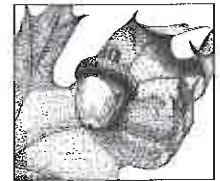




FOREST MANAGEMENT PLAN

Submitted to: Massachusetts Department of Conservation and Recreation
For enrollment in CH61/61A/61B and/or Forest Stewardship Program



CHECK-OFFS					Administrative Box			
CH61 cert. <input type="checkbox"/>	CH61A cert. <input type="checkbox"/>	CH61B cert. <input type="checkbox"/>	STWSHP new <input checked="" type="checkbox"/>	C-S EEA <input type="checkbox"/>	Case No. _____	Orig. Case No. _____		
recert. <input type="checkbox"/>	recert. <input type="checkbox"/>	recert. <input type="checkbox"/>	renew <input type="checkbox"/>	Other <input checked="" type="checkbox"/>	Owner ID _____	Add. Case No. _____		
amend <input type="checkbox"/>	amend <input type="checkbox"/>	amend <input type="checkbox"/>	Green Cert <input type="checkbox"/>		Date Rec'd _____	Ecoregion _____		
Plan Change: _____ to _____			Conservation Rest. <input type="checkbox"/>		Plan Period _____	Topo Name <u>Maynard</u>		
			CR Holder _____		Rare Sp. Hab. _____	River Basin <u>Concord</u>		

OWNER, PROPERTY, and PREPARER INFORMATION

Property Owner(s) Town of Sudbury, c/o Sudbury Conservation Commission
 Mailing Address 275 Old Lancaster Road, Sudbury, MA 01776 Phone 978-443-2209

Property Location: Town(s) Sudbury Road(s) Old Sudbury Rd & Water Row

Plan Preparer Gary H. Gouldrup, New England Forestry Cons., Inc. Mass. Forester License # 81
 Mailing Address 72 Townsend Street, Pepperell, MA 01463 Phone 978-433-8780

RECORDS

Assessor's Map No.	Lot/Parcel No.	Deed Book	Deed Page	Total Acres	Ch61/61A 61B Excluded Acres	Ch61/61A 61B Certified Acres	Stewshp Excluded Acres	Stewshp Acres
H10	301	31975	451	1.93	NA	NA	0.00	1.93
H10	15	41708	165	0.71	NA	NA	0.00	0.71
*H10	300	31975	451	40.10	NA	NA	0.00	40.10
H11	401	1310	144	23.49	NA	NA	0.00	23.49
H11	300	18737	217	30.27	NA	NA	0.00	30.27
H11	305	39630	344	2.39	NA	NA	0.00	2.39
H11	15	12961	275	1.69	NA	NA	0.00	1.69
G11	200	31975	451	29.42	NA	NA	0.00	29.42
TOTALS				130.00	0.00	0.00	0.00	130.00

Excluded Area Description(s) (if additional space needed, continue on separate paper)

There are no excluded areas.

HISTORY Year acquired 1987-2005 Year management began 2010

Is subdivision plan on file with municipality? Yes No
 Are boundaries blazed/painted? Yes No Partially
 Have forest products been cut within past 2 years? Yes No

What treatments have been prescribed, but not carried out (last 10 years if plan is a recert.)?
 stand no. NA treatment NA reason NA

Previous Management Practices (last 10 years)

Stand #	Cutting Plan #	Treatment	Yield	Value	Acres	Date
<u>All</u>	<u>NA</u>	<u>Trail Management</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>2008-2010</u>

Remarks: (if additional space needed, continue on separate page)

* Acreage for Map H10, Lot 300 is based on map calculations and GPS field work. The Assessor's acreage figures appear to be too low. Assessor records show the lot to be 27.81 acres.

RECORDS

Assessor's Map No.	Lot/Parcel No.	Deed Book	Deed Page	Total Acres	Ch61/61A 61B Excluded Acres	Ch61/61A 61B Certified Acres	Stewshp Excluded Acres	Stewshp Acres
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H11	15	12961	275	1.69	NA	NA	0.00	1.69
G11	200	31975	451	29.42	NA	NA	0.00	29.42
TOTALS				130.00	0.00	0.00	0.00	130.00

EXCLUDED AREA DESCRIPTION (continued):

There are no excluded areas.

HISTORY (continued):

Trail management has been done on the property by local volunteers. The trail work has included clearing, foot bridge construction, and the partial marking of trails with signs and markers.

The property and several abutting properties have been surveyed in the past. The surveys will be used to help identify the property lines in the future.

Cultural resource protection and improvement has been pursued on the adjacent town-owned property by the Sudbury Historical Society.

Parking lot areas have been constructed off of Old Sudbury Road and Fieldstone Farm Road.

Periodic mowing of the open meadows is done yearly in the northern sections of the property. Mowing is done in late August in order to avoid the bird nesting season.

Owner(s) Town of Sudbury, Conservation Commission

Town(s) Sudbury



Property Overview, Regional Significance, and Management Summary

The Sudbury Conservation Commission's King Philip, Piper, Dickson, and Libby properties are located in an east-central section of Sudbury near the Sudbury River. The property has been acquired periodically over the years since 1987. The Town of Sudbury initially purchased jointly with the Department of Environmental Management the King Philip Woods. The King Philip Woods have significant historical resources on the property. The abandoned Old Berlin Road was an important stagecoach road from Boston to Lancaster, and is now a dirt road located on the south side of the property. The "Tavern of the Damned" foundation is also located on the property in close proximity to the Haynes Garrison House which is situated on the adjacent Historical Society property. The Haynes Garrison House is the location where two survivors of the 1676 Native American massacre of Sudbury settlers, at the Four Arch Bridge (at the Sudbury River in Wayland), fled for refuge. It is here, that they courageously fought off a band of warriors of the Wampanoag Chief, King Philip.

The property lies in the Sudbury Assabet Concord (SuAsCo) Watershed. Water that flows through the property flows south into the Sudbury River just east of the property. The Town of Sudbury identifies this watershed locally as the Great Meadows Watershed. The Great Meadows National Wildlife Refuge is located just east of the property on the east side of Water Row.

The forest soils on the property are diverse and consist of productive and unproductive sites. Forest productivity can be defined as the total amount of plant material produced by a forest per unit area per year. The upland areas consist of well drained rock outcrops and fine sandy loam (Charlton-Hollis-Paxton) as well as moderately drained fine sandy loam (Woodbridge-Merrimac-Sudbury-Deerfield). The wetland areas include the poorly drained muck (Freetown-Swansea) and fine sandy loam (Whitman-Ridgebury). The unproductive soils on this property are the soils that are saturated with standing water within the properties wetland resource areas. These unproductive areas are located primarily in the Freetown and Swansea soil types.

The property is comprised of mature white pine, mixed oak, red maple and mixed hardwood upland forest types. Open wetland resource areas include a pond, vernal pools, and swamps which provide wildlife habitat and landscape diversity to the property. Open meadows and abandoned apple orchards can also be found on the property. The forest health is generally good although "overstocking" of trees is prohibiting adequate forest regeneration of trees in the understory and individual tree growth. Overstocking can be defined as the situation in which trees are so closely spaced that they compete for resources and do not reach full growth potential.



