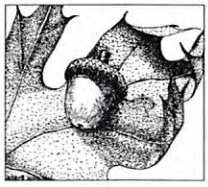
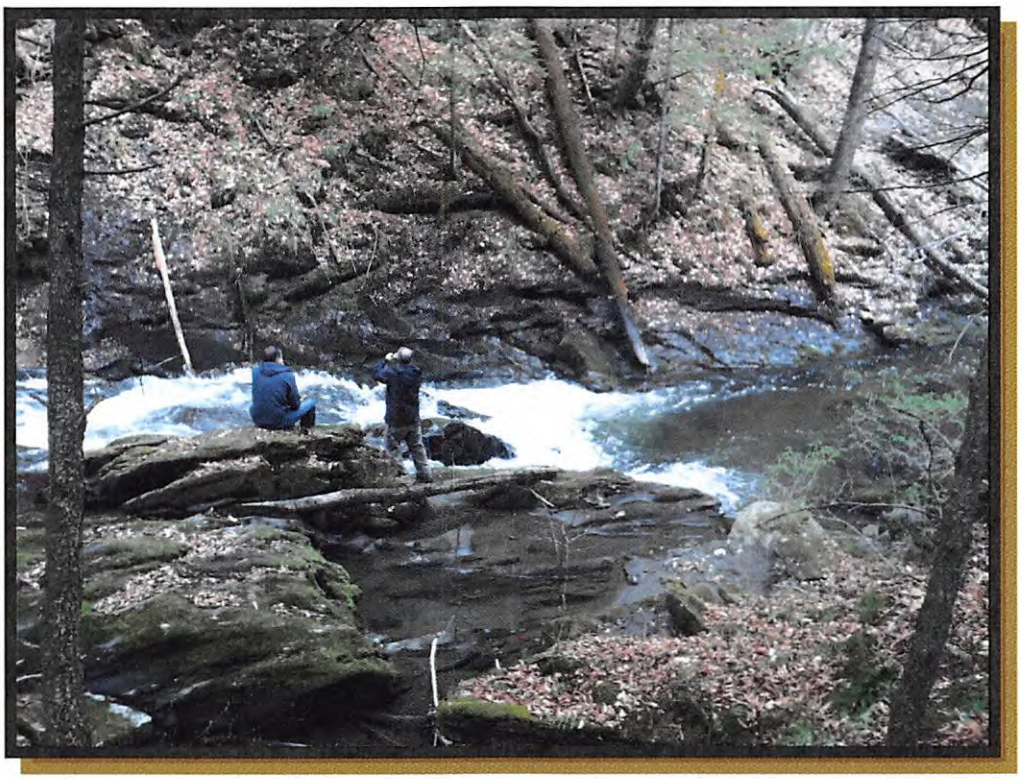
dcr



# Woodland Enhancement Plan

## DCR Working Forest Initiative



## For property belonging to:

Mary and John Sample
Sample Road, Shelburne, MA 01370

## Prepared by:

**Alex Tree**
123 Multiple Use Rd, Big Tree, MA

dcr
Massachusetts

## How to use this report

When your consulting forester visited your property they were documenting many things: (1) the current health and timber quality of the trees in your woods, (2) cultural resources such as stone walls and cellar holes, (3) presence/absence of exotic invasive species, (4) wetlands and terrain features, (5) current forest bird habitat conditions, (6) identifying specific opportunities for protecting and/or enhancing timber quality, tree regeneration and bird habitat, (7) suggesting options for improving habitat over a 10-year period. After reading this report you might consider some of the following steps:

**Learn more about the habitat and birds on your property.** Whether you're a seasoned birder or just beginning, we hope that this report will show you something new about your property and encourage you to learn more. You can begin by learning to identify the *Birder's Dozen* by sight and sound, if you don't know them already. Start taking notes on when and where you see birds in your woods. If you want help setting up a simple monitoring program let us know and we can help you set something up. To learn more about the birds that breed in Massachusetts, check out the Breeding Bird Atlas 2 (www.massaudubon.org/birdatlas/bba2) and State of the Birds reports (www.massaudubon.org/sotb). **Share this report with neighbors, friends, and family.** Help us spread the word about the importance of breeding habitat for forest birds found here in New England. Teach your neighbors how to identify the priority species, and let others know about the services being offered by Mass Audubon and the DCR Working Forest Initiative. By involving your neighbors in management planning you can maximize the impacts of your efforts by crossing property boundaries and increasing the amount of land you enhance. The benefits for birds and forest health will be worth the coordination effort.

**Contact Mass Audubon or your DCR Service Forester with any questions when you're planning management activities.** We would be happy to follow up with you, answer questions, and assist with any implementation of our recommendations.

