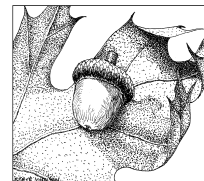




FOREST MANAGEMENT PLAN

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 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>Marlboro</u>	
			CR Holder _____		Rare Spp. Hab. _____	River Basin <u>SuAsCo</u>	

OWNER, PROPERTY, and PREPARER INFORMATION

Property Owner(s) Town of Southborough, Southborough Town Forest
Mailing Address 17 Common Street, Southborough, MA 01772 Phone 508-485-0710

Property Location: Town(s) Southborough Road(s) Walnut Dr., Woodland Rd. & Old Oregon Rd.

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
22	14	35911	114	1.57	NA	NA	0.00	1.57
22	3.A	6115	181	20.02	NA	NA	0.00	20.02
22	2	35911	116	1.95	NA	NA	0.00	1.95
22	15	35911	118	0.75	NA	NA	0.00	0.75
23	8	5333	551	21.00	NA	NA	0.00	21.00
23	6	5333	551	13.50	NA	NA	0.00	13.50
30	17	35911	118	0.22	NA	NA	0.00	0.22
TOTALS				59.01	0.00	NA	0.00	59.01

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

There are no excluded areas.

HISTORY Year acquired 1973 Year management began 2011

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

(if additional space needed, continue on separate page)

Previous Management Practices (last 10 years)

Stand #	Cutting Plan #	Treatment	Yield	Value	Acres	Date
<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>

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

This is the first Forest Management Plan prepared for the Southborough Town Forest

RECORDS (continued)

Assessor's Map No.	Lot/Parcel No.	Deed Book	Deed Page	Total Acres	Ch61/61A 61B <i>Excluded</i> Acres	Ch61/61A 61B Certified Acres	Stewshp <i>Excluded</i> Acres	Stewshp Acres
22	14	35911	114	1.57	NA	NA	0.00	1.57
22	3.A	6115	181	20.02	NA	NA	0.00	20.02
22	2	35911	116	1.95	NA	NA	0.00	1.95
22	15	35911	118	0.75	NA	NA	0.00	0.75
23	8	5333	551	21.00	NA	NA	0.00	21.00
23	6	5333	551	13.50	NA	NA	0.00	13.50
30	17	35911	118	0.22	NA	NA	0.00	0.22
TOTALS				59.01	0.00	NA	0.00	59.01

EXCLUDED AREA DESCRIPTION (continued):

There are no excluded areas.

HISTORY (continued):

The original 54.52 acres of the Southborough Town Forest was acquired in 1973.

This is the first management plan that has been for the property.

Trail construction and maintenance has been the primary management pursuit on the property.

No timber harvesting has been conducted on the property.

Owner(s) Town of Southborough, Town Forest

Town(s) Southborough



Property Overview, Regional Significance, and Management Summary

The Southborough Town Forest is located in a residential area of southeast Southborough near the point where Southborough, Ashland and Framingham come together. The property is divided by the Massachusetts Turnpike (Interstate 90). Access and parking can be obtained off of Walnut Drive, Woodland Road and Vine Street.

Nearby lands with long term protection include the Wilfred J. Turenne Property (18-acres) owned by the Sudbury Valley Trustees. The SVT property is located on the north side of the Bay Path Trail off of Walnut Drive. A small parking lot has been created on the SVT property. Another nearby parcel with long term protection is the Breakneck Hill Conservation land (88-acres) located on the west side of Woodland Road.

The property lies in the SuAsCo Watershed approximately 0.6 miles south of the Sudbury Reservoir, 1.75 miles southwest of the Foss Reservoir and 2.5 miles west of the Bracket Reservoir. All three reservoirs are secondary public drinking water supply sources. Southborough's main water supply comes from the Quabbin Reservoir. Water that passes through the property flows southeast for approximately 1.5 miles into the Sudbury River in Ashland.

Forest soils on the property are capable of producing high quality timber resources. The upland areas consist of well drained rock outcrop soils (Chatfield-Hollis) and moderately drained fine sandy loam soils (Woodbridge-Canton). The wetland areas are somewhat poorly and poorly drained fine sandy loam (Whitman). Exposed ledge and shallow soils are found in the highest elevations of the property.

The property is comprised of primarily mature upland forest types (85%) which include mixed oaks, oak-hardwoods, and white pine-oak. Seasonally wet and low lying areas along drainage ways consist of red maple and white ash. Forest health is generally good although overstocking in some sections of the mature woodland areas is not allowing the developing, best formed and highest quality trees to grow to their full potential. Invasive and non-native vegetation on the property is not a major concern at this time; however buckthorn, honeysuckle, firebush and Japanese barberry were present during the inventory of forest resources.