Property Overview, Regional Significance, and Management Summary

Trails have been established on the property by local volunteers. Allowable uses of the property include hiking, cross country skiing, camping, and biking.

Management on the property over the next ten years will focus on recreation improvements, wildlife habitat enhancement, cultural resource protection, biological diversity, forest stewardship education, and potential timber resource management. Some of the management will be conducted by local volunteers. The Sudbury Weed Education and Eradication Team (SWEET) will be called upon to address the invasive species concerns and help develop a list of plant species on the property.

Landowner Goals

Please **check** the column that best reflects the importance of the following goals:

Goal	Importance to Me			
	High	Medium	Low	Don't Know
Enhance the Quality/Quantity of Timber Products*			X	
Generate Immediate Income			X	
Generate Long Term Income			X	
Produce Firewood			X	
Defer or Defray Taxes (NA)				
Promote Biological Diversity	X			
Enhance Habitat for Birds	X			
Enhance Habitat for Small Animals	X			
Enhance Habitat for Large Animals	X			
Improve Access for Walking/Skiing/Recreation		X		
Maintain or Enhance Privacy			X	
Improve Hunting or Fishing			X	
Preserve or Improve Scenic Beauty		X		
Protect Water Quality	X			
Protect Unique/Special/ Cultural Areas	X			
Other: Improve Coldwater Trout Streams	X			

* This goal must be checked "HIGH" if you are interested in classifying your land under Chapter 61/61A.

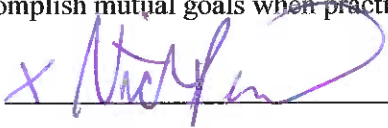
1. In your own words please describe your goals for the property:

Protecting the natural resource values and diversity of our lands while promoting public enjoyment of the outdoors. Specific objectives to this goal are addressed in this Forest Stewardship Plan.

Stewardship Purpose

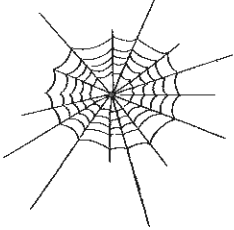
By enrolling in the Forest Stewardship Program and following a Stewardship Plan, I understand that I will be joining with many other landowners across the state in a program that promotes ecologically responsible resource management through the following actions and values:

1. Managing for long-term forest health, productivity, diversity, and quality.
2. Conserving or enhancing water quality, wetlands, soil productivity, biodiversity, cultural, historical and aesthetic resources.
3. Following a strategy guided by well-founded silvicultural principles to improve timber quality and quantity when wood products are a goal.
4. Setting high standards for foresters, loggers and other operators as practices are implemented; and minimizing negative impacts.
5. Learning how woodlands benefit and affect surrounding communities, and cooperation with neighboring owners to accomplish mutual goals when practical.

Signature(s): X  Date 6/28/10

Stewardship Issues

Massachusetts is a small state, but it contains a tremendous variety of ecosystems, plant and animal species, management challenges, and opportunities. This section of your plan will provide background information about the Massachusetts forest landscape as well as issues that might affect your land. **The Stand Descriptions and Management Practices sections of your plan will give more detailed property specific information** on these subjects tailored to your management goals.



Biodiversity: Biological diversity is, in part, a measure of the variety of plants and animals, the communities they form, and the ecological processes (such as water and nutrient cycling) that sustain them. With the recognition that each species has value, individually and as part of its natural community, maintaining biodiversity has become an important resource management goal.

While the biggest threat to biodiversity in Massachusetts is the loss of habitat to development, another threat is the introduction and spread of invasive non-native plants. Non-native invasives like European Buckthorn, Asiatic Bittersweet, and Japanese Honeysuckle spread quickly, crowding out or smothering native species and upsetting and dramatically altering ecosystem structure and function. Once established, invasives are difficult to control and even harder to eradicate. Therefore, vigilance and early intervention are paramount.

Another factor influencing biodiversity in Massachusetts concerns the amount and distribution of forest growth stages. Wildlife biologists have recommended that, for optimal wildlife habitat on a landscape scale, 5-15% of the forest should be in the seedling stage (less than 1" in diameter). Yet we currently have no more than 2-3% early successional stage seedling forest across the state. There is also a shortage of forest with large diameter trees (greater than 20"). See more about how you can manage your land with biodiversity in mind in the "Wildlife" section below. (Also refer to *Managing Forests to Enhance Wildlife Diversity in Massachusetts* and *A Guide to Invasive Plants in Massachusetts* in the binder pockets.)

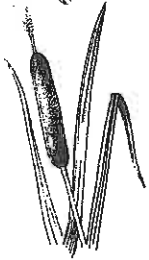


Rare Species: Rare species include those that are **threatened** (abundant in parts of its range but declining in total numbers, those of **special concern** (any species that has suffered a decline that could threaten the species if left unchecked), and **endangered** (at immediate risk of extinction and probably cannot survive without direct human intervention). Some species are threatened or endangered globally, while others are common globally but rare in Massachusetts.

Of the 2,040 plant and animal species (not including insects) in Massachusetts, 424 are considered rare. About 100 of these rare species are known to occur in woodlands. Most of these are found in wooded wetlands, especially vernal pools. These temporary shallow pools dry up by late summer, but provide crucial breeding habitat for rare salamanders and a host of other unusual forest dwelling invertebrates. Although many species in Massachusetts are adapted to and thrive in recently disturbed forests, rare species are often very sensitive to any changes in their habitat

Indispensable to rare species protection is a set of maps maintained by the Division of Fisheries and Wildlife's Natural Heritage & Endangered Species Program (NHESP) that show current and historic locations of rare species and their habitats. The maps of your property will be compared to these rare species maps and the result indicated on the upper right corner of the front page of the plan. Prior to any

regulated timber harvest, if an occurrence does show on the map, the NHESP will recommend protective measures. Possible measures include restricting logging operations to frozen periods of the year, or keeping logging equipment out of sensitive areas. You might also use information from NHESP to consider implementing management activities to improve the habitat for these special species.



Riparian and Wetlands Areas: Riparian and wetland areas are transition areas between open water features (lakes, ponds, streams, and rivers) and the drier terrestrial ecosystems. More specifically, a **wetland** is an area that has hydric (wet) soils and a unique community of plants that are adapted to live in these wet soils. Wetlands may be adjacent to streams or ponds, or a wetland may be found isolated in an otherwise drier landscape. A **riparian area** is the transition zone between an open water feature and the uplands (see Figure 1). A riparian zone may contain wetlands, but also includes areas with somewhat better drained soils. It is easiest to think of riparian areas as the places where land and water meet.