- Mass Audubon–birdconservation@massaudubon.org
- DCR – DCR.Forestry@state.ma.us

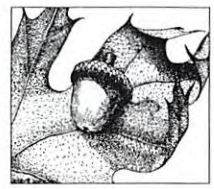
  Or *google*: MA DCR Service Forestry Program

Photo credit: David Larson

dcr

# FOREST MANAGEMENT PLAN

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



## CHECK-OFFS

| CH61 | | CH61A | | CH61B | | STWSHP | | C-S | |
|---|---|---|---|---|---|---|---|---|---|
| cert. | ☒ | cert. | ☐ | cert. | ☐ | new | ☒ | EEA | ☒ |
| recert. | ☐ | recert. | ☐ | recert. | ☐ | renew | ☐ | Other | ☐ |
| amend | ☐ | amend | ☐ | amend | ☐ | FSC | ☐ | Birds | ☒ |
| | | | | | | Conservation Rest. | | | ☒ |

Plan Change: _____ to _____

CR Holder FLT

## Administrative Box

| | | | |
|---|---|---|---|
| Case No. | | Orig. Case No. | |
| Owner ID | | Add. Case No. | |
| Date Rec'd | | Ecoregion | |
| Plan Period | | Topo Name | Shel.Fls |
| Rare Spp. Hab. | | River Basin | Deerfld |

## OWNER, PROPERTY, and PREPARER INFORMATION

Property Owner(s) Mary and John Sample
Mailing Address Sample Road, Shelburne, MA 01370 Phone (999) 999-9999
Email Address sample132@outlook.net

Property Location: Town(s) Shelburne Road(s) Sample Road

**Plan Preparer** **Alex Tree** Mass. Forester License # 00
Mailing Address 123 Multiple Use Rd, Big Tree, MA Phone (999) 111-1111

## 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 |
|---|---|---|---|---|---|---|---|---|
| B | 01 | 9999 | 999 | 150 | 20 | 130 | 20 | 130 |
| | | | | | | | | |
| | | | | | | | | |
| | | | TOTALS | 150 | 20 | 130 | 20 | 130 |

**Excluded Area Description(s)** **(if additional space needed, continue on separate paper)**
Beginning on the westerly side of Bassett Road at the northernmost point of the property, thence: N82W 562', S40W 635', S82E 470', S17E 230', S30W 280', S75E 360', N58E 380', N6E 245', N24W 250'to Bassett Road, northerly on Bassett Road 200' to point of beginning. Excluded area totals 20 acres and includes house, barn and open fields.

## HISTORY

Year acquired 2011 Year management began 2011

Are boundaries marked: Yes ☐ (blazed/painted/flagged/signs posted (circle all that apply)? No ☐ Partially ☒

What treatments have been prescribed, but not carried out (last 10 years if plan is a recert.)?

stand no. _____ treatment _____ reason _____
(if additional space needed, continue on separate page)

Previous Management Practices (last 10 years)

| Stand # | Cutting Plan # | Treatment | Yield | Acres | Date |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |

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

## 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 | | | |
| Attain Green Certification<br>Other: | | | | |

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

In your own words, describe your goals for the property:

To enhance the wildlife habitat of our property and to reduce property taxes so that we can continue to be long-term stewards of the land

## 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 sustainably for long-term forest health, productivity, diversity, and quality.
2. Conserving or enhancing water quality, wetlands, soil productivity, carbon sequestration, 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):** Mary and John Sample **Date:** _____

Owner(s) (print) _____

(This page will be included with the completed plan.)

# Property Overview, Regional Significance, and Management Summary

## Property Description

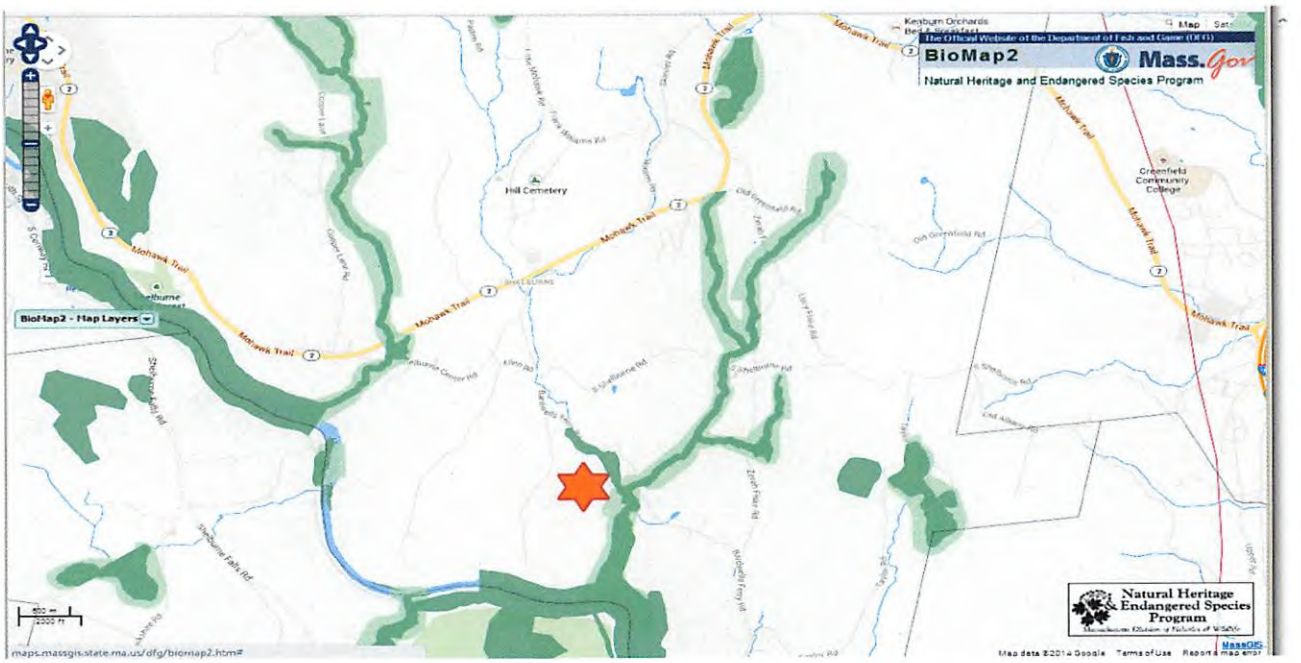
This property occupies 150 acres of flat to steeply sloping terrain with a general southerly aspect in the southeast corner of Shelburne. The property is 87% wooded. The open land is confined to the northern end of the property where the old farmhouse and barn are surrounded by open fields. The property is largely upland; however, Dragon Brook and its deep ravine form the eastern boundary of the property and exert a profound visual influence on it. Two smaller brooks drain north to south across the main body of the property. All the overland flow of water from this property flows south to the Deerfield River, which flows just 200' feet off of the southern boundary. The larger brooks on the property have very steep banks, indicating that there is potential for erosion.

