station portion of the property, the forested part of the property (the focus of this plan) has not significantly changed over recent years.

TOPOGRAPHY AND ACCESSIBILITY

Highest elevation on the property is about 80', near the south corner of the property. Most of the property is extremely flat. An intermittent stream (tributary of the Muddy River)

forms the northwest property boundary. Another small intermittent stream flows around the northern field and through stand 4c (refer to property map.) A third intermittent stream forms part of the southeast property boundary. Two ponds (totaling about 10 acres) provide wildlife habitat, fishing and swimming opportunities, and aesthetic pleasure.

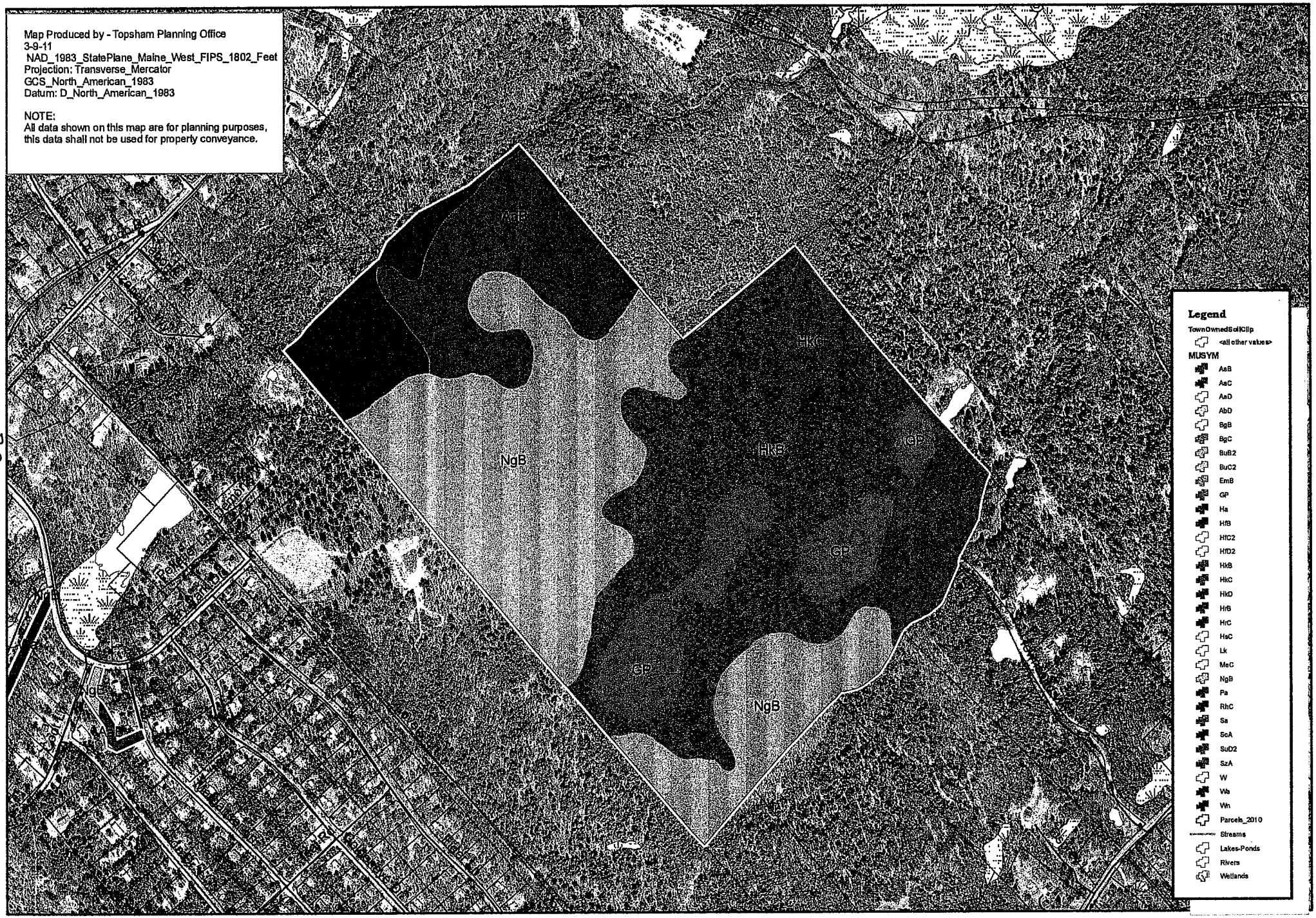
A network of roads, easily accessible by trucks and cars, exists between the transfer station and the ponds. When any harvesting is done, a wood yard could be established near one of these roads. Alternately, it would not be difficult to establish a wood yard within stand 3 (the largest and most distant stand) when harvesting there. Some woods roads/trails already exist (refer to property map.) Skid trails used for timber harvesting could be used as recreation trails after harvesting is complete.

northwest property boundary; unnamed tributary of Muddy River

SOILS

Please refer to the soils map on page 3a, on which the soil types of the Town's property are delineated. The letter codes pertain to the particular soil types, as described below. Four soil types appear on the property. They are all relatively acid and low in fertility. Soils information is from *Soil Survey of Sagadahoc County, Maine* (USDA, NRCS)

1) Adams loamy sand (AaB): This soil is well to excessively well drained, with 0-8% slopes. Erosion hazard, equipment limitations, and windthrow hazard are only slight. Seedling mortality can be significant. White and red pine grow well on this soil.


Map Produced by - Topsham Planning Office
3-9-11
NAD_1983_StatePlane_Maine_West_FIPS_1802_Feet
Projection: Transverse_Mercator
GCS_North_American_1983
Datum: D_North_American_1983
NOTE:
All data shown on this map are for planning purposes, this data shall not be used for property conveyance.
HkC
NgB
HkB
GP
NgB
GP
NgB
Legend
TownOwnedSoilClip
<all other values>
MUSYM
AaB
AaC
AaD
AbD
BgB
BgC
BuB2
BuC2
EmB
GP
Ha
HfB
HfC2
HfD2
HkB
HkC
HkD
HrB
HrC
HsC
Lk
MeC
NgB
Pa
RhC
Sa
ScA
SuD2
SzA
W
Wa
Wn
Parcels_2010
Streams
Lakes-Ponds
Rivers
Wetlands
Map R08-050 - Topsham Transfer Station - Soils
0
500
1,000
2,000
3,000
4,000
Feet

2) Hinckley gravelly sandy loam (HkB 0-8% slopes; HkC 8-15% slopes): This soil is deep, excessively well drained, and gravelly. Erosion hazard, equipment limitations, and windthrow hazard are only slight. Seedling mortality can be significant. White and red pine grow well on this soil.

3) Ninigret fine sandy loam (NgB): This soil is deep, moderately well drained, nearly level or gently sloping with 0-8% slopes. Erosion hazard, equipment limitations, seedling mortality, and windthrow hazard are slight. This soil is good for white pine, spruce, fir, and northern hardwoods.

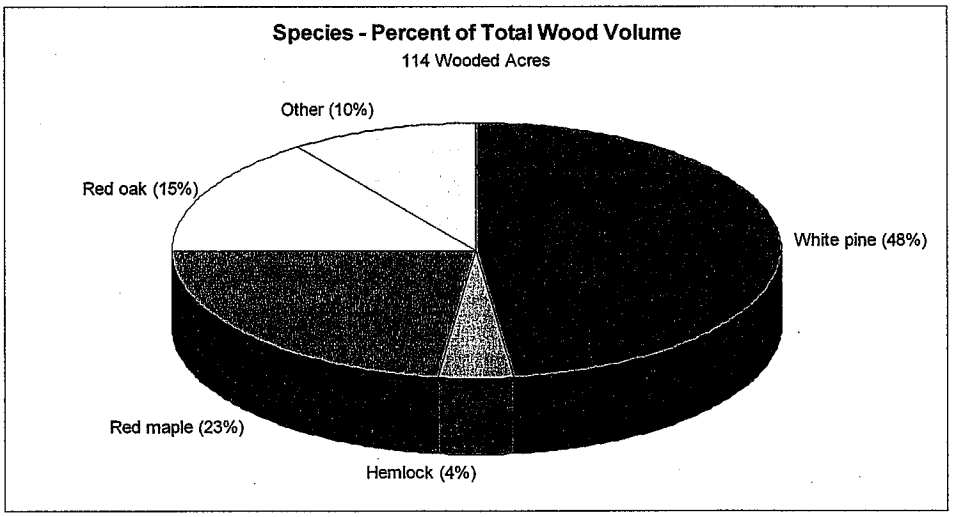
4) Walpole fine sandy loam (Wa): This soil is deep, poorly drained, and level or nearly level, with 0-8% slopes. Erosion hazard, equipment limitations, seedling mortality, and windthrow hazards are severe.

