

Forest Stewardship Climate Plan

Rauscher Farm
Property of the Town of Clinton

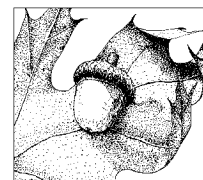


FEBRUARY 2025
Prepared by Ry Patton
Bay State Forestry Service



Forest Management Plan

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



CHECK-OFFS					Administrative Box	
CH61	CH61A	CH61B	STEWARDSHIP	Cost Share	Case No.	Orig. Case No.
cert ☐	cert ☐	cert ☐	new ☐	EEA ☒	Owner ID	Add. Case No.
recert ☐	recert ☐	recert ☐	renew ☒	Other ☐	Date Rec'd	Ecoregion
amend ☐	amend ☐	amend ☐	Climate ☒	Birds ☐	Plan Period	Topo Name
Plan Change ☐ to ☐			Conservation Rest. ☐		Rare Spp. Hab.	River Basin
			CR Holder ☐			

OWNER, PROPERTY, and PREPARER INFORMATION

Property Owner(s): Town of Clinton

Mailing Address: Clinton Town Hall, 242 Church Street, Clinton, MA 01510

Phone: 978-365-4120

Email Address: selectboard@clintonma.gov

Property Location Town(s): Clinton

Road(s): Clamshell Road

Plan Preparer Ry Patton

Mass Forester License # 475

Mailing Address: 37 S. Union St, Plainfield, MA 01070

Phone 913-274-0571

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
116	2752	43036	72	32.02	--	--	0.5	31.52
120	2753	43036	72	28.93	--	--	1.25	27.68
				60.95	--	--	1.75	59.2
TOTALS								

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

Excluded area consists of 1.7 acres, including buildings, parking areas and associated land at the entrance to the property.
The location of these features is shown on the Forest Stand Map included in this plan.

HISTORY Year acquired 2008 Year Management began 2008

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. 1,7 treatment: Tree Felling/Girdling

reason: Lack of funding

stand no. 2 treatment: Mow Hedge Rows

reason: Lack of funding & interest

stand no. 5 treatment: Clearcut with Reserves

reason: Too many invasives

(If additional space is needed, continue on separate page)

Previous Management Practices (last 10 years)

Stand #	Cutting Plan #	Treatment	Yield	Acres	Date
<u>All</u>	<u>-</u>	<u>Mechanical Removal</u>	<u>-</u>	<u>-</u>	<u>-</u>

Remarks: (if additional space is 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	MED	LOW	N/A, Don't Know
Improve access for walking/skiing/recreation	X			
Improve hunting or fishing				X
Maintain or enhance privacy			X	
Preserve or improve scenic beauty	X			
Protect special features, including those of historical or person significance	X			
Enhance the quality and/or quantity of forest products*				X
Practice agroforestry				X
Produce income from timber products, or other products and services				X
Produce firewood for personal use				X
Enhance habitat for birds	X			
Enhance aquatic habitat in streams, ponds, and other wetlands	X			
Enhance habitat for wildlife	X			
Promote diversity of plant species and habitat types	X			
Increase forest resiliency	X			
Minimize damage from forest pests	X			
Protect water quality	X			
Sequester and/or store carbon to mitigate climate change	X			
Suppress or eradicate invasive plants	X			
Lower property taxes				X
Protect land from development	X			

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

Owner(s): Town of Clinton

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

To protect Rauscher Farm's conservation and recreational goals for future generations.

Conservation Goals: To implement climate adaptability strategies to preserve and improve the property's diverse plant and animal habitat; continue to control invasive species; promote climate-resilient biodiversity through strategic management practices.

Recreation Goals: To continue to provide year-round, in-your-own-time public access to the property; to continue to present free nature-focused events for public enjoyment.

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: _____

Owner(s): Town of Clinton



Property Overview, Regional Significance, and Management Summary

Property Description

Rauscher Farm is a 60-acre area of open space located on Clamshell Road in the town of Clinton, Massachusetts. The farm was acquired by the town in 2008 as a way to conserve, protect, and steward its natural communities for the continued benefit and enjoyment of local residents. The property contains a tremendous variety of habitat types, soil types, and topographic features, all of which creates a substantial amount of biological diversity for people to explore. The modern-day distribution of these habitat types is driven in large part by the agricultural history of the site. Regional agriculture peaked in the mid-1800, which was followed by a gradual abandonment of agricultural land that was then retaken by forest. This pattern is reflected on Rauscher Farm, and the property's agricultural history is evident in the numerous stonewalls and wire fences that run through and around the property boundaries. Agricultural abandonment did not occur all at once, but rather occurred in stages that followed the fertility of different soils on the site. The first areas to be abandoned were likely the Chatfield-Hollis soils, which is a shallow, rocky soil type that is low in fertility and prone to drought. The majority of the western half of the property is situated on Chatfield-Hollis soils. Today, these areas are dominated by mixed oak and white pine communities, which are species that are readily able to establish and thrive on abandoned agricultural land with abundant available resources. Intermixed among these oak and pine communities are open grasslands of variable sizes. These grasslands tend to be situated over deposits of Paxton fine sandy loam or Woodbridge fine sandy loam, which are deep, fertile soil types that have long been prized for agriculture. These areas were likely retained for agriculture because of their inherent fertility and productivity. Overall, this pattern of land-use history and variation in soil types has produced a wide range of habitats within a relatively small area.

The property has been divided into 7 different stands, which are meant to capture unique physical areas that will be managed as a unit. Each stand hosts a different vegetation community with unique benefits, vulnerabilities, and risks, which are outlined in the stand descriptions. The history of intensive land use followed by forest regrowth has resulted in a young, two-aged, mid-successional forest intermixed with softwood plantations and open fields. A two-aged structure means that there are currently two dominant ages of trees, one older and one younger, distributed throughout the property. The older age class is characterized by large, branching white pine and mixed hardwoods, including red oak, red maple, and black birch. The younger age class is predominantly composed of small black birch poles with a lesser assortment of red oak, black oak, white oak, and hickory. Together, these two age classes form a moderately complex and layered canopy with multiple dominant tree species, each providing unique ecological values. The understory is poorly stocked with tree seedlings, owing to the high stocking of the midstory and understory.

Improving the health of the forest on Rauscher Farm is one of the main goals of this forest management plan. The health of a forest community is influenced by a number of factors, including weather, soil, insects and diseases, invasive plants, and human activity. It is often easier to prevent forest health problems before they occur, rather than cure them. This preventative approach involves two steps. The first is to promote a variety of plant species and age classes within the forest. This diversity makes

the forest less susceptible to a single devastating forest health concern, as other species are able to pick up the slack if another one becomes diseased. The second step is to manage competing or less-desirable vegetation, leaving healthy, well-spaced trees with enough water and light to thrive. This can involve thinning around desirable overstory trees as well as treating non-native invasive plants in the understory. Engaging in these two activities will create a forest community that is more resilient to environmental and biological stress, including climate change.