## Regional Significance

The village of Shelburne Falls is located approximately 4 miles northwest, up the Deerfield River. The larger community of Greenfield is located approximately 4 miles to the east in the Connecticut River Valley. The hilly communities of Shelburne, Deerfield and Conway are a mosaic of farm fields on the more gradual slopes and forest on the more rugged terrain. The surrounding landscape is roughly 75% forested.

This property is protected from development by a Conservation Restriction held by Franklin Land Trust. While development is prohibited, land uses such as forestry and agriculture are permitted with safeguards to protect the integrity of the land. The abutting 240 acre property to the west is also protected by a CR. Many properties along the Deerfield River are protected as well, such as the South River State Forest, and flood control land owned by the Corps of Engineers and by power companies.

Biomap core habitat is located along Dragon Brook.
http://maps.massgis.state.ma.us/dfg/biomap/pdf/town_core/Shelburne.pdf




Owner(s) Sample Town(s) Shelburne

**History**

In the not distant past, the open agricultural land on this property was roughly twice as extensive as it is now. Stand 3, 5&6 show telltale signs of having been cleared for agriculture and used within the past 50 years (stone walls, barbed wire, remnants of field juniper and other pasture plants, plus limby trees that were obviously grown under open field conditions). Looking more than 100 years back, it is likely the entire property was used at various times for both pasture, hayland, orchard and cultivation.

In addition to agricultural clearing, the forest here has been altered by harvesting. The most recent harvesting on this property took place in the 1980's approximately 25-30 years ago, and was done with silvicultural improvement in mind, as the remaining trees are largely the good quality, well-formed specimens. Prior to that, harvesting likely removed large pines that had grown into the abandoned pasture land along with other large trees. Heavy cuts for potash, charcoal as well as timber likely occurred earlier on land that wasn't already cleared for agriculture. Storms such as the 1938 hurricane, fire and insect/disease outbreaks have likely had impacts, but no large-scale evidence of recent disturbance was observed.

**Cultural Resources**

Cultural resources on the property include stone walls, woods roads, cleared fields, stone foundations and other remnants of human habitation, are concentrated along the relatively flat ground adjacent to the house in the northwest quadrant of the property. One notable exception is the stonework along Dragon Brook adjacent to a natural waterfall along the southeast boundary. This is likely the ruins of a pond and water powered mill. Cautions will be taken during harvesting and other work on the property to make sure that cultural resources are not adversely impacted.

**Soils and Forest Health**

The soils found on this property are derived from glacial origins. Glacial till soil types located here include Paxton, Charlton/Hollis and Canton. The productivity of a site for growing trees is directly related to depth of the soil. Consequently those sites located adjacent to ledgy outcrops are less productive that sites away from ledge. Except for the soils along the ridge of ledge on the western side of the property, all soils here have the capability to grow vigorous, tall, excellent-quality trees.

Forest health issues observed include beech bark disease. This is not surprising, as few beech in the hilltown woods are free from symptoms of this disease. Beech bark disease has ramifications for wildlife habitat as well as timber production, as relatively few beech nuts, an important wildlife food, are produced by heavily infected trees. Scattered instances of nectria canker on birch and black knot fungus on cherry were observed. Cutting infected trees is a reasonable strategy to have a limited postive impact on these tree diseases. The hemlock wooly adelgid insect is present on the property. Cottony masses can be observed on the underside of hemlock needles and some hemlocks appear olive-colored rather than green. However, early reports indicate that this past winter was cold enough to reduce the adelgid population to very low levels, which should give hemlocks a temporary reprieve of a few years. It would be inadvisable to allow hemlock to become the dominant tree in any section of this forest, as wooly adelgid is likely to remain a significant forest health problem. The emerald ash borer is almost certain to cause significant mortality of ash trees here in the not distant future. Salvage of ash trees along with other forest improvement work would be a sound management practice. The concentration of ash on the property is low enough that a logger could not make a living by salvage of ash alone. Forest improvement work on this property would present an opportunity to remove infected

and diseased trees to reduce chances of significant negative impact from insect/disease outbreaks. There appears to be fairly heavy browsing pressure from deer here, with few understory plants present that are palatable to them. Deer browsing can make it difficult to regenerate certain species, such as oak and sugar maple, that they prefer to eat.

**Invasive Species**

Another serious forest health issue is the presence of exotic-invasive plants. Heavy infestations of exotic plants can block the natural process of plant succession and prevent forests from regenerating. They also degrade wildlife habitat because their foliage is not available as food to native insects since they didn't evolve together (SeeTallamy, Douglas W. Bringing Nature Home: How Native Plants Sustain Wildlife in Our Gardens. Timber Press, 2007). Birds that feed caterpillars to their nestlings are forced to look elsewhere in a landscape dominated by exotic plants.

