FOREST MANAGEMENT PLAN

for

THE F.X. SHEA TOWN FOREST

in Corinth, Vermont

Prepared by the Corinth Town Forest Committee

January 2016-January 2026

Purpose of the Management Plan

This management plan serves as a 10-year management plan for the 93.6-acre F.X. Shea Town Forest located in Corinth, Vermont. The purpose of this plan is to address the uses and values of the Town Forest and guide the town in planning for its use. Management of the Town Forest will include educational, recreational, ecological, and timber activities. This plan will be reviewed and updated every 10 years and may be amended as necessary with the Town of Corinth's Selectboard approval. The management plan is an official document adopted by the Selectboard and directs the activities of the Town Forest Committee.

Vision

Collaboration on determining the future management of the Town Forest and its role in the general community led to the following vision for the future use and management of the F.X. Shea Town Forest:

The F.X. Shea Town Forest is a 94-acre secluded parcel of public land to be used by the residents of Corinth and surrounding towns. The Forest offers a public space and affords opportunities for recreation, quietude, place-based environmental education, stewardship, sustainable forestry, and natural beauty. Visitors can enjoy the natural beauty of the forest on its various trails and have the opportunity to participate in myriad nature-based activities that occur in the forest. In addition, low-impact, sustainable forest management practices provide educational opportunities, connect us to the local economy, and provide local forest products for the benefit of our community. The Forest is a vibrant part of our rural community and an integral component of community life; the Forest grounds us in a sense of place.

The Forest is managed by a committee of volunteers who are committed to the stewardship of the property and to maintaining its natural environment so that future generations can continue to gather in and celebrate the forest landscape.

Planning Process and Role of Forest Management Plan

The Town Forest Committee (TFC) has prepared this management plan for the F.X. Shea Town Forest (Town Forest) to guide the actions and decision-making on the Town Forest. The TFC recognizes the wide range of economic, social, and ecological values

associated with the Town Forest and has written this plan to guide multiple uses on this parcel.

It is the role of the TFC to manage the Town Forest. The Town of Corinth's Selectboard provides oversight to both the Town Forest Committee and the Town Forest. The TFC shall manage the Town Forest for stewardship, education, wildlife habitat, timber, recreation, public access, and conservation.

To gain a better understanding of the natural features of the forest and the forest's capacity for recreation and timber harvesting, the TFC has reviewed other documents and inventories that serve to inform the TFC about the current status of the parcel and to inform future management decisions. The Town Forest Committee has:

- relied on the parcel's detailed forest management plan prepared by Redstart Forestry in 2008;
- consulted with David Paganelli, the Orange County Forester;
- consulted the 2008 Audubon Vermont Bird Habitat Assessment for the parcel;
- inventoried and assessed the existing logging trails.

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Planning for the management of the F.X. Shea Town Forest is meant to be a public process to capture the values, opinions, and beliefs of residents related to the use of the Town Forest. The planning process has involved aaworking together to discuss current and future uses of the forest and to come to consensus on management actions that will serve the forest and the community well into the future. The plan integrates the interests of the residents of Corinth and the Town Forest. This plan defines the management, describes the forest, specifies management goals and activities, and addresses ways in which activities will meet the management goals. The plan is meant to guide, educate, and connect the community to the Town Forest.

During the management plan drafting process, the Town Forest Committee gathered public input and sought guidance from Corinth's residents in a variety of ways, including town-wide surveys, public information sessions, and public input session. The management plan was drafted by the Town Forest Committee between 2012 and 2016. A draft plan was submitted to the public for comments and revision on Month date, year. The final plan was approved by the Selectboard on Month date, year.

Introduction

Acquisition of the F.X. Shea Town Forest

On April 15th, 2011, the deed to Susan Shea's 93.6-acre woodlot was transferred to the Town of Corinth. The land was a gift to the town in memory of Susan's late husband, Frank Xavier Shea, an American educator and Jesuit priest. In his honor, the Town Forest was named the F.X. Shea Town Forest. Prior to the transfer, the parcel's conservation easement was amended to eliminate the possibility of building a house on the property and to guarantee public access. The costs for the transfer of title were provided by a generous grant from the Open Space Institute, Inc.

Corinth's Conservation Commission was instrumental in spearheading the effort to acquire the land for the Town Forest. A separate committee, the Town Forest Committee, was established soon after the acquisition to help guide the management of the Town Forest during the early stages. The need for the Town Forest Committee may become obsolete after some of the initial developments are completed and the management may be transferred to the Conservation Commission, assuming both groups agree that this step is in the best interest of the Town and the Forest. As of 2016, this forest management plan describes responsibilities of the Town Forest Committee. These may be transferred to the Conservation Commission in the future.

Current Easements

The Upper Valley Land Trust (UVLT) holds a conservation easement on this parcel that was established by Susan Shea in 2006 as part of the Orange County Headwaters Project. The easement for the parcel was amended in 2010 to guarantee public access in perpetuity. The easement stipulates that certain uses are restricted or prohibited on the Town Forest. The UVLT completes annual inspections of the property to ensure compliance with the conservation easement. A brief summary of the conservation easement is as follows:

> *"All 94 acres of the Forest will be protected under a Conservation Easement (CE) held by the Upper Valley Land Trust, which conserves the natural beauty and wildlife value of the Forest in addition to providing recreational benefits to the public. The CE also outlines some prohibited uses such as no residential, industrial, or commercial activities and no motorized recreation. The existing conservation easement with UVLT mandates continuation of the water quality protection that has been observed in the past."*

A full copy of the conservation easement can be found in Appendix 1. Grant of Development Rights and Conservation Restrictions.

Funding

The land was initially conserved in 2006 as part of the Orange County Headwaters Project, a community effort that helped about 40 landowners conserve about 6,700 acres in the town of Corinth and adjoining land in the town of Washington.
In August of 2010, before the land was donated to the town, a grant application to the Open Space Institute was submitted to help the transition from private ownership to a town forest. The generous OSI grant of $16,850 was used for amending the conservation easement with the Upper Valley Land Trust, for other transaction costs, for miscellaneous expenses, and to hire a coordinator to keep everything on track and moving forward.

Since the original OSI grant, the Town Forest Committee has fundraised to raise money to support various activities in and purchase materials for the Town Forest. The to largest fundraising efforts were in the form of the Wildlife Film Festival and donation. Corinth Taxpayers have also helped fund the Town Forest through a request of funds in the Town of Corinth's annual budget.

Currently, the Town Forest Committee is seeking other grants (Fields Pond Foundation) to support various activities but nothing has been secured to date. It is expected that on-going fundraising will be needed to support activities in and maintenance of the Town Forest, though much of the previous spent funds paid for on-time, establishment costs.

Description of the Town Forest

Historical Uses and Previous Ownership/Management

As with much of Vermont's landscape, the forest on this parcel has regenerated on land that was used previously for agriculture. Given that the land is uneven and rocky, it was most likely used as pasture for livestock, either sheep or cows. Evidence of this agricultural past can be seen in remnants of barbed wire fencing, herd paths, old woods roads, and an old barn foundation on a nearby parcel.

This parcel has been managed as a working forest for at least the past 30 years and was enrolled in the State of Vermont's Use Value Appraisal (UVA) program. Prior to town ownership, the Town Forest was privately owned by Shelley Herson and then Susan Shea and was managed as a working forest by private consulting foresters Nelson Blackburn and then Redstart Forestry. The forest was thinned several times while

under the supervision of the consulting foresters and was most recently harvested in 1997. It was scheduled to have another thinning in 2012; however, it was not carried out because it was acquired by the Town and TCF has different objectives for the town forest from the original forest management plan. See Appendix 3. Silvicultural Plan.

Landscape Setting

This parcel is in the central part of the Town of Corinth in the Northern Piedmont Biophysical Region. The Northern Piedmont is generally heavily forested, dissected with many rivers, and has open land along the valley floors. The same holds true for the Town Forest and surrounding parcels. Agricultural use in this area is significant, and many of the forests in this region have regenerated on abandoned pasture and cropland over the past 100 years.

Habitat fragmentation and heavy development pressure in the area is currently of little concern, though increasing, and a 2008 Audubon Vermont Bird Habitat Assessment of the property states:

"There is very little in the way of residential development and roads are minimal. Due to these minimal amounts of development, it is unlikely that habitat fragmentation is a concern. Conversely, there is great opportunity for interior forest bird species (e.g. wood thrush, scarlet tanager) habitat". Appendix 2.Forest Bird Habitat Assessment and Management Recommendations.

Directions and Parking

The property is at the end of Wilson Road, in the center of the Town of Corinth. An old log landing on the Town Forest is at the end of the Class IV Wilson Road, nearly a mile from the nearest Class III town road. Winter access can be tricky, but the road has been maintained by Wilson Road residents to within half a mile of the Town Forest entrance.

The closest physical address for the entrance of the Town Forest is: 797 Wilson Road, Corinth, VT 05039. The latitude and longitude coordinates are: 72°17'0.15978"W and 44°02'22.5747"N. Below are directions to the Town Forest.

Starting From the Corinth Post Office (in Cookeville):

- Follow Center Road for approximately 0.3 miles.
- Take left onto Coppermine Road. Follow Coppermine Road for approximately 0.1 miles.
- Take first right onto Wilson Road*. Follow Wilson Road for approximately 0.7 miles.
- At 0.7 miles is the designated parking area for the F.X.Shea Town Forest.

- Follow Wilson Road for another 0.1 miles on foot to reach the entrance of the F.X.Shea Town Forest.

Starting from East Corinth (near the East Corinth General Store)

- Start out heading west onto Route 25
- Take a left onto Brook Road. Follow Brook Road for approximately 2.8 miles.
- Take a slight right onto Center Road. Follow directions above from Coppermine Road.

Boundaries

Boundaries are mostly well marked by barbed wire, painted blazes, stone wall, some rather unofficial looking corner pins, and some surveyor-placed corner pins. Little boundary evidence was found along segments of the boundary lines extending west of Wilson Road. The Town Forest Committee is responsible for locating and keeping the boundaries marked.

Access and Trails

Internal woods roads are in excellent condition and access all of the property. Approximately 2.5 miles of the woods roads are currently used as hiking trails. The Town Forest can be accessed by this network of trails, which were developed for prior timber harvests. Some of these trails are too steep to sustain any kind of recreational activity, and to minimize erosion and allow natural revegetation, they will not be maintained. With ongoing maintenance, the identified trails are suitable for low-impact recreation.

Topography and Soils

Most of the land slopes to the east, with a steep to moderately-steep hillside whose peak is near the western boundary. A second, smaller knob is located just south of the main hill. Elevations range from 1,200 feet along the eastern edge near a stream and rise to 1,600 feet at the crest of the hill near the western boundary.

Tunbridge-Woodstock Complex and Buckland silt loam soils underlie the entire property. Tunbridge-Woodstock soils occur in units that are too small to map separately. Tunbridge soils are quite productive, although they are extremely stony and do not hold water well. Woodstock soils are slightly less productive and are classed as having a medium natural fertility but more apt to dry out. Buckland is a deep, moderately well drained and productive soil. In general, these three soils are generally productive for growing trees, and are rated as having a Site Class of 1 or 2.

A recent UVLT easement monitoring report notes that
"…there are several sweet areas with enriched soil indicator plant species. These occur primarily around several ledgey areas with exposed bedrock and steep banks in the southern and eastern portions of the property."

Forest Types and Natural Communities

The parcel contains several major forest types and was broken into three different forest stands (management units) based on the following forest types: Sugar maple, Northern Hardwood, and Mixedwood. Most of the property is in the sugar maple stand, and very few softwood trees are growing on the parcel.

The three forest types are incorporated into two Natural Communities: Northern Hardwood Forest Natural Community and Hemlock-Northern Hardwood Forest Natural Community.

Water Resources

A small drainage flows through the northeast corner of the parcel and another through a small portion of the southeastern sliver. These small-order streams flow into Center Brook, a tributary of Cookeville Brook which drains into the South Branch of the Waits River. The Waits River flows east across this region and is a major tributary of the Connecticut River.

Significant Ecological Attributes

This parcel is not mapped by Vermont's Agency of Natural Resources as containing significant deer wintering or bear habitat, or any rare, threatened, or endangered species.

Luckily, as of the 2008 forest inventory, this parcel is not infested with non-native, invasive plants. In general, this surrounding region does not have a significant presence of these plants, though they are becoming more abundant and will likely influence management of this parcel in the future.

Management Goals

The Town Forest Committee recognizes the need for multiple-use management of the Town Forest and has developed the following long-term, broad-based, equally important, management goals for the parcel

- **Provide Opportunities for Place-Based Education and Interpretation**
- **Promote the Use of the Forest for Low-impact Recreation**
- **Sustain Ecological Health, Natural Functions and Wildlife Habitat**
- **Practice Sustainable Forestry and Timber Harvesting**

The management goals listed above are further described in the following sections of the management plan. The Town Forest Committee has made suggestions for several action items related to these long-term management goals that may be reviewed by the Town Forest Committee during the next 10 years. The Town Forest Committee plans to complete some of the action items on an annual basis and others require a one-time action.

➢ Management Goal 1: Provide Opportunities for Place-Based Education and Interpretation

The town forest will serve a place where the general public has the opportunity to participate in and attend free forest-based events, field walks, interpretive walks and natural history interpretation. The forest can also be used as an outdoor classroom where people can learn about the environment, the forest ecosystem, sustainable timber harvesting, wildlife and wildlife habitat, and natural features of the Forest. The Town Forest will be open to local school children so they have the opportunity to participate in experiential education and teachers will have the opportunity to provide hands-on, place-based learning.

It is the responsibility of the Town Forest Committee to organize and host a variety of field walks with local and regional experts. The TFC has constructed an information kiosk and will maintain this structure so it can be used during interpretive walks or other education workshops. If other interpretive or educational installations are desired, the TFC will consider funding mechanisms such as grants to raise money. The TFC will make an effort to support local school curriculum by collaborating with school groups including, but not limited to, the Waits River Valley School and the Maple Sugar Pre-school. The TFC may collaborate with the Blake Memorial Library and scouting organizations (Boy Scouts, Cub Scouts, Girl Scouts) to reach home-schooled children and other educational groups.

Management Goal 1: Education			
Action Item	**Annual or One-Time**	**Suggested Completion Date**	**Date Completed**
Organize multidisciplinary educational walks in the town forest	Many times annually		
Construct Information Kiosk	One-time	2014	2014
Install posts with platform to be used for interpretative walks and Story Walk	One-time	2015	
Work with local scouting organizations	Annual		
Outreach to local elementary and preschool	Annual		
Install/Display local artist work in the Town Forest	Annual	2016	2015
Construct an outdoor pavilion	One-time	2020	

➢ Management Goal 2: Promote the Use of the Forest for Low-impact Recreation

The town forest will be a place where four-season, low-impact, non-motorized recreation is permitted and encouraged. A network of trails is established and trails will be maintained to support activities such as hiking, cross-country skiing, dog walking, wildlife observation, and snowshoeing. Recreation activities must be compatible with other management goals and must be compatible with providing a space for quiet solitude and must respect wildlife, the forest, and other Town Forest visitors and users.

Trails and Maintenance

The town forest will host a variety of trails. The Orange trail will be maintained as a double-track, wider trail that supports side-by-side hiking. Other trials will be maintained as single track trails to promote a more wilderness feel. All maintained trails will be identified on a trail map that is posted at the kiosk and smaller maps will be available to the public at the trailhead kiosk. Trails will be clearly marked in the woods with aluminum tags and vertical painted markers. Markers will be placed along the trail so that one individual marker can be easily seen from another in either

direction and they will be maintained annually. Major trial junctions will be clearly marked with trail signs that will be consistent in color, size, and placement. The TFC retains the right to temporarily or permanently relocate or close any of the trails on the Town Forest for maintenance or if they are being improperly used.

Off-trail recreation is permitted on the Town Forest. Unmaintained trails will be shown differently from maintained trails on the map but will not be indicated with signs or markings in the woods. The boundaries of the Town Forest property will be clearly marked and maintained regularly. Visitors must respect neighboring landowners and respect land-posting signs.

The Town Forest Committee will assess the trails and their condition and make suggestions for maintenance based on need. The TFC will schedule trail maintenance outings regularly. During trail maintenance, the TFC will assess hazard trees along the trails and consider them for removal. Hazard trees are dead, dying, or structurally compromised trees that may provide a risk to trail users. Removal of these trees will take into consideration the ecological value of dead trees.

The TFC will organize the maintenance events and encourage volunteers to participate. Trail maintenance will include keeping the condition of the trail intact as well as refreshing trail markers and signs as needed. The TFC has purchased a small cache of trail maintenance tools (including a weed wrench) to be used by volunteers on trail maintenance days and these are kept in the Corinth Town Hall basement.