The Forest Stewardship Committee for the Southborough Town Forest would like to provide public access and passive recreation, improve wildlife habitat, improve the health of the forest, identify invasive species and treatment options, determine forest boundaries, identify unique features, and identify opportunities for trail improvements.

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			X	
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:				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:

Provide public access, passive recreation, improve wildlife habitat, improve health of the forest, identify invasive species and treatment options, determine forest boundaries, identify important & unique features, identify opportunities for trail improvements.

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:

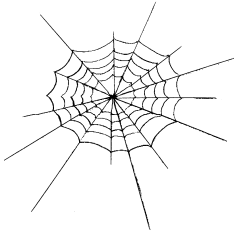
1. Managing for long-term forest health, productivity, diversity, and quality.
2. Conserving or enhancing water quality, wetlands, soil productivity, biodiversity, cultural, historical and aesthetic resources.
3. Following a strategy guided by well-founded silvicultural principles to improve timber quality 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): _____

Date: _____

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.)

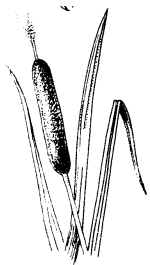


Rare Species: Rare species include those that are **threatened** (abundant in parts of its range but declining in total numbers, those of **special concern** (any species that has suffered a decline that could threaten the species if left unchecked), and **endangered** (at immediate risk of extinction 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.

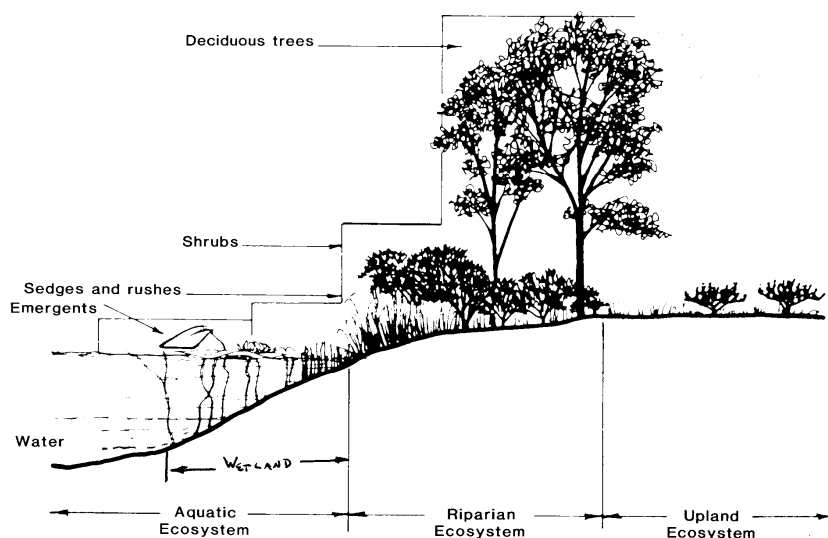


Figure 1: Example of a riparian zone.

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	OH	39.19	11.1" DBH Sawtimber-Pole	110 sqft	5,407 BF & 21.6 Cds	60 (RO)

Red oak, black oak and white oak are the dominant overstory species in this well stocked sawtimber and pole sized stand. Scattered hickory, red maple, sugar maple, white pine, pitch pine, black birch and white ash poles and sawtimber of poor to good form and timber quality can also be found. Forest regeneration is fair with advanced mixed hardwood and white pine saplings. The understory vegetation includes witch hazel, highbush blueberry, huckleberry and ferns. The area is gently to steeply sloped with areas of exposed ledge and shallow soils. The soils consist of well drained rock outcrop, moderately drained fine sandy loam (Woodbridge-Canton) and poorly drained fine sandy loam (Whitman). There are small wetland inclusions and drainage ways scattered throughout the stand as well. The soils are capable of producing high quality timber resources. Management will focus on recreation enhancement, woodland improvement and biological diversity. The desired future condition is a stand that is growing healthy trees that provide habitat for wildlife and recreational opportunities for the public.