A number of forest health concerns are present on Rascher Farm, with the potential to lessen their impacts with management. The first is the presence of non-native invasive species in the understory and along the edges of open fields and pastures. These species introduce the risk of outcompeting native biodiversity and reducing the ecological integrity of the property. Invasive species often respond favorably to disturbances and are expected to thrive under climate change. Another potential health threat is white pine needle damage (WPND), a complex of fungal pathogens that can infect over-stocked white pine stands. Old-field white pine is a common species on Rauscher Farm and are currently growing under high density with high competition. WPND can cause rapid crown die-back and mortality in infected stands, which can exacerbate unmanaged invasive species problems. Preventative management of WPND often involves density reduction and diversification of white pine stands to increase airflow, reducing the susceptibility of the site to fungal pathogens. The final forest health concern is the susceptibility of the forest to spongy moth (*Lymantria dispar*) outbreaks. Spongy moth is an invasive insect that can defoliate a number of tree species, with a preference for oak. Since oak is a major component of Rauscher Farm, plus its status as an ecologically valuable climate adapted species, it is important that preventative measures be taken to make the forest more resilient to this devastating insect. This includes promoting a diversity of oak and hardwood species of various ages so that the entire stand does not collapse should an outbreak occur.

Taken together, these forest health concerns have the potential to reduce the resilience of the forest to the stressors of climate change and limit how much carbon can be sequestered and stored. However, deliberate management can be used to address these concerns, which will be discussed below.

Regional Significance and Context

One of the most valuable aspects of Rauscher Farm is that it represents diverse open space in very close proximity to heavily urbanized and developed land. The farm is situated only a few miles to the south of downtown Clinton, and many of the property's trails are within walking distance. Development pressure is very high in the region. Within the surround landscape (here considered to be the wider 1500 acres around the farm), only 40% is forested and nearly 38% is under some kind of development. The remaining land is classified as either open water, including Wachusett Reservoir, Lancaster Millpond and Clamshell Pond (15%), and non-forested wetlands (6%). Grasslands and other non-forested habitats are poorly represented in the surrounding landscape (<1%). What this means is that Rauscher Farm, despite its small size, is greatly contributing to local habitat diversity by warding off development and protecting rare grassland habitat. Moreover, Rauscher Farm is situated within a much wider network of protected land. To the southwest lies over 1500 acres of the Wachusett Reservoir Watershed. To the northeast are the Forty Caves Forest, owned by the Town of Berlin Conservation Commission, and Garfield Woods, owned by the Sudbury Valley Trustees. And to the southeast is the Wachusett Woodlands Conservation Restriction, also owned by the Berlin Conservation

Commission. Together, these areas protect over 2000 acres of natural community, of which Rauscher Farm provides a small but important contribution.

Climate Resilience & Forest Carbon

The climate of Massachusetts is changing, and this is expected to impact local forests in a number of ways. First, temperatures are expected to rise throughout all seasons, with an estimated average increase of 3° to 10°F over the next 100 years. Coupled with this is an expected increase in the frequency of heavy rain events punctuated by prolonged droughts. Total precipitation amounts are expected to increase, but will arrive in a fewer number of rain events. In short, early spring thaws and highly variable rain events will put tremendous pressure on the region's forests. With a warming climate also comes drought stress on trees, increased abundance of deer, increased risk of invasive insect outbreaks, and improved habitat suitability for invasive species. These changes are expected to have unequal effects on different tree species. For example, oak, hickory, and red maple are expected to tolerate these changes relatively well, while species like hemlock and white pine are expected to decline over the long-term. These impacts, in turn, lead to vulnerabilities that could result in the loss of ecological function and services if not managed correctly. Climate change is expected to have adverse effects on forest birds as well, both through changing climatic conditions and changes in habitat as described above.

For example, with the increased likelihood of prolonged drought and higher seasonal temperatures, it is important to maintain a forest composed of species that have some degree of drought tolerance. The current oak and hardwood dominated stands are well-suited for this change, as these species are well-known to have characteristics that help them withstand drought for prolonged periods. Conversely, the white pine and red pine dominated stands are highly vulnerable to climate change because of their low diversity and lack of drought-tolerant traits. These areas are much more likely to experience significant decreases in ecosystem functioning as the climate continues to become less suitable. On the other hand, the high predominance of oak means that the stand is vulnerable to spongy moth outbreaks, which, coupled with drought, can cause widespread mortality of oak forests. Maintaining a diversity of oak and non-oak species will help to reduce the risk of heavy mortality after spongy moth outbreaks, as this insect tends to prefer certain species over others. Changes in precipitation will also put stress on the property's soils, as heavy rain events can cause erosion and sedimentation into nearby water sources. Maintaining a healthy, diverse, and thriving forest is the best way to buffer against adverse effects from heavy rain events

There are a number of management approaches at our disposal that we can use to help deal with the pressures that climate change is placing on our forests. We can try to **resist** change with intensive management that maintains the current structure and composition. We can increase **resilience** by allowing for some degree of change while still maintaining desirable ecosystem functions. Or we can actively **transition** the forest to an entire new state that is expected to be well-suited for a future climate. Here, we are aiming for a **resilience** approach that will diversify the forest composition and structure and promote tree species that are expected to thrive in a warmer, drier climate.

Enacting this resilience approach will require favoring oak and hickory species by thinning out white pine and other common hardwoods, like black birch, as well as treating invasive species throughout the property. This introduces an important trade-off between carbon storage and carbon sequestration. Carbon storage for this property is relatively low compared to similar forests in the region

due to the relatively young age of the forest and the amount of open fields and grasslands. However, this means that the carbon sequestration rate is relatively high, given that younger trees tend to have faster growth rates than older trees. Future harvesting to hasten the transition to a climate-adapted forest is expected to decrease carbon storage in the short-term while increasing sequestration rates over the following decades. This temporary loss of carbon from harvesting is expected to be regained, as the growth rate of the residual trees is expected to increase. Ideally, this temporary carbon loss will be in service of establishing a healthy, resilient forest that is able to handle the stressors and uncertainties of a changing climate and sustain populations of birds and other wildlife.

Management Summary

Management over the next 10 years will focus on realizing the goals set out by the Rauscher Farm managers of providing recreational access and scenic beauty to local residents, sequestering and storing carbon, and maintaining a healthy forest that is resilient to climate change. This will require a mixture of active and passive management. The active management components will involve deliberately favoring oak and hickory trees by felling or girdling competing pine, birch, and maple trees. Felled trees will be left on the forest floor to add ecological elements that are currently under represented in the forest, including coarse woody material. Additionally, invasive species will continue to be managed to prevent their spread and proliferation. The promotion of oak and hickory and the management of invasive species are both in service of increasing the resilience of Rauscher Farm to stressors associated with climate change, disease, and invasive pests. Passive management will be designated to areas that are currently meeting climate resilience and carbon storage goals, specifically areas dominated by older oak and pine communities.

Forest Stands

For the purposes of this report a forest stand is an easily defined area that is relatively uniform in composition and structure.