The rehabilitation or maintenance of existing trails shall be given priority before consideration of building new trails**.** New trails will not be constructed without permission of the TFC. The committee will consider wildlife, sensitive habitats or vegetation, erosion, maintenance, and marking when considering the establishment of a new trail. New trail development shall be considered to replace unsuitable (unsustainable or dangerous) trails, complete loops, provide access to special features, access vistas, or connect to other public trails.

Hunting

Hunting will be permitted on the Town Forest in accordance with the conservation easement and state law. The Committee considers hunting a traditional, low-impact use and the TFC does not intend to post the Forest against hunting. Hunting season dates will be posted at the kiosk to inform the public. Permanent tree stands and blinds are prohibited. Trapping may be permitted on the Town Forest, however permission will need to be obtained from the Selectboard, as per State of Vermont Law and the Selectborad will require that trappers will post a notice on the information kiosk

information the public of the trapping activity.

Permitted Recreation and Information Posting
Permitted and prohibited uses of the town forest will be clearly posted at the information kiosk. Visitors are encouraged to sign-in at the kiosk, both to provide information to the TFC about usage of the forest by visitors and to aid in the event of an emergency.

Motorized recreation is strictly prohibited, as dictated by the UVLT Conservation Easement and the goals of the Town Forest Committee. A barrier is placed at the trailhead entrance to discourage motorized usage. Wheeled-equipment may only be used by the Town Forest Committee to aid in logging, maintenance, or emergencies. The landing near the entrance of the Town Forest and the designated parking areas will be maintained as open areas by annual brush-hogging.

Trails will be maintained and restricted for foot travel only, and will remain closed to mountain biking and horseback riding. Low-impact, non-motorized recreation is promoted within the town forest. At this time (2016), the Committee finds that mountain biking, horseback riding, and other non-pedestrian recreational activities to be incompatible with Town Forest goals and/or the TFC does not have the capacity to properly establish and monitor the use of these activities; thus they are prohibited. In the future, The Committee may entertain proposals to open certain trails to mountain biking or horseback riding and will consider the following: its ability to control erosion, its ability to install erosion control measures, its ability to maintain trails to biking and horseback riding standards, community needs, the potential for invasive species introduction, wildlife impacts, potential user conflicts, and resources needed.

Dogs are permitted on the recreation trails in the Town Forest. As per the Town of Corinth's ordinance, owners must maintain responsibility for their pets and dogs must either be leashed or under voice control by their owners. Visitors must pick up after their dogs on trails. In addition, dogs may not be allowed at special events if their presence interferes with the program being offered (for example, tracking workshops).

Primitive, low-impact, leave-no-trace camping is permitted on the Town Forest. The TFC may consider creating designated camping areas in the future if demand is high. At present, there are no designated campsites on the parcel. Campers must not disturb the forest and all trash must be carried out. Fires are not permitted at individual, primitive campsites. One designated fire pit can be used for pre-approved community events on the landing when fire danger is not high. The Selectboard and/or the Town Forest Committee have the right to revoke camping privileges at any time.

Management Goal 2: Recreation			
Action Item	**Annual or One-Time**	**Suggested Completion Date**	**Date Completed**
Post permitted uses, hunting information, trails information on kiosk	Annually	2014-2024	2014
Install trail signs	One-time	2015	2015
Print trail map on kiosk and make handouts available	One-time	2015	2015
Conduct trail maintenance	Semi-annual- spring and fall		
Install a gate at the entrance of the Town Forest	One-time	2015	2015
Create passport to Corinth Trails- with CCC	One-time	2017	

➢ Management Goal 3: Sustain Ecological Health, and Natural Functions, and Wildlife Habitat of the Forest

Management activities within the town forest must maintain, protect, or enhance ecological functions such as wildlife habitat, carbon sequestration, soil health, and water quality. Other management objectives, such as recreation and timber harvesting, will maintain as much of the ecological health of the land as possible. Any development (trails or associated features such as picnic tables, interpretive signs, or outhouses) will consider scenic impacts, wildlife impacts, erosion, and natural features. New trails, permanent structures, or timber harvests must be reviewed by the Town Forest Committee which shall consider the potential effects on wetlands, vernal pools, waterways, soils, wildlife habitat, and rare, threatened, or endangered vegetation and wildlife.

Ecological Health and Natural Function

Rare, threatened, and endangered (RTE) plants and animals shall be protected. No RTEs have been identified on this parcel, but if found, they should be mapped and preserved.

The TFC will attempt to maintain native natural communities and protect the integrity of the natural communities. All activities should be designed to avoid the introduction of invasive plant and animal species as much as possible. If or when non-native

invasive vegetation is discovered within the forest, the Town Forest Committee will consult with local professionals (for example foresters or others who manage vegetation) to determine the best course of action for treatment and/or removal. Volunteer labor and mechanical treatment methods (for example pulling, weed wrenching, etc.) will be considered first for the removal of invasive plants; however the use of herbicides can be considered to treat non-native vegetation if necessary. Herbicide treatments shall be considered only after mechanical alternatives have been deemed inefficient and insufficient.

A wildflower garden was established near the entrance of the Town Forest. This area can be maintained if desired.

Wildlife Habitat

The Forest is located within a large block of private, yet undeveloped lands that provide habitat and travel corridors for wildlife. The integrity of these habitats on the parcel will be maintained.

Forest management practices must comply with regulations that protect wildlife and habitat and seek to integrate timber harvesting and wildlife conservation goals. Timber harvesting should be designed to develop diversity in tree species, size, and stocking to promote use by a variety of wildlife species (see "Management Goal: Forest Management" below). Down and standing-dead trees will be maintained to promote long term food supply for various animals. Other special attributes, such as mature beech trees, may also be maintained for wildlife. Mowing activities may be postponed or delayed to accommodate nesting birds and/or monarch butterflies.

The Vermont Vernal Pool Atlas does not identify any vernal pools within the Forest; however, since these pools are small and temporary, the TFC should continue to search for pools. Any identified pools shall be marked on a map and will be left undisturbed. Future timber management will follow Best Management Practices (BMPs) near vernal pools and trails will not be placed near vernal pools.

Management Goal 3: Ecology and Wildlife			
Action Item	**Annual or One-Time**	**Suggested Completion Date**	**Date Completed**
Maintain wildflower garden	Annually	2014-2024	2014
Consider tree cutting practices that promote wildlife species	Annually	Between 2016-2026	
Seek/map vernal pools (update to Vermont Atlas), sensitive habitats, unique features	One-time	2016	
Conduct a Bio blitz	One-time	2016	
Offer wildlife tracking or habitat walks	Annually		
Consider delayed mowing during upkeep of the landing area to promote birds and/or monarch butterflies	Annually		

- **Management Goal 4: Practice Sustainable Forestry and Timber Harvesting of the Town Forest Parcel.**

The primary forestry goal is to provide a good example of a well-managed, productive non-industrial forest, where respect and admiration of natural communities co-exists with the production of a sustainable supply of high quality forest products. The forest will provide employment and contribute to the local economy. People will be encouraged to learn about timber harvesting during the tree marking, harvesting, trucking, and marketing phases.

The TFC plans to execute sustainable timber harvesting practices to encourage the development of a multi-aged, diverse, resilient, and healthy forest that supports wildlife, aesthetics, and recreation. Currently, the Town Forest is comprised of a fairly even-aged, uniform forest. The Town Forest Committee recognizes that tending to the forest (cutting trees) may be necessary to help expedite the vision and goals the Town Forest Committee has for the Town Forest. The TFC has also decided to set aside a portion of the Town Forest to remain un-harvested into the future.

Timber harvesting may result in some financial income from wood products, but the forest is not to be primarily managed as source of income for the Town. If timber

harvesting produces a profit, the Town of Corinth will first be reimbursed for the lost property tax revenue, which would be based on the amount that a private property owner would have paid in taxes, and assuming the land would have remained in current use. Any income in excess of that amount will be dedicated to supporting the Forest as the overseeing committee sees fit, per Selectboard approval.

Timber Harvesting Practices

Timber harvests will conform to Acceptable Management Practices (AMPs) as outlined by the State of Vermont's Department of Forest, Parks and Recreation, to safeguard soil health and waterways and minimize erosion.

Low impact practices, such as logging in the winter months when the ground is frozen, will be considered whenever feasible. The use of existing trails/skid roads or developing new trials/roads will also be considered at the onset of a logging job. The Town Forest Committee, in consultation with the Orange County Forester, will decide which logging contractor will do the work and what type of harvesting equipment will be appropriate for the logging activity.

The Town Forest Committee will notify the Upper Valley Land Trust prior to any timber harvesting, as mandated by the conservation easement. The TFC will notify the Selectboard as to when timber harvesting will occur and at the completion of the harvest transactions will be published in a town budget report.

Silviculture

Silviculture (tending to trees) practices will be decided by the Town Forest Committee, in consultation with the Orange County Forester. Prior to any timber harvesting, a detailed Silvicultural Forest Management Plan with prescriptions will be developed by the Town Forest Committee and the Orange County Forester and will be updated every 10 years. Appendix 3. Silvicultural Plan.

The primary goals of timber harvesting on the Town Forest will be to improve and promote wildlife habitat and support recreation activities. Silviculture will be used to support the regeneration of desired tree species and promote a diversity of stand ages and species. The Town Forest Committee would like to encourage the growth of high-quality saw timber products where soils are suitable and other ecological criteria are met.

Downed woody debris, snags, and cavity trees will be retained when timber is harvested. The creation of early successional habitat will be considered as well. Forest pests and diseases, such as the emerald ash borer, Asian longhorned beetle, beech bark

disease, and hemlock woolly adelgid (among others) may present the need for a salvage operation on the Town Forest. Salvage operations may also be necessary if ice or storm damage occurs.

Management Goal 4: Practice Sustainable Forestry and Timber Harvesting of the Town Forest Parcel.			
Action Item	**Annual or One-Time**	**Suggested Completion Date**	**Date Completed**
Develop a Silvicultural Forest Management Plan	One-time	2016	2016
Consider an educational workshop of timber harvesting operation during the harvest	Annually	Between 2016-2026	
Communicate with the Orange County Forester	Annually	2014-2024	2014, 2015
Complete a commercial thinning in Stand 2- See Silvicultural Plan	One-time	Between 2016 and 2021	

CORINTH TOWN CLERK'S OFF.
RECEIVED FOR RECORD
DATE 5-25-06 TIME 9:45 AM
RECORDED IN BOOK 83 PAGE 697-708
ATTEST [signature] TOWN CLERK

GRANT OF DEVELOPMENT RIGHTS AND CONSERVATION RESTRICTIONS

WHEREAS, SUSAN GUSSENHOVEN SHEA is the owner in fee of certain real property in Corinth, Vermont, which has aesthetic, recreational and natural resource value in its present state; and

WHEREAS, this property contains at least 93.5 acres (more or less) of land, the majority of which is in agricultural and forestry land use, which provides wildlife habitat as well undeveloped open space and recreational opportunities; and

WHEREAS, this property is located within twenty-five (25) miles of the Appalachian Trail, a National Scenic Trail, and is approximately 4 miles from the Washington State Forest, which may demonstrate some degree of national or state significance in light of the background of I.R.C. Section 2031(c)(8)(a)or successor statute or regulation; and

WHEREAS, the UPPER VALLEY LAND TRUST, INC. is a publicly supported non-profit corporation incorporated under the laws of the State of New Hampshire, authorized to conduct business in the State of Vermont, and qualified under Section 501(c)(3) and 170(h) of the Internal Revenue Code, whose purpose is to preserve undeveloped open space land in order to protect the aesthetic, recreational, cultural, educational, scientific, and natural resources of the region through non-regulatory means, thereby reducing the burdens on state and local governments; and

WHEREAS, the economic health of Vermont is closely linked to its agricultural and forest lands, which not only produce food, fuel, timber, and other products, but also provide much of Vermont's scenic beauty, upon which the state's tourist and recreation industries depend; and

WHEREAS, the State of Vermont has repeatedly sought to foster the conservation of the state's agricultural, forest, and other natural resources through planning, regulation, land acquisition, and tax incentive programs, including, but not limited to, Title 10 VSA Chapter 151 (Act 250); Title 24 VSA Chapter 117 (Regional and Municipal Planning and Development Act); Title 10 VSA Chapter 155 (Acquisition of Rights and Interests in Land); Title 32 VSA Chapter 124 (Current Use Taxation); Title 32 VSA Chapter 231 (Property Transfer Tax Act); Title 32 VSA Chapter 235 (Land Gains Tax); Joint Resolution No. 43 adopted by the Vermont House and Senate in February 1982 endorsing the voluntary transfer of interests in agricultural land through agreements between farmland landowners and private land trusts; and Title 10 VSA Chapter 15 (Housing and Conservation Trust Fund); and

WHEREAS, the conservation of this property as undeveloped land is consistent with and in furtherance of the Town Plan adopted by the Town of Corinth and the Regional Plan adopted by the Two Rivers Ottauquechee Regional Planning Commission, and the purposes set forth in Title 10 VSA Section 6301;

NOW, THEREFORE,

KNOW ALL BY THESE PRESENTS that **SUSAN GUSSENHOVEN SHEA**, of Corinth, in the County of Orange, and the State of Vermont, on behalf of herself and her heirs, successors, and assigns (hereinafter "Grantor"), in consideration of the agreement of the Grantee to accept and extinguish the development rights described herein, and the payment of one dollar and other good and valuable consideration paid to her full satisfaction, does freely give, grant, sell, convey, and confirm unto the **UPPER VALLEY LAND TRUST, INC.**, a non-profit corporation with its office located at 19 Buck Road, Hanover, New Hampshire, 03755, and its successors and assigns (hereinafter "Grantee"),

the following described development rights and a perpetual conservation easement and restrictions as more particularly set forth below, on a certain parcel of land situated on Wilson Road in the Town of Corinth, Vermont, County of Orange, more particularly described in Schedule "A" attached hereto and incorporated herewith by reference.

Definitions:

- The term "premises" as used in this Grant shall refer to the entire 93.5± acre parcel of Grantor as described in Schedule "A" incorporated herein by reference;
- "Protected Property" shall refer to the 93.5± acre portion of the premises that is restricted hereby as described in Schedule "A" and so designated on the Plan attached as Schedule "B" incorporated herein by reference;
- "Reserved Housesite" shall refer to a 5 acre or less contiguous area, to be more particularly described by Grantor's survey at some future date, which may be located within the Protected Property; and
- "Development Zone" is an area within which the Reserved Housesite may be sited and which is more particularly described in Schedule "A" and designated on the Plan attached as Schedule "B";

The development rights hereby conveyed by Grantor to Grantee shall include all development rights, except those specifically reserved by the Grantor herein, and those reasonably required to carry out the permitted uses of the Protected Property as described herein. The Grant of Development Rights and Conservation Restrictions (hereinafter "Grant") hereby conveyed to the Grantee consist of covenants on the part of Grantor to do or refrain from doing, severally and collectively, the various acts set forth below. These covenants shall constitute a servitude upon the land and shall run with the land in perpetuity. They constitute conservation rights and interests provided by 10 VSA Chapter 34, including Sections 821 and 822. The effect of this Grant is to forever terminate and extinguish whatever right Grantor and Grantor's successors in interest may have, whether now or in the future, to develop the Protected Property or devote it to uses not consistent with the Purposes of this Grant as set forth herein. Grantee accepts and agrees to enforce such covenants in order to achieve the Purposes of this Grant.

A. PURPOSES OF THE GRANT

Grantor and Grantee acknowledge that the purposes of this Grant are as follows (hereinafter "Purposes"):

1. To preserve permanent open space for the scenic enjoyment of the general public, where development would impair the scenic rural character of the Town of Corinth, as viewed from areas near the town center along the Cookeville Road;

2. To protect lands adjacent to or in close proximity to other conserved lands;

3. Consistent with State policy, to conserve highly productive forest land and resources, and to encourage the long-term sustainability and professional management of those resources, without compromising water quality, wildlife habitat, and other conservation values of the Protected Property;

4. To protect lands that are part of a regional conservation effort, known as the Orange County Headwaters Project (OCHP), to protect working farms and forests in the Towns of Washington and Corinth, such lands have been identified as a priority of OCHP and will help to leverage additional conservation projects and federal and state matching funds for conservation in the area;

5. To conserve biological diversity, native flora and fauna, habitat conducive to a variety of wildlife (including numerous species that rely on a mixture of forests, field edges and wetlands) as well as the environments, habitats, and ecological processes which support them, as those values exist on the date of this instrument, and as they may evolve in the future;

6. Overall, to assure the Protected Property will be retained forever in its undeveloped and scenic condition, and to prevent any use of the Protected Property that will significantly impair or interfere with the unique and significant qualities of public benefit and conservation values of the Protected Property; and

7. To contribute to the implementation of the policies of the State of Vermont designed to foster the conservation of the state's agricultural, forestry, and other natural resources through planning, regulation, land acquisition, and tax incentive programs by conserving productive agricultural and forestry uses, wildlife habitats, non-commercial recreational opportunities and activities, and other natural and scenic values of the Protected Property for present and future generations. In conveying the development rights, conservation easement, and restrictions described herein to Grantees, it is the intent of Grantors and Grantees that the interests conveyed herein may serve as the local or State contribution or match to conserve other forestlands and wildlife habitat in Vermont under the Federal "Forest Legacy Program" described in Section 1217 of Title XII of the Food, Agriculture, Conservation and Trade Act of 1990.