STEW	2	MS	0.95	Open Wetland Ponded	NA	NA	40 (RM)
------	---	----	------	------------------------	----	----	---------

This open wetland resource area is vegetated primarily with wetland shrubs and plants which include highbush blueberry, winterberry, sweet pepperbush, swamp azalea, alder, and grasses. Red maple trees can be found growing along the edges and drier sections of the area. Open water is an attraction to wood ducks and local wetland wildlife. The area is flat and hummocky in spots with very poorly drained soils (Whitman). Management will focus on wildlife habitat enhancement by installing a wood duck box. Recreation enhancement will also be considered by creating scenic vistas and installing a bench for resting and allowing hikers to view this unique site on the property. The desired future condition is an area that provides habitat for wetland wildlife and provides scenic views for hikers.

STEW	3	WH	1.57	9.3" DBH Pole-Sawtimber	90 sqft	5,169 BF & 13.5 Cds	63 (WP)
------	---	----	------	----------------------------	---------	------------------------	---------

White pine and mixed hardwoods dominate the overstory species in this adequately stocked pole and sawtimber sized stand. The white pine stems range from fair to good in form and timber quality. The mixed hardwood component includes white birch, yellow birch, red maple, elm, white ash, black cherry and mixed oak poles and sawtimber of poor to good form and timber quality. Forest regeneration is advanced and includes mixed hardwood saplings. Witch hazel is common in the understory. There is an area at the corner of Kidder Lane and Woodland Road (0.3-acres) that has been landscaped by the Kidder Lane housing development. The area includes Norway maple, river birch, Colorado blue spruce and ornamental trees. Honeysuckle, barberry, azalea grass and flowers have all been planted here as well. The area is gently sloped with well drained and moderately drained soils (Chatfield-Hollis). Forest soils are capable of producing high quality timber resources. No management is recommended in the woodlands of this area. The Forest Stewardship Committee may consider creating a parking area within the landscaped area along Kidder Lane. The desired future condition is a stand that provides habitat for wildlife and a parking area for the public.

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 Southborough, Town Forest

Town(s) Southborough

STAND DESCRIPTIONS

OBJ	STD NO	TYPE	AC	MSD OR SIZE-CLASS	BA/AC	VOL/AC	SITE INDEX
STEW	4	RM	3.80	10.5" DBH Pole-Sawtimber	60 sqft	1,700 BF & 13.4 Cds	50 (RM)

Red maple is the dominant overstory species in this wetland resource area. The red maple stems are poor to good in form and timber quality. Scattered white ash and mixed oak poles and sawtimber of poor to good form and timber quality can also be found. Species composition, stand density and size class varies throughout the area. Northern sections tend to be open with a dense shrub understory. The southern sections of the stand are generally well stocked with trees. The understory vegetation includes highbush blueberry, swamp azalea, winterberry, spicebush, arrowwood, buckthorn and ferns. The area is flat, rocky in spots with poorly drained fine sandy loam soils (Canton). Management will focus on maintaining the trails and footbridge for recreation. The desired future condition is a stand that provides habitat for wildlife and to continue to provide a safe trail system for the public.

STEW	5	WO	13.50	12.3" DBH Sawtimber-Pole	136 sqft	7,750 BF & 27.3 Cds	63 (WP)
------	---	----	-------	-----------------------------	----------	------------------------	---------

White pine and mixed oaks dominate the overstory of this overstocked sawtimber and pole sized stand. Timber form and quality varies throughout this stand that has not been managed in the past. Timber of poor to good form and quality can be found. Scattered pockets and individual stems of red maple, white ash, hickory and black birch of poor to fair form and timber quality are present as well. Forest regeneration is scattered and includes mixed hardwood and white pine saplings. Witch hazel, buckthorn, lowbush blueberry and huckleberry are present in the understory in the upland areas of the stand. The low lying and wetland resource areas are vegetated with highbush blueberry, sweet pepperbush, swamp azalea, winterberry, ferns and grasses. The terrain is flat to steeply sloped with areas of exposed ledge and shallow soils. The upland area soils are generally well drained rock outcrops (Chatfield-Hollis) with areas of moderately drained and poorly drained fine sandy loam (Canton-Whitman). Management will focus on recreation enhancement, woodland improvement and biological diversity. The desired future condition is a stand that is growing healthy trees that provide habitat for wildlife and recreational opportunities for the public.

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 Southborough, Town Forest Town(s) Southborough

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 Protect Rare & Endangered Species	59+/-	NA	NA	2012-2021
------	-----	-----	---	-------	----	----	-----------

The landowner is interested in promoting biological diversity on the property. Eliminating any invasive non-native trees, plants and shrubs will be done where these species exist and when economically feasible and practical. Protecting rare, endangered, and watch list species on the property will be done if any are known to exist, or are found in the future. The Massachusetts Natural Heritage Program will be contacted to determine what species may be present on the property and how to best protect that species. Another biodiversity issue is the distribution of forest growth stages. Maintaining and creating multiple age classes throughout the forest will be a goal of the Conservation Commission. Please see the Biological Diversity issues on page #5 for more information.