Stand	Forest/Habitat Type	Size	Important Observations	Climate Risk	Carbon Stocking*
1	Oak/Hardwood	14.5	A young, two-aged forest composed of mixed oak, black birch, and hickory growing on abandoned farm land.	Moderate: Abundant climate-adapted species. Suseptible to spongy moth.	24.2 tons/ac (12 th Percentile)
2	Abandoned Pasture	13.6	A complex of open fields and hedgerows growing on abandoned pasture land.	High: Fragmented forest patches with abundant invasive species.	--
3	White Pine	7.1	Old-field white pine growing above a developing hardwood midstory. White pines are large with multiple stems and excessive branching.	High: Low species diversity dominated by at-risk species.	39 tons/ac (40 th Percentile)
4	Grassland	13.5	Open grassland with little to no tree cover. Little potential for carbon sequestration.	Moderate: Highly susceptible to invasive species infestation.	--
5	Red Pine Plantation	1.5	A small, red pine dominated stand with hardwoods growing in the midstory and understory.	High: Low species and structural diversity. Susceptible to disease and invasive species.	32 tons/ac (22 nd Percentile)
6	Shallow Marsh	1	A wetland community situated on inundated soils. Little potential for carbon sequestration	Moderate: Suseptible to drought and invasive species.	--
7	White Pine/Oak	8	Diversity community of pine, oak, and red maple.	Low: High species diversity with climate adapted species. High adaptive capacity.	39 tons/ac (40 th Percentile)

*Carbon stocks and percentiles were estimated from look-up tables presented in the DCR publication titled "Estimating Carbon for Forest Stewardship Climate Plans".

Owner(s): Town of Clinton

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STAND DESCRIPTIONS

OBJ	STD NO	TYPE	AC	MSD OR SIZE-CLASS	BA/AC	VOL/AC	SITE INDEX
STEW	1	OH	14.5	13.2''	70 ft ² /ac	2.6 MBF 4.7 Cords	60 RO
Overstory/Midstory				% Canopy Cover		>80%	
				Stocking Level		Adequate	
				Distribution		Uniform	
				Type		Mixed	
				Species Diversity		Adequate	
				Species Present		Black birch, red oak, black oak, white oak, white pine	
				Forest Health		Concern: Susceptible to spongy moth	
				%at-risk trees		5%	
Understory				% cover (woody)		6 – 20%	
				Distribution		Patchy	
Regeneration				Seedling/Sapling Diversity		Adequate	
				Species Present		Black birch, white pine, red oak, lowbush blueberry	
				% At-Risk Trees		5%	
				Browse Impact		Moderate	
Invasive Species				% Cover		21 – 40%	
				Species Present		Glossy buckthorn, common buckthorn, bittersweet, Norway maple	
Other Stand Characteristics				Soft Mast		Absent	
				Hard Mast		Abundant	
				Leaf Litter		Abundant	
				Fine Woody Material		Sparse	
				Course Woody Material		Sparse	
				Standing Dead Trees		Inadequate	

Stand 1 Narrative

Stand 1 is a young oak/hardwood forest located in the far western portion of the property. Topography is gently to moderately sloping but very rocky, with frequent exposed rock outcrops and steep cliffs. The aspect is highly variable, with a slight southeastern aspect that slopes toward Clamshell Pond to the south. Soils consist of very well-drained Chatfield-Hollis soils, which is a very shallow, rocky soil type that is prone to drought during prolonged dry spells. A deposit of poorly-drained

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Whitman fine sandy loam is present along the southern border with Clamshell Pond. The predominantly dry soils and gently sloping terrain make for excellent logging operability.

The dry, sandy soils currently support a young, diverse forest composed of black birch, red oak, black oak, white oak, hickory, red maple, and white pine. Tree sizes range widely from small poles (6 to 10 inches in diameter) to large sawlogs (18 to 20 inches in diameter). This variation in sizes points to a complicated history of agricultural use and abandonment, with some areas being abandoned more recently than others. The large trees are likely relics from when the site was used for agriculture, where they would have served as borders for fields or shade for livestock. The younger, smaller trees were established from seed after agriculture ceased. This gives the stand a decisive two-aged structure, with large, older trees growing over and among a younger midstory. The understory is poorly stocked with black birch, white pine, red maple, and red oak seedlings. These seedlings tend to be heavily shaded and of poor quality, with extensive signs of deer browse.

Low-bush blueberry is common in isolated pockets, and adds diversity and soft mast to the forest floor. Invasive species are prevalent in this stand, particularly along the southern border with Clamshell Pond and the western property boundary. Common species include glossy buckthorn, bittersweet, common buckthorn, and burning bush. Norway maple, an invasive tree in the maple family, is common in the developing young midstory and is actively competing with the native oaks and hickories. The presence of these invasive plants places considerable constraints on the ability of this stand to remain diverse and well-adapted to climate change, as these invasive plants tend to vigorously outcompete native vegetation.

Climate Change Vulnerability and Adaptation

Stand 1 is currently well-situated to adapt to a changing climate due to the high abundance of oak and hickory. These species are slatted to do well in a warmer, drier climate, as the suitable range of many of these species is expanding. This stand is diverse and young with potential to favor oak abundance and diversity with management. However, due to the high abundance of oak, the stand is susceptible to spongy moth outbreaks. Spongy moth is an invasive insect that preferentially feeds on the leaves of oaks and other hardwoods, and large outbreaks can cause widespread defoliation and mortality,



Figure 1: A large white oak growing above a younger community of hardwood saplings.

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particularly if the defoliation is coupled with a drought. A diversity of oaks, hickories, and other hardwoods should be promoted to hedge the bets against a spongy moth outbreak.

Desired Future Conditions

The desired future condition of this stand is a diverse, two-aged forest community with a high abundance of future-adapted mast producing tree species. Oaks and hickories are already present in modest amounts, but their health and growth can be enhanced through deliberate management. Future management will aim to favor the growth and development of oaks and hickories in this stand through the deliberate felling or girdling of competing trees. Preferences will be made to retain red oak and white oak where possible. Invasive species will continue to be treated before any other management takes place.

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OBJ	STD NO	TYPE	AC	MSD OR SIZE-CLASS	BA/AC	VOL/AC	SITE INDEX
STEW	2	AF	13.6	--	--	--	
Overstory/Midstory				% Canopy Cover		6 – 20%	
				Stocking Level		Understocked	
				Distribution		Patchy	
				Type		Mixed	
				Species Diversity		Adequate	
				Species Present		Red Oak, White Pine, White Ash, Black Cherry, Hickory	
				Forest Health		No Concern	
				%at-risk trees		25%	
Understory				% cover (woody)		6 – 20%	
				Distribution		Patchy	
Regeneration				Seedling/Sapling Diversity		Inadequate	
				Species Present		White Pine, Red Oak, Witch Hazel, White Ash	
				% At-Risk Trees		50%	
				Browse Impact		High	
Invasive Species				% Cover		41 – 60%	
				Species Present		Bittersweet, Common Buckthorn, Multiflora Rose, Japanese Barberry	
Other Stand Characteristics				Soft Mast		Adequate	
				Hard Mast		Abundant	
				Leaf Litter		Adequate	
				Fine Woody Material		Sparse	
				Course Woody Material		Sparse	
				Standing Dead Trees		Inadequate	

Stand 2 Narrative

Stand 2 is an assortment of open, mowed grasslands and small islands of trees distributed throughout the central portion of the property. Terrain and soil composition are variable. The main western portion of this stand is located on the Chatfield-Hollis-rock outcrop soil complex, which is shallow to bed rock and very stony. The eastern portions of the stand are on higher quality soils, consisting mainly of Woodbridge fine sandy loam and Paxton fine sandy loam. These areas are deeper and have long been prized for agriculture. Soils are overall well-drained and the terrain is flat to gently sloping.