On this property the most common exotic-invasive plants are located around the field edges, adjacent to the power line and in the old pasture (stands 5 & 6). Species include bush honeysuckle, barberry, bittersweet, burning bush and multiflora rose. Also of concern is an infestation of garlic mustard along Dragon Brook, approximately 250' from the Deerfield River. These troublesome species should be eradicated before any management takes place that would open up the canopy. In addition, care should be taken not to inadvertantly transport exotic-invasive seed on equipment or on hiking boots.

**Wildlife Habitat**

From a wildlife habitat perspective, the property fills an important role providing both forest interior habitat and open field habitat. The components of high quality forest-interior wildlife habitat are present on the property. Large-crowned hardwoods, such as healthy beech, oak and black cherry, provide abundant wildlife food (mast) during heavy seed years. Mast production could be dramatically increased by thinning around the crowns of mast-producing trees, especially the slow-growing, but highly-prized (for acorns) white oaks. The thinning accomplished in the sugar maple glade (stand 6) has released some understory shrubs that produce wildlife food, including blackberry, highbush blueberry and winterberry. Coniferous cover is amply provided by large hemlock and pines. Large cavity/wolf trees (greater than 20" diameter) as well as large downed logs are scattered through the property and provide valuable nesting and denning habitat.

**Birds Habitat Characteristics**

A predominantly mature forested landscape punctuated by patches of your regenerating forest will provide the diversity of age classes that will benefit a wide variety of bird species. Complex structure within forest stands including large diameter trees, snags, midstory, areas of dense understory and downed woody material provide the greatest number of nesting and foraging opportunities.

Habitat strengths observed on the property include numerous large cavity trees, some mast (wildlife food-producing) trees, and a variety of forest types with both hardwood and softwood species. Within this predominantly forested landscape are agricultural areas along the main roads. The field habitat, including former orchard and hayfields provides excellent grassy habitat for bird species that have been declining regionally. Woodcock, meadowlark, and bob-o-link are examples.

Habitat features that are lacking; softmast (such as raspberry), areas of dense understory (0-5' in height); areas of young forest (openings with thick brushy habitat as opposed to grassy habitat). Some bird species that have been declining utilize brushy or young forest habitat, including Brown Thrasher, Eastern Towhee, and Woodcock. As our abandoned pasture lands have grown into mature forest, our brushy habitat has shrunk to below 3% of our landscape. Along Dragon Book large, dead woody material is plentiful but both large and fine dead woody material is lacking through the rest of the property. This material provides habitat for insects, singing perches and cover for a variety of birds.

Because mature forest, grassy and brushy habitat could exist in close proximity here, many species that utilize more than one, or all of these habitats (such as turkey, ruffed grouse and woodcock) would stand to benefit.

Recommended Management Practices will enhance these important wildlife habitat features.

**Natural Heritage and Endangered Species**

The MA Natural Heritage Program has delineated an area along Dragon Brook and the Deerfield River, a corridor approximately 400' wide from the bank, as priority habitat. This indicates that there is an aquatic organism (s) that uses this habitat that they are concerned with. Any management work in these areas is required to be reviewed by the Natural Heritage Program.

**Boundaries**

Most boundary lines are fairly clear because of natural features (e.g. Dragon Brook) or man-made features like stone walls that run along them. The south boundary is an exception and is not marked. The west and the south boundary lines should be marked by blazing and painting or other acceptable method so that they can be readily located in the woods. Clearly marked boundaries are important to prevent accidental incursions and to save time for anyone working on the property.

**Wood Products**

Estimates of forest growth are speculative, as there are many variables (ice storms, for instance) that influence how productive a forest stand can be. However, it can be interesting and useful for planning purposes to calculate how much timber a property can be expected to produce. By referring to Massachusetts forest inventory data, it can be seen that Massachusetts forests average 162 board feet of growth per acre annually. By using this figure, it can be calculated that this 109-acre woodlot can be expected to grow roughly 18,000 board feet per year. It should be noted that good forestry (improvement cuts to improve tree quality and provide adequate sunlight for residual trees) will dramatically improve this growth rate. Data from well-managed forests show growth of 352 board feet per acre annually (38,000 board feet annually on 108 acres) for similar forest types. These forest products are useful commodities that can have a beneficial effect on the local, land-based rural economy. Skilled labor is necessary for harvesting, and the sale of lumber generates economic activity for local sawmills, especially when high-quality hardwood is processed. Firewood harvesting generates a much-needed commodity and allows homeowners to avoid using fossil fuels for heat.

Access to this property for improvement work, habitat restoration work or harvesting poses no particular challenges. The terrain is gradual enough and historic harvest roads adequate so that all parts of the property, except some of the steep slopes along Dragon Brook, are accessible.

**Management Summary**

The owners of this propertydesire the benefits from multiple forest values, including wildlife habitat, forest productivity, and recreational opportunity. The management of forests for many or all of these values simultaneously is referred to in various circles as eco-forestry, ecosystem management, "green" forestry or, more traditionally, multiple use management. The significance is that cutting or harvesting on such a property will not be done for the ultimate goal of selling timber without consideration of other forest values. Rather, opportunities will be taken to manipulate the forest to enhance any of the above forest values where a significant benefit would result and the change would not adversely impact the other values.