Recreation Management

STEW	All	All	Trail Management	59+/-	NA	NA	2012-2021
------	-----	-----	------------------	-------	----	----	-----------

Most of the trails on the property have been established for many years. Existing trails will be maintained by removing hazard trees, pruning, footbridge and resting station construction, and general repairs when necessary. Extending the trails to special points of interest (e.g., large erratic boulders, vernal pools, and potential vista sites) will also be done. Interpretive signs and trail markers will be placed along the trails for educational purposes. A trail guide is available for areas north of Interstate 90 at the Wilfred J. Turenne Wildlife Habitat property parking area. An updated trail map for the Southborough Town Forest property showing points of interest is recommended. Creating a small parking area along Woodland Road and at the end of Vine Street will also be considered.

Timber Management

STEW	1 & 5	OH	Salvage Harvest Improvement Thin	50+/-	5 sqft	25 Cords	2012-2021
------	-------	----	-------------------------------------	-------	--------	----------	-----------

Timber management is not a high priority on this property at this time. Trees within this forest are providing a sound buffer between the Interstate highway and abutting residential dwellings. Any tree harvesting will focus on salvaging trees that have been storm damaged, or trees that may be a safety hazard along the trails and in the parking lot areas. Improvement thinning of trees that are suppressed or suffering from insect or disease may also be removed to promote a healthy forest environment and reduce forest fire threats. Trees cut for these purposes will be removed for firewood.

MANAGEMENT PRACTICES
to be done within next 10 years

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

Wildlife Habitat Enhancement

STEW	2	MS	Artificial Nest Box Wood Duck Management	1+/-	NA	NA	2012-2021
------	---	----	---	------	----	----	-----------

This wetland resource area provides habitat for **wood ducks**. The open water and emergent vegetation within this area is 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 boxes 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 this area on an experimental basis.

Boundary Management

STEW	All	All	Identify, Blaze & Paint	59+/-	NA	NA	2012-2021
------	-----	-----	-------------------------	-------	----	----	-----------

Boundary identification of the property lines will be done to protect the property from encroachment and assist the landowner when conducting management near the property lines. The property lines will be identified with property signs or by blazing and painting. The boundary lines will be identified periodically over the next ten years of management. High priority boundary lines are located in the northwest corner of this forest along Woodland Road, Kidder Lane and the Bay Path Trail. There was no evidence of boundary lines observed in these areas. There are several survey Plans of abutting parcels that can be used to identify the property lines.

Forest Stewardship Education

Educating the public through workshops, signs, maps and interpretive walks will assure that visitors using the property have had an opportunity to learn and be able to respond to the practices that have been completed and recommended in this plan. Compiling a comprehensive list of the wildlife and flora on the property is also recommended. This will also build a greater understanding and knowledge of the property as a whole.

OBJECTIVE CODE: CH61 = Forest Products (for Ch. 61/61A) STEW= Stewardship Program practices
 STD= stand Type= Forest type AC= acre MBF= thousand board feet BA= basal area VOL= volume

Owner(s) Southborough Town Forest Town(s) Southborough

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) _____ Date _____

_____ Date _____

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

Plan Preparer _____ Date _____

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) Southborough Town Forest Town(s) Southborough