Standing timber volume and carbon stocking levels were not calculated due to the low density and limited extent of tree cover in this stand. The existing tree cover is highly variable in composition and distribution. White pine, red oak, and white ash are the most common, along with a lesser extent of

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black cherry, hickory, sassafras and cedar. Trees are concentrated in small islands or along narrow edges of pasture. The midstory and understory vegetation consists of cedar, juniper, witch hazel and grape vines climbing into the overstory. Invasive species are particularly abundant in the understory and along pasture edges, as these fragmented forest patches and edges are ideal habitat for these species.

Bittersweet, common buckthorn, multiflora rose and Japanese barberry are the most common invasive species found in this stand.

Climate Change Vulnerability and Adaptation

Stand 2 is moderately vulnerable to climate change due to the high abundance of invasive plants and the fragmented nature of the forest community. Moreover, the low stocking of trees means that the carbon sequestration potential of these areas is limited. While the mowed fields and complex arrangement of trees and shrubs create ideal habitat for a variety of birds and wildlife, it places unique limitations on the ability for the stand to adapt and mitigate climate change. To effectively adapt to climate change, a forested area needs to be relatively large, unfragmented, and contain multiple species and ages of trees. This gives the forest multiple ways to respond and recover from disturbances caused by extreme weather, pests or pathogens. Fragmented forests have fewer options for recovery, and so are more likely to collapse under stressors. This is especially true when invasive species are present, as they are readily able to overtake disturbed areas and outcompete beneficial native vegetation.

Desired Future Condition

The desired future condition of this stand is a complex arrangement of pastures and trees with an absence of invasive species in the understory. The current habitat structure should be maintained with mowing to promote wildlife habitat, but the tree community should be left largely undisturbed to protect the small amount of carbon sequestration occurring in this stand. Management over the next 10 years should focus on controlling non-native invasive plants found along pasture edges and within islands of trees, to increase the adaptive capacity of the site and promote native vegetation for wildlife.

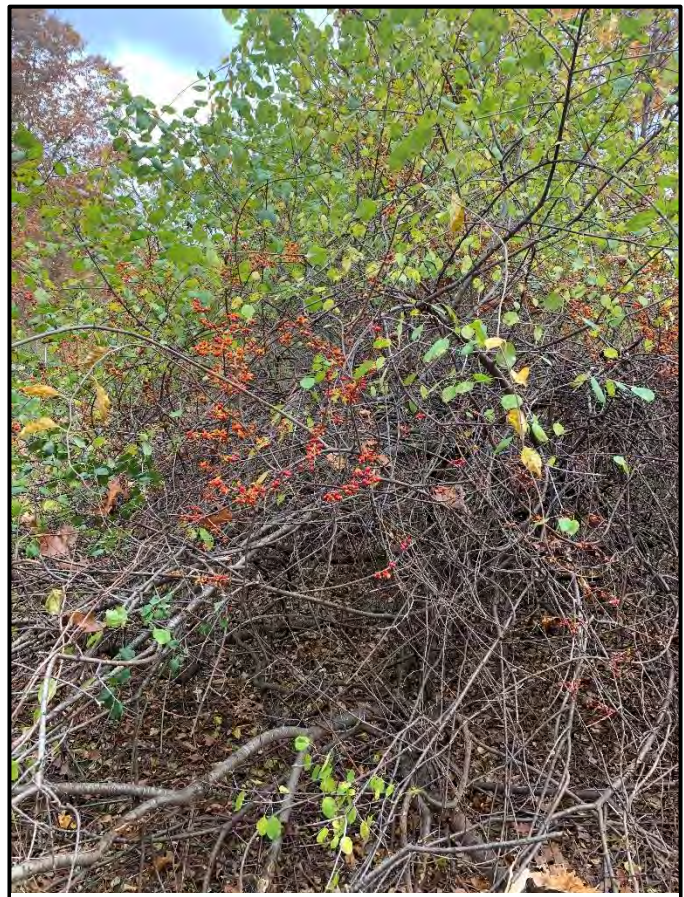


Figure 2: Invasive bittersweet growing along a field edge.

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OBJ	STD NO	TYPE	AC	MSD OR SIZE-CLASS	BA/AC	VOL/AC	SITE INDEX
STEW	3	WP	7.1	17.7"	115 ft ² /ac	8.2 MBF 3.6 Cords	60 WP
Overstory/Midstory				% Canopy Cover		>80%	
				Stocking Level		Overstocked	
				Distribution		Uniform	
				Type		Softwood	
				Species Diversity		Inadequate	
				Species Present		White Pine, Black Birch, White Oak, Black Oak, Hickory	
				Forest Health		Concern: White Pine Needle Damage	
				%at-risk trees		75%	
Understory				% cover (woody)		1 – 5%	
				Distribution		Patchy	
Regeneration				Seedling/Sapling Diversity		Inadequate	
				Species Present		Black Birch, Red Maple, White Pine	
				% At-Risk Trees		50%	
				Browse Impact		High	
Invasive Species				% Cover		21 – 40%	
				Species Present		Glossy Buckthorn, Autumn Olive, Bittersweet, Multiflora Rose	
Other Stand Characteristics				Soft Mast		Absent	
				Hard Mast		Adequate	
				Leaf Litter		Adequate	
				Fine Woody Material		Sparse	
				Course Woody Material		Adequate	
				Standing Dead Trees		Inadequate	

Stand 3 Narrative

Stand 3 is a white pine dominated stand located in the western half of the property. It is situated on a steep, rocky knoll with a slight southern aspect. Soils consist of the Chatfield-Hollis soil complex, which is a shallow, sandy soil that is generally very shallow to bed rock. Numerous rock outcrops are present throughout the stand in areas with particularly shallow soils. The terrain is difficult to navigate and highly variable. Topography ranges from very steep to the east and south and becomes generally flat in the center of the stand. Overall, this variable, rocky terrain makes for difficult operating conditions for logging equipment.

The dry, shallow Chatfield-Hollis soils have produced a community almost entirely dominated by white pine. These dominant white pines are large, with many individuals exceeding 20 inches in

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diameter, with excessive limbs and forking trunks. This type of growth form is typical of white pines that established on abandoned agricultural land and grew under abundant light. Moreover, pines grown under these conditions are highly susceptible to damage from the white pine weevil, which causes the excessive forking and branching by feeding on and damaging the tree's apical meristem. This kind of growth history significantly reduces the economic value of these trees, but their value as habitat for wildlife and sources of course woody material is high. These white pines are associated with a lesser component of mast producing hardwoods, including white oak, black oak, and hickory. These species also tend to be large (20+ inches in diameter) but are distributed at a much lower density throughout the stand. The midstory and understory are generally poorly stocked with shade-tolerant hardwoods due to the dense cover of white pine. Common midstory and understory species include black birch, white pine, hickory, red maple, and low-bush blueberry. Invasive species are present in low numbers throughout the stand, with the most common species being glossy buckthorn, autumn olive, bittersweet, and multiflora rose. Invasive density is highest around the perimeter of the stand, particularly the eastern and southern edges, where there is more abundant access to light.



Figure 3: A white pine showing a growth form typical of white pine weevil damage.