Grantor and Grantee recognize these natural values of the Protected Property and share the common purpose of conserving these values by conservation restrictions to prevent the use, development or fragmentation of the Protected Property for any purpose or in any manner which would conflict with the maintenance of these values. Grantee accepts this Grant to conserve these values for present and future generations.

B. RESTRICTED USES OF THE PROTECTED PROPERTY

The restrictions imposed upon the Protected Property, and the acts which Grantor shall do or refrain from doing, are as follows:

1. Undeveloped Open Space

The Protected Property shall be maintained in perpetuity for agricultural, forestry, non-commercial education, non-commercial recreation, and open space (meaning enjoyment with little to no adverse impact) purposes only. No residential, commercial, industrial, or mining activities shall be permitted, and no building, structure or appurtenance shall be installed or placed on or within the Protected Property, except as specifically permitted and conditioned under the terms of this Grant.

2. Limits on Potential New Property Rights

No rights-of-way, easements of ingress or egress, driveways, roads, boundary line agreements, or utility lines (collectively "Property Rights") shall be conveyed, constructed, developed or maintained into, on, over, under, or across the Protected Property, without the prior written approval of Grantee, except those of record prior to this Grant, and those, if any, specifically permitted in this Grant. Grantee may grant such approval if it determines, in its sole discretion, that Grantor's creation of a Property Right would be consistent with the Purposes and not adversely affect the conservation values of the Protected Property.

3. Advertising

There shall be no signs, billboards, or outdoor advertising of any kind erected or displayed on the Protected Property without the prior written approval of Grantee. Grantor may, however, without the prior written approval of Grantee, erect and maintain reasonable signs indicating the name of the Protected Property, directional signs, boundary markers, signs regarding public access, hunting or trespassing, memorial plaques, political signs, temporary for lease or sale signs, and signs informing the public that agricultural or timber products are for sale or are being grown on the Protected Property. Grantee, with the permission of Grantor, may erect and maintain signs designating the Protected Property as land under the protection of Grantee. Signage shall remain unlighted and sized no larger than reasonably necessary for its purpose.

4. Dumping

There shall be no placement, collection, burial, burning, or storage of trash, human waste, materials known to be environmentally hazardous, or any unsightly or offensive material (including construction debris, vehicle bodies or parts) on the Protected Property, without the prior written approval of Grantee in consideration of the Purposes of this Grant. Provided, however the storage and spreading of compost, manure, or other fertilizer under sound agricultural practices, the storage of feed, the temporary storage of trash in sound receptacles for periodic off-site disposal, the burning of untreated wood or leaves, or leaving of slash after harvesting timber, are permitted without such prior written approval.

5. Topography

There shall be no disturbance of the surface, including but not limited to filling, excavating, quarrying, removing of topsoil, gravel, rocks, sand, or minerals, or changing of the topography of the land made in any manner, except as may be reasonably necessary to carry out the specific permitted uses on the Protected Property under the terms of this Grant. In no case shall drilling, pumping or mining of subsurface oil, gas, or other minerals be permitted on the Protected Property.

6. Subdivision

The Protected Property shall not be subdivided or conveyed in any form in separate parcels without the prior written approval of Grantee. Such approval will be granted only in exceptional circumstances, provided: (a) severe hardship would occur otherwise; (b) it does not compromise the Purposes of this Grant; and (c) Grantor provides full compensation for any anticipated increase in Grantee's perpetual stewardship responsibilities. If, under applicable law, the Protected Property constitutes more than one tract of land, Grantor nevertheless covenants and agrees that from hereon all of the Protected Property shall be held under one ownership as a single undivided tract and transferred as a single undivided tract. Grantor shall not directly or indirectly cause the separation of any parts of it through the allocation of property rights among partners, shareholders, or members of any successor entity, the creation of a horizontal property regime, long-term leasing, or any other means without Grantee's prior written approval as described herein.

7. Water Systems

There shall be no manipulation of natural watercourses, wetlands or other water bodies, nor shall there be activities conducted on the Protected Property which would be detrimental to water quality or the ecosystems supported thereby, or which could alter natural water level or flow, except as reasonably necessary to carry out the uses allowed under this Grant, such as for agricultural purposes, within the bounds of state and federal laws and regulations. The construction of ponds or reservoirs shall be permitted only upon the prior written approval of Grantee. Grantee's approval shall not be unreasonably withheld or conditioned, provided the pond is located and constructed in a manner consistent with the Purposes of this Grant. Construction shall also be consistent with the Pond Construction Guidelines of the Vermont Agency of Natural Resources (or a successor state or federal pond construction guideline or regulation). Subsequent pond maintenance may be conducted with prior notice to Grantee.

8. Potential Uses

No use shall be made of the Protected Property and no activity thereon shall be permitted which, in the reasonable opinion of Grantee, is or may possess the potential to become inconsistent with the Purposes of this Grant.

Grantor and Grantee acknowledge that, in view of the perpetual nature of this Grant, they are unable to foresee all potential future land uses, technology, evolution and other occurrences which may affect the Protected Property or its use or management. Grantee, therefore, in its reasonable discretion, may determine whether (a) proposed uses or improvements are addressed in this Grant, either through the Purposes or extrapolation of other terms; and (b) alterations in existing uses or structures are consistent with the Purposes of this Grant.

C. PERMITTED USES OF THE PROTECTED PROPERTY

Notwithstanding the foregoing, Grantor shall have the right to make the following uses of the Protected Property:

1. Agriculture

The right to establish, re-establish, maintain, and use cultivated fields, orchards, and pastures for personal and commercial purposes provided such uses: (a) are in accordance with generally accepted, sound practices and principles of agriculture and husbandry; and (b) do not cause significant pollution or degradation of soil, surface or subsurface waters, soil loss or erosion, or significant adverse effects to the conservation values outlined in the Purposes of this Grant.

In the event an agricultural activity or proposed agricultural activity appears to be of such size and scope it could pose a question as to the conditions above, Grantor shall, upon Grantee's request, submit an agricultural plan setting forth the proposed activities, methods Grantor will utilize to protect soils (especially "highly erodable soils" as defined by the U.S. Department of Agriculture's Natural Resource Conservation Service or similar successor organization), or methods Grantor will utilize to protect other conservation values. In the event such a plan is submitted, Grantor shall perform such agricultural activities to the extent possible in accordance with that plan.

2. Forestry

The right to harvest timber and other wood products for personal and commercial purposes provided such uses are in accordance with generally accepted sustainable forestry practices and in accordance with a forest management plan.

Before harvesting timber for commercial purposes, Grantor shall obtain the written approval of Grantee of its forest management plan (including amendments thereto), which approval shall not be unreasonably withheld or conditioned, provided that such plan (a) has been written or approved by a professional forester, or endorsed by a wildlife biologist or similar professional experienced in woodland habitat and ecosystem management; (b) encompasses sustainable forestry practices; and (c) does not violate the terms or conflict with the Purposes of this Grant. Disapproval by Grantee of a forest management plan proposing a clearcut (removal of more than 75% of the basal area within five (5) acres or more) or a liquidation cut (a harvest leaving a residual stocking level of acceptable growing stock below the C line as defined by the U.S. Department of Agriculture stocking guides for the applicable timber type) shall not be deemed unreasonable. However, Grantee may approve such plan in its discretion if consistent with the Purposes of this Grant, such as to permit the planting of different species of trees, or a salvage cut to regenerate the forest, or the establishment of a field, pasture, or garden, or for wildlife purposes.

Notwithstanding the foregoing, Grantor may conduct maple sugaring operations, and with prior notice to Grantee, may remove a negligible number of trees for Grantor's personal, non-commercial uses such as for fencing, firewood, maintaining a limited view, or wood crafts without a forest management plan. More intensive forestry activities, treatments or cutting, whether for personal or commercial purposes, shall only be undertaken in accordance with a forest management plan approved by Grantee, as described above. All forestry activities shall be in accordance with all governmental laws and regulations applicable to the Protected Property.

3. Structures

The right to construct and maintain barns, sugar houses, or similar structures on the Protected Property provided that they are plausibly supportive of and used *exclusively* for agricultural or forestry purposes, they do not cover or displace large amounts of soil or vegetation or convert a significant open field, and provided further that such structure or facility and its location have been approved in writing in advance by Grantee.

Further, the right to construct, repair, maintain, and use a minimal number of structures related to low-impact recreation or open space uses or that complement the qualities of the Protected Property (for example, deer stands, gazebos, hunting blinds, lean-tos, tent platforms, tree houses, children's play houses, kiosks, outdoor fireplaces), provided that such structures have been approved in writing in advance by Grantee. Grantee's approval shall not be unreasonably withheld or conditioned provided that each structure: (a) is located and accessed in a manner consistent with the Purposes and terms of this Grant; (b) shall not have any utility services, waste disposal systems, or plumbing; (c) shall not be used for year-round, continuous occupancy; (d) shall not exceed 600 square feet of floor space or 15 feet in height, and (e) the cumulative impact of all such structures remains consistent with the Purposes and terms of this Grant.

4. Roads and Trails

The right to maintain existing driveways, roads, and rights-of-way of record and, with prior notice to Grantee, the right to construct and maintain permeable-surface (unpaved) roads or trails provided that they are located, maintained and used in the manner described herein exclusively for the purposes of agriculture, forestry, land management, or for recreational purposes.

Roads or trails used for recreational purposes shall be (a) located and maintained in a manner that prevents or minimizes any adverse impacts to the conservation values of the Protected Property as described in the Purposes of this Easement, and in a manner that adequately protects soil stability and water quality; (b) used primarily for transitory purposes, namely low-impact travel through the Protected Property, and not for non-transitory purposes or for highly-concentrated area use such as vehicle obstacle courses or dirt-track raceways; and (c) limited to suitable seasonal ground conditions that avoid mud and erosion.

5. Reserved Housesite

With the prior written approval of Grantee, the right to create one "Reserved Housesite", of a size not to exceed five (5) acres. Grantee's approval shall not be unreasonably withheld so long as (a) the Reserved Housesite is located generally within the larger area depicted for as the "Development Zone" on the Conservation Plan attached as Schedule "B;" and (b) prior to commencing any clearing of the Reserved Housesite or construction of any such improvement thereon, Grantor shall deliver to Grantee, a survey map in recordable form, that defines the boundary of the Reserved Housesite and the area of proposed improvements authorized by these provisions, along with payment to Grantee sufficient to cover all recording costs. Upon reviewing these documents and deeming the Reserved Housesite acceptable and consistent with the provisions herein, Grantee shall execute a document in recordable form, fully releasing said Reserved Housesite from all terms and conditions of this Grant except Section B(6), above.

D. MANAGEMENT PLAN

THIS SECTION SHALL APPLY TO A GRANTOR THAT IS A MUNICIPALITY, DIVISION OF THE STATE OF VERMONT, OR A NOT-FOR-PROFIT ENTITY ORGANIZED FOR THE PUBLIC BENEFIT.

1. Activities and uses proposed for the Protected Property shall be identified within and performed in accordance with a "Management Plan" (which term shall include changes, amendments, and revisions thereto).

2. As a general guideline a Management Plan shall at a minimum:

(a) Provide for the use and management of the Protected Property in a fashion that is consistent with and which advances the Purposes of this Grant; and

(b) Identify the locations, timing, and extent of human uses and address any impacts such uses may have on the conservation values set forth in the Purposes of this Grant. When there are uses permitted by this Grant which one could reasonably anticipate to have little or no adverse impacts on the conservation values of the Protected Property, the Plan may address these uses briefly or in a general way; and

(c) In the event there are uses, proposed by a Management Plan, that have the potential to result in adverse impacts to the conservation values of the Protected Property, the Management Plan shall identify and evaluate those impacts, and recommend or address the feasibility of alternative, remedial, or restorative measures. To the extent that any values may be inconsistent with each other, the Management Plan shall consider and propose a reasonable balance of such values, with respect to potential uses or impacts.

3. Grantor shall prepare each Management Plan, including updates, revisions and amendments in consultation with the Grantee. Prior to the final adoption of a Management Plan, Grantor shall secure the written approval of such Plan from Grantee.

4. Grantee may grant, condition, or deny approval of a Management Plan, in its reasonable discretion to prohibit, restrict or limit any use or activity which it determines is, or may have the potential to become, inconsistent with the terms of this Grant.

5. Complete copies of any relevant effective Management Plan shall be kept on file and made available for public review at Grantor and Grantee's respective offices.

E. ENFORCEMENT OF THE RESTRICTIONS

1. Grantor conveys and Grantee accepts this Grant with the understanding that they and their successors have an obligation in perpetuity to work together to uphold the objectives of this Grant. To this end, Grantor and Grantee shall confer with each other and attempt to resolve any issue by mutual agreement in a timely manner. Grantee shall make reasonable efforts from time to time to assure compliance by Grantor with all of the covenants and restrictions herein. In connection with such efforts, Grantee may make periodic inspection of all or any portion of the Protected Property, and for such inspection and enforcement purposes, Grantee shall have the right of reasonable access to the Protected Property.

2. In the event that Grantee becomes aware of non-compliance with the terms and conditions herein, whether existing or imminent, Grantee shall give written notice to Grantor of such non-compliance and request corrective action sufficient to abate such non-compliance and restore the Protected Property to its previous condition. Grantor acknowledges that Grantee may choose to contact regulatory officials in the event the non-compliance appears to be contrary to law. If Grantor is responsible for an event of non-compliance which is corrected through negotiation and voluntary compliance, Grantor shall reimburse Grantee all reasonable costs, including staff time, incurred in investigating the non-compliance and in securing its correction, unless such costs are waived by Grantee.

3. Failure by Grantor to take corrective action as requested by Grantee within a reasonable time after such notice and reasonable opportunity to take corrective action, shall entitle Grantee to pursue other remedies available to Grantee at law, in equity, including but not limited to arbitration, mediation, administrative proceedings if applicable, or to bring an action in a court of competent jurisdiction to enforce the terms of this Grant, compel specific performance, and to recover any damages, special or general as provided by law. Some circumstances of non-compliance may constitute immediate and irreparable injury, loss and damage to the Protected Property and, accordingly, may entitle Grantee to equitable relief, including but not limited to *ex parte* injunctive relief, as a court may deem just.

4. If such court determines that Grantor has failed to comply with this Grant, Grantor shall reimburse Grantee for any reasonable costs of enforcement, including Grantee's staff time, costs, and reasonable attorney and legal fees, in addition to any other relief ordered by such court. Damages, when recovered, may be applied by Grantee to corrective action on the Protected Property, if the court and Grantee so choose. In the event that Grantee initiates litigation and the court determines that the Grantor has not failed to comply with this Grant and that Grantee initiated litigation without reasonable cause or in bad faith, then Grantee shall reimburse Grantor for any reasonable costs of defending such action, including court costs and reasonable attorney and legal fees.

5. In the event of a third party violation of any terms of this Grant, in which Grantor has not consented or participated, Grantor shall either instigate, pursue, or cooperate in good faith with Grantee to take steps reasonably necessary to curtail the violation and compel the third party to return the Protected Property to its pre-violation condition or mitigate the damage. Such steps include, but are not limited to, Grantor joining Grantee as a named plaintiff and seeking equitable or other remedies against the third party, in the event Grantee brings a suit against the third party. If Grantor fully cooperates in the effort to halt and remedy such violation, and has not consented to or participated in the violation, Grantee shall not initiate any action in law or equity against Grantor to remedy the violation itself.

6. No delay or omission by Grantee in the exercise of any right or remedy upon any breach by Grantor shall impair Grantee's rights or remedies or be construed as a waiver.

F. EXECUTORY INTEREST

Grantor hereby gives, grants, and conveys to the Vermont Land Trust, Inc. ("VLT"), a 501(c)(3) organization with principal offices currently located at 8 Bailey Avenue, Montpelier, Vermont, 05602, an executory interest in this Grant of Development Rights and Conservation Restrictions, such that in the event the Upper Valley Land Trust shall cease to exist as a legal entity or function as a qualified organization under Section 501(c)(3) and 170(h) of the Internal Revenue Code, then the rights, interests, restrictions, and obligations hereunder shall shift to and vest with VLT.

G. MISCELLANEOUS PROVISIONS

1. Grantee Approvals

Where Grantor is required, as a result of this Grant, to obtain the prior written approval of Grantee before commencing an act, in consideration of any terms or conditions imposed by the Grant regarding the approval, Grantee shall not otherwise unreasonably condition or withhold such approval, unless such approval is stated to be in Grantee's "sole discretion." Grantor shall reimburse Grantee for all costs, including staff time, incurred in reviewing any extraordinary proposed action requiring Grantee's approval, but not those which are expected and routine in scope. If Grantee has designated in writing another organization or entity to have the authority to grant such approval, the approval of the designee shall be deemed to be the approval of Grantee.