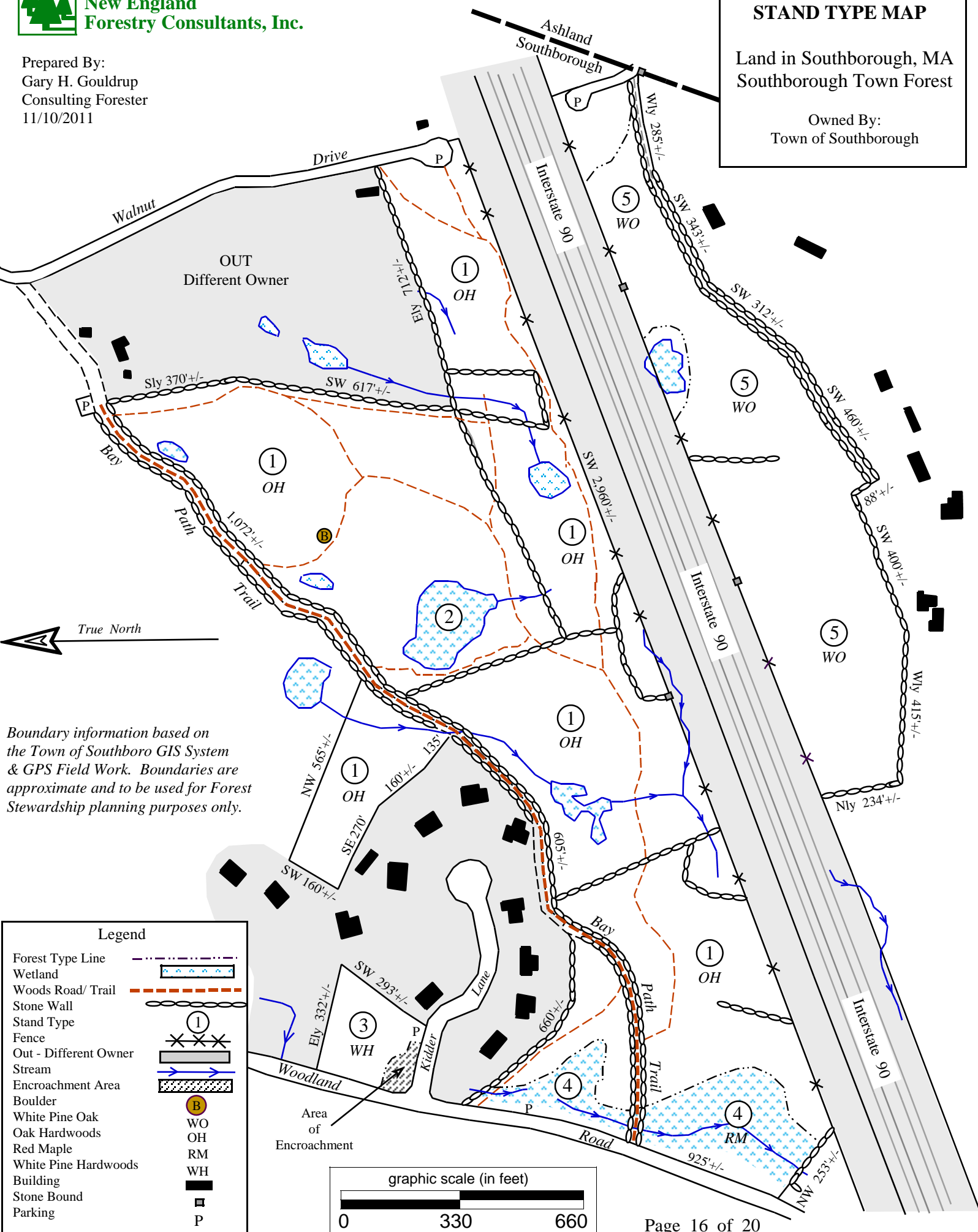


Prepared By:
Gary H. Gouldrup
Consulting Forester
11/10/2011

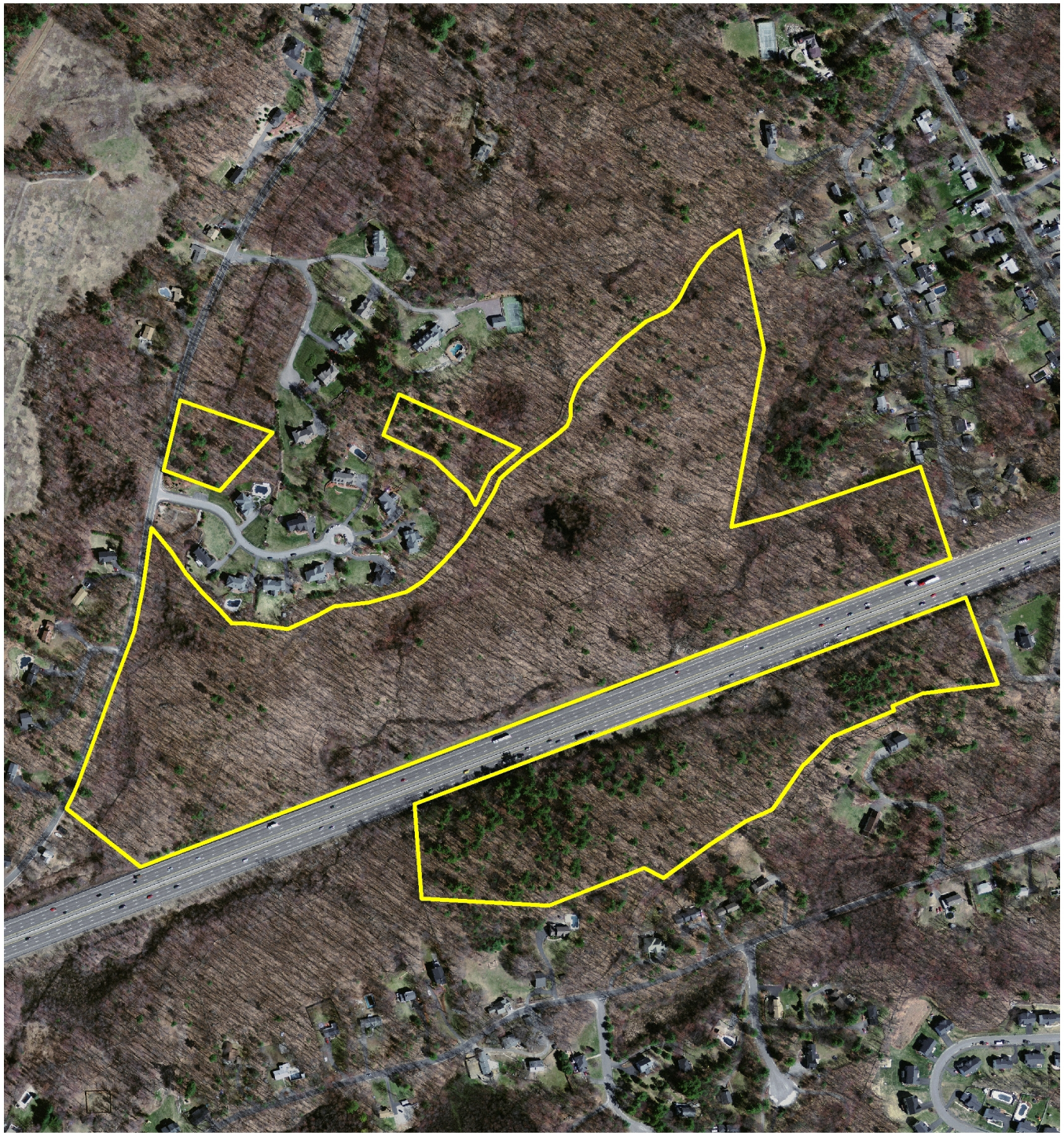
BOUNDARY & STAND TYPE MAP

Land in Southborough, MA
Southborough Town Forest

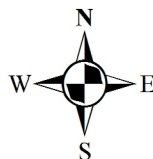
Owned By:
Town of Southborough



Southborough Town Forest
Southborough, Massachusetts
2008 Aerial Photo