Climate Change Adaptation and Vulnerability

This stand is moderately vulnerable to climate change because of the dominance of white pine in the main canopy and a general lack of tree and plant diversity in the understory. Moreover, the abundance of invasive species greatly inhibits the ability of the stand to adapt to a changing climate by limiting the regeneration of desirable climate adapted species. White pine is currently growing well on the site, but its habitat suitability is expected to decline as the climate warms and annual precipitation rates increase. This could lead to a gradual decline in the dominate white pine and a significant loss of the stand's high carbon stocks. The presence of white oak, black oak, hickory, black birch, and red maple is reassuring, as these species are slated to do very well in a warmer and drier climate. Although these species are present in low numbers, they still increase the likelihood that this stand will be able to adapt to climate change in the future. Invasive species remain a barrier to this process, however, as they will likely outcompete any regenerating hardwoods in the understory.

Desired Future Condition

Stand 3 is currently not meeting the resilience and diversity goals of the landowner. Densley stocked white pine are vulnerable to climate change and fungal pathogens. The desired future condition is a white pine/hardwood stand with a higher relative abundance of mast producing hardwoods, specifically white oak, black oak, red oak, and hickory.

STAND DESCRIPTIONS

OBJ	STD NO	TYPE	AC	MSD OR SIZE-CLASS	BA/AC	VOL/AC	SITE INDEX
STEW	4	GF	13.5	--	--	-- --	--

Stand 4 Narrative

Stand 4 is a collection of 3 distinct open grasslands that were used as hayfields under the previous ownership. These areas are distributed over both sides of Clamshell Road. The topography of the fields is flat to gently sloping. The bulk of the fields are situated on large deposits of Woodbridge fine sandy loam, a deep, moderately drained soil type that has long been prized for farming. These areas were likely under cultivation the longest because of their ideal drainage and productivity characteristics that produced high-quality hay. The largest field in the eastern half of the property contains a large deposit of Walpole sandy loam, a poorly drained soil type that drains from the shallow marsh in stand 6 to the north. Some of these poorly drained areas support small inclusions of speckled alder, a valuable shrub species that is not seen anywhere else on the property. This alder inclusion should be protected and promoted because of its unique contribution to the habitat diversity of the property. Moreover, an area in the southern half of the stand contains a dense plantation of Norway spruce. Other than these areas containing alder and spruce, the remaining stand is entirely dominated by grasses and forbs, periodically mowed and managed for wildlife habitat instead of hay. Invasive species are present in modest amounts around the perimeter of the fields, particularly in areas that are not actively mowed. Species include bittersweet, common buckthorn, Norway maple, multiflora rose, and winged euonymus. A population of purple loosestrife is present on the poorly-drained Walpole soils.

Climate Change Vulnerability & Adaptation

The carbon storage and sequestration potential of this stand is limited because of the dominance of grasses and shrubs. Alternatively, the true ecological value of these fields lies in their ability to provide habitat to wildlife species that depend on grassland habitats, like bobolink, ruffed grouse, and woodcock. Grasslands and other early-successional habitats are under represented on the New England landscape, so it is vitally important that they areas are protected, managed, and expanded where possible. With that being said, these areas are at a low to moderate risk from climate change due to increases in the suitable habitat of woody invasive species. Grasslands and shrublands are already at a higher risk of infestation due to abundant light resources, but increasing temperatures and precipitation are believed to be more favorable to invasive plants. Invasive species are currently present around the perimeters of many of these fields, so it is important to continue monitoring and treating invasive species where they occur.

Desired Future Condition

The collection of fields making up stand 4 are currently contributing to local habitat diversity by providing a much needed and often limited habitat in the form of grasslands and shrublands. These areas complement and enhance the associated forested stands by providing a place for different species of wildlife to live and thrive. The desired future condition of this stand is to maintain it as an open grassland through periodic mowing. Despite the low carbon storage potential, there is still value in keeping the site free of trees and other woody vegetation. The site should continue to be monitored and treated for invasive species to prevent an undesirable shift away from native grasses and forbs towards non-native woody invasives.

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OBJ	STD NO	TYPE	AC	MSD OR SIZE-CLASS	BA/AC	VOL/AC	SITE INDEX
STEW	5	RP	1.5	13.5''	95 ft ² /ac	5.8 MBF 12.2 Cords	60 RP
Overstory/Midstory				% Canopy Cover		61 – 80%	
				Stocking Level		Adequate	
				Distribution		Uniform	
				Type		Mixed	
				Species Diversity		Inadequate	
				Species Present		Red Pine, Red Oak, White Pine, Black Cherry, Hickory	
				Forest Health		Concern: Red Pine root rot	
				%at-risk trees		80%	
Understory				% cover (woody)		6 – 20%	
				Distribution		Patchy	
Regeneration				Seedling/Sapling Diversity		Inadequate	
				Species Present		White Pine, Red Maple	
				% At-Risk Trees		50%	
				Browse Impact		High	
Invasive Species				% Cover		41 – 60%	
				Species Present		Multiflora Rose, Barberry, Norway Maple, Bittersweet, Knotweed	
Other Stand Characteristics				Soft Mast		Sparse	
				Hard Mast		Sparse	
				Leaf Litter		Adequate	
				Fine Woody Material		Sparse	
				Course Woody Material		Sparse	
				Standing Dead Trees		2 trees/ac	

Stand 5 Narrative

Stand 5 is a small red pine plantation located along the northern property boundary, between the old railroad line to the north and abandoned pastures and grasslands to the south. Topography is gently sloping with an eastern aspect. Soils consist of Paxton fine sandy loam in the western half of the stand and Woodbridge fine sandy loam in the east. Both soil types are well-drained and moderately fertile, and are both prized for agriculture. This stand was likely deliberately planted to red pine after agricultural abandonment, and the resulting forest is highly simplified with low species diversity. Red pine makes up the majority of the overstory growing stock, with many individuals beginning to decline and die. The midstory is composed of a mixture of trees that have naturally seeded in below the red pine, consisting of red oak, black birch, black cherry, red maple, and hickory distributed in a patchy manner throughout the stand. The understory is very sparse, consisting mainly of suppressed white pine and red maple

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seedlings at very low densities. A major barrier to regeneration and resilience in this stand is the abundance of invasive species found in the understory. Multiflora rose, Japanese barberry, bittersweet, Japanese knotweed, and Norway maple are all present in high amounts throughout the stand, as these species tend to grow well under the partial, diffuse light that passes through the red pine overstory.

Climate Change Vulnerability and Adaptation

Stand 4 is highly vulnerable to climate change because of poor overstory tree diversity and the abundance of invasive vegetation in the understory. First, the presence of a single species in the overstory makes the stand highly susceptible to disease and other disturbances related to climate change. For example, with an expected increase in annual precipitation, conditions will be more suitable for infestations of red pine root rot, which is a devastating fungal pathogen that can cause rapid mortality in red pine stands. Moreover, should the red pine overstory die, poor understory tree diversity and abundant invasive species limits the ability of new trees to become established. This will greatly delay or even eliminate the ability of the stand to recover and sequester carbon. Forest resilience can be improved in this stand by controlling invasive species and shifting the species composition of the understory towards more climate-adapted tree species, such as red oak, white oak, hickory, red maple, and black birch.