BOUNDARIES

The property has not been surveyed. The northwest line of stand 4c has been painted. Sections of the northeast line (behind the active transfer station area) are marked by an old fence. A stream marks the northwest boundary and part of the southeast boundary. Other line sections are unclear. The property should be surveyed. Although this is expensive, it is an investment in the property that would enable the town to fully manage and utilize its land. After surveying, the lines should be blazed and painted to preserve current boundary evidence and to help protect against timber trespass. Property lines should be inspected yearly, and reblazed and repainted every ten years.

TIMBER RESOURCE

For purposes of accurately describing the forest and setting management priorities, different forest types and stands were identified. These are described in the Glossary and map legend. A timber inventory was conducted in May-July 2011. Inventory data was taken at 57 variable radius (15 BAF prism) plots on cruise lines running N40W (true bearing), parallel to the long boundary line. Data was processed using the INVENT Forest Inventory Program from the University of New Hampshire. Overall volume estimate is accurate within ±9% nine times out of ten. Error is greater for individual species, products, and values.



In the inventory, 48% of the overall volume is white pine, followed by red maple (23%), red oak (15%), hemlock (4%), and several other species, each with 3% or less of the total. Fifteen percent of the overall volume is sawtimber quality. This relatively low percentage could be increased in the long term by: 1) allowing the relatively young forest to grow and mature; 2) conducting careful selection harvests.

Of the several types of timber harvesting systems that are available now, this author recommends a **cut-to-length harvesting system** on this woodlot. It generally involves two machines in the woods. One machine harvests the trees and cuts them into appropriate lengths for sale, leaving the tree tops and branches low to the ground in the woods, and one machine picks up the wood products, puts them on a trailer, and carries (not drags) them out of the woods. This type of machinery is well-suited to long skid distances and smaller diameter trees, both of which are common on this property. **Whole tree chipping** operations leave a "clean, vacuumed" appearance of the woods, since most of the tops and limbs are removed rather than left on the ground. Although this type of harvest is aesthetically pleasing to many people, it is not recommended on this lot. First, most of the soils are low in fertility, and removal of large amounts of biomass rob the soil of potential nutrients. Second, many types of wildlife utilize slash (tops and limbs, and unmerchantable wood) and the vertical diversity (trees of different heights, shrub layer, etc.) which is generally decreased following a whole tree chipping operation.

Horses and/or small equipment may be suitable for areas near roads. However, loggers using these systems generally do not want long skid distances and they do want a fairly high proportion of sawlog-quality trees to cut, since production (and income) with these small-scale operations is less than it is with larger operations. **Skidders** are a common type of machine used for harvesting wood, and they may be suitable for parts of this woodlot. However, the maximum effective skid distance is shorter than that of a cut-to-length system, and they generally require a higher percentage of sawtimber volume than a cut-to-length system, in order to make a profit for the landowner and logger. Perhaps even more important than the type of harvest system is the skill and attitude of the logger, and the choice of correct season for harvesting (avoiding operation on wet ground, and the subsequent soil damage.)

Overall, the woodlot has excellent potential for long term production of quality wood products (sawlogs, boltwood, etc.) while maintaining a healthy forest, an aesthetic appearance, and providing recreation opportunities.

INSECT, DISEASE AND WEATHER INFLUENCES

Both historic and current evidence of pine mortality due to the white pine blister rust is evident. This exotic disease spends part of its life cycle on currant plants (*Ribes* sp.) and enters the pine through live branches. Once it reaches the tree trunk, it effectively girdles its growth and eventually kills it. Control of this disease is difficult, since the rust spores can travel long distances with the wind. Infected trees should be harvested, within constraints imposed by harvesting logistics.

The effects of the white pine weevil are evident in the crooked, multi-top form of some of the larger trees which were more open grown earlier in their lives. This insect will kill the top leader of the tree at a young age, whereupon one or more of the side branches becomes a new leader(s). This may happen repeatedly on a given tree, causing a crooked and multi-stem top. Although these trees, when larger, have value as a seed source and as "character trees", their value for timber is quite low. Regenerating pine in areas of partial shade can help minimize future damage by this insect.

Hardwoods that are of poor quality often contain any one of many fungal infections that slowly rot the trees' wood. This is sometimes caused by overcrowding, which limits tree growth and vigor and makes them more susceptible to fungal infection. None, however, is significant; they are a normal component of the forest ecosystem.

FOREST HEALTH

The following essay is intended to provide food for thought on the subject.

"Forest health" is an often used, and often abused and misunderstood concept. In terms of forest management, forest health is often defined as growing trees that are vigorous, free of insects and diseases, of good for, of desirable (a.k.a. commercially valuable) species, and at a spacing in the forest that allows them to grow as quickly as possible without compromising timber quality. This definition frames health in terms of human (economic) values for wood products. Forest health can also be defined on an ecological basis. Dead, diseased, old, and slow-growing trees of all species naturally occurring on the site are part of a healthy forest from a biodiversity perspective.

It's important to remember and acknowledge that we are most often discussing forest health in terms of human values. The forest doesn't care if a large veneer quality tree dies, rots, or burns. We humans often do. When viewed through a set of ecological values, the

number of reasons to justify timber harvesting decrease noticeably. They might include:

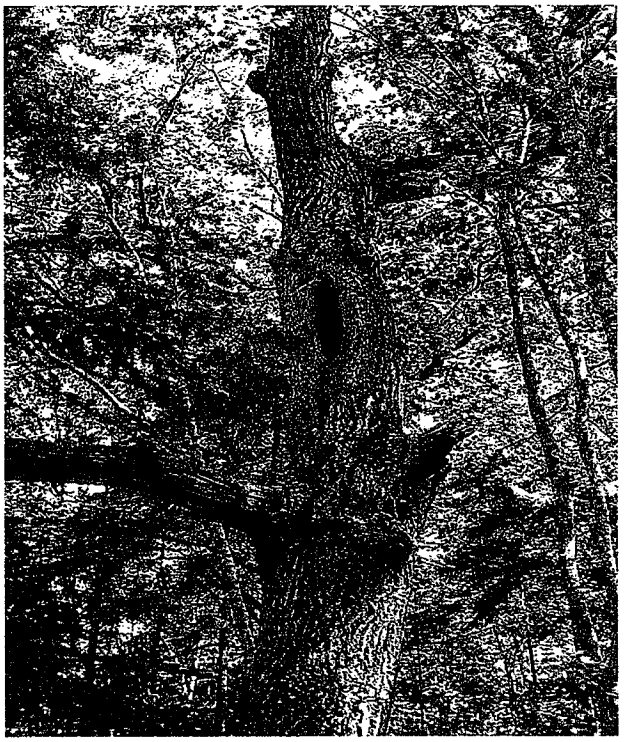
1) Infestation of an exotic, non-native insect or disease whose spread could be prevented or significantly reduced by harvesting.
2) Improving wildlife habitat or maintaining habitat for species that are rare or declining.
3) Significant mortality or blowdown resulting from exotic, non-native causes.
4) Applying the principles of restoration forestry, as we are beginning to understand them. This might include, for example, addressing years of build-up of fuels due to past human interference with natural fire cycles. It might also include attempting to increase species diversity.

Silviculture is a practice by which we respectfully remove products from the forest for human use, employing methods that we believe most closely imitate and least impact the "natural" processes occurring there. It's important to acknowledge the distinction between our human and ecological definitions of forest health, and not to use the former to justify creating forests of diminished ecological value.

WILDLIFE

The property provides diverse habitat types for a variety of wildlife species. The most important habitat element is the ponds. They are 15-20' deep, spring-fed, and stocked with bass. Other habitats present include the field/forest edge, wetlands, intermittent streams, shrubby and sprout growth, large den (live hollow) trees, and snags (standing dead) trees. Many animals feed on the nuts and seeds (hard mast) provided by the relatively abundant oaks and other species. Deer, coyote, and a variety of song birds and waterfowl use the property. Evidence of past beaver activity was seen in stand 7, near the small pond formed in the stream.

During any cutting, certain trees should be retained to benefit wildlife, even though they may not have sawtimber value. These include den trees, snags, and mast producers. Snags should not be cut unless they pose a safety hazard during logging. Recommendations vary as to how many trees per acre should be left. According to *Biodiversity in the Forests of Maine: Guidelines for Land Management*, recommended practices include retaining a minimum of four wildlife (den or snag) trees per acre, with one exceeding 24" DBH and three exceeding 14" DBH. Leaving downed woody material on site is important as well. Wildlife trees do not have to be evenly distributed on the property. They may be clumped into areas such as along the ponds or field edges. In addition to the existing wildlife trees, potential future ones should be identified and allowed to grow old and die naturally.



cavity in oak tree

Four deer stands were noted on the property. Two are in stand 5, where oak is abundant. One was seen in near the corner of stand 3, where stands 1 and 2 abut. A fourth one is located along one of the trails in stand 3. The owner(s) of these stands are by law required to put their names & addresses on the stands, but this information was not evident.