One noticeable difference from timber management is that some trees may be retained far longer than is thrifty from a timber growing perspective. Trees may be allowed to decline or die in the woods, as many wildlife species depend on declining trees that form cavities for denning sites. For the most part, large diameter cavity trees are more desirable than small. Under multiple-value management, a tree with particular wildlife value may be retained even if its retention has a negative impact on timber growth. In general, blanket prescriptions such as a maximum diameter at which all trees should be harvested are not used in multiple-value forestry.

Aesthetics deserve mention because the tidiness of a harvesting job does more to influence most observers' opinion of that job than any other factor. While the aesthetic impact of multiple-value forestry harvests will vary from job to job, a forester will weigh the effect of different aesthetic treatment options on other forest values in order to determine management strategy. For instance, chipping slash for aesthetics is rarely used as an option since it usually consumes more revenue than most timber sales would generate. In addition, chipping would negatively impact wildlife habitat by eliminating coarse woody debris on the forest floor, an important element of habitat for many species. An option that is often considered in order to reduce the negative aesthetic impacts of harvesting is restricting the equipment used to a forwarder. A forwarder is a machine that carries, rather than drags logs out of the woods. Requiring a forwarder may result in a lower stumpage price to the landowner, since fewer operators have forwarders than have skidders. However, under the right conditions, it can result in less disruption to the forest floor and less damage to the residual trees. Requiring that slash be lopped low may also be a worthwhile investment in aesthetics by the landowner.

The management practices reflected in this document attempt to balance the landowners goals with both cost-share and revenue producing practices while enhancing wildlife and aesthetic values.

# Forest Stands

For the purposes of this report a forest stand is an easily defined area that is relatively uniform in composition, and structure, *and supports a particular suite of birds*.

**Summary of the Forest Stands on your property**

| Stand | Forest/Habitat Type | Approx. Size (acres) | Notes |
|---|---|---|---|
| 1 | Hemlock/ Hardwood association | 56 | Diverse mix of hemlock and northern hardwoods. Rich site understory plants. Some HWA infestation. Bordered by Dragon Brook and abandoned orchard. |
| 2 | Oak/Northern Hardwood association | 25 | Relatively mature stand with some very large oak specimens. Landowners thinking about regenerating oak here. |
| 3 | White Pine Hardwood | 30 | Large volume of good quality white pine mixed with northern hardwood species. Harvested in the 1980's. Northern hardwood understory with scattered pine regeneration. |
| 4 | Mixed Hardwood | 19 | Young pole forest Field abandoned in 1950's. Shallow soils. White pine is multistemed. Invasive species present |
| 5 | Open Fields/Orchard/ Houselot | 20 | Large open area. Maintained by mowing biennially. Many non-native invasives present in this unit. |
| | **Total** | **150** | |

## *STAND DESCRIPTIONS*

| OBJ | STDNO | TYPE | AC | MSD OR SIZE-CLASS | BA/AC | VOL/AC | SITE INDEX |
|---|---|---|---|---|---|---|---|
| Ch.61 | 1 | HH | 56 | 15.1" | 122 | 9.7 MBF<br>8 Cds | 65HK |

### Stand 1: Eastern Hemlock – with northern hardwoods associated

This hemlock/hardwood stand is located adjacent to the pasture and on the steep slopes within 200 feet of Dragon Brook. Trees present are a diverse mix of northern hardwoods, including sugar maple, red maple, bitternut hickory, cherry, birch, red oak, beech, ash, and basswood, along with hemlock and a few white pines. Understory plants are typical of a rich, moist northern hardwoods site and include hobblebush, shadbush, ground yew, fly honeysuckle (a native honeysuckle), striped maple, witch hazel and partridgeberry. Understory saplings are sparse and generally hemlock with a few beech.

Some harvesting has occurred here within the past fifty years, judging by the old stumps that can be observed. Access is difficult, but possible, by means of two harvest roads that have been constructed in the past which angle across the more gradual portions of the slope. At present, the stand is dominated by medium to large sawtimber-sized trees. Two species that are indicators of a rich, high quality site, sugar maple and bitternut hickory, grow commonly here. The soil type, Charlton sandy loam, is a productive site for growing trees. The sheltered, east-facing aspect makes this an excellent site for growing high-quality hardwood such as sugar maple, cherry and black birch.

Forest health is generally good. Some issues observed include beech bark disease and hemlock wooly adelgid. The presence of grape vines on this steep site causes some areas of the stand to be unstable. Trees can be smothered and/or pulled down by attached grape vines during storm events such as a wet, heavy snow. These blowout areas often regenerate to beech, which is likely to be compromised by beech bark disease. Worse, a number of these small open areas have become infested by invasive-exotic plants such as multiflora rose, bush honeysuckle and burning bush. Limiting this trend by cutting grape vines and eradicating exotic-invasive plants would be a sound management strategy to protect the integrity of this stand.

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

Owner(s) Sample Towns(s) Shelburne

## *STAND DESCRIPTIONS*

| OBJ | STDNO | TYPE | AC | MSD OR SIZE-CLASS | BA/AC | VOL/AC | SITE INDEX |
|---|---|---|---|---|---|---|---|

**Current Habitat Conditions**

Stand 1 is dominated eastern hemlock and a variety of northern hardwood species. The canopy is about 60-70 feet, and approximately 90% closed. Hemlock woolly adelgid is present on many of the hemlock trees. While some might persist, it is likely that in the coming years and decades many hemlocks in this stand will die. Fortunately the rich soils will easily grow hardwoods to replace the hemlock, but the decline in softwood tree species diversity will be a great loss to this habitat unit.