Desired Future Conditions

Stand 5 is currently not meeting the resilience and diversity goals of the landowner due to the dominance of highly vulnerable red pine and an abundance of invasive species. Additionally, red pine is generally a very short-lived species and many individuals in this stand are likely reaching the end of their life. This means that the future carbon sequestration potential of the stand is limited because many of the overstory trees are dying or their growth rates are slowing. Future management will aim to move the stand towards a more resilient condition with better carbon sequestration potential by controlling invasive species in the understory and promoting climate-adapted, long-lived hardwoods like red oak, red maple, black cherry, and hickory.

STAND DESCRIPTIONS

OBJ	STD NO	TYPE	AC	MSD OR SIZE-CLASS	BA/AC	VOL/AC	SITE INDEX
STEW	6	MS	1	--	--	-- --	--

Stand 6 Narrative

Stand 6 is a small shallow marsh located along the northern property boundary near the old railroad line. The site is flat and inundated with water for most of the year. It sits on a larger expanse of Walpole sandy loam, a poorly drained soil with limited potential for growing trees, that runs north off the property south through the adjoining grassland. The site was likely once a red maple swamp, indicated by the presence of several standing dead red maple stems throughout the area. Today, the vegetation is dominated by cattails, sedges, grasses, alder and other wetland shrubs. Because of the lack of trees on the site, there is very limited potential to enhance above ground carbon sequestration or storage. Rather, the most carbon is likely stored in the inundated, oxygen-poor wetland soils, where organic matter builds up under conditions of slow decomposition. This form of carbon sequestration occurs very slowly, but substantial amounts of carbon are able to be stored in these soils over long periods of time. This store of carbon is best left undisturbed by machinery or cultivation, as these actions tend to stimulate decomposition and thus release carbon into the atmosphere. In summary, this stand should be most valued for its large store of soil carbon and the habitat diversity that it adds to the property.

Climate Change Vulnerability and Adaptation

Stand 6 is moderately vulnerable to climate change due to the site's sensitivity to changes in precipitation and drought. The vegetation community is currently well-adapted to the site, but this could change if the regions climate continues to shift towards a warmer, drier condition with less-predictable precipitation. Periods of repeated prolonged drought could cause the current ecologically valuable community of cattails and wetland shrubs to transition to a less desirable state, one that is dominated by a less unique assemblage of species. Moreover, the drying out of this plant community could lead to the proliferation of invasive species, which tend to compete best in transitional areas with a modest amount of soil moisture and abundant light. However, shifts in climate could potentially make the site more favorable for the growth of a diversity of tree species, which would improve the carbon sequestration and storage potential of the site. These are important trade-offs to consider when deciding how best to manage this wetland community, although the best course of action is to keep invasive species at bay to assure that the site remains ecologically valuable and diverse.

Desired Future Condition

Stand 6 is currently meeting habitat diversity goals set out by the landowners. However, there is a moderate risk of losing these values if drought becomes more common in the future and the site begins to shift away from a wetland community. Future management should continue to monitor the site for invasive species and remove them where they occur.

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OBJ	STD NO	TYPE	AC	MSD OR SIZE-CLASS	BA/AC	VOL/AC	SITE INDEX
STEW	7	WO	8	19.2''	115 ft ² /ac	12.3 MBF 2.2 Cords	58 RO
Overstory/Midstory				% Canopy Cover		>80%	
				Stocking Level		Adequate	
				Distribution		Uniform	
				Type		Mixed	
				Species Diversity		Adequate	
				Species Present		White Pine, Red Maple, Red Oak, Black Oak, Black Birch	
				Forest Health		No Concern	
				%at-risk trees		25%	
Understory				% cover (woody)		21 – 40%	
				Distribution		Patchy	
Regeneration				Seedling/Sapling Diversity		Adequate	
				Species Present		White Pine, Red Oak, Chestnut Oak, Highbush Blueberry	
				% At-Risk Trees		50%	
				Browse Impact		Moderate	
Invasive Species				% Cover		1 – 5%	
				Species Present		Japanese Barberry, Bittersweet	
Other Stand Characteristics				Soft Mast		Abundant	
				Hard Mast		Abundant	
				Leaf Litter		Adequate	
				Fine Woody Material		Sparse	
				Course Woody Material		Sparse	
				Standing Dead Trees		Inadequate	

Stand 7 Narrative

Stand 7 is a white pine/oak stand located throughout the far eastern portion of the property. The stand is flat to gently sloping with a slight western aspect. Soil drainage and composition is highly variable across the stand. To the furthest east and south lies a dry, rocky deposit of Chatfield-Hollis soils. These areas are particularly rocky with frequent exposed ledges. Soil drainage decreases towards the western half of the stand bordering the grasslands, giving way to a deposit of poorly drained Whitman fine sandy loam. These variations in soil type and drainage lead to important changes in forest and vegetation communities that will be discussed below. Overall, the rocky terrain and pockets of wet soils make for very difficult operating conditions and difficult access

The overstory is composed of a mixture of white pine, red maple, and red oak with a lesser amount of black oak, white oak, hickory, white ash and black birch. The dominant white pine and oak

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are very large and of good quality, with many individuals exceeding 20 inches in diameter. These trees have wide, efficient spacing that have allowed for the development of large, expanding crowns. The remaining individuals of red maple, birch, and hickory are more variable in size and tend to be smaller, averaging around 12 inches in diameter. The dominant white pine and oak tend to be more common on the dry, rocky upland portions of the stand. In these areas, witch hazel and low-bush blueberry are common understory shrubs along with seedlings of white pine, red oak, and chestnut oak. In the lower, wetter areas, red maple becomes a more dominant tree species, as red maple is able to tolerate a wide range of soil moisture levels. Understory composition changes to include more high-bush blueberry than in other parts of the stand. Invasive species are present but sparse in this stand, and are mainly concentrated around the stand perimeter. Species include common buckthorn and bittersweet.

Climate Change Adaptation and Vulnerability

Stand 7 has a low to moderate vulnerability to climate change. The current forest composition is well balanced and diverse, increasing the resilience and adaptive capacity of the stand. The three dominant species, white pine, red maple, and red oak, occurring in nearly even proportions. This means that if one of these species begins to decline due to changes in climate, precipitation, or is inflicted with a disease, the other species will continue to provide the desired functions of sequestering carbon, providing habitat value, and protecting soil quality. Of the three dominant species, white pine is the one at the greatest risk from climate change. Red maple and red oak are slated to do well in a warmer and drier climate and their habitat suitability is expected to increase, meaning that multiple species will be available to pick up the slack should white pine begin to decline in the future. However, the prevalence of oak means that this stand is susceptible to spongy moth outbreaks. Maintaining a diversity of oak and non-oak tree species can promote resilience to these outbreaks.

Desired Future Condition

Stand 7 is currently meeting several goals related to resilience, diversity, carbon storage, and wildlife habitat value. The forest is diverse and well-mixed, trees are large and well-spaced, and a variety of climate-adapted species are present in relatively high abundance. The desired future condition is to maintain this stand as a diverse, mature white pine/oak forest. No management is planned at this time, except for occasional monitoring and removal of invasive species around the stand perimeter.