Any recommended cutting should avoid sensitive habitats and be timed to minimize disruption of important nesting and young rearing seasons in spring and early summer. Harvesting can help maintain and increase age and structural diversity (both horizontal and vertical) within the forest ecosystem, which will in turn create more varied habitats.

No vernal pools were noted during the field work for this plan, although one or more may exist. Vernal pools are depressions that fill with water from spring runoff. The absence of fish in these pools makes them ideal breeding and feeding areas for local amphibian populations. Any management activity which impacts the pool directly or the water regime in a vernal pool indirectly may affect the survival of these amphibians. The best time to look for vernal pools is in the spring. They are usually found in shallow depressions in the ground, at the bottom ridges, etc. During harvesting, these pools should be identified and should not be driven through nor should tops of harvested trees be left in them. One small winterberry wetland is located within stand 3. It should be left alone for the wildlife habitat it provides.

The Department of Inland Fisheries and Wildlife has identified no significant wildlife habitats on the property. The property is within the Kennebec Estuary Focus area of the Beginning with Habitat program of the Maine Natural Areas Program. No evidence of threatened or endangered plants or animals was noted during the field work for this plan. MNAP has not identified any rare, threatened, or endangered plants on the property, or any rare or exemplary natural communities. Should such plants or animals be discovered, appropriate measures will be adopted to ensure protection of their habitat.

RECREATION, AESTHETICS, AND CULTURAL FEATURES

Hunting, fishing, swimming, hiking, horseback riding, cross-country skiing, snowmobiling, and four-wheeling are some of the popular recreational activities enjoyed by the public. The network of woods trails is actively used. Since the land is so flat and the soils so well drained, erosion from four wheelers has not been a problem. Access through the main gate is limited and monitored by the transfer station manager, but access is relatively unrestricted from adjoining properties. Simple signs could be established at the main entry points of the woodlot, stating "Entering Topsham Town Forest", so people are aware of who owns the land. These signs could be placed high enough to hopefully discourage people from vandalizing and/or stealing them.

Other interesting features of the property include a shooting range managed by the local police. This is a restricted area. Additional signs should be posted to this effect, along the back edges of the range, where signage is sparse. A tree nursery has been established on the west side of the road leading to the ponds.

The Maine Historic Preservation Commission has identified no prehistoric or historic archaeological sites, historic buildings or structures on the property. However, much of the property is identified as being "archaeologically sensitive;" please refer to the MHPC map in Appendix C. No formal botanical inventory was conducted, but the shrubs noted during field work for the plan were raspberry, blackberry, meadowsweet, high and low bush blueberry, beaked hazelnut, winterberry, sweetfern, and alder. Ground plants noted were dewberry, Canada mayflower, bracken fern, sensitive fern, lady slipper, wintergreen, gold thread, bunchberry, skunk cabbage, and sarsaparilla.

stump shows burn history; lady slipper in foreground

INVASIVE PLANTS

Unfortunately, several invasive plant species were noted on the property. These non-native plants, if left unchecked, will spread quickly. They take over habitat from native plants. Although they do provide wildlife food, the fruits are not necessarily as nutritious as native fruits. Also, when wildlife eat these non-native fruits, they are spreading those seeds rather than those of native plants. Mechanical or chemical control is possible. Mechanical control is possible using a tool called a weed wrench. The roots of these plants need to be pulled up, since they will quickly grow back if they are simply cut. Mechanical control works best where plants are scattered or not too numerous. For heavy infestations, chemical controls, used by a licensed pesticide applicator, may be the most effective and least costly method. Invasive plants do not respect property boundaries, so cooperation with neighbors to eradicate plants on their land is necessary for long term success of any eradication project.

Autumn olive grows along the edges of stand 4b, near the road. At one of the trail junctions in stand 3, a load of fill was dumped. Japanese knotweed, bittersweet, honeysuckle, and staghorn sumac now grow there. The Japanese knotweed is spreading along the south side of one of the trails. Along with the above species, multiflora rose, *Euonymous* (burning bush), and barberry also grow along various field edges and shrub areas. Honeysuckle and Japanese knotweed grow at the west end of stand 4c. Japanese knotweed, barberry, and bittersweet were all noted in stand 7. Honeysuckle grows in the shrub areas. Japanese knotweed grows on the west edge of the shrub area, near stand 4c.

LEGAL RESTRICTIONS

Before any commercial harvesting occurs, the landowners (or their agent) must file a harvest notification form with the Maine Forest Service. Year-end reports of harvested volumes and stumpage prices are a part of this requirement.

For areas greater than 10 acres, all boundary lines within 200' of cutting must be clearly marked. It is highly recommended that these lines be marked even if the harvest area is less than 10 acres. During harvesting operations of any size all slash must be removed at least 25' from adjoining property lines and 50' from public roads. Land within 75' of the intermittent stream at the northwest end of the property is mapped by the town as a stream protection district. Harvesting there is limited to no more than 40% of the standing volume in any 10 year period. Most of the property is in an aquifer protection district.

During a harvest operation, procedures outlined in the Maine Forest Service's *Best Management Practices for Forestry: Protecting Maine's Water Quality* (2004) should be followed regarding working in and around wetlands and streams. By doing so will help the landowner comply with the Protection and Improvement of Waters Law (sections 413 & 417). Specifically, this law prohibits one from causing erosion of soil into water bodies and disposing of slash in streams, lakes and tidal waters. In the case of road construction, compliance of the Erosion and Sedimentation Control Law is necessary, which regulates

activities involving filling, displacing or exposing soil. Specifically, erosion control practices (such as hay bales, sift fence and hay mulch) are properly installed and maintained whenever filling or soil disturbance occurs.

Maine's Natural Resources Protection Act (NRPA) regulates work in and adjacent (within 75') to lakes, streams, freshwater wetlands and tidal wetlands (as well as elevations greater than 2,700'). Activities regulated include disturbing soil, placing fill and building permanent structures in or adjacent to these areas. A permit is required from the Department of Environmental Protection (DEP) for work such as:

- Road building, excavating, filling, or otherwise disturbing the soil within 75' of lakes, rivers, streams and wetlands,
- Building new bridges, fords, or installing culverts for road or trail crossings
- Building or placing permanent structures in, on, or over lakes, rivers, streams, wetlands or fragile mountain areas, and
- Harvesting operations above 2,700' in elevation

Exempt activities include:

- Temporary structures, such as a road crossing using a temporary bridge, if fill is not used.
- Repair, maintenance, or replacement of an existing culvert, provided any replacement is not more than 25% longer than that being replaced and not longer than 75'. Erosion control must be used and fish passage may not be blocked.
- Forest management, including associated road construction or maintenance, in or adjacent to forested wetlands, as long as it:
  1) meets minimum stocking requirements under the Forest Practices Act;
  2) meets "permit-by-rule" standards for any road crossing of a stream, or for soil disturbance adjacent to great pond, river or stream and DEP is notified prior to starting the activity;
  3) the area is not a forested wetland mapped as a significant wildlife habitat; and
  4) road construction is not used to access development, but is primarily used for forest management activities.

MARKETS

Pulpwood (softwood, hardwood and poplar) would most likely be trucked to one of these mills: NewPage Co. in Rumford, Verso Paper Co. in Jay or Bucksport, Sappi in Hinckley, or Madison Paper in Madison. Firewood could be sold to local dealers or customers, or used by the town for its needy citizens. There are several sawmills in Sagadahoc and the surrounding counties. Depending on the trucker, logs would likely be sold to one of these local mills. Wood markets fluctuate in price, product specifications, and demand. Current market conditions should be assessed as part of any timber harvesting activity.

COMMERCIAL HARVESTS OF WOOD PRODUCTS

Properly done, commercial harvests can be one part of an environmentally sound, multiple-use forest management system. Through cutting, a forester manipulates the vegetative structure within a forest stand to attain the landowner's objectives. Sawtimber can still be grown and harvested while managing wildlife habitat and improving recreational opportunities. Typically, low quality and unhealthy trees and/or mature individuals are chosen for removal. This allows for faster growth to occur in the more valuable, vigorous, immature trees. It also favors the release or establishment of natural regeneration of desired species. The regeneration is part of the property's long-term potential. Thus, proper harvesting not only generates immediate income for the owner, but, over time, can also improve the health and quality and overall value of the timber and wildlife resources of the property.

Commercial harvesting should be conducted on a marked tree or species designation basis (for example, harvest all merchantable fir in a given stand), and under the supervision of a professional forester. This will ensure that the selection of trees for cutting is in the Town's best short- and long-term interest, and leaves a desirable residual stocking of trees. In addition, the forester supervises harvesting operations to ensure proper utilization, minimal felling and skidding damage to residual trees, and to help assure accurate payment for harvested wood products.