As is typical in a white pine/hemlock dominated stand the midstory and understory are both lacking. Vegetation in the midstory (between 5'-30') does not exceed 15% cover. It is uniformly distributed and entirely composed of softwood. The understory is sparse, where canopy gaps exist or concentrations of hardwoods there are patches on native shrubs, beneath the hemlock canopy there are suppressed hemlock saplings.

Invasive plants were observed at this habitat unit.

Coarse woody material is adequate with 7 piles counted in the sub-plot. Fine woody debris was present but inadequate with only one pile. A number of trees in various stages of decline were observed, which potentially provide cavities for nesting as well as perches.

Leaf litter is adequate, but almost entirely composed of hemlock needles.

No soft mast species are present in this habitat unit.

While conducting this habitat assessment many bird species were observed in this habitat unit.

Some of those species include *scarlet tanager, ovenbird, black-throated green warbler, blue-headed vireo, red-eyed vireo,* and a *wild turkey*

**Desired Stand Conditions**

| **Condition** | **Action** | **Responsibility birds that my benefit** |
|---|---|---|
| Interior forest condition | Unevenaged management<br>-Selection Harvest | Scarlet tanager<br>Black-throated green warbler<br>Wood thrush<br>Veery<br>Ovenbird<br>Canada warbler<br>Northern parula |

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

Owner(s) Sample Towns(s) Shelburne

## *STAND DESCRIPTIONS*

| OBJ | STDNO | TYPE | AC | MSD OR SIZE-CLASS | BA/AC | VOL/AC | SITE INDEX |
|---|---|---|---|---|---|---|---|

| | | |
|---|---|---|
| | | Blue-headed vireo<br>Blackburnian warbler |
| Increased abundance of canopy gaps | Unevenaged management -Group Selection Harvest | Eastern wood-pewee |
| Increased understory and midstory density | Purpose of an unevenaged management system is to create condition for all age and sized of tree species | Black-throated blue warbler<br>Veery<br>Canada warbler<br>Magnolia warbler<br>White-throated sparrow<br>Blue-headed vireo<br>Wood thrush<br>American redstart |
| Maintain softwood component | | Black-throated green warbler<br>Blackburnian warbler<br>Blue-headed vireo |
| Increase fine woody debris presence and piles | | Veery<br>White-throated sparrow |
| Increase tree species diversity | | All birds & general forest health |

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

Owner(s) Sample Towns(s) Shelburne

# Management Recommendations

For the purposes of this report management practices with an object code of *CH61* are required to be accomplished as a commitment to the Massachusetts Current Use Program. Practices with object codes of *STEW* are voluntary and are provided as suggestions of activities that can help you achieve your woodland objectives.

## Summary of the Management Recommendations for your property

| Stand | Object Code | Recommendation | Value/Cost/ Cost Sharing opportunities | Acres | Timing |
|---|---|---|---|---|---|
| 1 | Stew | Invasive Species control | Plan to apply for NRCS – EQIP reimbursement | 10 | 2013-15 |
| | Ch61 | Selection – group selection | Revenue producing practice | 15 | 2014-2016 |
| 2 | Stew | Oak Regen Site Prep | Plan to apply for NRCS – EQIP reimbursement | 10 | 2013-2020 |
| | Ch61 | Seed Tree Harvest – in good oak seed year | Revenue producing practice | 10 | 2013-2020 |
| 3 | Stew | Invasive Species control | Plan to apply for NRCS – EQIP reimbursement | 10 | 2013-15 |
| 4 | Ch61 | Group Selection – in good pine seed year | Revenue producing practice | 5 | 2014-20 |
| 5 | Stew | Invasive Species control | Plan to apply for NRCS – EQIP reimbursement | 20 | 2013-15 |
| ALL | Ch61 | Boundary Marking | Plan to apply for NRCS – EQIP reimbursement | | 2013 |

## MANAGEMENT PRACTICES
***to be done within next 10 years***

| OBJ | STD NO | TYPE | SILVICULTURAL PRESCRIPTION | AC | TO BE REMOVED | | TIMING |
|---|---|---|---|---|---|---|---|
| | | | | | BA/AC | TOT VOL | |
| Ch61 | 1 | HH | Selection – Group Selection | 15 | 40 | 30MBF 30CDS | 2014-16 |

**Management Options & Considerations**

As was discussed in the stand description this hemlock hardwood stand is lacking in structural diversity which is an important breeding habitat component for many forest bird species. A variety of silvicultural treatments could be used to achieve the desired conditions listed for stand 1 in the stand description section. The guide, *Silviculture with Birds in Mind: Options for Integrating Timber and Songbird Habitat Management* was designed to guide foresters and landowners in improving breeding habitat for responsibility species. One of the following options would be compatible with the landowner's use of this area, and would provide some guidance and ideas on how to maximize positive benefits for breeding birds and general forest health.