2. Uses and Improvements to Comply with Law

Grantor hereby agrees that the construction, installation or maintenance of any structures or improvements or any use of the land otherwise permitted under this Grant, shall be in accordance with all applicable laws, ordinances, statutes and regulations.

To comply with applicable state rules concerning potable water supplies and wastewater systems, Grantor shall not construct or erect any structure or building or other improvement on any portion of the premises described in this deed, if the use or useful occupancy of that structure or building or improvement will require the enlargement of, installation of, or connection to a potable water supply or wastewater system, without first complying with applicable state or local rules and obtaining any required permit. Any Grantor who owns these premises acknowledges that these premises may not be able to meet state standards for an additional or larger potable water supply or wastewater system and therefore these premises may not be able to be improved.

3. Transfer by Grantee

Grantee may transfer the Grant of Development Rights and Conservation Restrictions conveyed herein, but only to a qualified conservation organization that agrees to enforce the conservation purposes of this Grant in accordance with the regulations established by the Internal Revenue Service governing such transfers, and subject to the approval of VLT, as holder of an executory interest under Section F of this Grant. If at any time it becomes impossible for the Grantee to ensure compliance with the restrictions and covenants contained herein, or that the Grantee ceases to exist, and VLT is unable to assume the role of Grantee, then Grantee's rights and duties hereunder shall become vested in full and fall upon any other entity having similar purposes to which such rights and duties may be awarded by a court of competent jurisdiction under the doctrine of *cy pres*.

4. Ancient Roads

Grantee shall not seek any remedy against Grantor for a third-party claim when that claim is based upon allegations pertaining to public property rights (e.g. revival of ancient legal public roads) that predate the execution of this Grant.

5. Condemnation

In the event the development rights or conservation restrictions conveyed to the Grantee herein may be extinguished by eminent domain or other legal proceedings, Grantee shall be entitled to a share of the proceeds which pertain to the extinguishment of Grantee's rights and interests. Any proceeds from extinguishment shall be allocated between Grantor and Grantee using a ratio based on the relative value of the development rights (as if they were converted from extinguishment), and the value of the fee interest in the Protected Property encumbered by this Grant. Reference is made to Treasury Regulations Section 1.170-A-14(g)(6)(ii) for more detail. Grantee's proportional interest shall be determined either as of the date of this Grant, if such data is readily available, or as of the date of the proposed termination, as determined by a qualified appraiser acceptable to Grantor and Grantee. Grantee's interest will not include value attributable to authorized improvements to the Protected Property made after the date of this Grant, except as to improvements that are made by or at the expense of Grantee.

If all or any part of the Protected Property is taken under the power of eminent domain by public, corporate or other authority, or otherwise acquired by such authority through a purchase in lieu of a taking, Grantor and Grantee shall join in appropriate proceedings at the time of such taking to recover the full value of the interests in the property subject to the taking and all incidental or direct damages resulting from the taking. First, all expenses reasonably incurred by the parties to this Grant in connection with such taking shall be paid out of the recovered proceeds. Next, Grantor and Grantee shall be respectively entitled to compensation from the balance of the recovered proceeds allocated as provided herein. Grantee will use such net proceeds for its conservation purposes. The respective rights of Grantor and Grantee set forth here shall be in addition to, and not in limitation of, any rights they may have at common law with respect to a modification or termination of this Grant by reason of the exercise of powers of eminent domain.

6. Changed Conditions and Amendments

Grantor understands that uses prohibited hereby may, in the future, become even more economically valuable than permitted uses; Grantor likewise has considered that neighboring properties may be put entirely to such prohibited uses. Grantor and Grantee expressly intend that any such changes in the economy or to nearby lands shall not be deemed "changed conditions" that might otherwise be used as an argument to alter or terminate this Grant. Likewise, Grantor understands and acknowledges that Grantee's interest in this Grant is governed by federal and state law, as well as organizational standards and practices that make future alterations or amendments to this Grant unfeasible or highly unlikely, unless to clarify the terms consistent with the Purposes or make them more restrictive.

7. Obligations and Liabilities

Grantee shall be under no obligation to maintain the Protected Property or to pay any taxes, liens, judgments or assessments thereon. Grantee shall not be considered an "owner" or "operator" under any solid waste disposal or hazardous waste cleanup laws. Grantor shall indemnify and defend Grantee from and against any liabilities including attorney's fees and costs, derived from any hazardous waste law enforcement action or from Grantor's ownership or operation of the Premises, unless Grantee's action or misconduct contributed to the liability.

8. Requirement of Notice Upon Transfer of Property

Grantor or its legal representatives shall notify Grantee of the name and address of Grantor's successor in interest at least ten (10) business days *prior* to any transfer or conveyance of any interest in the Protected Property. In any deed or conveyance instrument, Grantor shall make reference to this Grant agreement and shall indicate that said rights and restrictions are binding upon all successors in interest in perpetuity.

9. Future Recording

Grantee shall be entitled at any time to re-record this Grant, or to record a notice making reference to the existence of this Grant, in the applicable land records as may be necessary to satisfy the requirements of the Record Marketable Title Act, 27 V.S.A., Chapter 5, Subchapter 7, including 27 V.S.A. §§ 603 and 605 or to preserve its rights under this Grant.

10. Successors to the Parties

The term "Grantor" shall include the heirs, executors, administrators, successors, and assigns of the original Grantor SUSAN GUSSENHOVEN SHEA. The term "Grantee" shall include the successors and assigns of the original Grantee, UPPER VALLEY LAND TRUST, INC. The same terms apply whether Grantor or Grantee is a person or entity, male or female, singular or plural.

11. Invalidation or Waiver

Invalidation or waiver of any of the provisions hereof shall not affect any other provision of this agreement. Headings are intended for convenience of the reader and have no contractual significance.

TO HAVE AND TO HOLD said granted development rights, conservation easement and restrictions, with all the privileges and appurtenances thereof, to said Grantee, UPPER VALLEY LAND TRUST, INC., its successors and assigns, to their own use and behoof forever; and said Grantor SUSAN GUSSENHOVEN SHEA, for herself and her heirs and assigns, does covenant with the said Grantee, its successors and assigns, that until the ensealing of these presents she is the sole owner of the premises, and has good right and title to convey the same in the manner aforesaid, that the premises are free from every encumbrance except those previously of record, and Grantor hereby engages to warrant and defend the same against all lawful claims whatsoever.

IN WITNESS WHEREOF, I set my hand and seal this 8th day of May, 2006.

GRANTOR:

Witness to SGS

SUSAN GUSSENHOVEN SHEA

STATE OF VERMONT
COUNTY OF WINDSOR ss.
At Norwich, VT, this 8th day of May, 2006, SUSAN GUSSENHOVEN SHEA personally appeared and she acknowledged this instrument, by her sealed and subscribed, to be her free act and deed.

Before me,
Notary Public Annette Lorraine
My commission expires: 2/10/07

ACCEPTED BY GRANTEE:

witness

UPPER VALLEY LAND TRUST, INC.

By
duly authorized

SCHEDULE "A"
Description of Protected Property

Premises and Protected Property:

Being all of the same lands and premises conveyed to Grantor by Warranty Deed of SHELLEY HERSON, dated 12 May 2002 and recorded in Book 73, Pages 87-89 of the Corinth Land Records.

This being all and the same lands and premises conveyed to Shelley Herson and Carol E. Herson by Warranty Deed of James W. Sargent, dated July 12, 1968 and recorded in Book 30 at Page 183 of the Corinth Land Records, excepting the following out-conveyances: (1) out-conveyance of 11 acres, more or less, to Gerald Levesque dated October 31, 1983 and recorded in Book 42 at Page 235 of the Corinth Land Records; (2) out-conveyance of 12.1 acres, more or less, to Robin E. Ray and Arlene Ray dated January 10, 1982 and recorded in Book 41 at Page 398 of the Corinth Land Records; (3) out-conveyance of 19.3 acres, more or less, to Robin E. Ray and Arlene Ray dated February 13, 1987 and recorded in Book 45 at Page 241 of the Corinth Land Records.

The lands and premises herein conserved are subject to and benefited by all easements and rights of way of record, as well as easements and rights of way as were conveyed in the aforementioned deeds.

Reference may be made to the above described deed and record and to the deeds and records referred to therein for a more complete and particular description.

Development Zone:

The Development Zone is an elongate area of approximately 20 acres, along Wilson Rd. and the extension thereof, located at the southeast corner of the Shea Premises.

The Development Zone is defined as follows with reference to 3 survey plans:

1. "Land Surveyed for Shelley Herson, Corinth, Vermont, Scale 1"= 200'," prepared by Bedard & Hemond, Inc., Waterford, Vermont, dated June, 1974, and recorded in Map Book 1, Page 34 of the Corinth Land Records.
2. "Plan of a 10.1 acre Lease Lot with a 6.1 acre Lease option which is a portion of Land Owned by Shelley Herson and Carol E. Herson and is being leased to Gerald J. Levesque in Corinth, Vermont", prepared by J.P.R. Associates, Inc., Bradford, Vermont, dated June, 1978, and recorded in Map Book 1, Page 62 of the Corinth Land Records.
3. "Subdivision Plat, Lands of Shelley and Carol Herson, Corinth, TWP, Vermont," Scale 1"=100', prepared by Frank B. Lamson, LLS #553, dated December, 1982, and recorded in Map Book 1, Page 75 of the Corinth Land Records.

Beginning at the southeast corner of the Premises, which is the southeasterly corner of lands shown on both the Bedard & Hemond plan and the Lamson plan referenced above and is represented thereon as being marked by an iron pipe set at the junction of wire fences along the westerly edge of Town Road #37 (Wilson Rd.); thence

Proceeding northerly (Lamson plan says North 07° East (true), 2232 feet; Bedard & Hemond plan says North 20° East (magnetic), 2032 feet) to an iron pipe set along old wire fencing just south of a stream, which is the northeasterly corner of the area shown on the Lamson plan; thence

Proceeding North 34° East (mag) 99 feet, following old wire and crossing a stream, to a capped rebar (Roger Thrall, LLS); thence

Turning left and proceeding North 45° 30' West (mag) 230 feet, following old wire, to an iron pipe at the junction of old wire fencelines, said pipe is herein referenced as "Corner D"; thence

Proceeding westerly some 370 feet, more or less, through the Shea Premises, to an iron rod which is the northeast corner of the lands represented on the J.P.R. Associates plan referenced above; thence

Turning left and proceeding South 4° 00' West (mag) 248 feet, along a boundary with lands of Huntington, and partially following a stonewall, to a granite bound; thence

Proceeding along said stone wall and the common boundary with Huntington South 2° 30' West (mag) a distance of 44 feet to an unmarked point in said stone wall; thence

Continuing along said stone wall and the common boundary with Huntington South 8° 00' West (mag) a distance of 86 feet to an unmarked point in said stone wall; thence

Continuing along said stone wall and the common boundary with Huntington South 25° 40' West (mag) a distance of 231 feet to an unmarked point in said stone wall; thence

Continuing along said stone wall and the common boundary with Huntington South 33° 10' West (mag) a distance of 63 feet to a granite bound set in said stone wall, which is the southeast corner of the lands represented on the J.P.R. Associates plan; thence

Turning left and proceeding North 58° 20' East (true) 136.72 feet, along the boundary with lands of Ray, and crossing the access road to the Premises, to a drill hole set in a stone ledge, as shown on the aforereferenced Lamson plan; thence

Proceeding North 72° 16'45" East (true) 198.45 feet, along the common boundary with Ray, to an iron pipe; thence

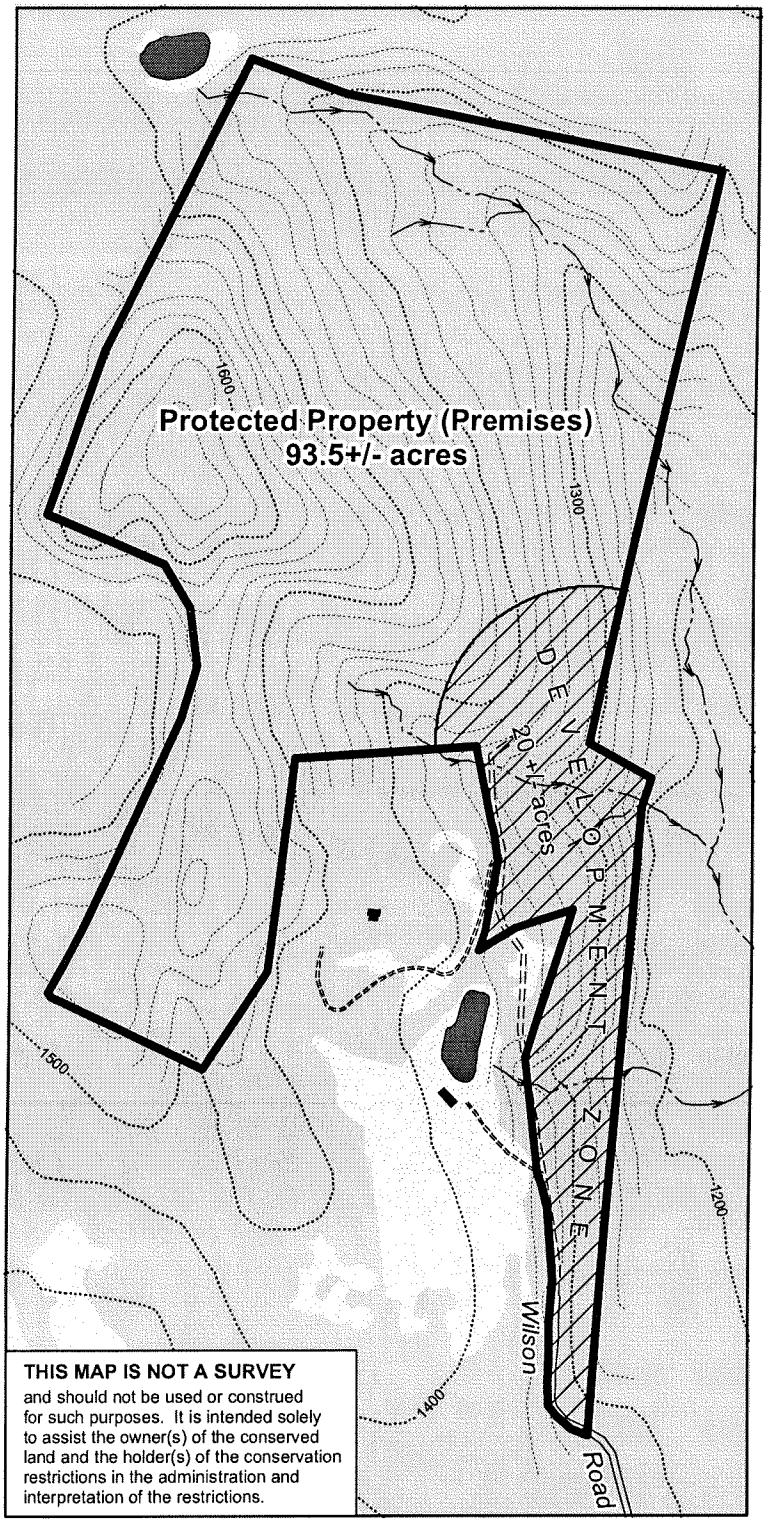
Turning right and proceeding South 17° 24' West (true) 507.4 feet, along the common boundary with Ray, to the location of a wooden stake set in the ground at the easterly end of a culvert which passes under the access road to the Shea Premises, as shown on the aforereferenced Lamson plan; thence

Proceeding South 06° 57'30" East (true) 373.0 feet, along the common boundary with Ray, to a drill hole set in a headwall along the west edge of Town Road #37; thence

Continuing in a southerly direction along the west edge of Town Road #37, and the common boundary with Ray, a distance of approximately 855 feet to the Point of Beginning.

Additionally: The Development Zone shall also include all portions of the Premises which are within 500 feet of "Corner D", as referenced above.