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 Management Recommendations for Your Property

Stand(s))	Obj Code	Goal	Practice	Benefits		Value/Cost/Cost Share
				Resilience	Carbon	
1,3	STEW	Increase Forest Resilience	Timber Stand Improvement (Girdle & Fell Trees)	Promote climate-adapted oak and hickory species	Increase carbon sequestration rates into long-lived native tree species Increase the amount of carbon stored in course woody material	
All	STEW	Reduce abundance of invasive plant populations	Invasive species control (Mechanical & Chemical)	Successful regeneration and growth of native trees and plants.	Increase the likelihood of prolonged carbon sequestration and storage	
7	STEW	Permanent protection of natural areas that provide long-term carbon storage	Establish forest reserves	Maintain full canopy cover and species composition	Leaves carbon stores undisturbed	

MANAGEMENT PRACTICES

To be done within next 10 years

OBJ	STD NO	TYPE	SILVICULTURAL PRESCRIPTION	AC	TO BE REMOVED			TIMING
					BA/AC	TOTAL VOL		
STEW	All	--	Invasive Species Management (Mechanical & Chemical)	30	--	--	--	2024 - 2034
Purpose		This treatment is intended to reduce the abundance of non-native invasive plants on the property and prevent future infestations. This is to the benefit of native plants and wildlife, as non-native invasive plants can smother native vegetation and reduce the habitat value for birds and wildlife. Target species include, but are not limited to, bittersweet, common buckthorn, glossy buckthorn, Norway maple, multiflora rose, autumn olive, and Japanese barberry.						
Treatment		Non-native invasive plants can spread by multiple methods, including wind and transportation by wildlife. With this understanding it is important to know that complete eradication of these plants is not realistic. Rather, reducing their numbers to a level where native vegetation can establish and thrive is the goal of this treatment. This treatment will involve a combination of mechanical and chemical methods. While manual cutting of invasive vegetation will kill the above ground portion of the plant, the remaining root system will produce new shoots the following growing season. For this reason, chemical herbicides are often the most successful and cost-effective approach because they prevent resprouting and allow native vegetation to become established sooner. Large climbing vines and bushes exceeding 5 feet in height will be cut with chainsaws just above the root collar and treated with an herbicide concentrate on the cut surface, killing the below ground root system. Vegetation below 5 feet in height will be treated with a foliar herbicide spray during the growing season after full leaf-out. Applications will be targeted so as to prevent damage to desirable native vegetation.						
Climate Vulnerabilities Addressed		Invasive treatment will enable climate-adapted native tree regeneration to establish more readily. This will increase forest resilience and carbon sequestration and storage over the long term. Removing invasive plants will also maintain high-quality vegetation for bird species, as invasive berries tend to be less nutritious for native wildlife and host fewer native invertebrates.						
Special Considerations		Disturbance to the canopy through felling or girdling trees creates environmental conditions suitable to many invasive plant species. It is therefore important that these populations be brought down to manageable levels before any other management takes place.						

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

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MANAGEMENT PRACTICES

To be done within next 10 years

OBJ	STD NO	TYPE	SILVICULTURAL PRESCRIPTION	AC	TO BE REMOVED			TIMING
					BA/AC	TOTAL VOL		
STEW	1 3	WH WP	Timber Stand Improvement (Felling & Girdling Trees)	14.5 7.1				
Purpose		This treatment is intended to promote the growth and development of red oak and hickory species found in the two-aged forest communities in the western half of the property. Efforts will be made to favor these climate-adapted tree species over the currently dominant white pine and birch. Healthy regeneration, a more diverse stand structure and the promotion of diverse, climate adapted species will improve climate resilience and lead to long-term increases in forest carbon sequestration and stocks.						
Treatment		This prescription will involve felling or girdling white pine and birch that are directly competing with red oak and hickory growing in the midstory and overstory. The goal is to identify as many desirable oak and hickory trees as possible and release them from competition on at least three sides, with a preference for releasing competition on the south side. Competing trees will either be felled and left on the ground or girdles and left standing. Girdled trees will preferentially be large, multi-stemmed white pine. Girdling and felling trees will add to the ecological value of the property by contributing course woody material, which is generally lacking on the property. Course woody material is an important habitat for insects and small mammals, and contributes to nutrient cycling and enrichment of the soil.						
Climate Vulnerabilities Addressed		This practice will directly address the risk of drought stress caused by climate change. Reducing competition around oak and hickory poles and saplings will favor species that are well positioned to thrive in a warmer and drier climate. Reducing stand density will also reduce the amount of moisture competition occurring below ground, allowing the remaining trees to have better access to limited and unpredictable soil water. This practice						
Special Considerations		Disturbance to the canopy is expected to increase the suitability of the site to invasive species. Due to the prevalence of invasive species on the property, it is important to bring these populations down to a manageable level before this practice takes place. Girdled and felled trees should be located a safe distance away from public hiking trails to prevent the creation of hazards to hikers.						

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MANAGEMENT PRACTICES***To be done within next 10 years***

OBJ	STD NO	TYPE	SILVICULTURAL PRESCRIPTION	AC	TO BE REMOVED			TIMING
					BA/AC	TOTAL VOL		
STEW	7	WO	Establish Forest Reserves	8	--	--	--	2025
Purpose		The purpose of designating stand 7 as a reserve is to maintain important ecological functions on potentially sensitive sites. This stand is currently meeting several important ecological functions, including mast production, water quality protection, species and structural diversity, and long-term carbon storage. Moreover, this stand is one of the most carbon rich sites on the property.						
Treatment		Designate this area for intentional passive management. This will promote high long-term carbon storage through a combination of large standing oaks and pine, woody debris from natural canopy disturbances, and carbon stored in the soil.						
Special Considerations		This stand should continue to be monitored for invasive species infestations and treated where they are found.						

OBJECTIVE CODE: CH61 = stands classified under CH61/61A/61B STEW= stands not classified under CH61/61A/61B