- Option 1B – Variable-retention thinning
- Option 2B – Small-group and single-tree selection
- Option 3B – Mixed intermediate treatments

Some bird species that might benefit specifically from these treatments include: B*lack-throated Blue warbler, Eastern Wood-pewee,* and *White-throated Sparrow.*

**Landowner Goals and Management Description**

Based upon the landowners dual goal of creating old growth characteristics and enhancing bird habitat it was decided that *Option 2B – Small-group and single tree selection* would be the best silvicultural option.

This style of harvesting can mimic natural, small scale disturbance while allowing the retention of specific trees as legacy trees. Small to medium size openings created in the forest canopy will release advance regeneration and allow for the establishment of new regeneration, generally shade-tolerant species, which is a good fit for this northern hardwood site.

Large hemlocks that seem to healthy despite the hemlock woolly adelgid infestation will be lightly thinned around. Small canopy gaps will be created throughout the stand by removing suppressed and low quality, intermediate hardwoods as well as the salvaging of the more stressed hemlock. These canopy gaps will allow existing saplings to be released and establish some new regeneration. Tops of harvested trees, as well as a few of the small poor quality poles, will be left in the woods to supplement coarse woody material. Logging debris will be kept back from woods roads for aesthetic reasons. No harvesting will occur along Dragon Brook due to steep slopes and highly erodible soils.

## MANAGEMENT PRACTICES

***to be done within next 10 years***

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

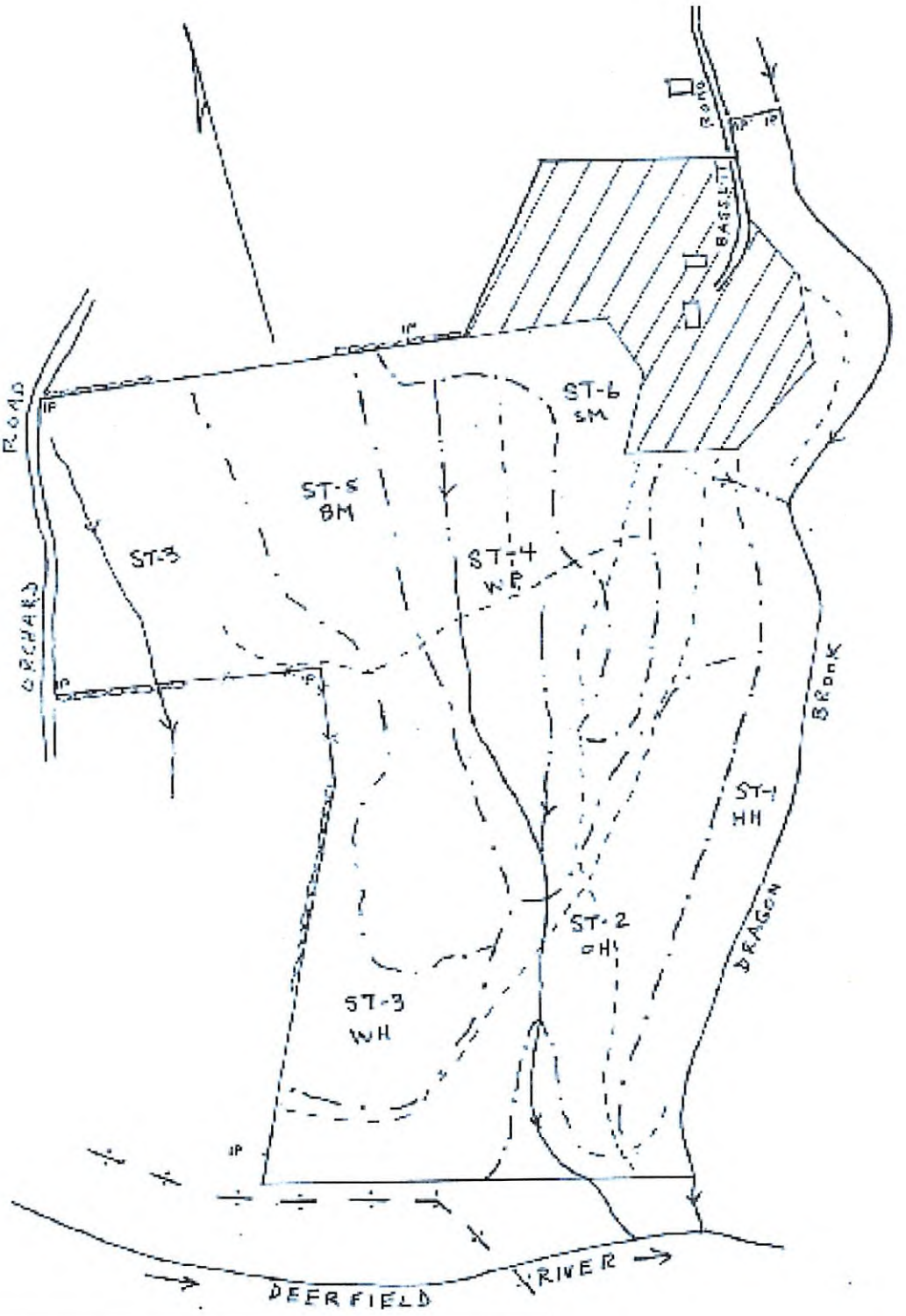
**Additional Management Considerations**

If possible harvesting will be limited or avoided during the breeding season. Forest birds in New England typically breed from May-August. The most critical time for birds is from May to mid-July.

To the extent possible forest access roads will be minimized. These can serve as pathways for nest predation and parasitism. Also, leaf litter becomes warmer and drier, decreasing the density of arthropods for birds to forage on.