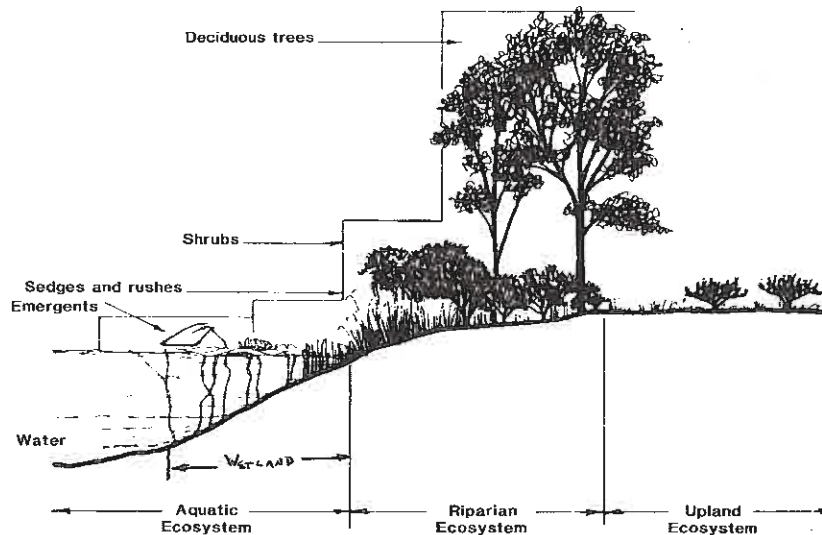


Figure 1: Example of a riparian zone.

The presence of water in riparian and wetland areas make these special places very important. Some of the functions and values that these areas provide are described below:

Filtration: Riparian zones capture and filter out sediment, chemicals and debris before they reach streams, rivers, lakes and drinking water supplies. This helps to keep our drinking water cleaner, and saves communities money by making the need for costly filtration much less likely.

Flood control: By storing water after rainstorms, these areas reduce downstream flooding. Like a sponge, wetland and riparian areas absorb stormwater, then release it slowly over time instead of in one flush.

Critical wildlife habitat: Many birds and mammals need riparian and wetland areas for all or part of their life cycles. These areas provide food and water, cover, and travel corridors. They are often the most important habitat feature in Massachusetts' forests.

Recreational opportunities: Our lakes, rivers, streams, and ponds are often focal points for recreation. We enjoy them when we boat, fish, swim, or just sit and enjoy the view.

In order to protect wetlands and riparian areas and to prevent soil erosion during timber harvesting activities, Massachusetts promotes the use of “Best Management Practices” or BMPs. Maintaining or reestablishing the protective vegetative layer and protecting critical areas are the two rules that underlie these common sense measures. DEM’s Massachusetts Forestry Best Practices Manual (included with this plan) details both the legally required and voluntary specifications for log landings, skid trails, water bars, buffer strips, filter strips, harvest timing, and much more.

The two Massachusetts laws that regulate timber harvesting in and around wetlands and riparian areas are the Massachusetts Wetlands Protection Act (CH 131), and the Forest Cutting Practices Act (CH132). Among other things, CH132 requires the filing of a cutting plan and on-site inspection of a harvest operation by a DEM Service Forester to ensure that required BMPs are being followed when a commercial harvest exceeds 25,000 board feet or 50 cords (or combination thereof).



Soil and Water Quality: Forests provide a very effective natural buffer that holds soil in place and protects the purity of our water. The trees, understory vegetation, and the organic material on the forest floor reduce the impact of falling rain, and help to insure that soil will not be carried into our streams and waterways.

To maintain a supply of clean water, forests must be kept as healthy as possible. Forests with a diverse mixture of vigorous trees of different ages and species can better cope with periodic and unpredictable stress such as insect attacks or windstorms.

Timber harvesting must be conducted with the utmost care to ensure that erosion is minimized and that sediment does not enter streams or wetlands. Sediment causes turbidity which degrades water quality and can harm fish and other aquatic life. As long as Best Management Practices (BMPs) are implemented correctly, it is possible to undertake active forest management without harming water quality.



Forest Health: Like individual organisms, forests vary in their overall health. The health of a forest is affected by many factors including weather, soil, insects, diseases, air quality, and human activity. Forest owners do not usually focus on the health of a single tree, but are concerned about catastrophic events such as insect or disease outbreaks that affect so many individual trees that the whole forest community is impacted.

Like our own health, it is easier to prevent forest health problems than to cure them. This preventative approach usually involves two steps. First, it is desirable to maintain or encourage a wide diversity of tree species and age classes within the forest. This diversity makes a forest less susceptible to a single devastating health threat. Second, by thinning out weaker and less desirable trees, well-spaced healthy individual trees are assured enough water and light to thrive. These two steps will result in a forest of vigorously growing trees that is more resistant to environmental stress.



Fire: Most forests in Massachusetts are relatively resistant to catastrophic fire. Historically, Native Americans commonly burned certain forests to improve hunting grounds. In modern times, fires most often result from careless human actions. The risk of an unintentional and damaging fire in your woods could increase as a result of logging activity if the slash (tree tops, branches, and debris) is not treated correctly.

Adherence to the Massachusetts slash law minimizes this risk. Under the law, slash is to be removed from buffer areas near roads, boundaries, and critical areas and lopped close to the ground to speed decay. Well-maintained woods roads are always desirable to provide access should a fire occur.

Depending on the type of fire and the goals of the landowner, fire can also be considered as a management tool to favor certain species of plants and animals. Today the use of prescribed burning is largely restricted to the coast and islands, where it is used to maintain unique natural communities such as sandplain grasslands and pitch pine/scrub oak barrens. However, state land managers are also attempting to bring fire back to many of the fire-adapted communities found elsewhere around the state.



Wildlife Management: Enhancing the wildlife potential of a forested property is a common and important goal for many woodland owners. Sometimes actions can be taken to benefit a particular species of interest (e.g., put up Wood Duck nest boxes). In most cases, recommended management practices can benefit many species, and fall into one of three broad strategies. These are **managing for diversity, protecting existing habitat, and enhancing existing habitat.**

Managing for Diversity – Many species of wildlife need a variety of plant communities to meet their lifecycle requirements. In general, a property that contains a diversity of habitats will support a more varied wildlife population. A thick area of brush and young trees might provide food and cover for grouse and cedar waxwing; a mature stand of oaks provides acorns for foraging deer and turkey; while an open field provides the right food and cover for cottontail rabbits and red fox. It is often possible to create these different habitats on your property through active management. The appropriate mix of habitat types will primarily depend on the composition of the surrounding landscape and your objectives. It may be a good idea to create a brushy area where early successional habitats are rare, but the same practice may be inappropriate in the area's last block of mature forest.

Protecting Existing Habitat – This strategy is commonly associated with managing for rare species or those species that require unique habitat features. These habitat features include vernal pools, springs and seeps, forested wetlands, rock outcrops, snags, den trees, and large blocks of unbroken forest. Some of these features are rare, and they provide the right mix of food, water, and shelter for a particular species or specialized community of wildlife. It is important to recognize their value and protect their function. This usually means not altering the feature and buffering the resource area from potential impacts.

Enhancing Existing Habitat – This strategy falls somewhere between the previous two. One way the wildlife value of a forest can be enhanced is by modifying its structure (number of canopy layers, average tree size, density). Thinning out undesirable trees from around large crowned mast (nut and fruit) trees will allow these trees to grow faster and produce more food. The faster growth will also accelerate the development of a more mature forest structure, which is important for some species. Creating small gaps or forest openings generates groups of seedlings and saplings that provide an additional layer of cover, food, and perch sites.