Recreational and aesthetic concerns and wildlife needs are given appropriate emphasis during timber marking and while supervising harvesting activities. Yards and skid roads are located to minimize soil erosion and visual impact, as well as to improve interior access. Cutting along existing roads, trails, streams and vistas needs to be especially carefully done to maintain an aesthetically pleasing appearance. Appropriate numbers of wildlife trees and other critical areas should be left to provide both cover and food. Some areas can be left uncut to provide habitat values with minimal human impact.

ESTIMATES OF TIMBER VOLUMES AND VALUE BY SPECIES

Town of Topsham – Transfer station lot

July 28, 2011

Products, Species	Volume[1,2]	Stumpage[3] Rate	Value
	MBF	$ per MBF	
White pine - grade	109	165	17985
White pine - pallet	64	55	3520
Hemlock	2	65	130
Red oak	34	225	7650
White birch	1	100	100
Red maple	2	60	120
Totals:	212 MBF		$29,505
	Cords	$ per cord	
White pine	987	8	$7,896
Hemlock	100	10	1000
Spruce-fir	79	15	1185
Aspen-bigtooth & quakir	98	15	1470
*Hardwood pulp & firewc	1090	14	15260
Totals:	2,354 cords		$26,811

Total Estimated Stumpage Value = $56,316

These numbers are estimates of the total standing volume, **not** the recommended harvest volumes.

[1] Total timber volume estimate is ±9% nine times in ten. Error is greater for individual species or products

[2] Pulpwood volumes include topwood from sawtimber trees.

[3] Stumpage price estimates based on recent local averages, summer 2011.

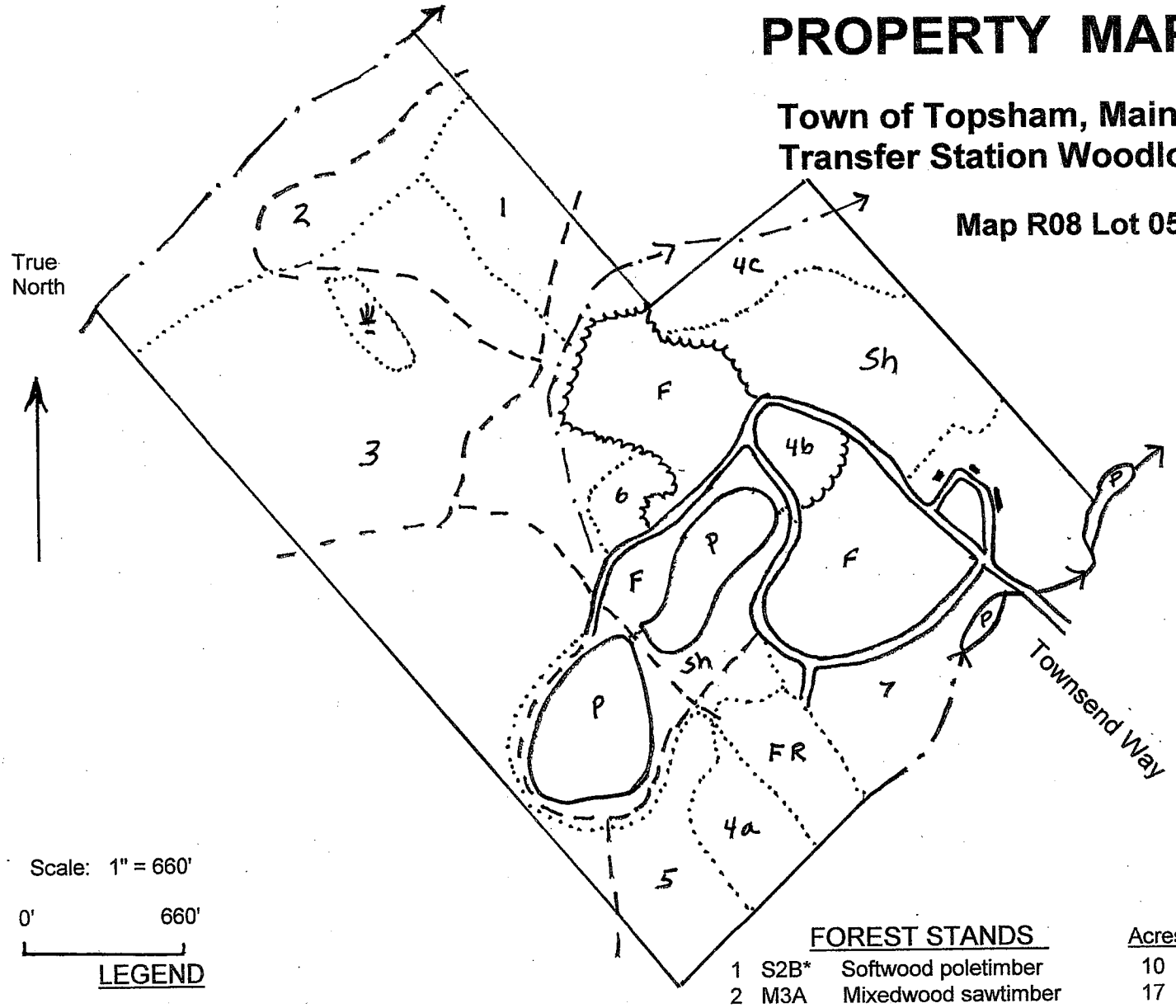
*Species include red maple, white birch, black cherry, yellow birch, gray birch, red oak, and white oak.

Barbara Brusila, LPF # 590

PROPERTY MAP

Town of Topsham, Maine
Transfer Station Woodlot

Map R08 Lot 050



Scale: 1" = 660'

0' 660'

LEGEND

Stand number	2
Stand boundary	.....
Woods trail	— — —
Road	═══
Field edge	~~~
Wetland	⚶
Intermittent stream	~→
Pond	⬭
Building	■

FOREST STANDS			Acres
1	S2B*	Softwood poletimber	10
2	M3A	Mixedwood sawtimber	17
3	M2B	Mixedwood poletimber	56
4	M3A	Mixedwood sawtimber	12
5	H2A	Hardwood poletimber	8
6	H1/2A	Hardwood sapling	3
7	H2A	Hardwood poletimber	8
TOTAL WOODLAND			114 ac.
FR		Firing range	6
Sh		Shrub land	20
F		Fields and building area	32
		Wetland	2
P		Ponds	10
TOTAL PROPERTY			184 ac.

*S=75%+ Softwood; H=75%+ Hardwood; M=Mixedwood
1=0-30' height; 2=30-60'; 3=60'+
A=70-100% crown cover; B=40-70%; C=15-40%

For forest management purposes - **Not a boundary survey**.

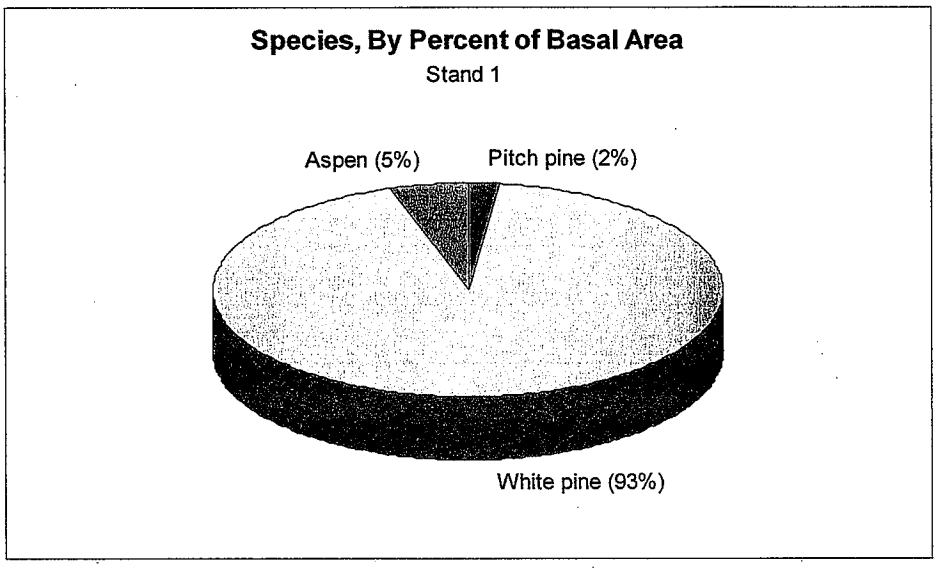
Barbara Brusila, LPF #590
October 28, 2011

STAND DESCRIPTIONS AND RECOMMENDATIONS

Refer to Appendix A for additional stand attributes, including tree diameters, stand basal area, volumes, and a listing of most common tree species.