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

Owner(s) Sample Towns(s) Shelburne



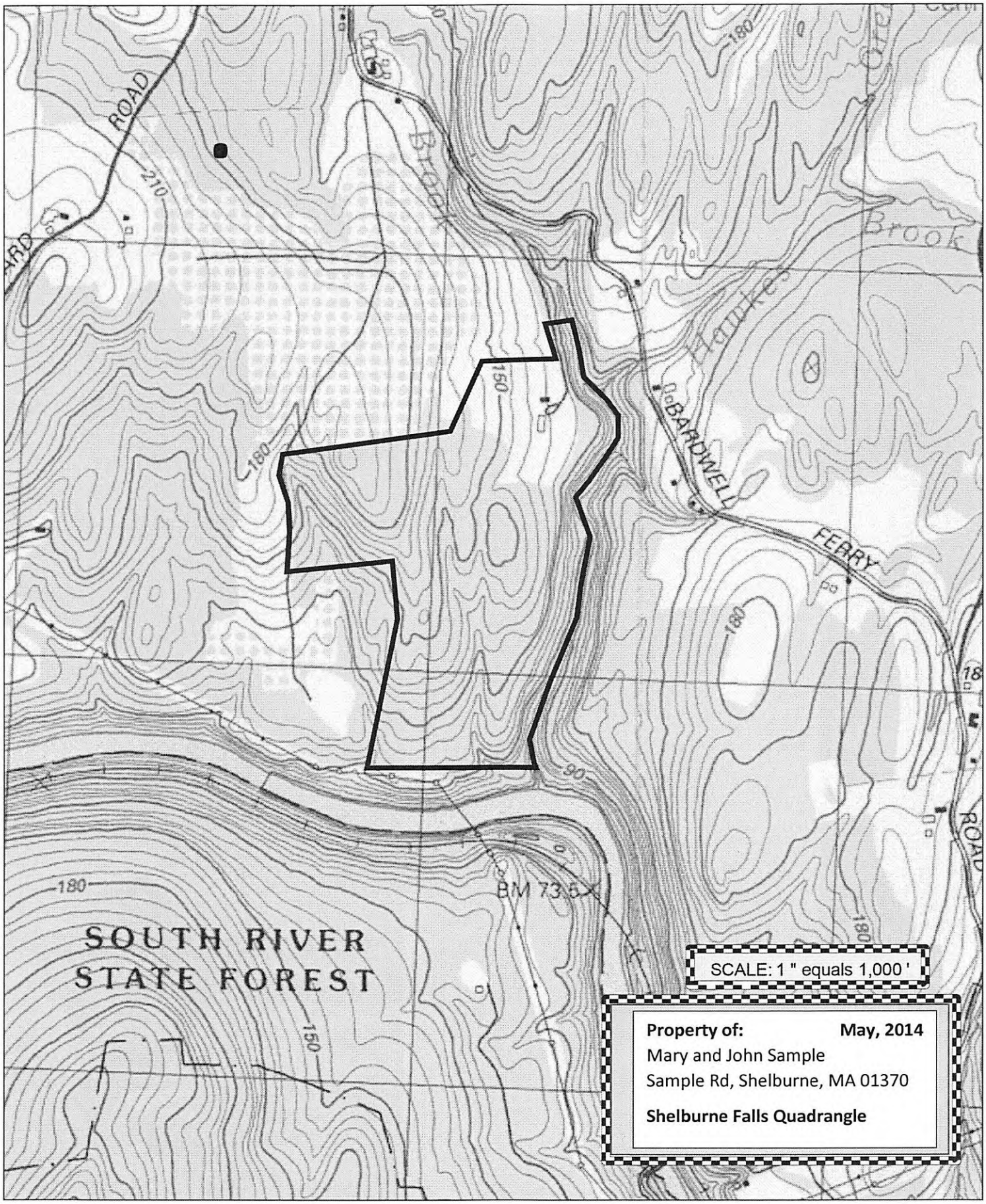

**SHELBURNE,MA**

**Property of:**
**Mary and John Sample**
**Sample Road, Shelburne, MA 01370**

**Prepared by:**
**Alex Tree**
**123 Multiple Use Road, Big Tree, MA**

**LEGEND**

- Excluded Area
- Stone Wall
- Barbed Wire
- Power Line
- Forest Stand Bounda.
- Intermittent Stream
- Woods Road


ROAD
Brook
Hawkes
McBARDWELL
FERRY
ROAD
BM 73.5
SOUTH RIVER
STATE FOREST
210
180
150
90
SCALE: 1 " equals 1,000 '
Property of:
May, 2014
Mary and John Sample
Sample Rd, Shelburne, MA 01370
Shelburne Falls Quadrangle

## 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.** When undertaking management activities, I pledge to abide by the management provisions of this Stewardship Management Plan during the ten year period 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.

☐ **Green Certification.** I pledge to abide by the FSC Northeast Regional Standards and MA private lands group certification for a period of five years. To be eligible for Green Certification you must also check the box below.

☐ **Tax considerations.** I attest that I am the registered owner of this property and have paid any and all applicable taxes, including outstanding balances, on this property.

Signed under the pains of perjury:

Owner(s) Mary Sample Date May 1, 2013

Owner(s) John Sample Date 5/1/2013

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

Plan Preparer Alex Tree Date May 1, 2013

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) Mary and John Sample Town(s) Shelburne