SCHEDULE B



1:7,000

0 250 500 1,000 1,500
Feet

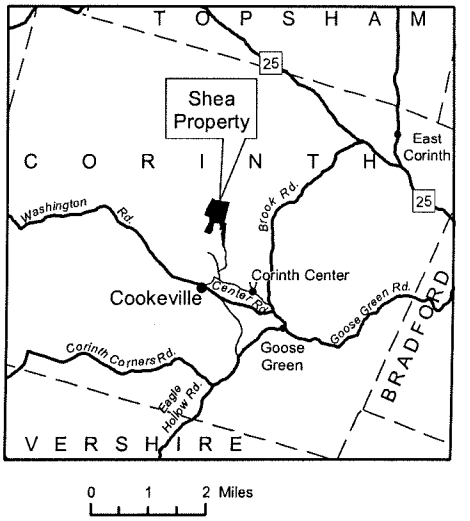
True North

Conservation Map
Shea Property
Corinth, VT

Legend

- Premises
- Development Zone
- Road
- Building
- Forest
- Non-Forest
- Water
- Stream

LOCUS



Upper Valley Land Trust

Prepared by
Upper Valley Land Trust
March, 2006

Map Data Sources:
- Topographic base map: VCGI DRGs, tiles 1011, 1012, 1111, 1112.
- Orthophoto base map: VMP tile 168168 (1999).
- Property boundary: Taken from Deed (Grantee=S.G. Shea), and from survey of abutting property: "Survey for Edmund M. and Elizabeth Speer in Corinth, VT", by Byron Kidder12/17/80, with guidance on overall location from orthophoto.
- Forest, water, field: Interpreted from orthophoto.
- Streams: Digitized from topographic map with guidance from orthophoto.
- Roads: VCGI vector layer, edited using orthophoto.
- Contours: Digitized from topographic base map.
- Town boundaries: VCGI vector layer, edited.

Map Projection: VT SPCS, NAD83, m.
ArcGIS file:Shea-recordable.mxd (ESB).

Forest Bird Habitat Assessment And Management Recommendations

Sue Shea Property
Corinth, VT

Prepared by
Steve Hagenbuch
August 1, 2008

Introduction

The purpose of this document is to 1) provide an assessment of forest bird habitat on the Shea property in Corinth, VT and 2) offer management recommendations that will protect, create, and/or enhance breeding habitat conditions for *responsibility forest bird species* as identified by Audubon Vermont's Forest Bird Initiative (FBI) program. A *responsibility species* is a bird species with a high proportion of its global breeding population found in the Northern Forest region. See Appendix 1 for a complete list of FBI responsibility species.

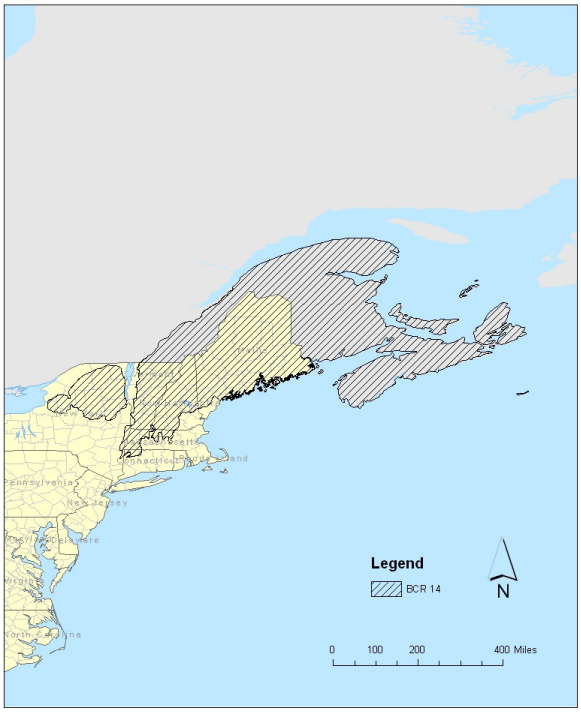


Figure 1 - BCR 14

The ~99 acre (according to ArcView mapping software calculations) property is located in the Atlantic Northern Forest Bird Conservation Region (BCR 14) as delineated by the North American Bird Conservation Initiative (NABCI). The Atlantic Northern Forest encompasses a geographic area stretching southwest to northeast from the Taconic Hills of eastern New York/western Massachusetts and the Adirondack Mountains (cut off from the remainder of the BCR by the Lake Champlain valley), through most of Vermont, New Hampshire and Maine, Quebec south of the St. Lawrence River including the Gaspe Peninsula, and all of the Maritime provinces of New Brunswick, Prince Edward Island, and Nova Scotia. (BCR14 Blueprint page 7) (Figure 1). Predominant general forest types include spruce-fir, northern hardwood, and mixed deciduous-coniferous forests.

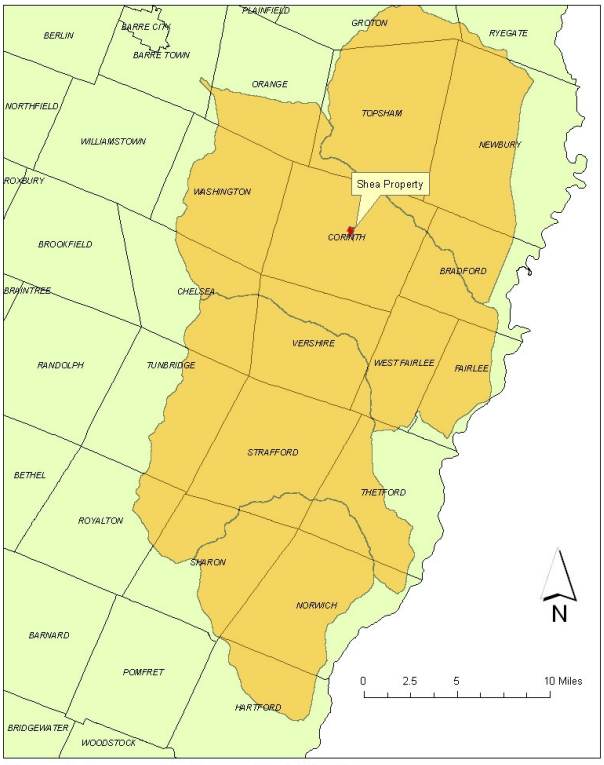


Figure 2. Orange Co. Forest Bird Block

Audubon Vermont has identified the landscape around the Shea property as the Orange Co. Forest Bird Block, denoting its high importance to conserving responsibility bird species (Figure 2). The block is roughly 308,000 acres of land bounded by VT Rt. 302 on the north, I-89 on the south, I-91 on the east and VT Rt. 110 on the west (Figure 2). This block is approximately 90% forested.

Landscape Context

A consideration of the property's surrounding landscape (an area approximately 10 times the acreage of the parcel in question) is an important component of assessing current habitat conditions and making management recommendations. The approximately 1,000 acre landscape around the Shea property is predominately (~80-90%) in a mid-successional mixed forest condition. There are minimal amounts of early-successional (regenerating forest/brushy field) habitat. The remaining 10-20% of the landscape consists of open fields, wetlands, ponds, and streams. There is very little in the way of residential development and roads are minimal. Due to these minimal amounts of development it is unlikely that habitat fragmentation is a concern. Conversely there is great opportunity for interior forest bird species (e.g. wood thrush, scarlet tanager) habitat. In order to provide habitat for a range of responsibility species, the landscape context lends itself to a focus on maintaining current and developing new areas of mature (mid-late successional) unfragmented forest over >90% of the Shea property while also promoting early-successional (scrub/shrub and/or regenerating forest) conditions where opportunities exist. Combined, these areas of early-successional habitat should comprise 2-3 acres (2-3%) of the overall property acreage at any given time. All aquatic features, including wetlands, should be protected.

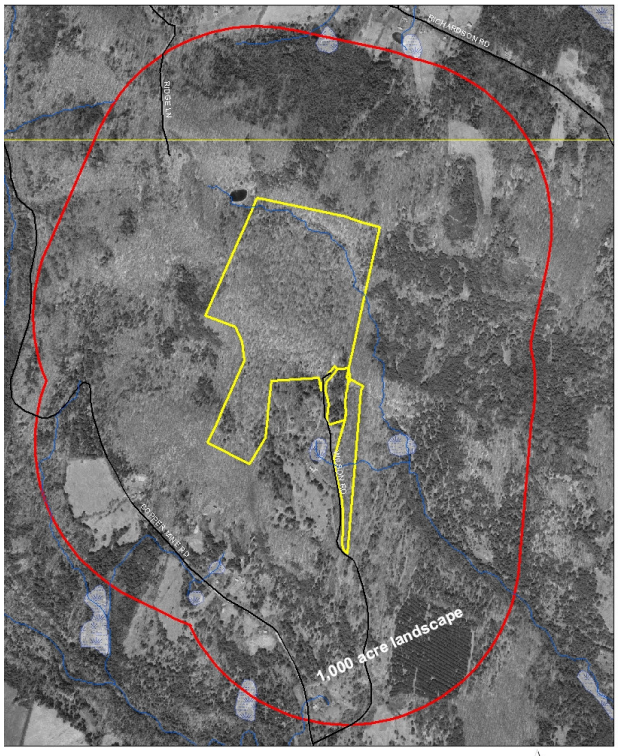


Figure 3. Landscape Context

Landowner Objectives

Landowner management objectives as articulated by the landowner include recreation and natural beauty.

Property Description

Primary land cover is hardwood forest with sugar maple, yellow birch, and American beech well represented in the canopy. This is the most common forest type in low-mid elevations of the region. Characteristic bird species of hardwood forest stands include yellow-bellied sapsucker, wood thrush, ovenbird, and black-throated blue warbler. Additional land cover features is white pine/hemlock forest.

Habitat units have been delineated based on a qualitative on-the-ground assessment conducted on June 9, 2008 and aerial photo interpretation for purposes of easy identification and as a basis for management recommendations. These habitat units are 1) northern hardwood forest and 2) white pine/hemlock forest (Map 1).

The following pages provide an assessment of current habitat conditions and forest management recommendations that would enhance habitat for forest responsibility bird species on the property. While not always discussed in the report, the recommended practices will also benefit a variety of other bird and other wildlife species. The recommendations are designed to be discussed with the property's forester or land manager and implemented where practical and appropriate.

Contact Steve Hagenbuch, Audubon Vermont Conservation Biologist, at 802-434-5827 or shagenbuch@audubon.org for more information on the recommendations outlined in this report.

1. Northern Hardwood Forest – 96 acres

Area description:
This habitat unit is made up of two patches, making up 97% of the total acreage. Dominant canopy tree species include sugar maple, yellow birch, and American beech mostly in the poletimber size class (4-11.9 inch dbh). A small stand of hemlock is in the southwest corner. Understory vegetation and regeneration is low to locally moderate and consists of seedlings and saplings of white ash, American beech, sugar maple, and eastern hemlock. Some of the saplings are found in dense patches and are the result of harvesting in the not too distant past. There is a heavy cover of leaf litter on the forest floor. Snag (standing dead tree) abundances are low. Coarse woody material (down logs, branches, etc) is also in low abundance. Narrow, shallow streams are flow across the northern and southern portions of the habitat unit. A minor network of trails and skid roads is also found here. These trails and roads by and large maintain an overhead canopy cover of >70% and are <25 ft. in width.

Assessment of Current Habitat Conditions:
The current conditions of this habitat unit are suitable for mixed/hardwood forest canopy nesting bird species, including area sensitive species, due in part to the dominance of pole and some sawtimber sized trees, lack of fragmentation, and contiguous nature with similar habitat in all directions. Area sensitive bird species (also referred to in this context as interior forest specialists) are those whose occurrence and/or reproductive success is reduced in small habitat patches. High abundances of leaf litter also make this area suitable for some ground nesting species such as the ovenbird. Woody stemmed vegetation 1-10 ft. height is in low to moderate abundance. This amount of understory vegetation may provide opportunities for shrub nesting species such as black-throated blue warbler however a greater density will enhance this feature. The narrow width of trails and skid roads, along with the maintenance of high canopy cover overhead, will likely not lead to negative effects, such as the introduction of nest predators into the forest interior.

Timber harvesting and intermediate treatments appropriate to forest composition has the potential to protect and enhance the current interior forest habitat conditions, particularly through understory development and increases in snags and coarse woody debris. Interior forest is defined as habitat that occurs in unfragmented forest at least 600 ft. from the habitat edge. Additionally larger forest canopy openings created through timber harvesting may develop a density of regeneration suitable for some bird species of early-successional habitats.

If and when harvesting occurs in the future, the following are recommended.

Management Recommendations:

- ✓ The use of uneven-aged silvicultural methods, with single-tree and group selections (or patch cuts) that create canopy openings of up to ½ acre releases advanced tree regeneration and promotes sapling and shrub development such as that utilized for nesting by the black-throated blue warbler. These methods of tree harvesting will maintain the overall interior forest conditions that exist over this habitat unit. Additionally larger openings may result in the growth of blackberry/raspberry and other soft mast producing trees and shrubs which are important food sources for many forest birds during the post-breeding season. These same openings may also provide a density of regeneration and shrub development to provide a small amount of breeding habitat for some species of early-successional forest birds. Larger group selection cuts should also be clustered as much as possible during any given

harvest. Doing so will concentrate any negative edge associated effects on nesting interior forest birds, such as ovenbirds. Shape of group selection cuts should be circular to maximize functionality of regenerating conditions. It is recommended that the number of larger group selections be minimal (4-6) during any entry period. Actual location and size of harvests should be determined by the property's forester based on factors such as site conditions, tree quality, accessibility, and current markets.

- ✓ If summer harvesting is required, try to schedule it before the start of bird breeding season (generally the second to third week of May) if soil conditions permit or after the second or third week of July, which will allow breeding birds to fledge a first brood. If summer harvesting is not required, harvesting during frozen ground conditions is preferred as it will have no impact on the breeding bird community.
- ✓ Standing snags and downed trees are of significant value to many species of wildlife. Dead or dying standing trees provide roosting, perching, foraging, and nesting sites for roughly 40 species of birds. Retain a minimum of six snags per acre, with one exceeding 18 in. dbh and three exceeding 16 in. dbh. Priority should be given to hardwood snags as they remain intact longer. Aspen is of particular value to yellow-bellied sapsuckers. Also retain some live trees of poor form and quality during harvests to serve as the next cohort of snags and CWD. If target number of snags does not exist, consider girdling poor quality trees in order to achieve abundance objectives.
- ✓ The tops of harvested trees that are left in the forest contribute to vertical structure, an important habitat feature. Minimize the use of whole tree harvesting and leave as much slash (branches, limbs, etc.) on the ground as possible.
- ✓ Exercise care when harvesting near streams. Maintain buffers of at least 50 ft. in which trees are not harvested or harvested very lightly and only during frozen ground conditions.
- ✓ Forest access roads and recreational trails can serve as pathways for increased nest predation. Minimize the width, number, and extent of new access and skid roads built for a harvest and utilize the current trail system as much as possible. Road/trail widths <25 ft. are preferred. Wider roads may serve as corridors for nest predators. Whenever possible maintain forest canopy closure of > 70 percent over access roads and trails.

Target Responsibility Bird Species: **denotes species observed during field visit*

- Wood Thrush
- Yellow-bellied Sapsucker*
- Veery
- Ovenbird*
- Scarlet Tanager
- Eastern Wood-Pewee
- Black-throated Blue Warbler

Larger group selection harvests-

- Chestnut-sided Warbler
- Mourning Warbler
- White-throated Sparrow
- Ruffed Grouse

2. White Pine/Hemlock Forest – 3 acres

Area Description:
This habitat unit lies between the two compartments of the northern hardwood habitat unit (#1) and comprises 3% of the total acreage. Dominant canopy tree species are white pine and eastern hemlock mostly in the sawtimber size class (> 9 inch dbh). Understory vegetation and regeneration is overall low. Snags and coarse woody debris are also low.

Assessment of Current Conditions:
The current conditions of this habitat unit likely provide breeding habitat for responsibility species that nest in the canopy of mature conifers. Some of these species, such as the black-throated green warbler, achieve their highest abundances in mature softwood stands, particularly those with a heavy hemlock component.

Management Recommendations:

- ✓ This is a unique habitat type on the property. Given its small acreage the primary recommendation is to think of this habitat unit as a reserve area where no active management occurs.

If the extraction of forest products is a desired outcome, the following are recommended:

- ✓ The use of uneven-aged silvicultural methods, with single-tree and group selections of 2-3 trees will maintain the mature forest characteristics of this habitat unit while releasing advanced regeneration.
- ✓ If summer harvesting is required, try to schedule it before the start of the breeding bird season (generally the second to third week of May if soil conditions permit) or after the second week of July, which will allow breeding birds to fledge a first brood. If summer harvesting is not required, harvesting during frozen ground conditions is preferred as it will have no impact on the breeding bird community.
- ✓ Standing snags and downed trees are of significant value to many species of wildlife. Dead or dying standing trees provide roosting, perching, foraging, and nesting sites for roughly 40 species of birds. Retain a minimum of six snags per acre, with one exceeding 18 in. dbh and three exceeding 16 in. dbh. Priority should be given to hardwood snags as they remain intact longer. Also retain some live trees of poor form and quality during harvests to serve as the next cohort of snags and CWD.
- ✓ The tops of harvested trees that are left in the forest contribute to vertical structure, an important habitat feature. Minimize the use of whole tree harvesting and leave as much slash (branches, limbs, etc.) as possible.