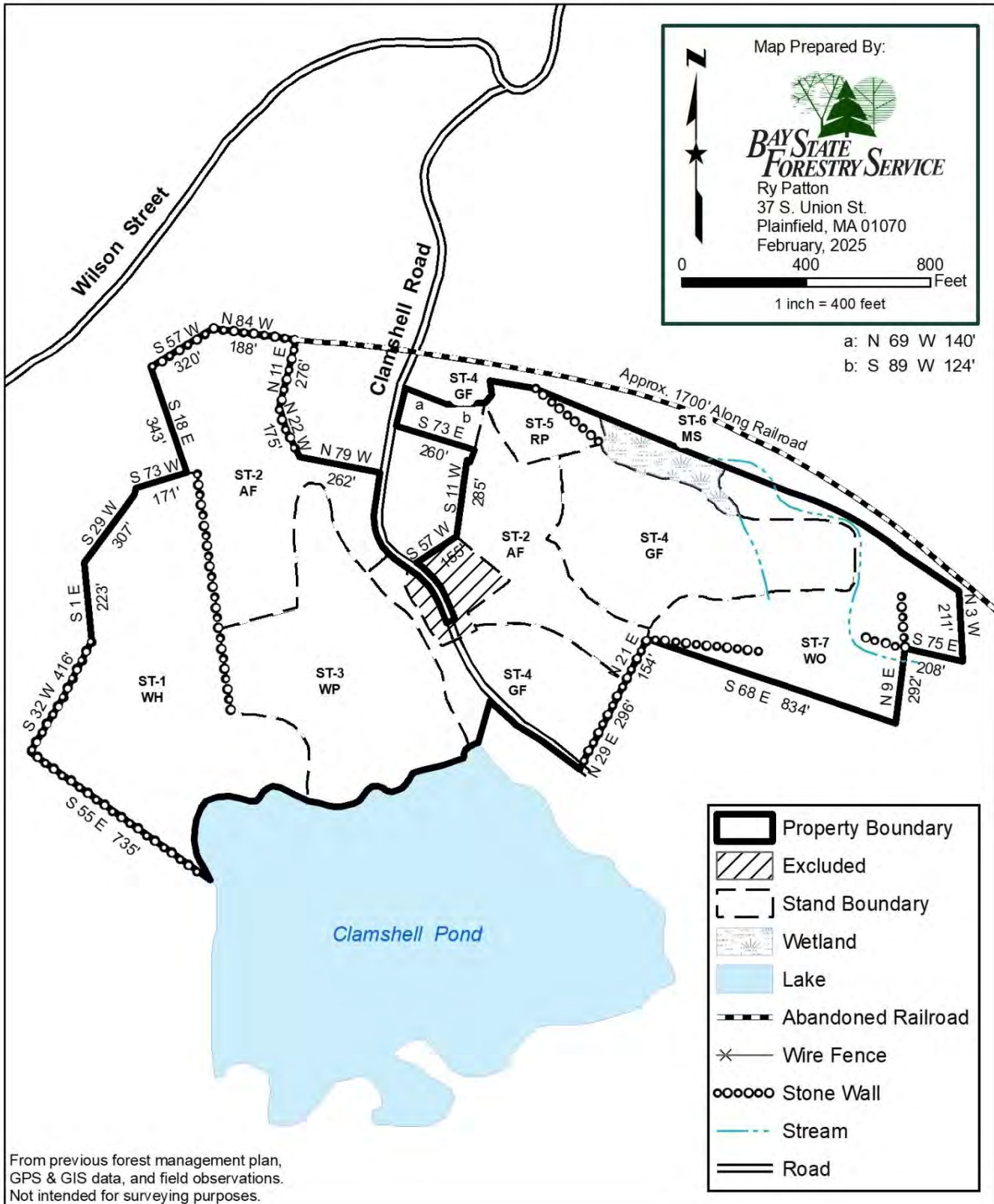
STD= stand AC= acre MSD= mean stand diameter MBF= thousand board feet BA= basal area VOL= volume

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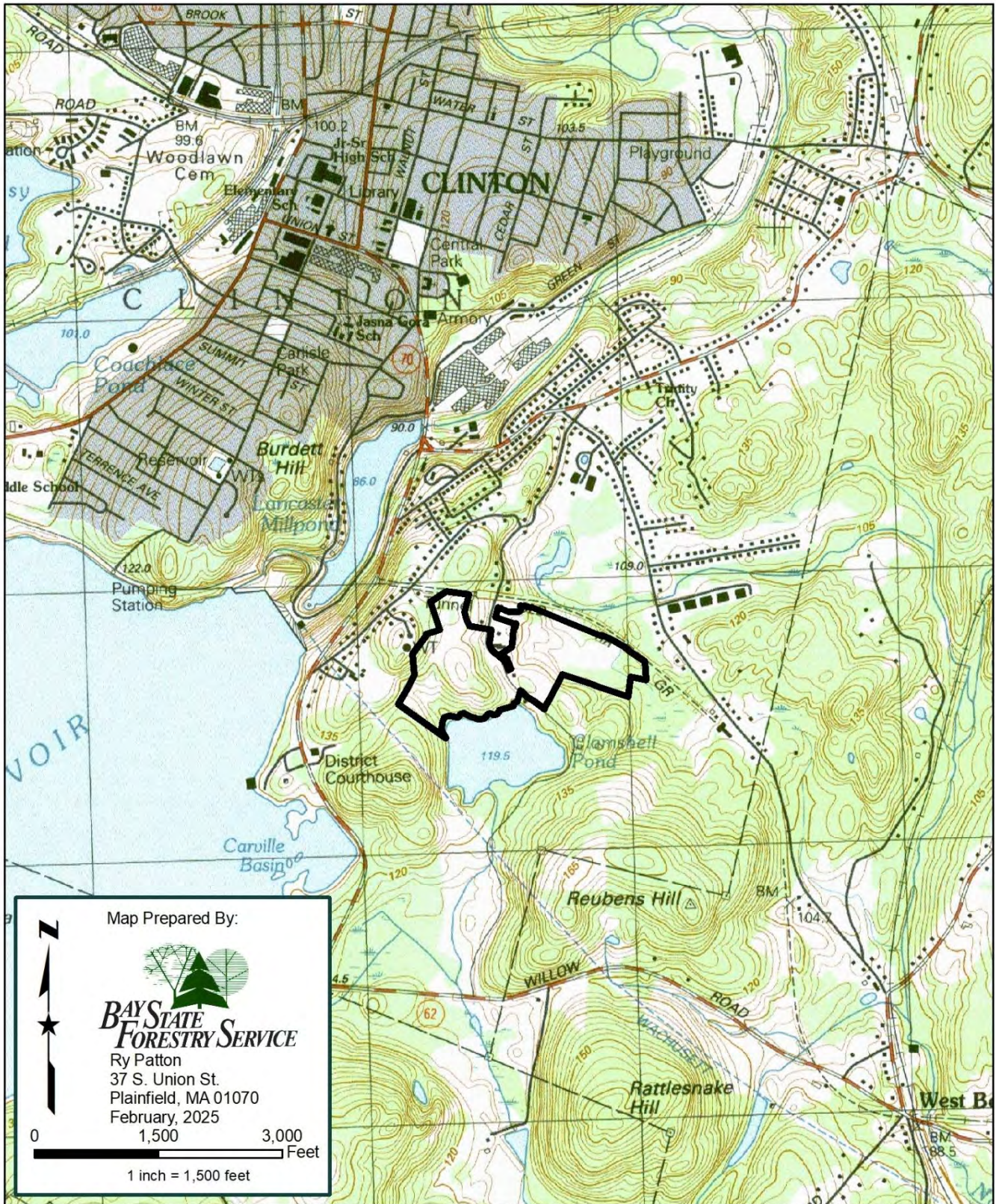
Forest Stewardship Stand Map

Rauscher Farm, Property of the Town of Clinton
Located on Clamshell Road, Clinton, Massachusetts



Forest Stewardship Locus Map

Rauscher Farm, Property of the Town of Clinton
Located on Clamshell Road, Clinton, Massachusetts



Signature Page Please check each box that applies.

☐ **CH. 61/61A/61B 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.

Signed under the pains of perjury:

Owner(s) _____ Date _____

Owner(s) _____ 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/61B 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/61B plan within 90 days from the transfer of title to insure continuation of Ch. 61/61A/61B classification.

☐ **Amendment**

Signed under the pains of perjury:

Owner(s) _____ Date _____

Plan Preparer _____ Date _____

Description of Amendment: _____

Approved, Service Forester _____ Date _____