STAND 1 –SOFTWOOD POLETIMBER 10 acres

This stand is located northwest of the back field, and along one of the back boundary lines. One woods trail passes through it. Because the land is so flat and well-drained, creating additional access trails would be easy. Machinery operation is possible during all but the wettest days of the year. An intermittent stream passes through the southeast end of the stand. The forest is about 40 years old here, having regrown from pasture. Some of the stand, closer to the active transfer station area, burned in the past. Evidence of charcoal was seen in the soil and on some stumps.



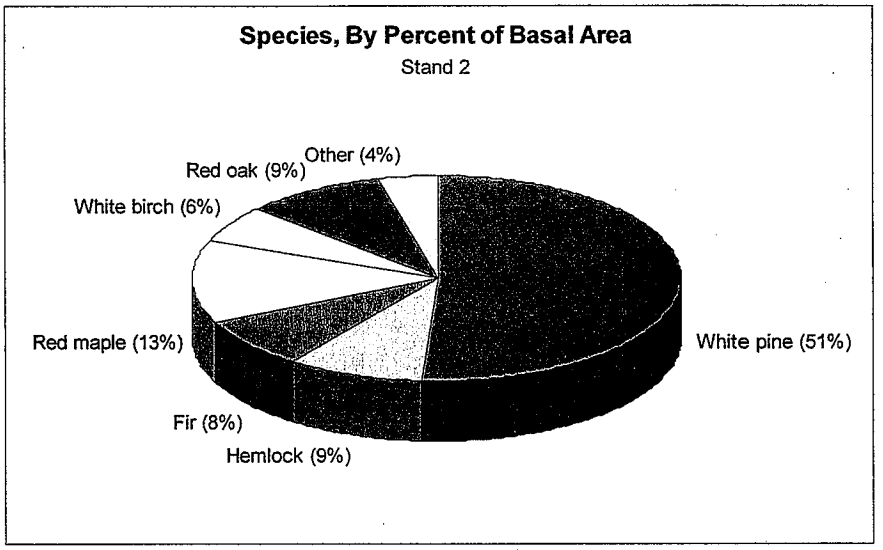
As seen in the above chart, white pine is the most common tree with 93% of the total basal area, with small amounts of poplar and pitch pine. The stand is even-aged, about 40 years old. Tree diameters range from 1-22". Most trees are about 40' tall. Openings exist in the forest canopy. Many of the pine have relatively large branches, because they were open grown earlier in life. Many have crooked trunks, showing evidence of earlier damage by the white pine weevil. Potential growth, under management, is 1.1 cord per acre per year. Most of the sawtimber is pallet (low) grade. Regeneration, although not abundant, includes seedling red maple and a few seedling and sapling white pine.

RECOMMENDATIONS

The long-term goal is to improve the quality, growth, health, and density of the forest. In the short term, a light selection harvest could be conducted here, removing one-fourth to one-third of the lowest quality pine and releasing the straight trees with healthy crowns for further growth. Because of the relatively low volumes, the harvest should be done in conjunction with a harvest in stand 3. The few pitch pine that grow here should be protected for the species diversity they provide.

STAND 2 –MIXEDWOOD POLE/SAWTIMBER 17 acres

This stand is located at the back of the property, and includes the sloping riparian area along an intermittent stream that flows into the Muddy River. It also includes some of the flat upland adjacent to the riparian zone. A few small gullies lead to the stream. Most of the stand is at least 2,000' from a road, creating a long skid distance if any timber harvesting is done here. Any machinery operation should be limited to frozen or very dry ground conditions. Some timber harvesting was done here, at least 40 years ago. The burning that occurred in stands 1 and 3 reached the edges of this stand. The trees are bigger and species composition is more diverse here than in the nearby stands 1 and 3.



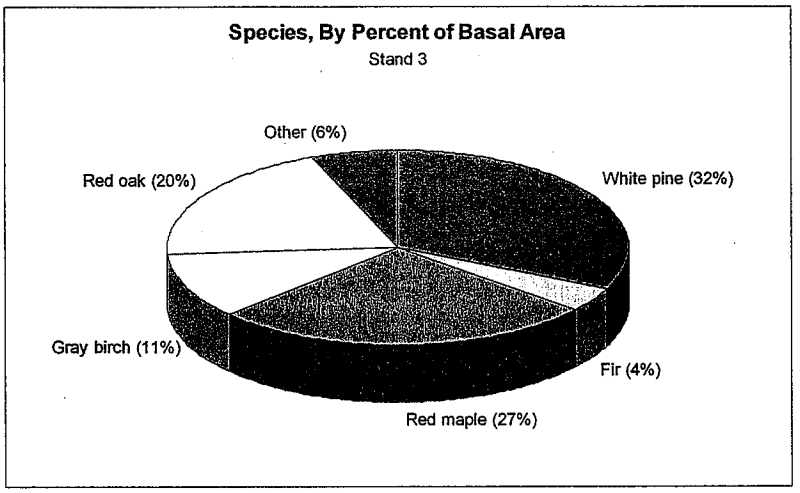
As seen in the above chart, white pine is the most common tree with 51% of the total basal area, followed by red maple (13%), red oak and hemlock (9% each), balsam fir (8%), white birch (6%), and several other species, each with 2% or less of the total. The stand is becoming uneven-aged because of the past harvesting activity. Most trees are 55-65' tall. Due to the dense forest canopy, regeneration is not abundant. It includes seedling and sapling red maple, white pine, balsam fir, red oak, and hemlock. Potential growth, under management, is 0.350 MBF per acre per year.

RECOMMENDATIONS

The long-term goal is to protect the wildlife values (closed canopy, older forest) of the riparian corridor. Thus, although this is one of the more heavily wooded stands on the property, no harvesting is recommended on the slopes to the stream. A marked wood selection harvest could be conducted in the narrow strip of flat upland, in conjunction with a harvest in adjacent stand 3.

STAND 3 –MIXEDWOOD POLETIMBER 56 acres

This stand, the largest one on the property, is located northwest of the ponds. It is accessible via the several woods trails that pass through it. Creating additional trails would be quite easy. In fact, it would not be difficult to establish a wood yard, accessible by logging trucks, somewhere in the center of the stand. This would significantly shorten the skidding distance for any timber harvesting. Operability is very good; the land is grassy, quite flat and the soils are well-drained. One intermittent stream flows through the east end of the stand. One shrub wetland (primarily winterberry holly) is located in the back section. Once pasture, this area was allowed to grow back, has had some partial harvesting about 40 years ago, follwed by a partial burning. In general, the trees become gradually taller towards the back of the stand. Some dumping (including a sofa) has occurred near the west line.



As seen in the above chart, a variety of tree species grows here. White pine is the most common tree with 32% of the total basal area, followed by red maple (27%), red oak (20%), gray birch (11%), balsam fir (4%), and several other species, each with 2% or less of the total. Scattered white grow here. They should be protected and favored because of their relative rarity. The stand is even-aged, an estimated 40-50 years old. It is similar in age to stand 1; the difference is the noticeably higher percentage of white pine in stand 1. Tree height varies from 15-50' tall. Openings exist in the forest canopy.

Quality of the pine is limited by limbiness and some past weevil damage. Gray birch is a pioneer tree species, which means it grows quickly, on open/disturbed sites, and does not live long. Most of the oak trees are relatively short and large-crowned which reduces their value as sawtimber. However, the acorns they produce are a valuable wildife food source. Regeneration is more abundant in openings in the forest canopy, and includes seedling and sapling red oak, red maple, and gray birch. White pine regeneration is present as well, greater abundance would be desirable. Potential growth, under management, is 0.8 cord per acre per year.

RECOMMENDATIONS

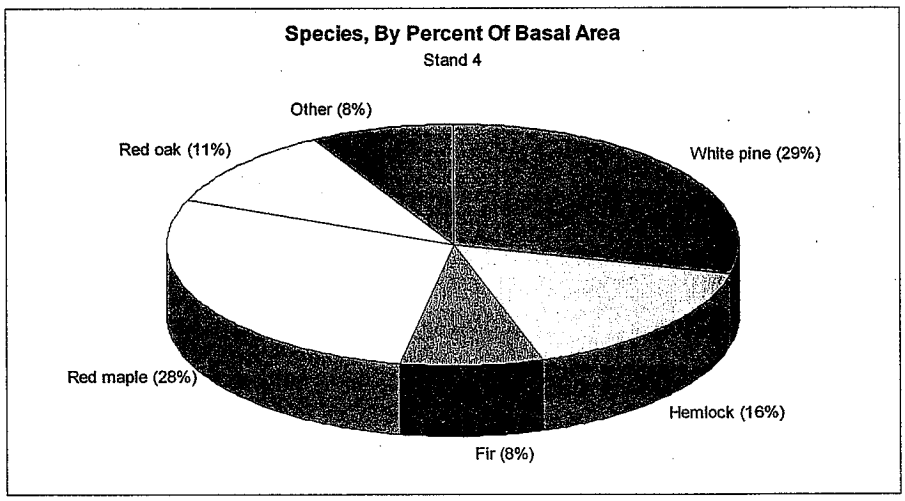
The long term goal is to improve the quality, growth, health, and density of the forest. In the short term, an improvement harvest could be conducted, removing the grey birch, low quality red maple, and badly weeviled pine. Straight white pine, red oak, and white oak

should all be favored for future growth. Because of the relatively low volume/value and small diameters of trees to be harvested, a cut-to-length harvest system would be the most suitable here. Little to no sawtimber should be harvested. Harvest priority is low compared to other stands because of the relatively low volumes/values per acre. Most likely, some areas would be left untouched during a harvest operation.

Alternately, the area can simply be left to grow for another 10 years.

STAND 4 –MIXEDWOOD SAWTIMBER 12 acres

This stand type is located in 3 different areas. One is located southwest of the firing range (4a), one is located within the road loop and north of the field (4b), and one isnorth of the largest shrub area (4c). The trees are generally larger and older (estimated 60+ years) and bigger here compared to most other stands. Stand 4a is accessible from a woods trail to the north, 4b is easily accessible since it is surrounded by a greavel road on 3 sides, and 4c is accessed most easily through the adjacent field or shrub area. The soils in stand 4b are well drained. Land adjacent to the intermittent streams in stands 4a and 4c is wetter; access should be limited to frozen/very dry ground. These areas have seen little harvesting since they regrew from agricultural land, beginning an estimated 60+ years ago.



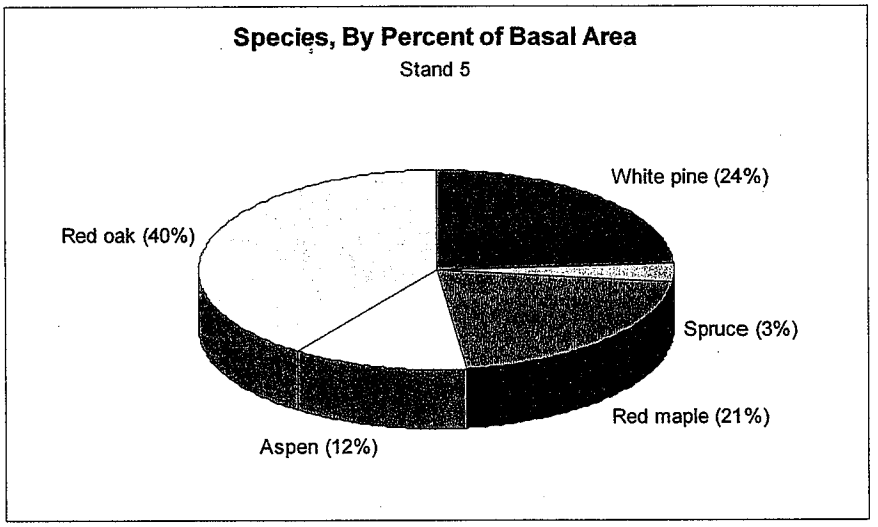
As seen in the above chart, a diversity of species grows here. White pine is the most common tree with 29% of the total basal area, followed by red maple (28%), hemlock (16%), red oak (11%), balsam fir (8%), and several other species, each with 3% or less of the total. The stands are even-aged, an estimated 60+ years old. Few openings exist in the forest canopy. Potential growth, under management, is 0.350 MBF/acre/year. Regeneration, athough not abundant, includes seedling and sapling fir and sapling hemlock.

RECOMMENDATIONS

The long term goal is to improve the quality, growth, health, and density of the forest. In the short term, a marked wood selection harvest could be conducted here. Low quality trees of all species should be cut to favor healthy, well-formed red oak and pine, then red maple and hemlock. Approximately 1/3 of the standing volume should be cut.

STAND 5 –HARDWOOD POLETIMBER 8 acres

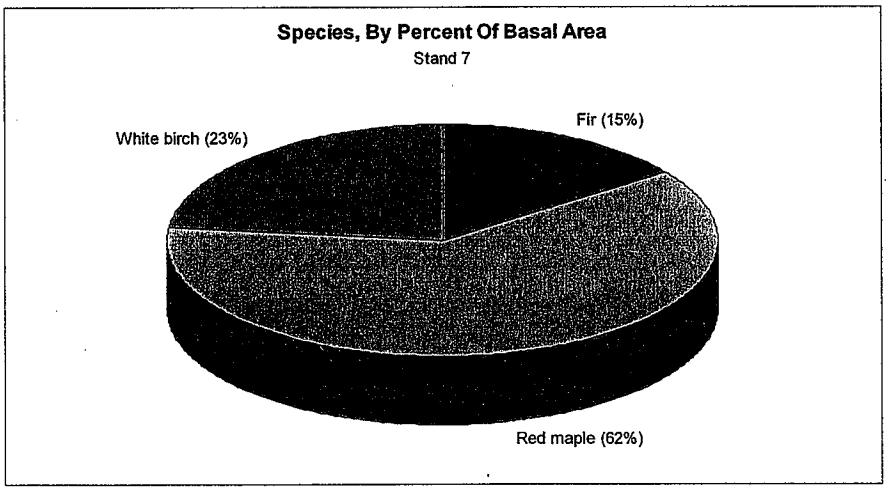
This stand is located at the most southerly corner of the property. It is easily accessible via the existing woods roads. However, the property boundaries are unclear and should be marked before any harvesting is done. Operability is good. The land is flat and the soils are well-drained. The trees are a variety of ages and sizes; the forest is uneven-aged overall. A modest amount of harvesting was done in the past in some areas; other places have had no harvesting since the stand regrew from pasture land. The larger oaks provide an abundance of acorns for wildlife.



As seen in the above chart, red oak is the most common tree with 40% of the total basal area, followed by white pine (24%), red maple (21%), bigtooth and quaking aspen (12%), and red spruce (3%). Most trees are 40-60' tall. Few gaps exist in the forest canopy. Quality of the oak is generally good, although some are limby. The pine are generally crooked due to past weevil damage. Potential growth, under management is 0.5 cord/acre/year. Regeneration includes seedling and sapling white pine and fir, along with sapling red oak and red maple.

RECOMMENDATIONS

The long term goal is to improve the quality, growth, health, and density of the forest. In the short term, a marked wood harvest could be conducted here, removing the aspen and white pine, and favoring the red oak. Logistically, it makes sense for this stand to be harvested in conjunction with the adjacent stand 4a.



As seen in the above chart, red maple is the most common tree with 62% of the total basal area, followed by white birch (23%) and balsam fir (15%). The stand is two-aged, with many trees about 20 years old and a more scattered overstory of trees about 60 years old. Potential growth, under management, is 0.5 cord/acre/year. Regeneration includes seedlings and saplings of the above species. Invasive species in this stand or its edges include Japanese knotweed, bittersweet, and barberry.

RECOMMENDATIONS

The long-term goal is to improve the quality, growth, health, and density of the forest. In the short-term, invasive species control is the top priority. Other than that, the area should simply be allowed to grow.

MOWED AREAS 24 acres

Three mowed areas appear on the property. If possible, mowing should be delayed until after mid-July to allow ground nesting birds to fledge (fly from the nest).

SHRUB AREAS 20 acres

Shrubby/young forest growth is found south and east of the ponds, and northwest of the active transfer station area. A variable mix of gray birch, blackberries, sweetfern, aspen, red maple and young pine grow here. A few red pine and black locust grow on the east side of the north pond. These early succession shrub areas provides habitat for ruffed grouse, chestnut sided warbler, eastern towhee, magnolia warbler, and other species. Maintaining these as early successional areas is important from a wildlife standpoint. In the future (perhaps beyond the 10 year time frame of this plan), trees should be harvested as they grow over 25-30' tall. A higher priority now is to eradicate invasive species, such as honeysuckle.

CONCLUSIONS

This property has excellent short and long-term potential for providing wildlife habitat and recreation opportunities. Timber harvesting can be conducted to complement these goals, while maintaining a healthy, aesthetically pleasing forest ecosystem. This author recommends that the town establish a dedicated Town Forest Account to keep track of income, expenses and grants related to the town forest, if this has not already been done.

SUMMARY OF MANAGEMENT PRIORITIES
2011-22

Year	Stand	Activity	Estimated Income/(cost)
2012	All	Locate (survey if necessary), then blaze and paint boundaries (approx. 1.7 miles)	-($survey??) -($550 if done by Mid-Maine Forestry)
2012	All	Eradicate invasive plants. Monitor yearly & continue eradication as needed	-($??)
2012-22	1	Conduct marked wood selection harvest (estimate 60 cords & 10 MBF)	$1,000
2012-22	2	Conduct marked wood selection harvest (estimate 70 cords & 8 MBF) in the section of stand that is not riparian area	$1,600
2012-22	4	Conduct marked wood selection harvest (estimate 130 cords & 20 MBF)	$2,300
2012-22	5	Conduct marked wood selection harvest (estimate 50 cords) in conjunction with a harvest in nearby stand 4a	$500
2012-22	3	Conduct marked wood selection harvest (estimate 280 cords) (lower priority than other stands)	$3,000
2012-22	All	Clear walking trails as desired	-($ negligible)
2012-22	All	Continue to monitor recreation use and control as necessary. Establish "Entering Topsham Town Forest" signs. Establish clearer signage around firing range	-($??)
2022	All	Update management plan	($??)

GLOSSARY

Basal Area (BA) - a) of a tree: the cross-sectional area of the trunk at 4.5 feet above the ground; b) per acre: the sum of the basal areas of all the trees on an acre; a measure of tree density of a forest stand

Board Foot - a unit for measuring wood volume in a tree, log, or cut lumber. It is the volume of wood in a board 1 foot by 1 foot by 1 inch, equaling 144 cubic inches.

Boltwood - smaller diameter and/or shorter length sawlog grade hardwoods, usually birch or red oak, manufactured into items such as furniture blanks, dowels, etc.

Canopy - the top leafy layer of the forest, formed collectively by tree crowns

Commercial Harvest - a harvest operation that results in net landowner income

Cord - a measure of wood products 4 feet high , 4 feet wide and 8 feet long, equaling 128 cubic feet of wood, bark, and interior spaces

DBH - tree diameter at breast height, measured at 4.5 feet above the ground

Even-aged - a stand of trees of the same age class

Habitat - the type of ecosystem in which a particular wildlife species or group of species is commonly found

Improvement cut - cutting in a stand to improve composition and quality by removing less desirable trees

Maturity, biological - the age range in which abundant seed is produced, typically starting at about 40 years of age

Maturity, financial - condition of optimal tree value

MBF - log measurement unit; one thousand board feet; 1 MBF = approximately 2 cords

Operability - ease with which logging machinery could work a site; often limited by rockiness, steep slopes, or wetness

Overmaturity - the age range in which significant physical decline occurs

Patch cut - a clearcut of a relatively small area (less than an acre)

Poles - trees between 6 and 9 inches DBH

Quality (of a tree) - expressed relative to a tree's potential to become a valuable product

Regeneration - seedlings or sprouts of commercial tree species

Riparian - the forest edge along rivers and streams and around rivers, ponds, and wetlands

Saplings - trees between 1 and 5 inches DBH

Sawtimber - trees of DBH 10 inches or greater and containing log quality wood; generally 8 - 16 feet long and straight

Seedlings - trees less than 1 inch DBH or 3 feet high

Selection Harvest - the removal of individual or small groups of trees at regular intervals; designed to create or maintain an uneven-aged stand. Used as a management tool to ensure continuous establishment of regeneration of species that do not require full sunlight to grow well.

Silviculture - the art and science of controlling the establishment, growth, composition, health, and quality of a forest. It entails the manipulation of forest vegetation in stands and across landscapes to meet the needs and values of landowners as well as society on a sustainable basis.

Stand - a contiguous, homogenous unit of forestland, delineated because it supports trees of common species, size, age, potential, etc.

Stocking - the current number and density of trees in a forest stand, compared to the optimum it could support

Structure (of a forest) - the physical arrangement of a forest's vegetation

Stumpage (value) - the value of a live tree standing in the woods, a common basis for a logging contract

Thinning - a cutting to reduce density in an even-aged stand of trees, primarily to improve growth and enhance stand quality

Timber Stand Improvement (TSI) - an activity which improves the value of a stand for producing quality wood products; pre- or non-commercial thinning, weeding, pruning and/or crop tree release

Type - a unit of forestland, which may be composed of one or more individual stands which are homogenous but geographically separate

Uneven-aged - a stand of trees of 3 or more age classes

ADDITIONAL SOURCES OF ASSISTANCE

1) Mid-Maine Forestry: We can assist with all phases of implementation of this forest management plan, including establishing low-impact forestry demonstrations, marking trees for harvest, selection of competent loggers, and harvest administration and supervision. We also maintain boundary lines, administer forestry cost-share programs, as well as supervise TSI, tree planting, trail building, and wildlife habitat enhancement practices. Please contact us for further assistance.

2) Maine Forest Service: A good source of educational material and information, including taxation and utilization expertise. Information and applications for Federal forestry cost-share programs for practices such as tree planting, weeding, pruning, erosion control, and forest management plans.
State House Station #22, Augusta, ME 04330. 1-800-367-0223 (in Maine) or 1-207-287-2791 web site: www.maineforestservice.org

3) University of Maine Cooperative Extension (UMCE): A good source of educational materials and information.
web site: www.umext.maine.edu/topics/forestry

4) Natural Resources Conservation Service (NRCS), formerly Soil Conservation Service, and the Androscoggin-Sagadahoc Co. Soil and Water Conservation District (SWCD): Information on, and technical assistance with, conservation and erosion control practices.
Androscoggin-Sagadahoc Co.NRCS, or SWCD, 254 Goddard Road, Lewiston, Maine 04241. Tel. 207-753-9400 web site: www.androscogginswcd.net

5) Small Woodland Owners Association of Maine (SWOAM): A statewide non-profit organization which promotes long-term management of private woodland. It publishes a monthly newsletter, and sponsors educational programs on a variety of issues relating to forest management and ownership.
SWOAM, P.O. Box 836, Augusta, ME 04332-0836. 1-207-626-0005.
web site: www.swoam.org

Appendix A. Summary Table of Stand Type Attributes
Town of Topsham – Transfer Station Woodlot

Stand	Type[1]	Acres	Size	Average diameter all trees	Average diameter merch. trees[2]	Basal area (BA) all trees (ft^2/acre)	Basal area (BA) merch. trees (ft^2/acre)	Volume/acre MBF	Volume/acre Cords	Top 3 species[3] in descending order of BA
1	S2B	10	poletimber	11"	12"	123	120	3.3 MBF	22c.	93% WP, 5% AS, 2% PP
2	M3A	17	sawtimber	6	11	168	145	3.8	35	51% WP, 13% RM, 9% RO,HM
3	M2B	56	poletimber	4	10	101	78	1.0	16	32%WP, 27%RM, 20% RO
4	M3A	12	sawtimber	7	10	182	156	4.2	37	29%WP%, 28%RM, 16% HM
5	H2A	8	poletimber	4	13	99	75	0.7	18	40% RO, 24% WP, 21%RM
6	H1/2A	3	sapling	4	7	53	15	0.0	2	43% GB, 29%RO, 14% RM,WB
7	H2A	8	poletimber	3	10	65	25	0.0	5	62% RM, 23% WB, 15% BF
		114 wooded acres								
Non-forested acres		70								
Total		184 acres								

[1]S=75%+ softwood; H+75%+ hardwood; M=mixed wood 1=0-30' height; 2=30-60' height; 3=60'+ height
A=70-100% crown closure; B=40-70% crown closure; C=10-40% crown closure

[2]merchantable trees are those with diameters of 6" or more

[3]species codes: red oak (RO), red maple (RM), white pine (WP), pitch pine (PP), hemlock (HM), balsam fir (BF) white birch(WB), grey birch (GB), aspen (AS)

Appendix B

MAINE HISTORIC PRESERVATION COMMISSION
55 CAPITOL STREET
65 STATE HOUSE STATION
AUGUSTA, MAINE
04333

PAUL R. LEPAGE
GOVERNOR

EARLE G. SHETTLEWORTH, JR.
DIRECTOR

ARCHAEOLOGY AND HISTORIC RESOURCES REVIEW
FORESTRY PLAN

MHPC # F120-11 Date Received 5/19/2011
Township TOPSHAM Forester MID-MAINE FORESTRY
Parcel TOWN OF TOPSHAM LOT

******This worksheet was completed for informational purposes only******

Prehistoric (Native American) Archaeology (for further information: arthur.spiess@maine.gov)

☐ No prehistoric archaeological sites known. Based on location, soils and topography, none are expected.
☒ No prehistoric archaeological sites known because no survey has been conducted. However, the following area is archaeologically sensitive: See attached map
☐ The property includes known sites of archaeological importance. (See attached info)

Historic Archaeology (e.g. 1800s farms, etc.) (for further information: leith.smith@maine.gov)

☒ No sites are known, and none are expected (based on historic maps and documents).
☐ There are possible sites from former houses, barns, and outbuildings shown on maps from 1850 to 1920, now possibly recognizable as foundations or cellar holes. (See attached map.)
☐ The property contains known sites of archaeological importance. (See attached info)

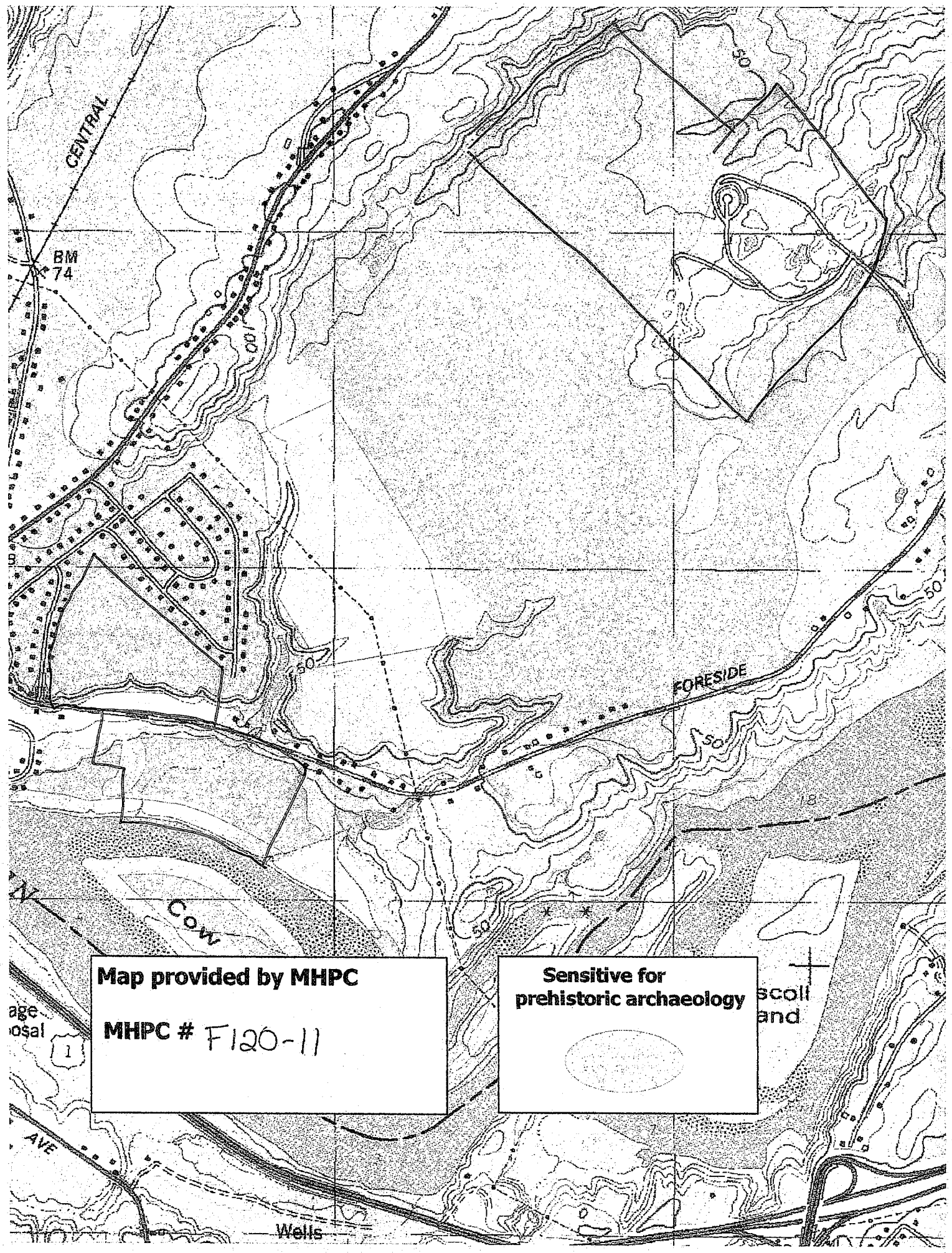
Historic Buildings or Structures (for further information: robin.stancampiano@maine.gov)

☒ No historic buildings or structures are known or expected on the property (based on 7.5' USGS topographic maps and MHPC records.
☐ Buildings or structures may exist on the property that have not been evaluated for National Register eligibility. eligibility. Our office will provide an assessment if a request letter, photos of any buildings over fifty years of age that are on the subject parcel, and a 7.5' USGS topographic map with all photos keyed to it are submitted to our office.
☐ Buildings or structures exist on the property that are either listed in or eligible for nomination to the National Register of Historic Places. (See attached info)

The information on this worksheet is being provided for Forestry Management Planning purposes only.

If any construction or ground disturbing activities on these properties will utilize federal funding, permitting or licensing, initiation of Section 106 review with the Maine Historic Preservation Commission is required pursuant to the National Historic Preservation Act of 1966.

PHONE: (207) 287-2132
FAX: (207) 287-2335


CENTRAL
BM
74
100
50
FORESIDE
50
50
50
50
COW
Map provided by MHPC
MHPC # F120-11
Sensitive for
prehistoric archaeology
AVE
Wells

Appendix C

Appendix D

STATE OF MAINE
DEPARTMENT OF CONSERVATION
93 STATE HOUSE STATION
AUGUSTA, MAINE
04333-0093

PAUL R. LEPAGE
GOVERNOR

WILLIAM H. BEARDSLEY
COMMISSIONER

May 24, 2011

Barrie Brusila
midmaineforestry@gmail.com

Re: Forest Management Plan Review

Dear Mr. Brusila:

In response to your request received on May 19, 2011, I have searched our data system for information on rare or unique botanical features, rare animal populations, and essential or significant wildlife habitats in the vicinity of the three properties owned by the town of Topsham.

For individual parcel reviews, we use a simple checklist that summarizes our findings. The enclosed checklist includes our review of several data sets, some of which are maintained by MNAP and others that are maintained by the Maine Department of Inland Fisheries and Wildlife (MDIFW), and the U.S. Fish and Wildlife Service (USFWS). If a parcel intersects with a data set maintained by MDIFW or USFWS, please contact the appropriate biologist indicated on the checklist for additional information.

According to the information currently in our files, there are no rare species or important habitats documented within these three properties. This lack of data may indicate minimal survey efforts rather than confirm the absence of rare features.

The southern property, along the Androscoggin River, is within the Kennebec Estuary Beginning with Habitat Focus Area. The Beginning with Habitat program is a cooperative, non-regulatory effort between state and federal agencies, conservation groups, and regional governments in Maine. *For more information about focus areas, visit the Beginning with Habitat website, http://www.beginningwithhabitat.org, or call the Beginning with Habitat program at 207-287-5254.*

Thank you for using the MNAP in the forest management planning process. If you have questions about the MNAP, or if you would like more information about this site, please feel free to contact me. You can also visit us on the web at http://www.maine.gov/doc/nrimc/mnap/.

Sincerely,

Shonene Scott

Assistant Ecologist
Maine Natural Areas Program
17 Elkins Lane, 93 State House Station, Augusta, ME 04333
maine.nap@maine.gov
Phone: (207) 287-8044, Fax: (207) 287-8040

Enclosure

MAINE NATURAL AREAS PROGRAM
(207)287-8044 or maine.nap@maine.gov

Forest Management Plan Review

Forester: *Barrie Brusila* Landowner: *Town of Topsham* Lot Name: *3 parcels*
Date Received: *5/19/2011* Town: *Topsham* County: *Sagadahoc* MDIFW Region: *A*

PLANT, ANIMAL, AND HABITATS	Documented to occur at the site? YES	NO	Contact the following biologist to discuss conservation considerations
Plants: rare, threatened and/or endangered *If yes, see attached summary table.*	☐	☒	
Natural Communities: rare and/or exemplary *If yes, see attached summary table.*	☐	☒	
Animals: rare, threatened, or endangered *If yes, see attached summary table.*	☐	☒	
Mapped Essential Wildlife Habitats:			
Roseate tern	☐	☒	
Piping plover and Least tern	☐	☒	
Mapped Significant Wildlife Habitats:			
Deer wintering area	☐	☒	
Inland waterfowl and wading bird habitat	☐	☒	
Tidal waterfowl and wading bird habitat	☐	☒	
Significant vernal pool	☐	☒	
Shorebird roosting area	☐	☒	
Wild brook trout habitat	☐	☒	
Atlantic Salmon:			
Salmon watershed	☐	☒	
Salmon habitat: ☐ General ☐ Rearing ☐ Spawning	☐	☒	
Canada lynx: Does the site occur within a town which may provide habitat for lynx?	☐	☒	

LANDSCAPE CONTEXT	YES	NO
Does parcel intersect with a Beginning with Habitat Focus Area? Focus Area Name: **Kennebec Estuary**	☒	☐
Is the parcel adjacent to state-owned land? Owner: Ownership type: ☐ Fee ☐ Easement Area Name:	☐	☒
Is the parcel within an area identified by MNAP as a potential inventory site for undocumented rare plants or exemplary natural communities? If so, MNAP will contact the landowner for permission prior to any inventory work.	☐	☒

Review completed by: JRS
Date: 5/24/2011
MNAP #: 2011_05_24_JS_03