Target Responsibility Bird Species: **denotes species observed during field visit*

- Black-throated Green Warbler
- Blackburnian Warbler
- Blue-headed Vireo

Bird Monitoring

Understanding the response of bird communities to forest management is a critical aspect of conservation efforts. It is important for us to understand how our management activities impact bird populations over time, so that we can adapt practices accordingly. One method to collect this information is through a bird monitoring program. By periodically recording the bird species present at a given time and place on the property in question, we can see if and how the composition of the bird community is changing in response to management activity.

For assistance on getting started with monitoring on this property, please contact Audubon Vermont at 802-434-5827 or shagenbuch@audubon.org.

SILVICULTURAL PLAN

for
THE F.X. SHEA TOWN FOREST

in Corinth, Vermont

Prepared by the Corinth Town Forest Committee

January 2016

Appendix 3

Purpose of the Silvicultural Plan

This Silvicultural Plan is an appendix to the Forest Management Plan written for the F.X. Shea Town Forest in Corinth, Vermont. This plan outlines the uses and values of the Town Forest to guide the town in planning for multiple uses of the Town Forest. Management of the Town Forest includes educational and recreational uses, ecological protection, and harvesting. This Silvicultural Plan outlines the activities related to forest and timber management. This plan will be reviewed and updated every 10 years when the Forest Management Plan is updated as well. The Silvicultural Plan will be updated sooner if pressing activity is warranted.

Development of the Silvicultural Plan

This plan was adapted from a forest management plan written by Redstart Forestry in 2008 for Susan Shea (Appendix 4. Forest Management Plan for Susan Shea), the previous owner of the F.X. Shea Town Forest. Prior to the property becoming the Town Forest, it was privately owned and enrolled in the State of Vermont's Use Value Appraisal (UVA) program and the previous forest management plan was developed as required by the UVA program.

Data were collected at 28 sample points. Basal areas and mean stand diameters were estimated from a random point sampling of trees. A 10-factor basal area prism was used

to determine which trees to tally at each sampling point. Data, including basal area, tree species, diameter, crown position, and tree height were gathered at each sampling point and an assessment was made of the sawlog potential of each stem.

It is from this information that the "Basal Area/Acre," "Number of Trees/Acre," "Mean Stand Diameter" and "Acceptable Growing Stock" figures were calculated using NED. Site class is based on soils and site index information and personal judgement. The "Species Composition" percentages refer to percent of total basal area. Acreage for the various forest types was calculated using ArcMap mapping software and is approximate. Trees included in the Acceptable Growing Stock category must have the potential to grow a sawlog that will be at least 10 inches in diameter at the small end, and 10 feet long, with at least two clear faces.

Management Factors to Consider

Demonstrating Excellent Forestry

Timber harvesting here will be designed and carried out to the highest standards, a place where long term goals are considered more important than short term financial gain, and where the best and most up-to-date scientific information about management will inform decisions. It will be a forest in which timber management contributes to the natural beauty of the forest, is used to improve habitat for birds, mammals and smaller creatures, as well as contributing to the conservation of a diversity of native, herbaceous plants. It will be a lovely, well-used forest that the people of the town of Corinth will be proud to own for many generations.

Consulting with a Forester

The Orange County Forester is responsible for overseeing the management of public parcels in Orange County, including Town Forests. The current Orange County Forester, David Paganelli, provided support to the Town Forest Committee (TFC) during the development of the Forest Management Plan and this Silvicultural Plan. During future management, the Orange County Forester should continue to be involved.

Henceforth, it is likely that the Orange County Forester will be available to help the Town with management of the Town Forest, but if not, it will be necessary to hire a professional, consulting forester to assist with forest management, most importantly timber harvesting. A consulting forester should complete upcoming timber inventories,

update the Silvicultural Plan, and oversee logging operations that happen on the Town Forest. A consulting forester may also be helpful in organizing or leading management workshops. It is strongly recommended that the Town and the consulting forester communicate with the Orange County Forester to discuss any tree cutting or commercial timber harvesting to ensure that the work is done in accordance with this silvicultural plan, the goals of the Town, and all state laws. During commercial timber harvesting, a consulting forester will be responsible for the following: select an appropriate logger/harvesting equipment for the site, ensure the logger is paying fair prices for the wood, help draft a contract between the Town and the logger, check on the job to ensure that cutting is done appropriately, and discuss any other details of the logging job with all parties.

Hiring a professional forester to complete these above tasks should be budgeted for by the overseeing committee of the Town. In some cases, logging revenue will help or entirely cover the cost of hiring a consulting forester to oversee commercial timber harvesting.

Consulting with UVLT

The Upper Valley Land Trust (UVLT) holds a conservation easement on the F.X. Shea Town Forest. The Town must notify UVLT prior to any timber harvesting and should be in regular communication with them to discuss management activities on the town forest as outlined in the conservation easement.

Management of Non-Native, Invasive Plants

To date, no non-native, invasive plants have been detected in the interior of the F.X. Shea parcel, though several plants pose a threat in the greater area. In addition, wild parsnip has been detected along the east side of Wilson Road, adjacent to the Town Forest. Given that timber harvesting can spread plants and make infestations worse, it is strongly recommended that prior to any timber harvesting or disturbance, the area is scouted for invasive plants, and treated if found. Mechanical methods should be considered first, and if necessary, other treatment methods (such as herbicide) should be considered. The Orange County Forester or a consulting forester may be able to help in this process.

Commercial vs. Non-Commercial Management Activities

This Silvicultural Plan outlines commercial and non-commercial management activities that are recommended for each Management Area.

Commercial harvesting is timber harvesting that is intended to generate an income from timber products. Only two of the five management areas are designated to be managed commercially. These harvests should be overseen and closely managed by the Orange County Forester and/or a consulting forester. A professional logger should be selected to complete this work, at the discretion of the Orange County Forester and/or consulting forester. In some cases, the revenue generated from the timber sale will only be able to offset the cost of hiring a consulting forester and may not generate extra revenue. In other cases, a timber sale may be quite profitable, though it should be noted that profitable timber sales will not occur on an annual basis and will not generate a constant source of revenue.

Though income generation is not the primary purpose of the F.X. Shea Town Forest, if timber harvesting produces a profit, the Town of Corinth will first be reimbursed for the lost property tax revenue, which would be based on the amount that a private property owner would have paid in taxes, and assuming the land would have remained in current use. Any income in excess of that amount will be dedicated to supporting the Forest as the overseeing committee sees fit, per Selectboard approval.

Pre-commercial or non-commercial management activities are not designed to generate income, though they may include a minor amount of tree cutting. These activities are designed to support other goals, such as to improve wildlife habitat, educate people about forestry, improve the existing condition of the forest (called timber stand improvement) and/or manage aspects of the forest other than timber production. The overseeing committee should consult with the Orange County Forester annually about these management activities.

Boundary Line Maintenance

Boundary line determination and maintenance should be done regularly. Prior to any management activity, and especially ones that involve tree cutting, the overseeing committee should ensure that the property boundaries of the F.X. Shea Town Forest are correctly delineated and clearly marked. Good boundary line maintenance is the best defense against accidentally crossing the property line of a neighbor, and vice versa.

Access/Trails Network

The F.X. Shea Town Forest has an excellent system of skid trails that provide access into the heart of the forest. Many of these roads were bulldozed and are on appropriate grades with water diversion devices in place. Several of these trails are also used as

recreation trails. Prior to any management activity, especially a commercial timber harvest, skid trails should be identified and designated. Given the amount of disturbance that may be caused to the trails and recreation traffic in general, it may be best to harvest larger areas at one time, spaced far apart, rather than continuously using trails for harvesting smaller areas every few years.

The "Orange Trail" that circles Management Area 1 should be maintained as a double-track trail, given that that is the main skid access into this management area and will likely need to be used as a skid trail in the future. In addition, post-harvesting, the overseeing committee should anticipate the need to block off other trails that are made or used during timber harvesting if they are not to be used as recreation trails. "Acceptable Management Practices" (AMPs) are outlined by the State of Vermont and dictate the condition in which skid trails should be developed and closed-out once the timber harvesting has finished.

The main log landing is located next to the information kiosk and meeting circle. This area will likely be used as a log landing in the future for commercial harvests. The hired consulting forester and the hired logger should communicate directly about the post-harvest clean-up of this landing space, details of this should be written into the timber sale contract, and the hired forester should ensure that the clean-up is completed in accordance with the timber sale contract.

Ground conditions will dictate the times of year when timber harvesting can be completed. In general, harvesting during winter months when the ground is frozen helps limit or eliminate ground disturbance. However, harvesting in the winter may not always be warranted or possible. In addition, soils on this site are well drained and stable, and no stream crossings are associated with the harvest areas. It should be noted that Wilson Road is a Class IV road and is posted and not passable during mud season.

The Orange County Forester and/or consulting forester can help make decisions regarding access, trails, landing clean-up and harvest timing.

Management Areas

The parcel was previously subdivided into forest stands that were delineated based on several factors, but predominately on forest cover type (groups of tree species). With the transfer of ownership to the Town of Corinth, the Town Forest Committee re-delineated

boundaries and divided the property into "Management Areas" that will be managed to reflect the goals the TCF has for the property.

Generally, there are two types of Management Areas: areas that are intended to be **actively managed and harvested** and areas where **no harvesting is planned** (see Figure 1).

- **Management Area 1** is the largest management area on the property and is comprised of northern hardwood tree species, predominately sugar maple. Commercial tree harvesting is intended for this area.
- **Management Area 2** is comprised of a small patch of softwood species, mostly hemlock and white pine. Commercial tree harvesting is intended for this area.
- **Management Area 3** is in the northern part of the property and serves as a riparian buffer for an unnamed brook and a wildlife corridor. No harvesting will be conducted here.
- **Management Area 4** is in the southwest corner of the property and is set aside from commercial harvesting to promote "old growth" conditions and protect a series of ledge outcrop features that are unique to the parcel. This area will not be commercially harvested.
- **Management Area 5** is in the southeast corner of the parcel. It is a steep sliver of land that parallels Wilson Road and will be set aside from commercial harvesting to promote "old growth" conditions. This area will not be commercially harvested.

These Management Areas are further described below. Management Areas that are planned for harvest have detailed forest metrics data to help inform timber management and harvesting. Management Areas where no harvesting is planned are intended to be left unmanaged and develop naturally.

Management Area 1

Management Area 1 is comprised predominately of sugar maple trees that have the potential to become high quality sawtimber. This area will be managed and commercially harvested and provides the best long term ability to generate income from timber harvesting on the F.X. Shea Town Forest. Though commercial timber harvesting is not needed for the next 10 years, other goals of the management area will influence possible management activities over the next five years and beyond.

Forest Type: Sugar Maple
Natural Community Type: Northern Hardwood
Species Composition: Overstory species are comprised of sugar maple (74%), American beech (11%), white ash (5%), and smaller amounts of hophornbeam, yellow birch, paper birch, and white pine.
Regeneration is well established where previous harvesting has created gaps in the forest canopy and allowed more sunlight to reach the forest floor. Dominant understory species are sugar maple, white ash, striped maple and hophornbeam.

Acres: ~60
Total Basal Area/Acre: 91 sq. ft.
Acceptable Growing Stock (Basal Area/Acre): 70 sq. ft.
Number Trees/Acre: 172
Mean Stand Diameter: 9.8" D.B.H. (Diameter at Breast Height)
Stand Age: Transitioning to all-aged
Coarse Woody Debris (CWD): 8.0 standing dead trees per acre and an average of 1.3 pieces of fallen CWD per sample point.
Stand Health: A wide variety of pests afflict sugar maple trees and all can be found in this management area. Though they are not cause for major concern, signs of these pests should be looked for when planning a pre-commercial or commercial harvest and affected trees should be targeted for removal. Sugar maple borer, nectria canker, eutypella canker, armillaria root rot, and open grown form are all problems that can affect the quality or longevity of individual maples in this stand. Maple leaf cutter damage is sometimes widespread and deer browsing has damaged maple regeneration.

The stand has been well managed and no single pest stands out as being particularly problematic. Managing the stand for biodiversity, including the promotion of tree species other than sugar maple, is an important element to maintaining stand health. Beech bark disease has infected and is killing most beech trees in the stand.

Stocking: This management area is considered to be well stocked, above the B-line for even-aged stands of northern hardwoods. This area would be overstocked at above 120 sq. ft. of basal area/acre (the A-line) and understocked at below 47 sq. ft. of basal area/acre (the C-line). The suggested residual stocking following a thinning (the B-line) is 65 sq. ft.

Site Productivity: Generally, this area is quite productive; it is classified as Site Class 1. This is due to the soils that underlie this area, a mix of Tunbridge-Woodstock Complex and smaller amounts of Buckland silt loam. Tunbridge-Woodstock complex is a mix of two soils that occur in units that are too small to map separately. Tunbridge soils are quite productive, although they are extremely stony and do not hold water well. Woodstock soils are less productive. They are also classed as having medium natural fertility, but are even more apt to dry out during the heat of summer. Buckland is a deep, moderately well drained and productive soil that holds moisture well. It is found in the north end of the stand in the vicinity of the brook.

Previous Management: This area was under continuous management by its previous owners with the aid of their consulting forester. It was thinned several times before a 1997 harvest removed a good volume of sawtimber and veneer quality timber. Patches of this forest are less than 10 years old, less than 50 years old, less than 60 years old, while the matrix of the stand is around 75 years old.

Goals for this Management Area:

- Manage for the production of good quality northern hardwood sawlogs and veneer using uneven-aged management techniques, such as single tree selection and group tree selection. Single tree and group selection harvests should be carried out roughly every 20 years to reduce the basal area/acre to approximately the B-line stocking level, or just slightly above.
- Use single tree and group tree selection harvests to continue to encourage the development of multiple age classes of trees, to increase vertical structure of the forest, and to increase the biodiversity of species in this stand by promoting tree species other than sugar maple. There are currently at least two distinct age classes distributed in patches and selection harvests will encourage the rapid growth of young, vigorous trees.
- When ready, use single tree selection harvests to remove mature sawtimber, poor quality or diseased trees and to thin groups of densely stocked trees with good long-term potential. This will help promote the growth of the nicest quality sawtimber trees. In addition, a few trees could be selected to be continuously released from competing stems to encourage their growth into large stems that will become "older growth" trees. When thinning, be careful not to promote more tip-over trees, though trees that have already been tipped over should be left to decompose. When using this management framework, the best quality,

most healthy crop trees should be grown to specific diameter objectives. Use the following diameter objectives as a guide to maturity: 18-20 inches for sugar maple and 15-18 inches for other quality hardwood species. Remaining species should be left or harvested depending upon health, quality, stocking and wildlife objectives.

- When a commercial harvest is planned, select an area or areas where a slightly larger opening (or series of openings) can be created using group tree selection/group patch cut harvests. One single patch, or several smaller patches (not to exceed 3-5 acres total) should be considered to improve this management area for songbird habitat.
- Consider completing pre-commercial treatments for recreational and educational purposes and to use this area as an "outdoor classroom" for workshops and trainings. Pre-commercial activities, such as understory "cleaning" or pre-commercial thinning can help improve the quality and growth of the better trees. Some cull quality hardwoods can be selected from throughout the stand for girdling to both provide wildlife habitat and to achieve stand improvement objectives.
- Consider wildlife habitat when harvesting. This high quality timber stand is not very high quality wildlife habitat. While new age classes are establishing in some places, there is very little diversity of the stand structure. The number of standing dead trees and fallen dead trees is on par for managed hardwood stands, but probably below average for an unmanaged stand. Creating additional diversity in the layers of the canopy, as well as in the spatial distribution of a cutting pattern will create more opportunities for wildlife. More cull quality trees can be girdled to create standing dead and fallen down trees, and group selections can be made to attempt to diversify the species mix beyond just shade tolerant northern hardwoods. Consult the "Forest Bird Habitat Assessment and Management Recommendations" report written by Audubon Vermont in 2008 when planning upcoming harvests in this stand. For example, leave at least 2-3 large snag or cull trees per acre for woodpeckers and other cavity nesters. In addition, any large, healthy stems of American beech should be retained as these trees may be among the small percentage of beech trees that are resistant to beech bark disease. It is important that these specimens be left to grow in case they have disease-resistant genes. Bears and blue jays are two species that have historically been very dependent on beech nut production.

Suggested Activity between 2015 and 2025.

- No commercial harvesting is needed the next 10 years. Most of the stand is in excellent condition and expected to continue growing productively for the next 10 years.
- Re-inventory the management area in 2025. This may require hiring a professional forester, though the Orange County Forester may be able to assist in this process. It is expected that following an assessment in 2025, the area will be ready for a commercial harvest, around 2027. During the inventory, it will be prudent to pay particular attention to the white ash component of this stand as the emerald ash borer may become an increasing threat due to the spread of this insect in the Northeast.
- Explore the possibility of using this management area as an outdoor classroom for educational workshops or events. Pre-commercial activities such as girdling, pre-commercial thinning, and/or understory cleaning may be excellent activities for workshops and will help achieve management goals in this stand.
- Create a small opening in 2016 (between 20 trees to ¼ of an acre) around the "view spot" to support recreational activities.