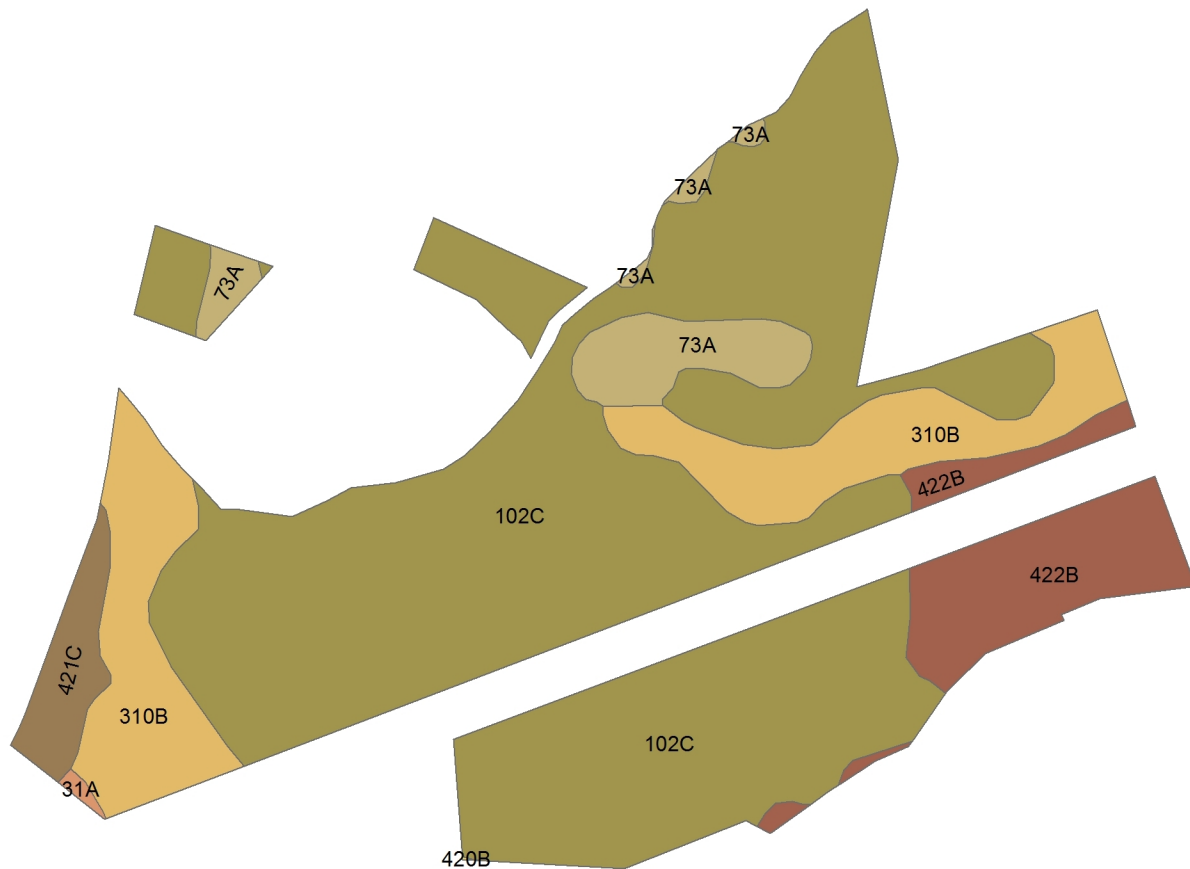
500 250 0 500 1,000 Feet



Prepared by:
New England Forestry Consultants, Inc
Sherman R. Small, Consulting Forester
Maine License # LF655
New Hampshire License # 409
November 14, 2011

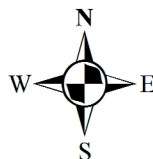
Sketch map for management and planning purposes only, NOT A LEGAL SURVEY