Each of these three strategies can be applied on a single property. For example, a landowner might want to increase the habitat diversity by reclaiming an old abandoned field. Elsewhere on the property, a stand of young hardwoods might be thinned to reduce competition, while a “no cut” buffer is set up around a vernal pool or other habitat feature. The overview, stand description and management practice sections of this plan will help you understand your woodland within the context of the surrounding landscape and the potential to diversify, protect or enhance wildlife habitat.



Wood Products: If managed wisely, forests can produce a periodic flow of wood products on a sustained basis. Stewardship encompasses finding ways to meet your current needs while protecting the forest’s ecological integrity. In this way, you can harvest timber and generate income without compromising the opportunities of future generations.

Massachusetts forests grow many highly valued species (white pine, red oak, sugar maple, white ash, and black cherry) whose lumber is sold throughout the world. Other lower valued species (hemlock, birch, beech, red maple) are marketed locally or regionally, and become products like pallets, pulpwood, firewood, and lumber. These products and their associated value-added industries contribute between 200 and 300 million dollars annually to the Massachusetts economy.

By growing and selling wood products in a responsible way you are helping to our society’s demand for these goods. Harvesting from sustainably managed woodlands – rather than from unmanaged or poorly managed forest – benefits the public in a multitude of ways. The sale of timber, pulpwood, and firewood also provides periodic income that you can reinvest in the property, increasing its value and helping you meet your long-term goals. Producing wood products helps defray the costs of owning woodland, and helps private landowners keep their forestland undeveloped.



Cultural Resources: Cultural resources are the places containing evidence of people who once lived in the area. Whether a Native American village from 1,700 years ago, or the remains of a farmstead from the 1800’s, these features all tell important and interesting stories about the landscape, and should be protected from damage or loss.

Massachusetts has a long and diverse history of human habitation and use. Native American tribes first took advantage of the natural bounty of this area over 10,000 years ago. Many of these villages were located along the coasts and rivers of the state. The interior woodlands were also used for hunting, traveling, and temporary camps. Signs of these activities are difficult to find in today’s forests. They were obscured by the dramatic landscape impacts brought by European settlers as they swept over the area in the 17th and 18th centuries.

By the middle 1800’s, more than 70% of the forests of Massachusetts had been cleared for crops and pastureland. Houses, barns, wells, fences, mills, and roads were all constructed as woodlands were converted for agricultural production. But when the Erie Canal connected the Midwest with the eastern cities, New England farms were abandoned for the more productive land in the Ohio River valley, and the landscape began to revert to forest. Many of the abandoned buildings were disassembled and moved, but the supporting stonework and other changes to the landscape can be easily seen today.

One particularly ubiquitous legacy of this period is stone walls. Most were constructed between 1810 and 1840 as stone fences (wooden fence rails had become scarce) to enclose sheep within pastures, or to

exclude them from croplands and hayfields. Clues to their purpose are found in their construction. Walls that surrounded pasture areas were comprised mostly of large stones, while walls abutting former cropland accumulated many small stones as farmers cleared rocks turned up by their plows. Other cultural features to look for include cellar holes, wells, old roads and even old trash dumps.



Recreation and Aesthetic Considerations: Recreational opportunities and aesthetic quality are the most important values for many forest landowners, and represent valid goals in and of themselves. Removing interfering vegetation can open a vista or highlight a beautiful tree, for example. When a landowner's goals include timber, thoughtful forest management can be used to accomplish silvicultural objectives while also reaching recreational and/or aesthetic objectives. For example, logging trails might be designed to provide a network of cross-country ski trails that lead through a variety of habitats and reveal points of interest.

If aesthetics is a concern and you are planning a timber harvest, obtain a copy of this excellent booklet: *A Guide to Logging Aesthetics: Practical Tips for Loggers, Foresters & Landowners*, by Geoffrey T. Jones, 1993. (Available from the Northeast Regional Agricultural Engineering Service, (607) 255-7654, for \$7). Work closely with your consultant to make sure the aesthetic standards you want are included in the contract and that the logger selected to do the job executes it properly. The time you take to plan ahead of the job will reward you and your family many times over with a fuller enjoyment of your forest, now and well into the future.

This is your Stewardship Plan. It is based on the goals that you have identified. The final success of your Stewardship Plan will be determined first, by how well you are able to identify and define your goals, and second, by the support you find and the resources you commit to implement each step.

It can be helpful and enjoyable to visit other properties to sample the range of management activities and see the accomplishments of others. This may help you visualize the outcome of alternative management decisions and can either stimulate new ideas or confirm your own personal philosophies. Don't hesitate to express your thoughts, concerns, and ideas. Keep asking questions! Please be involved and enjoy the fact that you are the steward of a very special place.



STAND DESCRIPTIONS

OBJ	STD NO	TYPE	AC	MSD OR SIZE-CLASS	BA/AC	VOL/AC	SITE INDEX
STEW	1	MW	8.76	Meadow	NA	NA	63 (RO)

This area is mostly an open meadow containing grasses, ferns and wildflowers. A few apple trees and wetland shrubs can also be found. A small section of red maple pole sized trees can be found between Rice Road and Old Sudbury Road. The area is annually mowed late in the summer in order to avoid the bird nesting season. A few bluebird boxes have been placed on poles within sections of the meadow. The area is flat to gently sloped with moderately well and somewhat poorly drained fine sandy loam soils (Montauk-Sudbury). Management will continue to focus on keeping the meadow open by mowing in order to provide habitat beneficial to wildlife for nesting, mating and feeding purposes. The desired future condition is to maintain a meadow for wildlife over the next ten years of management.

STEW	2	OH	26.24	10.2" DBH Sawtimber-Pole	95 sqft	3,000 BF & 14.9 Cds	63 (RO)
------	---	----	-------	-----------------------------	---------	------------------------	---------

Mixed oaks and mixed hardwoods are the dominant overstory species in this adequately stocked pole and sawtimber sized stand. Species composition, stand density and size class varies throughout the area. The mixed oak component includes red oak, black oak and white oak poles and sawtimber of poor to good form and timber quality. The mixed hardwood component includes red maple, hickory, black birch, white ash, sugar maple, and American elm poles and sawtimber of poor to good form and timber quality. Scattered white pine poles and sawtimber of poor to good form and timber quality can also be found. Forest regeneration is scattered and includes mixed hardwood saplings. Buckthorn, firebush (winged euonymus), bittersweet, honeysuckle wild grape, spicebush, and ferns can all be found in the understory. Most of the invasive species are present in the northern sections of the stand near the open meadow. The invasive species are prolific in these areas and is affecting the development of native species in the understory. The terrain is gently to moderately sloped with rocky ledge in the higher elevations. The soils range from well drained rock outcrop (Charlton-Hollis-Paxton) to poorly drained fine sandy loam (Scarboro) capable of producing high quality timber resources. Management will focus on trail maintenance and the removal of invasive species when economically feasible. The desired future condition is a stand that is growing native vegetation that provides recreational opportunities for the public and habitat for wildlife.

STEW	3	RM	4.21	Sapling-Pole	10 sqft	2.0 Cords	50 (RM)
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Red maple is the dominant overstory species in this understocked sapling and small pole sized stand. Most of this wetland resource area is open and vegetated with alder, swamp azalea, spicebush, ferns, skunk cabbage and other wetland shrubs and plants. The area is flat and hummocky with very poorly drained organic soils (Scarboro Muck) only capable of producing poor quality timber resources due to the high water table. Management will focus on protecting this site as a wetland resource area for wildlife habitat. Installing a wood duck box is recommended in the northern sections of this area where there is open water and emergent vegetation. The desired future condition is an area that will protect water quality and provide habitat for wildlife.

Continued on page 13

OBJECTIVE CODE: CH61 = stands classified under CH61/61A STEW= stands not classified under CH61/61A
 STD= stand AC= acre MSD= mean stand diameter MBF= thousand board feet BA= basal area VOL= volume

Owner(s) Town of Sudbury (Conservation Commission) Town(s) Sudbury

STAND DESCRIPTIONS

OBJ	STD NO	TYPE	AC	MSD OR SIZE-CLASS	BA/AC	VOL/AC	SITE INDEX
STEW	4	OM	15.06	9.5" DBH Pole-Sawtimber	110 sqft	2,250 BF & 19.9 Cds	60 (RO)

Mixed oaks are the dominant overstory species in this well stocked pole and sawtimber sized stand. The mixed oaks include black, red and white oak stems of poor to good form and timber quality. Scattered white pine, red cedar and mixed hardwood poles and sawtimber of poor to good form and timber quality can also be found. An abandoned apple orchard can be found on the east side of the main trail that runs through the middle of the stand. Forest regeneration includes scattered white pine and mixed hardwood saplings. Invasive species such as buckthorn and honeysuckle are present in the open apple orchard. Management will focus on trail maintenance and potential timber management. The desired future condition is a stand that provides recreational opportunities for the public, wildlife habitat and high quality timber resources in several size and age classes.

STEW	5	WH	4.36	14.1" DBH Sawtimber-Pole	145 sqft	6,250 BF & 23.0 Cds	63 (RO)
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White pine and mixed hardwoods dominate the overstory of this well stocked sawtimber and pole sized stand. The white pine stems range from poor to good in form and timber quality. The mixed hardwood component includes red oak, black oak, white oak, hickory, red maple, black birch and white ash poles and sawtimber sized stems of poor to good form and timber quality. Forest regeneration is scattered and consists of mixed hardwood and white pine saplings. Buckthorn is also present in the understory. The area is gently sloped with well to moderately drained fine sandy loam soils (Charlton) capable of producing high quality timber resources. Management will focus on potential timber resource management. The desired future condition is a stand that provides recreational opportunities for the public, wildlife habitat and high quality timber resources in several size and age classes.

STEW	6	RM	6.92	8.8" DBH Pole	75 sqft	750 BF & 15.6 Cds	55 (RM)
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Red maple is the dominant overstory species in this variably stocked pole sized stand. The red maple stems range from poor to fair in form and timber quality. Scattered white pine, black birch and white ash poles and sawtimber of poor to fair form and timber quality can also be found. The upland areas tend to be adequately stocked while the wetland areas are more open and understocked. Forest regeneration consists of white pine saplings in the upland areas. The wetland areas consist of shrubs, ferns and other wetland vegetation. The area is flat to gently sloped with moderately drained fine sandy loam soils (Scarboro) and poorly drained soils (Whitman-Swansea). The soils are capable of producing fair to good quality timber resources. No management is recommended at this time. The desired future condition is a stand that provides protection for water quality and habitat for wildlife.

STEW	7	WO	24.09	14.5" DBH Sawtimber	155 sqft	10,250 BF & 21.1 Cds	63 (WP)
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White pine and mixed oaks dominate the overstory of this overstocked sawtimber sized stand. The white pine stems range from fair to good in form and timber quality. The mixed oak sawtimber and pole sized stems range from poor to good form and timber quality. Scattered red maple, white ash and hickory poles and sawtimber of poor to fair form and timber quality can also be found. Forest regeneration is scattered and consists of advanced white pine saplings and scattered hardwood saplings. The area is gently sloped with well drained soils (Charlton-Hollis) capable of producing high quality timber resources. Management will focus on timber resource management and trail maintenance. The primary desired future condition is a stand that is growing a healthy crop of trees in several age and size classes while providing recreational opportunities for the public and wildlife habitat.

OBJECTIVE CODE: CH61 = stands classified under CH61/61A STEW= stands not classified under CH61/61A
 STD= stand AC= acre MSD= mean stand diameter MBF= thousand board feet BA= basal area VOL= volume

Owner(s) Town of Sudbury, Conservation Commission Town(s) Sudbury

STAND DESCRIPTIONS

OBJ	STD NO	TYPE	AC	MSD OR SIZE-CLASS	BA/AC	VOL/AC	SITE INDEX
STEW	8	WH	13.20	10.9" DBH Sawtimber-Pole	160 sqft	7,751 BF & 26.4 Cds	65 (WP)

White pine and mixed hardwoods dominate the overstory of this well stocked sawtimber and pole sized stand. The white pine stems range from poor to good in form and timber quality. The mixed hardwood component includes red oak, black oak, white oak, white ash, black walnut, hickory, and red maple poles and sawtimber sized stems of poor to good form and timber quality. White ash mortality is evident in the western sections of the stand. Forest regeneration is scattered and consists of mixed hardwood and white pine saplings. Buckthorn, bittersweet, honeysuckle, firebush (winged euonymus), multiflora rose, ferns, and poison ivy are scattered throughout the stand and most prevalent in the western sections of this area. A parking lot is located along Old Sudbury Road, and the northern end of the historic Old Berlin Road can be found in this stand as well. The area is gently sloped with well drained soils (Charlton-Hollis) and somewhat poorly drained fine sandy loam soils (Ridgebury). The soils are capable of producing high quality timber resources. Management will focus on trail maintenance and invasive species control. The desired future condition is a stand that is growing high quality timber resources with native vegetation growing in the understory while providing recreational opportunities for the public and wildlife habitat.

STEW	9	OP	0.50	Open Field	NA	NA	63 (WP)
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This area is an open field and yard periodically mowed by an abutting owner. The field provides habitat for wildlife. The area is flat to gently sloped with well drained soils (Merrimac-Hollis) capable of growing high quality timber resources. The current landowner is the donor of the Libby Lot (30.86 acres). The property line in this area will be located to prohibit encroachment from any future owners of the abutting property. The desired future condition is a field that provides habitat for wildlife.

STEW	10	WO	12.05	10.9" DBH Sawtimber-Pole	160 sqft	7,751 BF & 26.4 Cds	65 (WP)
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White pine and mixed hardwoods dominate the overstory of this variably stocked sawtimber and pole sized stand. The white pine stems range from poor to good in form and timber quality. The mixed hardwood component includes red oak, black oak, white oak, white ash, black cherry, white birch, hickory, red cedar, and red maple poles and sawtimber sized stems of poor to good form and timber quality. White ash mortality is evident in the stand. Species composition, stand density and size class varies throughout the area. Forest regeneration is scattered and consists of mixed hardwood and white pine saplings. Buckthorn, bittersweet, honeysuckle, arrowwood, multiflora rose, wild grape, and poison ivy are scattered throughout the stand. The area is gently to moderately sloped with well drained soils (Charlton-Hollis) and moderately drained loamy sand soils (Deerfield-Merrimac). Areas of ledge are also present. The soils are capable of producing high quality timber resources. Management will focus on trail maintenance and invasive species control. The desired future condition is a stand that is growing high quality timber resources with native vegetation growing in the understory while providing recreational opportunities for the public and wildlife habitat.

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Owner(s) Town of Sudbury, Conservation Commission Town(s) Sudbury

STAND DESCRIPTIONS

OBJ	STD NO	TYPE	AC	MSD OR SIZE-CLASS	BA/AC	VOL/AC	SITE INDEX
STEW	11	MH	7.89	7.3" DBH Sapling, Pole, Sawtimber	30 sqft	375 BF & 7.5 Cds	65 (RO)

Mixed hardwoods dominate the overstory of this understocked and unevenaged forest type. The mixed hardwoods include white ash, red maple, sugar maple, aspen, white birch, black birch, black cherry, mixed oak and American elm poles and sawtimber of poor to fair form and timber quality. Scattered red cedar and apple trees are present as well. An apple orchard was once located near the "Tavern of The Damned" along the Old Berlin Road. The understory vegetation is extremely dense and includes buckthorn, multiflora rose, honeysuckle, arrowwood, wild grape, bittersweet, and scattered mixed hardwood saplings. The "Haynes Garrison House" is also located within this area along Water ROW. The area is flat to moderately sloped with well to moderately drained soils (Charlton-Hollis-Deerfield) capable of producing high quality timber resources. Management will focus on cultural resource protection, trail enhancement and invasive species control. The desired future condition is an area where the cultural resources are maintained and protected, recreational opportunities are available to the public, native species are growing without competition from invasive plants, and wildlife habitat is improved.

STEW	12	RM	10.85	Wetland Resource Area	NA	NA	50 (RM)
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This is a wetland resource area which includes a pond, bog, vernal pools, shrub swamp and red maple poles and sawtimber sized stems. Wetland shrubs and plants are the primary source of vegetation growing in the open areas. The area is mostly flat and remains wet throughout most of the year. The soils are poorly drained organic muck (Freetown Muck). Many of the areas are not capable of growing trees due to the high water table. The red maple stands are located north of the pond and near the intersection of Old Sudbury Road and Water ROW. Management will focus on protecting this site as a wetland resource area for wildlife habitat. Installing a wood duck box is recommended in the pond and in the open areas of the western sections of this area where there is open water and emergent vegetation. The desired future condition is an area that will protect water quality and provide habitat for wildlife.

Maintaining abutter privacy and screening will always be a desired future condition for all of the stands. No-cut zones will be observed near areas where there are houses along stands 4, 5 and 7.

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Owner(s) Town of Sudbury, Conservation Commission Town(s) Sudbury

MANAGEMENT PRACTICES
to be done within next 10 years

OBJ	STD NO	TYPE	SILVICULTURAL PRESCRIPTION	AC	TO BE REMOVED		TIMING
					BA/AC	TOT VOL	

Recreation Management

Trails on the property are currently being managed by local volunteers. The goal is to provide a safe, user-friendly trail system that encourages the public to enjoy and learn about the natural and cultural resources of the property. Management will focus on assessing the current trails and creating new trails if necessary into areas that are not easily accessible. Trail closures may result as needed to protect and preserve sensitive wildlife habitat. Trail markers, resting stations, foot bridges, possible bird blinds, and interpretive signs for educational purposes will all be considered as part of the trail system management objectives. Pruning and cutting hazard trees along the trail will be done for safety and aesthetic purposes. Trails will be used for hiking, cross-country skiing and biking. Motor vehicles will be prohibited on the property, except for emergencies. The parking lot areas along Old Sudbury Road and Fieldstone Farm Road will be maintained periodically as needed.

Wildlife Habitat Enhancement

STEW	3, 12	Wetland	Artificial Nesting Box Wood Ducks	14+/-	NA	NA	2010-2019
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These wetland resource areas provide habitat for *wood ducks*. The open water and emergent vegetation within these areas are important for the development of young wood ducks. The boxes should be set up approximately four feet above open water on cedar, or metal poles to protect the young and eggs from predators. The box should also be set up over water that is 1-4 feet deep. The boxes should be cleaned every year and new bedding placed on the bottom of the box. The Division of Fisheries and Wildlife can provide further information about the box dimensions, installation, and maintenance. The recommendation is to install no more than one (1) box in area #3 and one box in area #12 on an experimental basis.

STEW	1	MD	Vegetation Control Artificial Nest Boxes	4+/-	NA	NA	2006-2015
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Periodic mowing and vegetation control will maintain the open areas of this stand as habitat necessary for many wildlife species presently using the site. The white-tailed deer, turkeys, American kestrel, American woodcock, song birds, and many other native species will use the open areas as a feeding, mating, and nesting sites. Ground nesting songbirds will use areas within this site for nesting in the spring. Mowing should be done after July 31 to avoid damaging any nests in those areas. The apple trees within the meadows provide apples as a food source for wildlife. Occasional pruning of these trees will help in producing a crop of apples. The eastern bluebird will benefit from artificial nest boxes. Bluebird boxes should be set-up approximately 300 feet apart to avoid fighting between territorial males. Artificial nest boxes to encourage other songbird species will also be considered. There are currently boxes in the meadow. The boxes should be assessed for quality and proper location within the meadow.

Timber harvesting practices alone will enhance wildlife habitat. Creating an unevenaged forest structure while maintaining a variety of forest types and vegetation will greatly increase the diversity of wildlife species using this property for food, protection, mating and nesting. For more information on wildlife management please refer to "*Enhancing Wildlife Habitats; A Practical Guide For Forest Landowners*". Please also see the Timber Management recommendations on page 18.

OBJECTIVE CODE: CH61 = Forest Products (for Ch. 61/61A) STEW= Stewardship Program practices
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Owner(s) Town of Sudbury, Conservation Commission Town(s) Sudbury

MANAGEMENT PRACTICES
to be done within next 10 years

OBJ	STD NO	TYPE	SILVICULTURAL PRESCRIPTION	AC	TO BE REMOVED		TIMING
					BA/AC	TOT VOL	

Biological Diversity

STEW	All	All	Promote Biological Diversity Invasive Species Control and Eradication	130+/-	NA	NA	2010-2019
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The landowner is interested in promoting biological diversity on the property. Eliminating invasive and non-native trees, plants and shrubs will be done where these species exist and when economically feasible and practical. Buckthorn, firebush (winged euonymous), bittersweet, honeysuckle, multiflora rose, and barberry are currently known to be growing on the property. Natural communities are being affected by their presence in several areas within the forest. Areas in the western sections of Stand #2 and #11 are being affected the most by the invasive species. The Sudbury Weed and Eradication Team (SWEET) will be called upon by the Town to address this concern. Compiling a comprehensive list of the plants and shrubs on the property and defining natural communities would be beneficial to the Town prior to the eradication program. Cutting the stems and applying herbicides will be one method used to eradicate the invasives. Another biodiversity issue is the distribution of forest growth stages. Trying to maintain different forest age and size classes on the property will also be considered by the landowner on this property through periodic timber harvests and wildlife habitat management. Please see the Biological Diversity issues on page #6 for more details.

Cultural Resource Protection

The Tavern of the Damned, the Old Berlin Road, and the stone walls on the property will be protected along with the Haynes Garrison House on the abutting town property. The Sudbury Historical Society and the Conservation Commission will work together to control the vegetation around these valuable historical sites. The structural integrity of the stone foundations is also of concern. Efforts to preserve the structures will be made in the future as necessary. The Town has placed signs at the entrances to the property that prohibit using metal detectors and conducting archaeological digging.

Forest Stewardship Education

The Sudbury Conservation Commission and Historical Society will educate the Sudbury residents and visitors of the property through workshops, signs, maps, property brochures and interpretive walks. Educating the public through will assure that those interested in the management of the property have had an opportunity to learn and respond to the practices that have been recommended in this plan.

Boundary Management

STEW	All	All	Boundary Maintenance	130+/-	NA	NA	2010-2019
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Property boundary identification will be done by hanging property signs at points along the boundary lines. There are surveys of the property and abutting properties that can be used to locate the boundary lines. Locating the boundary lines will protect the property from abutter encroachment and help the Conservation Commission when conducting management on the property.

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Owner(s) Town of Sudbury, Conservation Commission Town(s) Sudbury

MANAGEMENT PRACTICES
to be done within next 10 years

OBJ	STD NO	TYPE	SILVICULTURAL PRESCRIPTION	AC	TO BE REMOVED		TIMING
					BA/AC	TOT VOL	

Timber Management

STEW	4,5,7	WO	Improvement Thin By Selection Harvest	25+/-	40 sqft	65 MBF & 125 Cords	2010-2019
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Timber management on the property will be considered by the Conservation Commission during the next ten years of management, although it is not a high priority at this time and may not be conducted. The following recommendations are a guide to managing Stands 4, 5 and 7 if a harvest of forest products is pursued in the future.

Management will focus on harvesting mixed oak, white pine and mixed hardwood poles and sawtimber of poor to good quality by selection harvesting. Removing individual and small groups of trees will be done to improve the growth and value of the developing high quality white pine and mixed oak poles and developing sawtimber. The harvest will be designed to release advanced regeneration as well as improve growing conditions of trees in the pole (4-11" DBH) and small sawtimber (12-16" DBH) classes. The cutting will assist in the development of wind-firm trees. The percentage of the overstory removal will vary based on the varying tree sizes and stand density that currently exists within the three stands. The target is to harvest approximately 20 to 30% of the overstory. Thinning will also prepare the site for new production in the understory. Utilizing the wood to the lowest possible diameter will be done to maintain good aesthetics. Selecting a harvester with the ability to chip tops will also be considered for aesthetic purposes. No-cut zones will be defined in areas near houses along Plympton Road, Filedstone Farm Road and Water Row in order to maintain abutter privacy and screening.

Timber harvesting will help create forest diversity by creating different stages of growth within the forest. The following narrative (which is also found on page 9) explains the importance of forest diversity and how active management can help provide diverse forest habitats beneficial for wildlife.

Managing for Diversity – *“Many species of wildlife need a variety of plant communities to meet their lifecycle requirements. In general, a property that contains a diversity of habitats will support a more varied wildlife population. A thick area of brush and young trees might provide food and cover for grouse and cedar waxwing; a mature stand of oaks provides acorns for foraging deer and turkey; while an open field provides the right food and cover for cottontail rabbits and red fox. It is often possible to create these different habitats on your property through active management. The appropriate mix of habitat types will primarily depend on the composition of the surrounding landscape and your objectives. It may be a good idea to create a brushy area where early successional habitats are rare, but the same practice may be inappropriate in the area’s last block of mature forest”.*

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Owner(s) Town of Sudbury, Conservation Commission Town(s) Sudbury

Signature Page Please check each box that applies.

CH. 61/61A Management Plan I attest that I am familiar with and will be bound by all applicable Federal, State, and Local environmental laws and /or rules and regulations of the Department of Conservation and Recreation. I further understand that in the event that I convey all or any portion of this land during the period of classification, I am under obligation to notify the grantee(s) of all obligations of this plan which become his/hers to perform and will notify the Department of Conservation and Recreation of said change of ownership.

Forest Stewardship Plan. I pledge to abide by the management provisions of this Stewardship Management Plan for a period of at least ten years, following approval. I understand that in the event that I convey all or a portion of the land described in this plan during the period of the plan, I will notify the Department of Conservation and Recreation of this change in ownership.

Signed under the pains of perjury:

Owner(s) X  (Conservation Commission) Date 6/28/10
_____ Date _____

I attest that I have prepared this plan in good faith to reflect the landowner's interest.

Plan Preparer  Date 6-24-2010

I attest that the plan satisfactorily meets the requirements of CH61/61A and/or the Forest Stewardship Program.

Approved, Service Forester _____ Date _____

Approved, Regional Supervisor _____ Date _____

In the event of a change of ownership of all or part of the property, the new owner must file an amended Ch. 61/61A plan within 90 days from the transfer of title to insure continuation of Ch. 61/61A classification.

Owner(s) Town of Sudbury, Conservation Commission Town(s) Sudbury

Sudbury Conservation Commission Property
King Philip, Piper, Dickson, Libby Lots
Sudbury, Massachusetts
2008 Aerial Photo



660 0 660 1320 Feet



Prepared by:
New England Forestry Consultants, Inc.
Shannon R. Small, Consulting Forester
Maine License # LF675
New Hampshire License # 409
June 2, 2010

Sketch map for management and planning purposes only, NOT A LEGAL SURVEY
Data obtained from MASS GIS, & New England Forestry Consultants, Inc.



Prepared By:
Gary H. Gouldrup
Consulting Forester
5/26/2010

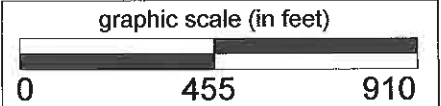
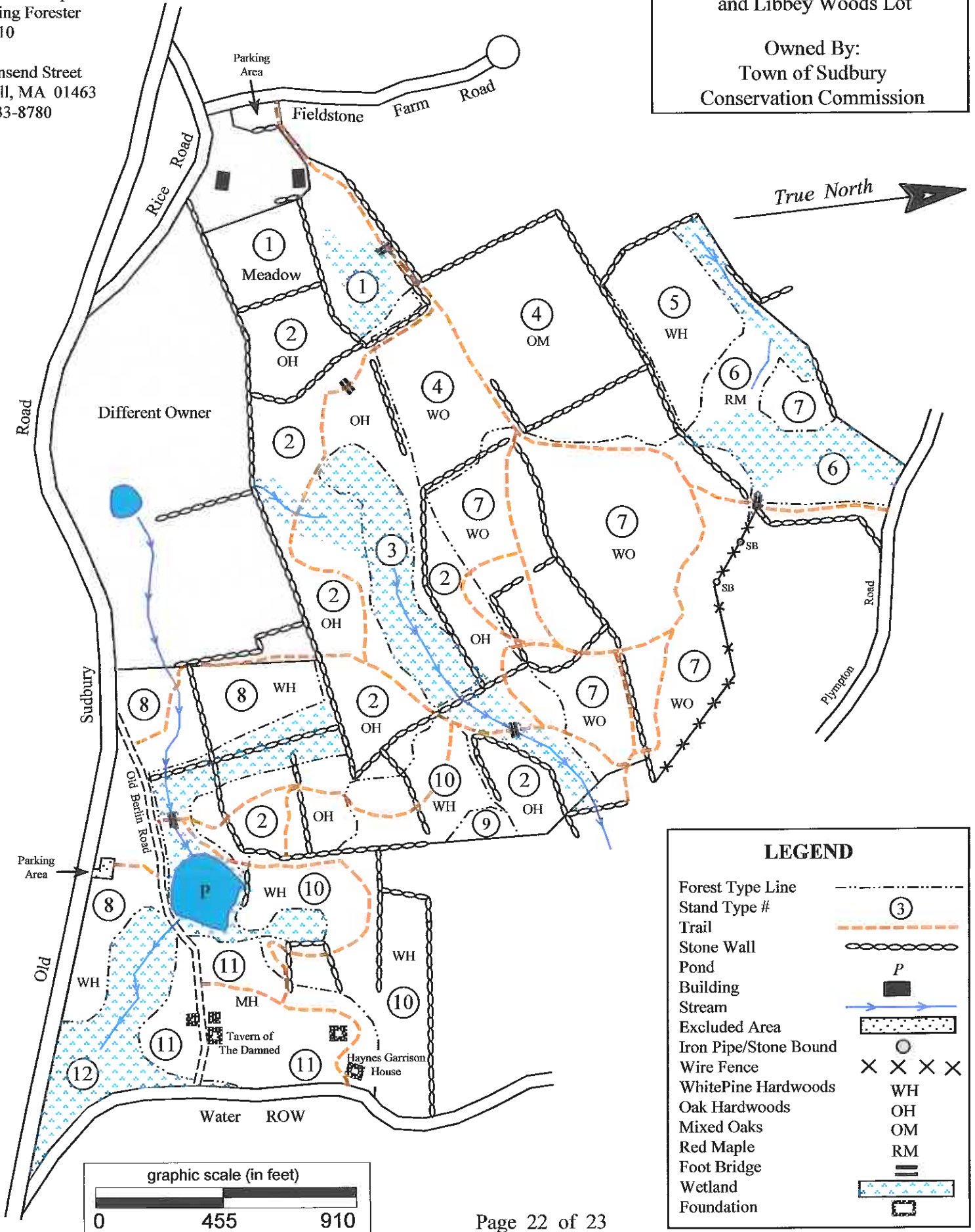
72 Townsend Street
Pepperell, MA 01463
(978) 433-8780

*Metes & bounds are approximate
and based on the Town of Sudbury
Assessor's Maps, Survey of Land,
and GPS Field Work.*

STAND TYPE MAP

Land in Sudbury, MA
King Philip, Piper, Dickson
and Libbey Woods Lot

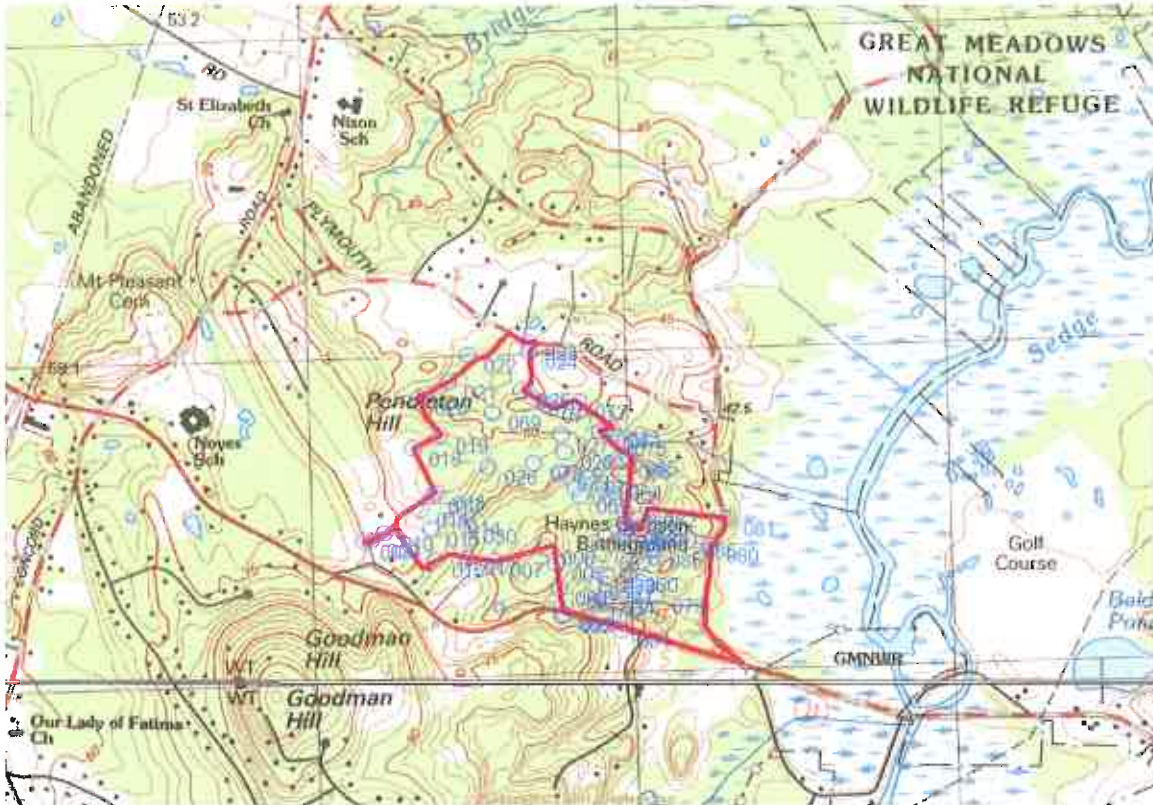
Owned By:
Town of Sudbury
Conservation Commission



TOPOGRAPHICAL MAP

Land In:
Sudbury, MA

Owned By:
Town of Sudbury, Conservation Commission



Topographical Map – Maynard Quadrangle

Scale 1 inch = 2000 feet

June 10, 2010

Prepared By: Gary H. Gouldrup, New England Forestry Consultants, Inc.