Management Area 2

This management area is comprised of a small cluster of softwood trees, mostly white pine and some hemlock. In general, softwood trees are fairly sparse on the property, and given time this area will likely revert to northern hardwoods as well. The white pine trees are regenerating on land that was formerly pasture and most of them are poor in quality. In the previous forest management plan (written for Susan Shea), this area was grouped with another part of the property, thus the following forest metrics may not be completely accurate in describing the characteristics of this area.

Acres: ~4
Forest Type: Mixedwood
Natural Community Type: White Pine-Hardwood
Species Composition: White pine (57%), sugar maple (24%), paper birch (11%), and white spruce, hemlock, yellow birch and hophornbeam. Regeneration is well established and advanced in places. Sugar maple, hophornbeam, white ash, beech, and white spruce are the most common species in the understory.

Total Basal Area/Acre: 118 sq. ft.
Acceptable Growing Stock (Basal Area/Acre): 98 sq. ft.
Number Trees/Acre: 176
Mean Stand Diameter: 11.1" D.B.H. (Diameter at Breast Height)
Stand Age: Even-aged (portions two-aged)
Coarse Woody Debris (CWD): 22.4 standing dead trees per acre and an average of 1.2 pieces of fallen CWD per sample point.
Stand Health: Some of the white pines appear to have been killed by white pine blister rust, though new infections are not apparent. Damage due to the activity of the white pine weevil can be seen in many of the stems, though the trees have put on sufficient diameter growth to cover most of the disfigurement caused by this insect pest.

Stocking: Well stocked, above the B-line stocking level for even-aged managed white pine stands. Stands of this type and size are considered to be overstocked when the basal area/acre is above 250 sq. ft./acre (the A-line). The understocked condition (the C-line) is below 75 sq. ft./acre. The optimum stocking level following a thinning (the B-line) is 105 sq. ft.

Site Productivity: Generally, this area is considered to be quite productive and is classified as Site Class 1.

Previous Management: This area was actively used as farm land. A barn foundation can be found just outside of the town forest boundary, as well as stone walls and barbed wire. This area appears to have started growing up to forest about 60 years ago and the white pine appears to have been thinned about 20 years ago.

Goals for this Management Area:

- In the short term, consider thinning mature white pine trees, completing a small commercial harvest between 2016 and 2021. The age of these stems has been described as approximately 70 years old, and a full rotation age for even-aged management is approximately 90 years; therefore they are not ready for an overstory removal.
- In the long term, allow the natural transition of this management area to northern hardwoods and manage for the production of good quality northern hardwood sawlogs and veneer, using uneven-aged management techniques, such as single tree selection and group tree selection. Single tree and group tree selection harvests should be carried out roughly every 15- 20 years to reduce the

basal area/acre to approximately the B-line stocking level.

- Use single tree and group tree selection harvests to continue to encourage the development multiple age classes of trees, to increase vertical structure of the forest, and to increase the biodiversity of species by promoting tree species other than white pine. There are currently at least two distinct age classes distributed in patches and selection harvests will encourage the rapid growth of young, vigorous trees.
- Though the focus will be to transition to a northern hardwood forest, a few healthy specimens of white pine and any other softwood tree species (such as hemlock) will be maintained to continue species diversity and as an education tool.

Suggested Activity between 2015 and 2025.

- Commercially thin the white pine between 2016 and 2021 to remove intermediate, suppressed, defective, diseased, crowded or structurally weak stems. Reduce the stocking to the B-line. About one truckload of mediocre logs will be produced during this commercial harvest.
- Consider girdling a few mature white pine stems to improve wildlife habitat and serve as a demonstration tool.
- Re-inventory the management area in 2025. This may require hiring a professional forester, though the Orange County Forester may also be able to assist in this process.

Management Area 3

This management area occupies the northernmost sliver of land, approximately 14 acres, predominantly on the north side of the unnamed brook that flows into Center Brook. The intention is to manage this area as a forested riparian area that is valuable to wildlife. It has been set aside from commercial harvesting and tree cutting; the only tree cutting that may be appropriate in this stand is felling trees to increase coarse woody debris in the stream and/or to remove potentially hazardous trees from the trail system.

Forested lands adjacent to streams are referred to as riparian areas. Maintaining an intact forest in riparian areas is valuable in protecting physical, chemical, and biological stream health. Forested riparian areas help reduce erosion of upland soils and sedimentation into waterways and allow stream channels to develop and migrate naturally. They also filter excess nutrients (such as nitrogen and phosphorous) from

flowing into waterways, especially in areas that are farmed. An intact tree canopy also keeps water temperatures cool, which increases the dissolved oxygen levels in the stream that is home to many aquatic organisms. Lastly, forest riparian areas supply coarse woody debris to streams over time, which is valuable to many wildlife species, including fish.

Forested riparian areas have significant wildlife habitat value. They often have a diverse mix of tree and plant species growing on rich, moist soils. Seeps and saturated soils surrounding a brook often remain unfrozen and grow fresh green shoots early in the spring, before most other plants have broken dormancy. Bear, deer, and turkey all visit seeps and riparian zones in search of food. Seep vegetation is an important part of the diet of hungry bears emerging from winter torpor.

Upland from the stream, there are other important wildlife features. American beech trees are prevalent in this management area. While many of these trees are in decline from beech bark disease, a few healthy trees provide beech nuts, which are a valuable hard mast for wildlife such as turkey, grouse, bears, and deer. Beech trees that are diseased and in decline are now providing woodpecker habitat.

Goals for this Management Area:

- Manage as a forest riparian area and wildlife corridor.
- Use as an educational and recreational area.
- No commercial tree cutting is planned for this area.
- Allow the trees to grow, mature, and die naturally.

Suggested Activity between 2015 and 2025.

- Consider working with professionals to assess and, if needed, increase the coarse woody debris retention of the stream.
- Only remove trees along trails that are potentially hazardous trees to recreational activities.

Management Areas 4 and 5

Management Areas 4 and 5 occupy the southwestern and southeastern tails of the F.X. Shea Town Forest. The intention is to manage these areas as an "old growth" forests, where the focus will be on promoting and allowing for the development of old, larger trees. They have been set aside from commercial harvesting; however minor pre-

commercial cutting techniques may be used to promote the development of large, old trees. Tree cutting may also be employed to remove potentially hazardous trees from the trail system or along Wilson Road.

As with most of the forest land in Vermont, the trees growing here have regenerated on lands that were previously cleared for agricultural practices, such as animal grazing, within the last 80-160 years. Since so much of Vermont's landscape was cleared for farming, very few old, large trees can be found in the State. Management Areas 4 (~13 acres) and 5 (~8 acres) are being set aside as a place where natural tree succession can occur so that one day larger, more mature trees can develop. In addition, natural succession can be aided by pre-commercial cutting: selecting a few trees and releasing them from competing trees. Currently, the largest and oldest trees in these management areas are found along the property boundaries, where they were retained as boundary delineations or fence posts.

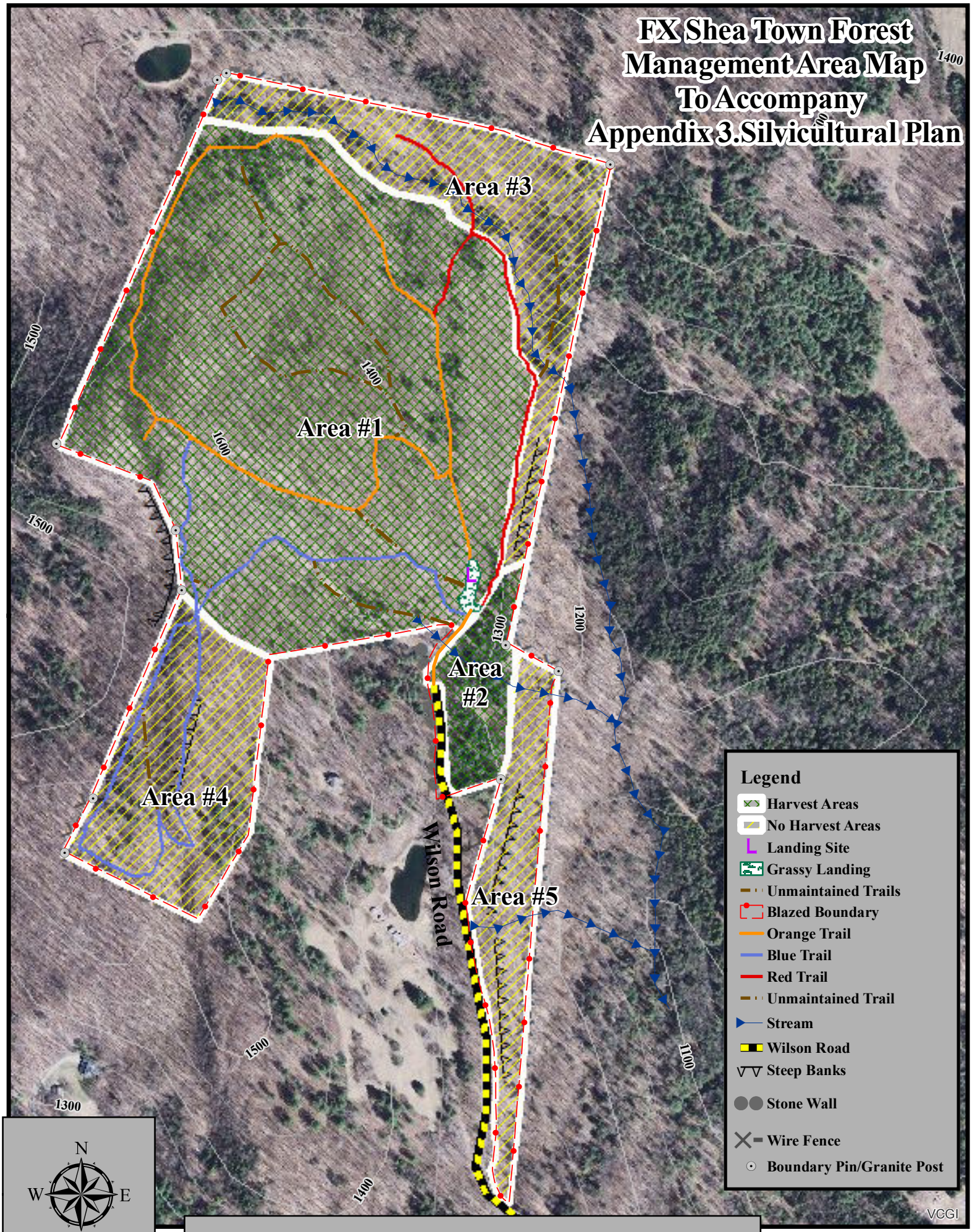
The soils in Management Area 4 are shallow to ledge and this area is prone to tip-up trees. In the past few years many trees have fallen over, exposing their shallow-grown root systems. The fallen trees are referred to as coarse woody debris, which on the forest floor is important to the long-term health of a forest. Over time, woody material is decomposed and builds forest soil structure. This management area also contains a north-south running ridge that is unlike other places on the property and would make commercial operation a challenge. Management Area 5 contains steep banks east of Wilson Road that would also be a challenge to commercial operations. Therefore, any tree cutting should be limited to pre-commercial work, where the focus is on promoting the development of large, old trees.

Goals for these Management Areas:

- Manage for growth and development of old, large trees.
- Use as an educational and recreational area.
- No commercial tree cutting is planned for this area. Pre-commercial tree cutting is permitted to help develop large, old trees. Trees can be cut to remove potential hazards from the trails.

Suggested Activity between 2015 and 2025.

- Allow trees to grow and develop naturally. If hands-on management is desired, select a few trees which will be released from competing trees to encourage the growth of large, old trees.


FX Shea Town Forest
Management Area Map
To Accompany
Appendix 3.Silvicultural Plan
Area #1
Area #2
Area #3
Area #4
Area #5
Wilson Road
1400
1500
1600
1300
1200
1100
Legend
Harvest Areas
No Harvest Areas
Landing Site
Grassy Landing
Unmaintained Trails
Blazed Boundary
Orange Trail
Blue Trail
Red Trail
Unmaintained Trail
Stream
Wilson Road
Steep Banks
Stone Wall
Wire Fence
Boundary Pin/Granite Post
N
W
E
S
0
250
500
1,000
1,500
2,000
Feet
VCGI

FOREST MANAGEMENT PLAN FOR LAND BELONGING TO

SUSAN GUSSENHOVEN SHEA

in Corinth, Vermont

Prepared by Redstart Forestry, Corinth, Vermont

August 2008

Landowner Address/Phone: Susan Gussenhoven Shea
P. O. Box 491
Corinth, VT 05039
439 6164

Town in which land is located: Corinth

Access Description: Less than 1 mile to a Class III Road with approximately 1550 feet of frontage along Class IV Wilson Road.

Grand List Description: 93.59 acres

Enrolled in Use Value Appraisal Program: 93.59 acres

Orthophoto Number: Series 5000 168168; 1999

This 10-year forest management plan is to be used as a guide to forest management activities on the 93.59-acre property belonging to Susan Gussenhoven Shea in Corinth, Vermont. This plan conforms to the standards adopted by the Current Use Advisory Board for eligibility in Vermont's Use Value Appraisal Program, as well as to the criteria required by the Forest Stewardship Council to qualify for marketing wood as "green certified" under Redstart Forestry's Resource Manager Certificate #SW-FM/COC-2179.

General procedures related to the management of this parcel can be found in Redstart

Forestry's Policy Master Book, available at www.redstartconsulting.com.

This property is at the end of Wilson Road, in the center of the Town of Corinth. The main landing is nearly a mile on the Class IV Wilson Road to the nearest town plowed road. Winter access can be tricky, but the residents along Wilson Road tend to take good care of the road. Internal woods roads are in excellent condition and access all portions of the property. The terrain is dominated by a large east facing hillside whose peak is along the western boundary. A second, smaller knob is located just south of the main hill, and a significant stream drainage characterizes land in the northern end of the property. Boundaries are mostly well marked by barbed wire, painted blazes, stone wall, some rather unofficial looking corner pins, and some surveyor placed corner pins. Little evidence was found of the first couple of segments of boundary lines extending west of Wilson Road.

All of Sue's property is forested and most has been actively managed in the past. Sue wishes to manage the land for several different goals including timber production, wildlife habitat, aesthetics, and recreation. This property is well suited for all these uses.

Landscape setting: This parcel is typical of land in the eastern foothills of the Green Mountains. Agriculture played a tremendous role in shaping the landscape. Vast areas of forestland in the region regenerated from abandoned pasture and cropland over the last 100 years. While agriculture still has a strong presence, northern hardwood and mixed conifer forests dominate the landscape. Development pressure in this area is modest and increasing, though a strong conservation movement is underway which is protecting many parcels of land. Water draining from the property flows south and east by Center Brook to the Cookeville Brook before joining the Waits River, which contributes its flow to the Connecticut River. Invasive plant species do not have a significant presence in the area, though they are becoming more frequent. The entire parcel is part of a large area of land mapped by the Vermont Department of Fish and Wildlife as important habitat for black bears.

Information was collected at 28 sample points in July of 2008 for this plan. Basal areas and mean stand diameters are estimated from a random point sampling of trees. A ten-factor basal area prism was used to determine which trees to tally at each sampling point. Data, including basal area, tree species, diameter, crown position, and tree height were gathered at each sampling point and an assessment was made of the sawlog potential of each stem. It is from this information that the "Basal Area/Acre," "Number

of Trees/Acre," "Mean Stand Diameter" and "Acceptable Growing Stock" figures were calculated using NED. Site class is based on soils and site index information and personal judgement. The "Species Composition" percentages refer to percent of total basal area. Acreage for the various forest types was calculated using the dot tally method and is approximate. Trees included in the Acceptable Growing Stock category must have the potential to grow a sawlog that will be at least 10 inches in diameter at the small end, and 10 feet long, with at least two clear faces.

Management units are delineated according to forest type, stand structure, and scheduled treatment. All scheduled treatment dates are approximate and refer to a date plus or minus three years. (A treatment date of 2011 means that the activity can be carried out between 2008 and 2014.) Actual activity will depend on the condition of the stand, logger availability, climate, weather, and market conditions.

STAND 1

This sugar maple stand dominates most of the property on gentle to moderately steep slopes. There are many very high quality stems spread out through the stand. Densities do vary somewhat based on management history and stand age. Most of the northern half of the stand has been managed extensively using single tree and group selections as well as some girdling. The southwestern end of the stand has not been so thoroughly managed and tends to be a bit more densely stocked.