Data obtained from MASS GIS, & New England Forestry Consultants, Inc.

Southborough Town Forest
Southborough, Massachusetts
Soils Map



307B Soils Symbol

500 250 0 500 1,000 Feet



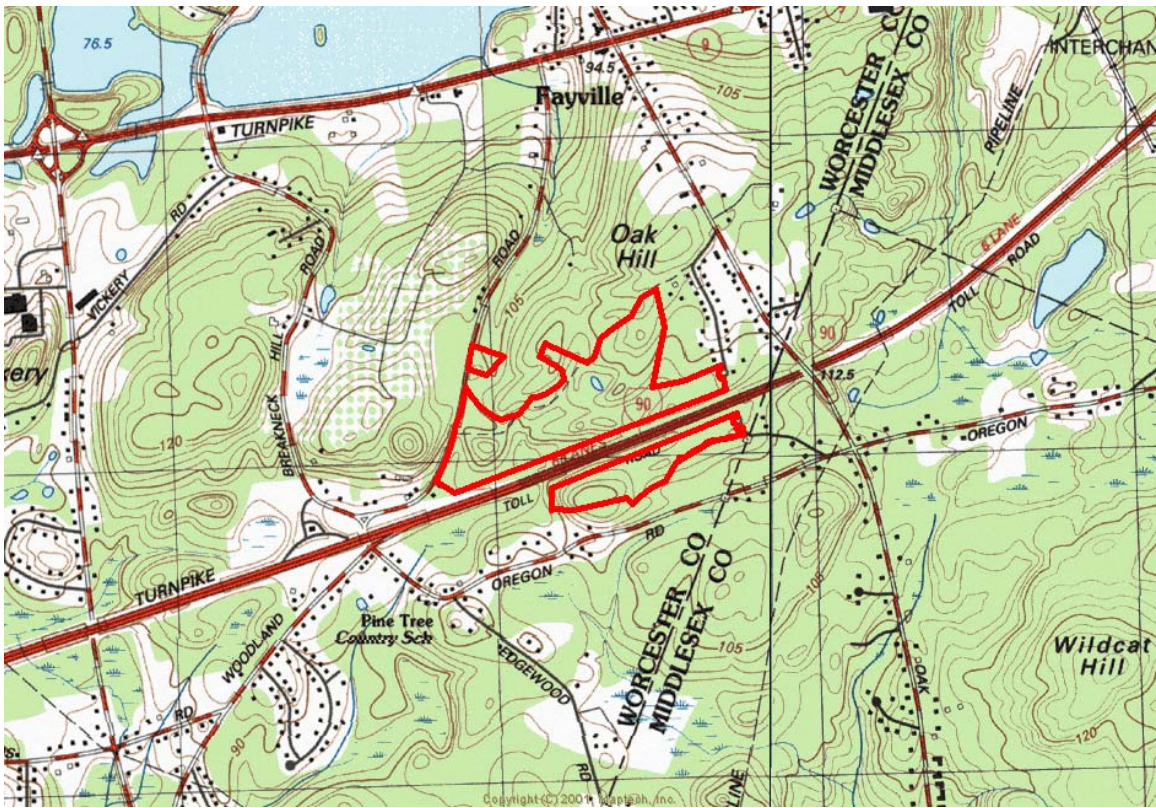
Prepared by:
New England Forestry Consultants, Inc
Sherman R. Small, Consulting Forester
Maine License # LF655
New Hampshire License # 409
November 14, 2011

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

LOCUS MAP

Land In:
Southborough, MA
Southborough Town Forest

Owned By:
Town of Southborough
17 Common Street
Southborough, MA 01772



Topographical Map – Marlborough Quadrangle

Scale 1 inch = 2000 feet

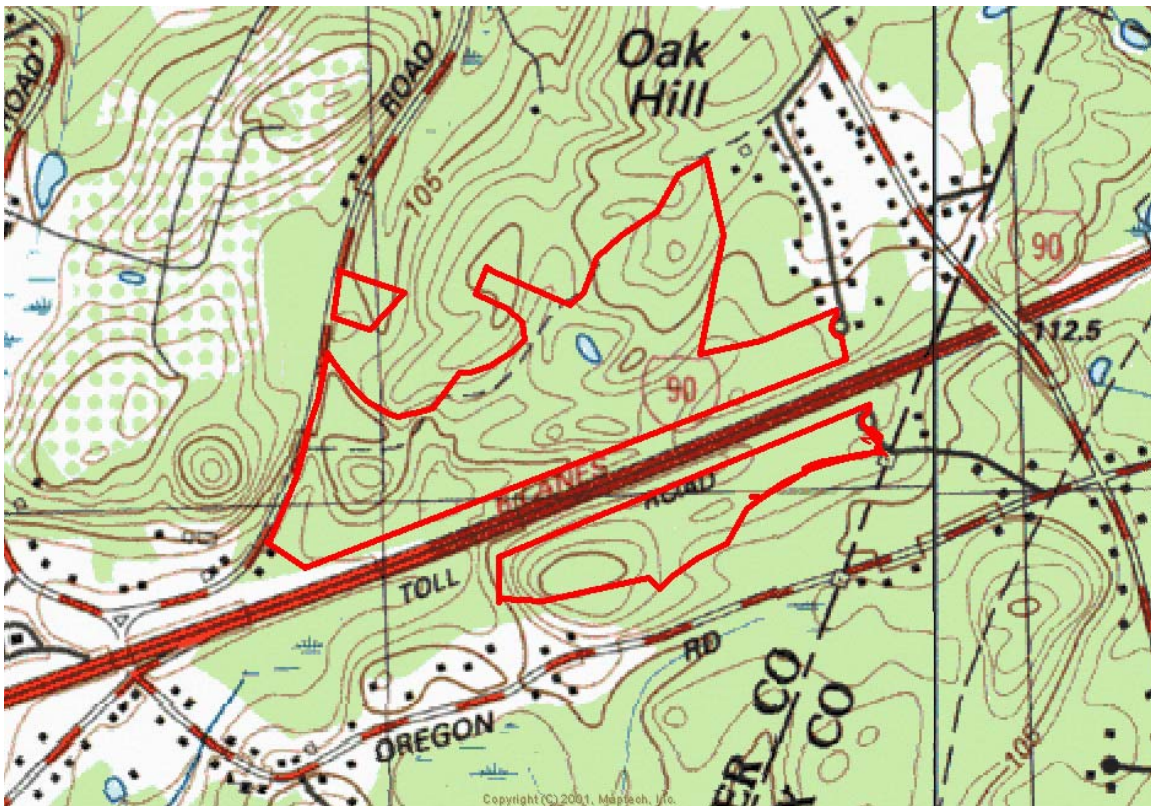
November 14, 2011

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

CONTOUR MAP

Land In:
Southborough, MA
Southborough Town Forest

Owned By:
Town of Southborough
17 Common Street
Southborough, MA 01772



Topographical Map – Marlborough Quadrangle

Scale 1 inch = 1000 feet

November 14, 2011

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