Acres: 70.43 (19 sample points)

Forest Type: Sugar Maple
Natural Community Type: Northern Hardwoods

Species Composition: Sugar maple (74%), beech (11%), white ash (5%), and smaller amounts of hophornbeam, yellow birch, paper birch, and white pine. Regeneration is well established where harvesting has broken up the even-aged, closed canopy condition. Dominant understory species in these areas are sugar maple, white ash, striped maple and hophornbeam.

Total Basal Area/Acre: 91 sq. ft.

Acceptable Growing Stock (Basal Area/Acre): 70 sq. ft.

Number Trees/Acre: 172

Mean Stand Diameter: 9.8" D.B.H. (Diameter at Breast Height)

Stocking: Well stocked, above the B-line for even-aged stands of hardwoods. This stand would be overstocked at above 120 sq. ft. of basal area/acre and understocked at below 47 sq. ft. of basal area/acre (the C-line). The suggested residual stocking following a thinning (the B-line) is 65 sq. ft.

Site Class: 1 (from soils and field examination)

Soil Mapping Unit: Tunbridge-Woodstock Complex and smaller amounts of Buckland silt loam. Tunbridge-Woodstock complex is a mix of two soils that occur in units that are too small to map separately. Tunbridge soils are quite productive, although they

are extremely stony and do not hold water well. Woodstock soils are less productive. They are also classed as having medium natural fertility, but are even more apt to dry out during the heat of summer. Buckland is a deep, moderately well drained and productive soil that holds moisture well. It is found in the north end of the stand in the vicinity of the brook.

Stand Age: All-aged

Stand History and Cultural Elements: This stand was under continuous management by its previous owners with the aid of their consulting forester. It was thinned several times before a 1997 harvest removed a good volume of sawtimber and veneer. Expansions to the woods road network have been ongoing and improvements to the access road have been made. In the 1997 entry, it does not appear that the southwestern end of the stand was operated while the southeastern finger of the stand, east of Wilson Road, was operated in for the first time. Patches of this forest are less than ten years old, less than 50 years old, less than 60 years old, while the matrix of the stand is around 75 years old.

Some cultural elements can be found which point to the land's agricultural past. Firstly, barbed wire runs around many of the boundaries. The land was most likely pastured since it is so uneven and has too many stones to be hayed. Stone piles can be found where a farmer tried to increase his pasture's productivity by freeing up the soils surface for grass to grow. One of these stone piles appears to have been scavenged for good stone wall stones. What appears to be a cow path (or a sheep path) can be seen along the western boundary. This path probably once led all the way down to the stream where livestock would move drink. Several of the old woods roads appear to pre-date the forest and to be old farm roads. A small neighboring parcel along Wilson Road contains a barn foundation and some stone walls suggesting a barnyard enclosure.

Water Quality, Wetlands, and Riparian Zones: The southeastern finger of this stand along Wilson road has several small streams that flow east towards Center Brook. Soils in this area are surprisingly shallow and the streams run across bedrock in several places. Because water can not soak into the ground around the stream, it creates broad areas of wet soil which need to be avoided while logging. Entering this part of the stand is recommended only during frozen conditions with little snow on the ground. Limit the amount of cutting within 25 feet of the brook to maintain bank stability and to help prevent erosion.

Access Network: An excellent network of skid roads runs to most portions of the property. Many of these roads were bulldozed and are on appropriate grades with water diversion devices in place. Herbaceous plants and seedlings have completely covered most skid roads and no erosion was noted.

Coarse Woody Debris (CWD): 8.0 standing dead trees per acre and an average of 1.3 pieces of fallen CWD per sample point.

Wildlife: This high quality timber stand is not very high quality wildlife habitat. While some areas of new age classes are establishing, there is very little diversity to the stand structure. The number of standing dead trees and fallen dead trees is on par for managed hardwood stands, but probably below average for an unmanaged stand. Creating additional diversity in the layers of the canopy, as well as in the spatial distribution of a cutting pattern will create more opportunities for wildlife. More cull quality trees can be girdled to create standing dead and fallen down trees, and group selections can be made to attempt to diversify the species mix beyond just shade tolerant northern hardwoods.

On a positive note, several relatively healthy looking beech trees were found along the northwestern boundary among many heavily diseased trees. These trees are among the small percentage of beech trees that may be resistant to beech bark disease. It is important that these specimens be left to grow in case they have disease-resistant genes. Bear and blue jays are two species that have historically been very dependent on beech nut production.

Insects Disease and Invasive Species: A wide variety of pests afflict sugar maple trees and all can be found somewhere in this stand. Sugar maple borer, nectria canker, eutypella canker, maple leaf cutter, deer browse, armillaria root rot, and open grown form are all problems which can affect the quality or longevity of maples in this stand. The stand has been well managed and no single pest stands out as being particularly problematic. Managing the stand for strong biodiversity including the promotion of tree species other than just sugar maple is an important element to maintaining stand health. Beech bark disease has infected and is killing most beech trees in the stand. One common buckthorn plant was noted in the southern end of the property in a small clearing created were a large old maple was cut. This noxious invasive plant can easily spread out through the understory of the forest and may eventually prevent native species from regenerating. In the late summer months, cut of any buckthorn plants found and spray or dab an approved herbicide on the cut stump to prevent sprouting.

Longterm Objective: Manage for the production of quality northern hardwood sawlogs and veneer using uneven-aged management techniques. Selection harvesting should be carried out roughly every 20 years to reduce the basal area/acre to approximately the B-line stocking level and to gradually create at least three age classes of trees. There are currently at least two distinct age classes distributed in patches. Encourage the rapid growth of young, vigorous trees. Selection harvests typically are used to remove mature sawtimber, poor quality or diseased trees, and to thin groups of densely stocked trees with good long-term potential. When using this management framework, the best quality, most healthy crop trees should be grown to specific diameter objectives. Use the following diameter objectives as a guide to maturity: 18-20 inches for sugar maple and 15-18 inches for other quality hardwood species. Remaining species should be left or harvested depending upon health, quality, stocking and wildlife objectives. Leave 2-3 large snag or cull trees per acre for woodpeckers and other cavity nesters.

Scheduled Treatment: Most of the stand is in excellent condition to continue growing productively for the next ten years. A small area of nominally even aged pole and small saw timber sized trees in the southwest corner of the stand can be thinned (2011) to produce several loads of firewood and some small saw logs. Additionally, some cull quality hardwoods can be selected from throughout the stand for girdling to diversify wildlife habitat and to achieve stand improvement objectives. Re-evaluate in 2018 and schedule the next stand-wide selection harvest.

STAND 2

This northern hardwood stand starts on the south side of the brook and covers all of the land up to the northern boundary. What distinguishes this stand from Stand 1 is a more diverse and balanced array of species on a bottomland or generally southerly exposure. Slopes can be steep leading down to the brook, and areas of saturated soil are common along the valley floor.

Acres: 13.40 (6 sample points)

Forest Type: Northern Hardwood
Natural Community Type: Northern Hardwoods and Hemlock-Northern Hardwoods

Species Composition: Sugar maple (34%), paper birch (17%), beech (14%), white ash (9%), red maple (9%), hemlock (8%), yellow birch (7%), and hophornbeam (2%). Sugar maple, beech, white ash, and yellow birch seedlings can be found where beech mortality or past harvesting disturbed the canopy.

Total Basal Area/Acre: 88 sq. ft.

Acceptable Growing Stock (Basal Area/Acre): 73 sq. ft.

Number Trees/Acre: 207

Mean Stand Diameter: 8.9" D.B.H. (Diameter at Breast Height)

Stocking: Well stocked, above the B-line stocking level for even-aged northern hardwood stands. Stands of this type and size are considered to be overstocked when the basal area/acre is above 120 sq.ft. The understocked condition (the C-line) is 47 sq. ft. The optimum stocking level following a thinning (the B-line) is 65 sq. ft.

Site Class: 2 (from soils and field examination)

Soils Mapping Unit: Tunbridge- Woodstock complex on the upper slopes and Buckland silt loam on the bottom slopes. Upper slopes appear to be plenty deep to bedrock, but are excessively well drained.

Stand Age: Even-aged (though transitioning to all-aged)

Stand History: This stand is primarily even-aged, though transitioning too an all-aged structure as a result of low grade wood harvesting in 1997 and patchy tree death due to beech bark disease and windthrow. The stand is growing on former pasture with a rather warm south facing aspect that contributes to soils being quite dry. Pre-settlement, hills like this would have had a very strong component of beech. The beech is at best struggling and some are being lost annually. The barbed wire fence that runs along the northern boundary has pretty well fallen down and is being buried by the accumulating duff layer.

Water Quality, Wetlands, and Riparian Zones: This stand serves as a riparian zone for the headwaters stream of Center Brook. It is a fairly flat bottomed valley which rises steeply to the north and more moderately to the south (towards Stand 1). The brook has historically been crossed by at least two skid roads, one on the eastern boundary and one close to the western boundary. The western skid trail crosses the brook over solid bedrock which is a pretty ideal crossing. The eastern trail needs to be filled in with poles to protect the stream channel before crossing. Within 50 feet of the brook, reduce the intensity of harvesting, avoid operating machinery, and leave or create abundant coarse woody debris since riparian zones are fragile and rich wildlife corridors.

Access Network: Access is easily achieved by the established network of skid trails.

Coarse Woody Debris (CWD): 45.1 standing dead trees per acre and an average of 1.7 pieces of fallen CWD per sample point.

Wildlife: The beech trees in this stand are not faring well and most are declining. While their mast producing days are either numbered or already past, these trees are now serving as woodpecker habitat.

The riparian zone has significant wildlife habitat value. A riparian corridor often has diverse mix of species growing on rich, moist soils. Seeps and saturated soils surrounding a brook often remain unfrozen and grow fresh green shoots early in the spring before most other plants have broken dormancy. Bear, deer, and turkey all visit seeps and riparian zones in search of food. Seep vegetation is an important part of the diet of hungry bears emerging from winter torpor.

Insects, Disease, and Invasive Species: Beech bark disease is common. Some natural decline of paper birch was noted. No invasive species were noted.

Longterm Objective: Similarly to Stand 1, manage for the production of quality northern hardwood sawlogs and veneer using uneven-aged management techniques. Selection harvesting should be carried out roughly every 20 years to reduce the basal area/acre to approximately the B-line stocking level and to gradually create at least three age classes of trees. Use the following diameter objectives as a guide to maturity: 18-20 inches for sugar maple and 15-18 inches for red maple, white ash, and paper birch. . Remaining species should be left or harvested depending upon health, quality, stocking and wildlife objectives. Leave 2-3 large snag or cull trees per acre for woodpeckers and other cavity nesters.

Scheduled Treatment: The stocking is acceptable and no commercial harvesting is needed for this 10-year management period. If optional work in Stand 1 is to be completed, re-examine the paper birch component of this stand to determine if any sawlog quality trees are in advanced decline and candidate for salvage (2011). Harvested volume will be small, if any.

STAND 3

This stand is a grouped mixture of areas which most recently regenerated from open land and do not resemble the rest of the property. The forest cover varies from dense white pine to open grown sugar maple. Regeneration is dominated by northern hardwoods, and if let be, all areas would likely revert to that forest type. The eastern section is very well stocked with small and medium sawtimber sized trees, while the western portion of the stand has mixed hardwoods, spruce, and white pines growing over advanced regeneration.

Acres: 9.76 (4 sample points)

Forest Type: Mixedwood
Natural Community Type: Northern Hardwood

Species Composition: White pine (57%), sugar maple (24%), paper birch (11%), white spruce (4%), yellow birch (2%), and hophornbeam (2%). Regeneration well established and advanced in places. Sugar maple, hophornbeam, white ash, beech, and white spruce the most common species.

Total Basal Area/Acre: 118 sq. ft.

Acceptable Growing Stock (Basal Area/Acre): 98 sq. ft.

Number Trees/Acre: 176

Mean Stand Diameter: 11.1" D.B.H. (Diameter at Breast Height)

Stocking: Well stocked, above the B-line stocking level for even-aged stands containing 25-65%. Stands of this type and size are considered to be overstocked when the basal area/acre is above 165 sq. ft./acre. The understocked condition (the C-line) is below 85 sq. ft./acre. The optimum stocking level following a thinning (the B-line) is 105 sq. ft.

Site Class: 1 (from soils and field examination)

Soils Mapping Unit: Mapped as all Tunbridge-Woodstock Complex, though a perched water table in the eastern half of the stand suggests that soils may actually be a Buckland silt loam or other similar soil.

Stand Age: Even-aged (portions two-aged)

Stand History: The eastern portion of the stand was actively used as farm land. A barn foundation can be found in the area as well as stone walls and barbed wire. This area appears to have started growing up to forest about 60 years ago and the white pine component appears to have been thinned about 20 years ago.

The western portion of the stand appears to have been used as pasture which was somewhat forested before being completely abandoned. There are numerous open grown sugar maples and clumps of shade intolerant tree species which only succeed in an open environment such as abandoned pasture. Several woods roads can be found which appear to pre-date the majority of the forest and were likely used while the land was pastured. The open grown sugar maples may have been tapped as part of a historic sugarbush associated with a nearby farm. No signs of recent forest management were noted in this area.

Water Quality, Wetlands, and Riparian Zones: Several small seasonal drainages too small to appear on the map run though this area. They create wet ground in places and prevent the soils of the stand from really drying out. While this constant moisture is good for tree growth, it limits access. The drainages most resemble seeps, and probably provide similar ecological services.

Access Network: Access to the eastern portion of the stand is simple since the stand is so close to Wilson Road. Wet soils in this area limit harvesting to frozen winter conditions.

Coarse Woody Debris (CWD): 22.4 standing dead trees per acre and an average of 1.2 pieces of fallen CWD per sample point.

Wildlife: Signs of wildlife are not abundant, though deer browse was noted and locally wet ground may provide early green shoots to winter hungry bear, turkey and deer.

Insects, Disease, and Invasive Species: Some of the white pine component appears to have been killed by white pine blister rust, though new infections are not apparent. Damage due to the activity of the white pine weevil can be seen in many of the stems, though the trees have put on sufficient diameter growth to cover most of the disfigurement caused by this insect pest. Open grown form in hardwoods is not uncommon in this stand, and while not a disease, it prevents affected stems from

ever reaching sawlog specifications. Some decline and death in paper birch was also noted, though not enough to warrant any salvage cutting.

Longterm Objective: Manage this stand for mixedwood sawtimber using even-aged silviculture. In white pine dominated areas, the overstory is about 60 years old will be grown to a rotation length of 90 years. Where sugar maple is the dominant overstory species, advanced regeneration is the focus of management is about 15 years old and will be grown to a rotation age of 100 years. In all areas, improve the quality of the growing stock by killing or harvesting poorly formed trees to release straight, sound, and healthy stems of all species. Pre-commercial and commercial thinning will be used at 15-20 year intervals to maintain desirable stocking near the B-line.

Scheduled Treatment: Commercially thin the white pine component of the stand around 2012 to remove intermediate, suppressed, defective, or diseased stems along with crowded or structurally weak stems. Reduce the stocking to the B-line. About one truckload of mediocre logs will be produced.

In areas dominated by hardwoods, select several of the open grown, poorly formed sugar maples to be girdled. Girdling these trees creates standing dead trees for wildlife habitat while releasing established advanced regeneration. Since this work is pre-commercial and costs money to have completed, it is not mandatory, though strongly recommended. Also, periodically scan roadside areas for invasive species.

SUMMARY

STAND	ACRES	FOREST TYPE	SCHEDULED TREATMENT
1	70.43	Sugar Maple	No required harvest. Thinning of pole sized areas optional (2012).
2	13.40	Northern Hardwood	No Scheduled Harvest.
3	9.76	Mixedwood	Thin white pine component (2012) and consider a small girdling project.
		All Stands	*Update plan in 2018*
	93.59	Total Productive Forest Land	
	93.59	Total Enrolled in the Use Value Appraisal Program	
	0.00	Excluded from the Use Value Appraisal Program	
	93.59	Total Grand List	

UVA MANAGEMENT PLAN SUMMARY FORM

New [ ] Revised [X] Amendment [ ] Change of Ownership [ ]
Town: Corinth
1) Parcel ID:
2) Plan Preparer: Redstart Forestry (previously Nelson Blackburn)
3) Year of Entry: 5) Previous Owner: Shelley Herson
4) Year of last plan: 1997
7) Year of last inspection:
8) Ortho Sheet #: 168168 Year: 1999
Following is prepared by agent

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9) Landowner Name: Susan Gussenhoven Shea
10) Landowner address: P. O. Box 491
Corinth, VT 05039

11) Total Forestry acres in parcel: 94
12) Stand Information

Std #	Acres	Age	Site	Type	MSD	Tot BA	AGS BA	Mgmt	Date
1	71	2	1	05	10	91	70	02*	2012
2	13	2	2	06	9	88	73	12	
3	10	1	1	11	11	118	98	02	2012

13) No Activity: Stand 2: Stocking Acceptable
14) Mgmt Activities - other: * Optional thinning of even-aged, pole sized area
15) 15) Timber Types – other: