State of Vermont
Agency of Natural Resources
Fish & Wildlife Department

Cavendish Management Unit – Knapp Brook Wildlife Management Area

Evens and Turco Lots (Compartment 5)

Long Range Management Plan Addendum

Cavendish, Vermont
529 Acres

Prepared by: Springfield Stewardship Team

August 4, 2014

Approved by: _____ 8/6/14
Louis Porter, Commissioner — Date
Fish & Wildlife Department

Reviewed by: _____ 8/4/14
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Conservation of this parcel was made possible by:

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Mission Statements

Vermont Agency of Natural Resources

The mission of the Agency of Natural Resources is "to protect, sustain, and enhance Vermont's natural resources, for the benefit of this and future generations."

Four agency goals address the following:

- To promote the sustainable use of Vermont's natural resources;
- To protect and improve the health of Vermont's people and ecosystems;
- To promote sustainable outdoor recreation; and
- To operate efficiently and effectively to fulfill our mission.

Departments

Vermont Department of Environmental Conservation
Mission Statement

To preserve, enhance, restore, and conserve Vermont's natural resources, and protect human health, for the benefit of this and future generations.

Vermont Fish & Wildlife Department
Mission Statement

The mission of the Vermont Fish & Wildlife Department is the conservation of all species of fish, wildlife, and plants and their habitats for the people of Vermont. To accomplish this mission, the integrity, diversity, and vitality of their natural systems must be protected.

Vermont Department of Forests, Parks and Recreation
Mission Statement

The mission of the Department of Forests, Parks and Recreation is to practice and encourage high quality stewardship of Vermont's environment by monitoring and maintaining the health, integrity, and diversity of important species, natural communities, and ecological processes; managing forests for sustainable use; providing and promoting opportunities for compatible outdoor recreation; and furnishing related information, education, and services.

EXECUTIVE SUMMARY

The 519-acre 'Evens Lot' and 10-acre 'Turco Lot' were acquired and added to Knapp Brook Wildlife Management Area (WMA) in 1999 and 2007, respectively. Acquisition of the Evens Lot was completed with the assistance of the Vermont Land Trust.

The primary goal of ownership is conservation and management of wildlife habitat for game and non-game species.

Habitat features include hard and soft mast trees, deer wintering areas, and wetlands. The location of the parcel in a relatively unfragmented larger forest area contributes to its value for wildlife.

The Evens parcel also features an important and popular VAST snowmobile trail.

The Evens parcel deed includes a number of conservation restrictions while the Turco deed is unrestricted. The conservation easement on the Evens parcel requires that some activities receive prior written approval from the easement holder. All currently scheduled management and existing recreational uses are identified as an "allowed" use in the conservation easement.

This Long Range Management Addendum adds and incorporates these parcels into the existing Cavendish Management Unit as compartment five of Knapp Brook WMA. Management prescribed in this addendum is consistent with the goals and objectives as well as the specific practices outlined in the existing Cavendish Management Unit Long Range Management Plan.

Management practices for all parcels in the Cavendish Management Unit are projected to 2020. At completion of this time period, it is anticipated that a new Long Range Management Plan (LRMP) will be drafted with a projected completion date of 2022.

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I. PARCEL DESCRIPTION

A. Purpose of Ownership

Knapp Brook WMA is managed by the Vermont Fish & Wildlife Department to meet a variety of habitat and resource goals. Wildlife management objectives consider game species such as white-tailed deer, turkey, grouse, and beaver as well as nongame species such as songbirds, small mammals, amphibians, and birds of prey. Multiple objectives are accomplished by a combination of commercial and non-commercial vegetative management practices applied over time in a manner that protects unique habitats.

Primary Management Goals for Knapp Brook WMA are to:

- Enhance opportunities for wildlife-based recreation, particularly hunting, trapping, and wildlife viewing;
- Protect and improve public access;
- Protect and enhance wetland function to provide habitat and moderate flood and snowmelt events;
- Protect and enhance rare, threatened, and endangered species and their habitat;
- Maintain or enhance the condition of natural communities;
- Protect and enhance wildlife habitat through management of all vegetative stages; creation of early successional growth; improvement of deer wintering areas; and protection of unique habitat;
- Demonstrate exemplary wildlife management practices so that practices applied here may find broader application on private lands;
- Provide sustainable, periodic timber harvesting in appropriate areas to promote wildlife habitat and forest productivity.

B. Parcel Description and Location

Compartment five of Knapp Brook WMA consists of the 519-acre Evens parcel and the 10-acre Turco parcel located entirely within the town of Cavendish, Vermont off the end of Moriglioni Road and Birmingham Road. The terrain consists of hillsides and wetlands with some steep slopes in the Southern Green Mountains biophysical region (Figures 1 and 2). The elevation ranges from 1200 feet to 1760 feet above sea level. The compartment is comprised of ‘fee simple’ land, meaning the Fish & Wildlife Department retains all rights, though the Evens Lot has a detailed conservation easement held by the Vermont Land Trust.

C. History of Acquisition

The Evens parcel was purchased in 1999 with assistance from the Vermont Land Trust. The warranty deed executed on February 10, 1999 (Appendix 1) lists in detail purposes, permitted uses, and restrictions of the acquisition. The Turco parcel was acquired by the State in 2007. The principal objective of the acquisitions and management of the parcel is to conserve wildlife habitats; secondary objectives are to conserve non-commercial public recreation, forestry values, and scenic resources.

Figure 1: Topographic Base Map with Boundaries

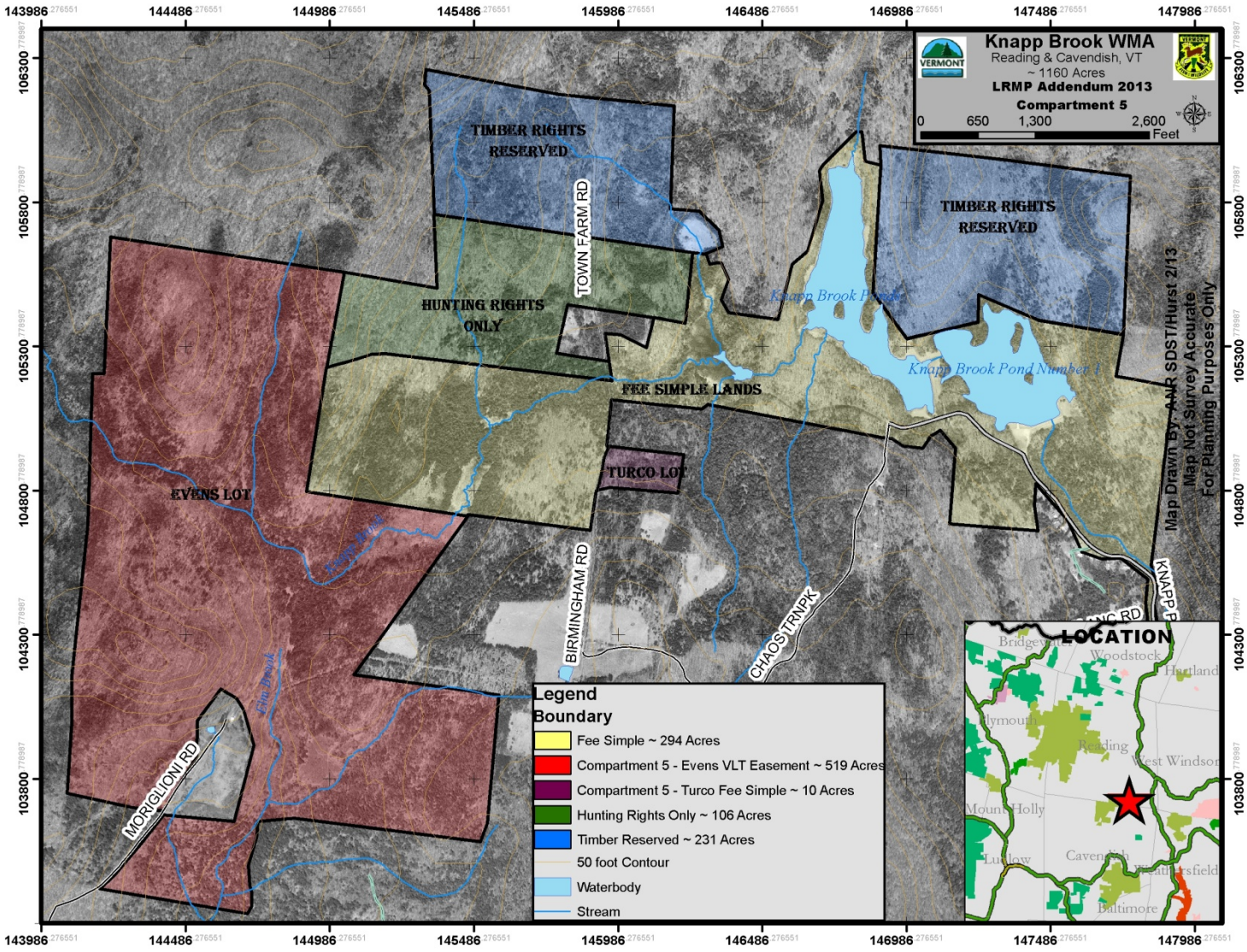
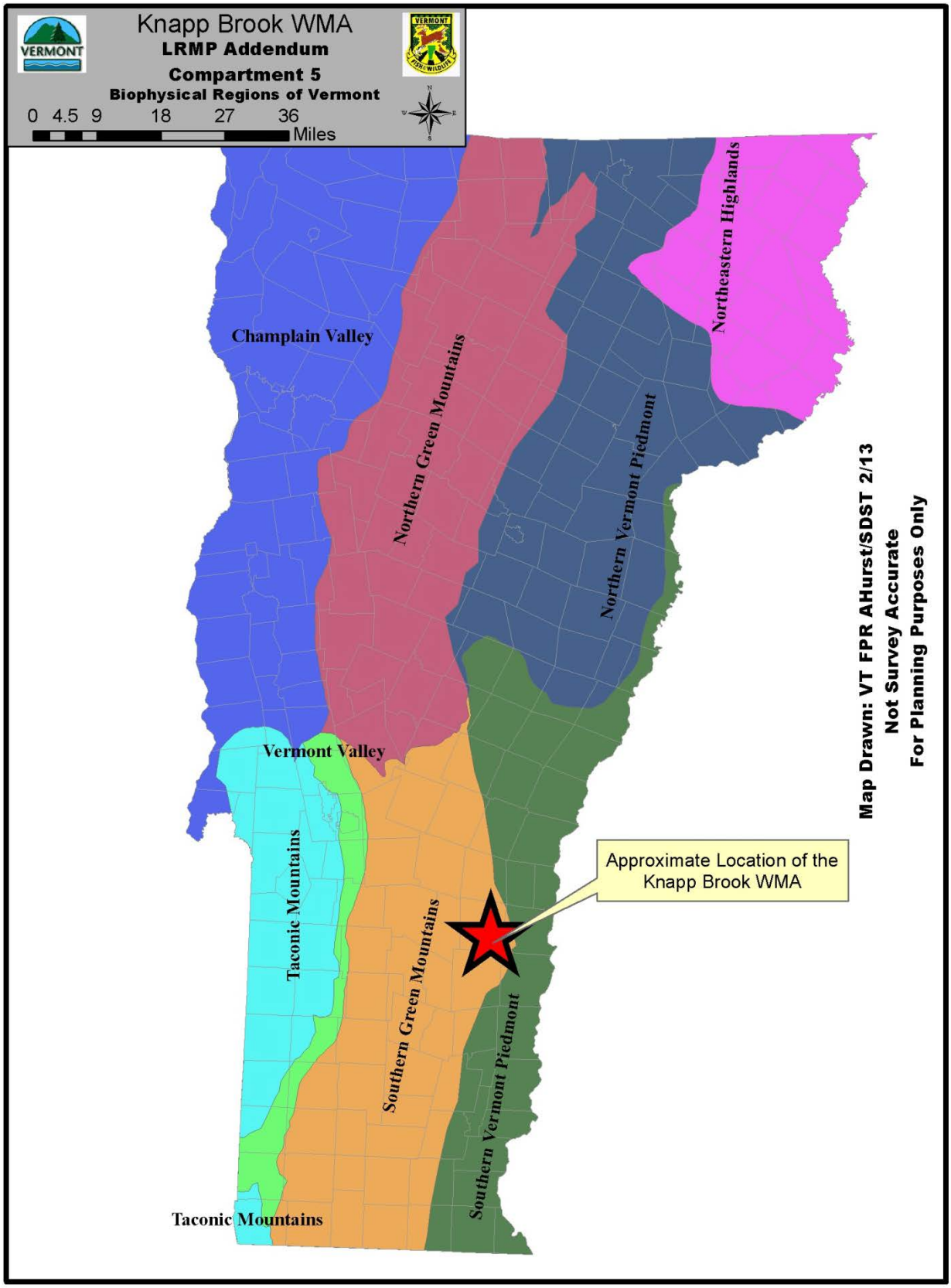


Figure 2: Locator/Biophysical Region Map



D. Land Use History

In Cavendish, early agriculture and settlement began in the late 1700s to early 1800s. This parcel was likely marginal subsistence Vermont farmland abandoned an approximately 150 years ago. Stone walls are common; and historical features include an abandoned farmstead in the approximate center of the WMA and stonewalls in many locations.

In more recent times, the forest supported a variety of timber harvests over a number of years, typically removing small numbers of large trees in a broad fashion. More recent management before State ownership included specific wildlife practices including patch clearcuts and apple tree release.

E. Resource Highlights

Habitat features include stands and stems of red oak and black cherry, wild apple trees, winter softwood cover, extensive wetlands, and pockets of young hardwood growth. The parcel is a popular local hunting and snowmobiling area. There are numerous opportunities to continue the habitat improvement work that has occurred here both by the previous owners and the State of Vermont. Soils are highly productive for white pine, red oak, and red spruce and moderately to poorly productive for other species. The entire parcel is located within the Southern Green Mountains biophysical region. The forest types include Dry Oak-Hardwood, Northern Hardwood, White Pine on abandoned pasture, Yellow Birch-Red Spruce-Balsam Fir, Hemlock, and Alder Swamp.

F. Relationship to Town, Regional, and Other Pertinent Planning Efforts

The LRMP Addendum for Knapp Brook compartment five is consistent with the agriculture and forestry resources and natural areas, and wildlife habitat resources of the Cavendish Town Plan and the Regional Plan developed by the Southern Windsor County Regional Planning Commission (SWCRPC).

The 2007 Cavendish Town Plan supports:

- Improving the quality of… wildlife and land resources.
- Conservation of critical wildlife habitat.
- The preservation of and access to important natural and scenic resource areas for recreational use.

The SWCRPC 2009 Regional Plan supports:

- The prevention of forest fragmentation and conservation of large blocks of forest land.
- Forest management that provides economic benefit to the region while protecting and enhancing multiple resource values.
- Acquisition of conservation easements to support forest sustainability and other resource values.
- Management of State lands that integrates multiple resource objectives.

The regional plan further states: "Because it is not subject to the same development pressures as privately-owned forestland, public forestland is an especially valuable asset to the Region, and becomes more valuable as large tracts of private land are fragmented and developed. Public land can be a real asset not only to the Region's natural environment, but also to its economy. When managed properly, the economic benefits of public land can offset, to some degree, losses of local property tax revenue inherent in public ownership through the use of effective forest management practices such as selective cuttings. Management of state land should take all resource values into account. Although the economic values of recreation, wildlife habitat, and aesthetics are difficult to measure, these are important values that state-owned forestland provides for the Region."

In addition, the regional plan outlines important wildlife objectives for the region that are addressed in the Knapp Brook WMA LRMP addendum including:

- Improvement of mast production.
- A diversity of habitat types and connectivity between habitat areas.
- Protection of deer wintering areas and large habitat blocks for bobcat and black bear.
- Conservation of rare, threatened, and endangered species and significant natural communities.
- Conservation of wetlands and vernal pools.
- Use of vegetated buffers along riparian areas.
- Where snowmobile trails intersect deer wintering areas, monitor impacts and explore re-location of trails.

II. PUBLIC INPUT

Public involvement was conducted on Monday, May 12, 2014. An extensive mailing list was used to notify the public that included user groups, town officials, neighbors, regional planners, and people known to have a local interest in the WMA. Approximately 25 people attended the meeting. Public comment was generally supportive of the LRMP content and implementation schedule and all questions and comments were discussed and answered during the meeting. A 30-day written comment period expired with no written comments received.

The draft addendum was provided to the Vermont Land Trust and Cavendish Selectboard for comment in April of 2014.

Management and use is consistent with current levels of activity on the Cavendish Management Unit in general. The LRMP addendum was not modified after public involvement. A summary of the meeting is found below. A summary of the response given is shown in *italics*.

Comments/Questions Received

- Is there a town road right-of-way from Parker Hill Road? Google maps is wrong. *No class IV or discontinued roads within the Wildlife Management Area (WMA) were discovered in the legal research for the Long Range Management Plan (LRMP). Though some digital maps show Parker Hill Road continuing onto the property, it does not.*

- When was Turco Lot acquired and why? *The Turco Lot was acquired by the State in 2007. The primary purpose was to conserve and protect a portion of deer wintering area (DWA) adjacent to an active DWA on the main block of Knapp Brook WMA.*

- Are you planning to do any clearcuts? *Patch clearcuts and openings of ¼ to 3 acres are planned in each harvest over the next 8 to 10 years. They are limited in frequency and size by other resources and features such as brooks, wetland, DWA, and steep slopes. We anticipate at the end of the planning period to have 40 to 70 acres of small and large openings in the forest.*

- Timber sale planned for 2018 is on very steep land. *Generally, where slope exceeds 25%, harvest is very limited or impossible.*

- The last time the area was logged near the Birmingham property, log trucks could not get through. *We anticipate developing better access in a different location for that area.*

- Will anything other than logging affect the snowmobile trail? *We plan to explore relocating one short segment of the VAST trail out of a small area of DWA. This will be done in cooperation with VAST. There is no intention of closing the trail if no option is found though expansion of use would be discouraged.*

- Do you place any value on ironwood/hardhack for turkeys? *We agree these are excellent wildlife food sources, and they will be retained on the WMA.*

- What is the policy for developing any other trails through the area? *Trail proposals from organized groups fall under 10 V.S.A. App. §15 Rule governing Public Use of Vermont Fish & Wildlife Department Lands. In general, additional formalized trails are discouraged on WMAs given the potential impacts on habitat and animal life cycles such as breeding and raising young.*

- For the last 25 years VAST has been trying to get off Moriglioni Road. VAST is trying to work with the new owners of the Robert Hollins's place. VAST is trying to change the trail location so that is not in a deeryard. *We support that endeavor as it would result in the trail moving out of a small area of DWA.*

- Do you anticipate any increased utilization (such as vehicle traffic) as a result of the addition of this parcel? Will access be at the southern portion? Can you get into that section right now through Knapp Pond #2? *Vehicle traffic will increase on occasion for trucking and maintenance though it will be similar to what is seen on nearby private lands in active forest management. Increased use during the hunting seasons is expected in response to habitat work. Generally, we find that hunters prefer to be dispersed and the level of activity is controlled by that desire. Access on foot from Knapp Pond #2 is possible but not with vehicles.*

- In terms of the roads and pathways that can be used for recreation, is there a map that exists? *Maps can be found in the management plan at:*

  www.vtfpr.org/lands/CavendishManagementUnit.cfm

  In addition, the Fish & Wildlife Department has a map making function by parcel at:

  www.anr.state.vt.us/fwd/WmaLocator.aspx

- Does the Department have any plan for leaving some trees? There's no old growth in Vermont. Would you consider a place for old growth in a difficult spot? *There are no plans for a formal tree reserve on the WMA. However, there are many places where trees will not be cut due to excessively steep ground, stream, and wetland buffers, and historic sites.*

III. RESOURCE ANALYSIS

A. Legal Constraints Assessment

A number of restrictions apply to the Evens parcel based on historical agreements and the Vermont Land Trust acquisition from Evens and transfer to the Vermont Fish & Wildlife Department (Figure 3).

Summary of Major Legal Constraints:

1. **Conservation Easements**

    - A number of deeded easements and restrictions (see Appendix 1) including permanent conservation easements (development rights removed), Vermont Land Trust right of re-entry, public access easement (non-motorized), and allowance for continued winter use by snowmobiles of VAST Trail 5A.

2. **Deed Restrictions**

    - A right-of-way over lands of Byron over the main access road for forestry and wildlife management, recreational access, and public pedestrian access for hunting (Appendix 4). In exchange for this right-of-way, the Byrons were to have been granted a right-of-way for access to Moriglioni Road for forest management purposes only.

    - Power line easement to Central Vermont Public Service Corporation dated September 27, 1947, recorded Book 29, Page 119 of the Cavendish Land Records.

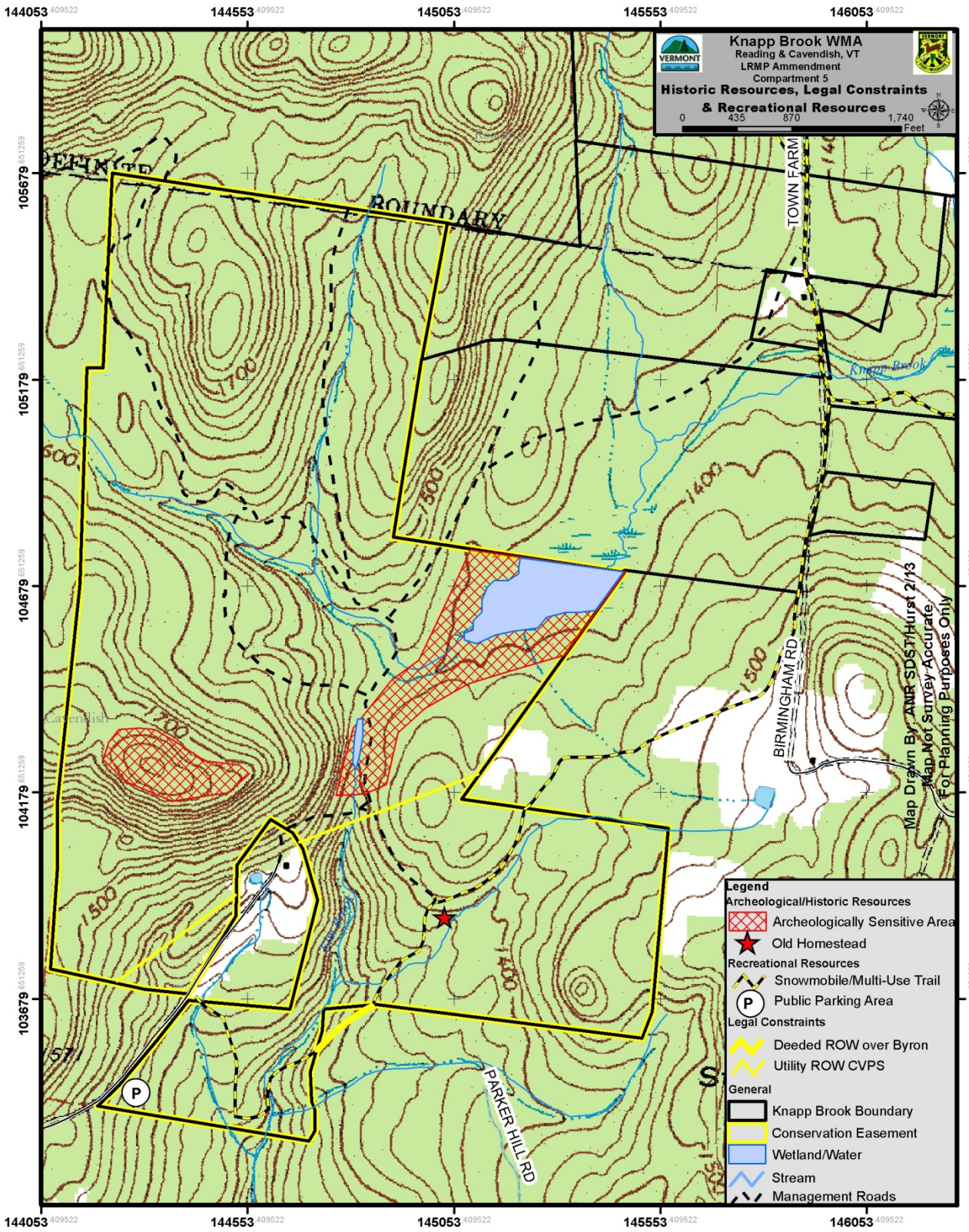
    - Power line easement to Central Vermont Public Service Corporation dated October 6, 1947, recorded Book 29, Page 111 of the Cavendish Land Records.

    - Power line easement to Central Vermont Public Service Corporation and New England Telephone and Telegraph Company dated October 18, 1962 and recorded Book 31, Page 278 of the Cavendish Land Records.

    - Right-of-way over and across the orchard lot behind the buildings for purposes of crossing and re-crossing with men and teams from the highway to a pasture as reserved in a deed from Hattie L. Stearns and George A. Stearns to Earl S. Bates and Anna H. Bates dated June 9, 1914 and recorded in Book 25, Page 23 of the Cavendish Land Records.

    - Right-of-way conveyed to George L. Pratt to Gary J. Holt by Warranty Deed dated July 14, 1966 and recorded in Book 32, Page 85 of the Cavendish Land Records.

Figure 3: Legal Constraints Map



- Spring rights conveyed to Matthew T. Birmingham Jr. and Jane Birmingham by Warranty Deed of George L. Pratt dated December 27, 1962 and recorded in Book 31, Page 288 of the Cavendish Land Records.

- Right, privilege and easement to shoot, take and kill any and all wild game was conveyed by George Pratt to the State of Vermont by deed dated February 26, 1964 and recorded in Book 31, Page 375 of the Cavendish Land Records.

3. **Regulatory** – Public use of wildlife management areas is subject to 10 V.S.A. App. 15, the Rule governing public use of Fish & Wildlife Department Lands (Appendix 8).

4. **Funding Restrictions**

    - Federal Aid in Wildlife Restoration Act (PR) (Pittman-Robertson Act): This Act, commonly called the Pittman-Robertson Wildlife Restoration Act, provides federal aid to the State for the management and restoration of wildlife. The federal aid, funded through an excise tax on sporting arms and ammunition, may be used to support a variety of wildlife projects including acquisition and improvements to wildlife habitat. Management activities and land uses on parcels funded with Pittman-Robertson funds must be consistent with the objectives of protecting, restoring, or improving habitat for wildlife. Recreational activities may be restricted to those activities which meet these objectives.

B. Natural Community Assessment

The Agency of Natural Resources uses a "coarse filter/ fine filter" approach to the ecological inventory and assessment of state lands (Jenkins 1985; Noss 1987; Hunter et al. 1988; Hunter 1991; Noss and Cooperrider 1994; Haufler et al. 1996; Jenkins 1996; Poiani et al. 2000). Widely employed as a management tool on state, federal, and private lands (see for example: Leslie et al. 1996; Committee of Scientists 1999; Stein et al. 2000; USFS 2000, 2004), it is an aid to land managers who seek to protect most or all of the species that naturally occur on their lands, but who lack the resources to make exhaustive inventories of all taxonomic groups. Because many groups of organisms are cryptic or poorly understood (for example, fungi and soil invertebrates), it is not practical to make lists of all of them (Anderson et al. 1999; Willis and Whittaker 2002). Even if we could assemble such lists of species, it would be impossible to manage the land with all of them in mind. Instead, natural communities are treated as a proxy for the biological organisms of which they are composed. It is thought that if examples of all of Vermont's natural communities are conserved at the scale at which they naturally occur, most of the species they contain, from the largest trees and mammals to the smallest insects, will also be conserved (NCASI 2004). Natural communities are thus a coarse filter for "catching" the majority of an area's native organisms. Because conservation of habitats (in the form of natural communities) will not protect all species, we also employ a "fine filter" to catch the remaining species that are known to require very specific conditions for their growth, reproduction, wintering, etc. Examples of organisms benefiting from the fine filter inventories described below include breeding birds, deer on their wintering areas, and rare plants.

The coarse filter assessment begins by describing landscape and climatic factors that characterize the Evens Lot parcel of Knapp Brook WMA, such as bedrock geology and water resources. It then details the 11 distinct natural community types documented and mapped during inventories of the WMA. This is followed by a fine filter assessment describing rare species, invasive plants, and wildlife habitats found here.

Coarse Filter Assessment

Biophysical Region and Climate

Vermont's biological landscapes are divided into eight regions that share features of climate, topography, geology, human history, and natural communities. These regions are continuous in adjacent states, and are related to regional and national classifications of ecological systems in North America. The Evens Lot is located near the eastern edge of the Southern Green Mountains biophysical region, which is the mountainous part of the state that extends from the towns of Chittenden, Stockbridge, and Bethel south to the border with Massachusetts. This region is part of the broader Appalachian Mountain system that stretches across much of the eastern North America. As a result of the high elevations, the Southern Green Mountains have high levels of precipitation, low temperatures, and a short growing season. The terrain is frequently steep, though there are some large high-elevation plateaus. The metamorphic bedrock is acidic, but is much older than similar rocks found in the Northern Green Mountains. Glacial till covers much of the region, but glacial and river sediments are present in the valleys.

Bedrock, Surficial Geology and Soils

The geologic history of an area can have a strong influence on the distribution of natural communities. Three types of bedrock, all dating to the Cambrien and Precambrien eras, underlie the Evens Lot: gneiss, schist, and dolostone (Doll et al. 1961). The first two types are erosion-resistant acidic rocks that contribute little to soil enrichment, and these rocks are found under most of the Evens Lot parcel. Running northeast to southwest, however, is a thin band of dolostone, a softer rock that is mineral-rich and can contribute significantly to soil enrichment. It is likely that this rock is responsible for the Rich Fen natural community.

The degree to which these bedrock types affect growing conditions in the WMA is mediated by the depth of the surficial materials deposited at the end of the last continental glaciation, some 15,000-12,000 years ago. As the glacier ice melted, rock fragments of all sizes, from boulders to clay, fell in an unsorted jumble known as glacial till. Almost all of the Evens Lot features a layer of this over the bedrock. Glacial till can be many feet deep, but is often substantially shallower. In places, the till is buried by post-glacial accumulations of alluvial deposits along flowing streams, and muck and peat in the wetlands. These latter deposits are found in very acidic and anaerobic environments where organic materials decay more slowly than they are produced.

The soils of the Evens Lot are primarily products of these surficial deposits. Till-derived soils are the most widely distributed, followed by peat and muck, and glacial-fluvial soils. The till soils are often quite rocky, and the NRCS mapping indicates that the Tunbridge, Lyman, and Berkshire series are the most widespread in the parcel. Wetland soils are mapped as Pondicherry and Wonsqueak mucks, but NRCS mapping does not include many of the small forested wetlands on the parcel. Finally, a small area of Adams loamy fine sand is mapped by the NRCS

on the eastern boundary of the parcel, near the beaver wetland complex. More detailed soil descriptions can be found in the natural community summaries below.

Hydrology/Streams/Rivers/Ponds

The Evens Lot receives around 42" of precipitation annually, which is about average for the state. All of the water that falls on the parcel eventually reaches the Black River. The northern portion of the parcel drains through Knapp Brook to the North Branch of the Black River, and the southern portion drains through Elm Brook to reach the Black River main stem. The parcel also contains many small water features, including seeps, two vernal pools, and a number of small wetlands that serve to moderate peak downstream flows by mediating high flows and storing water. Knapp Brook WMA does include the two Knapp Brook Ponds, but within the Evens Lot there are no large water bodies.

Natural Disturbance

Natural disturbance process, such as wind, fire, and flooding, continually shape landscapes and define their natural communities. Within the Evens Lot, the most frequent upland natural disturbances are small-scale events, such as individual tree death and canopy gap dynamics. At larger scales blowdown, ice damage, and insect outbreaks are the most likely disturbance regimes, but these would be expected to occur infrequently. Fire is a possible but unlikely disturbance in the generally mesic forests of the parcel. Wetland disturbances are primarily the result of small-scale flooding and beaver activity. Though uncommon, extreme flood events have the potential to cause extensive scouring and erosion in the steep, mountainous terrain.

Human Disturbance

Human use of the land can also greatly influence the present-day distribution of natural communities. Like much of the Vermont landscape, the Evens Lot has a history of agriculture and timber harvesting. Much of the land may have been cleared in the 19th century, but the 1929 USGS topographic map shows almost the entire parcel as forested. Stumps and skid trails on the parcel indicate an ongoing history of forest management. These past disturbances have influenced the present-day structure and composition of the forested natural communities, resulting in younger stands with less structural diversity. In addition there are localized hydrological changes around some skid trails.

Natural Communities Summary and Table

Nineteen occurrences of 11 natural community types were identified and mapped (Figure 4) in the Evens Lot (Table 1). The 10-acre Turco Lot, not depicted, is mapped as the common Hemlock-Northern Hardwood Forest community. A total of 29 natural community polygons were mapped. Some broad patterns emerged from this mapping effort. In general, the Evens Lot is forested with a mix of hardwood and softwood species. Small wetlands are scattered around the parcel, and provide some landscape diversity. The most notable of these are a beaver-disturbed Rich Fen at the headwaters of Elm Brook, and a large beaver wetland along Knapp Brook. The vegetation of each natural community on the WMA are described in Appendix 6. The scientific names of plants and some uncommon animals are given the first time a species is mentioned in each description.

Table 1: Natural Communities of the Evens Lot, Knapp Brook WMA

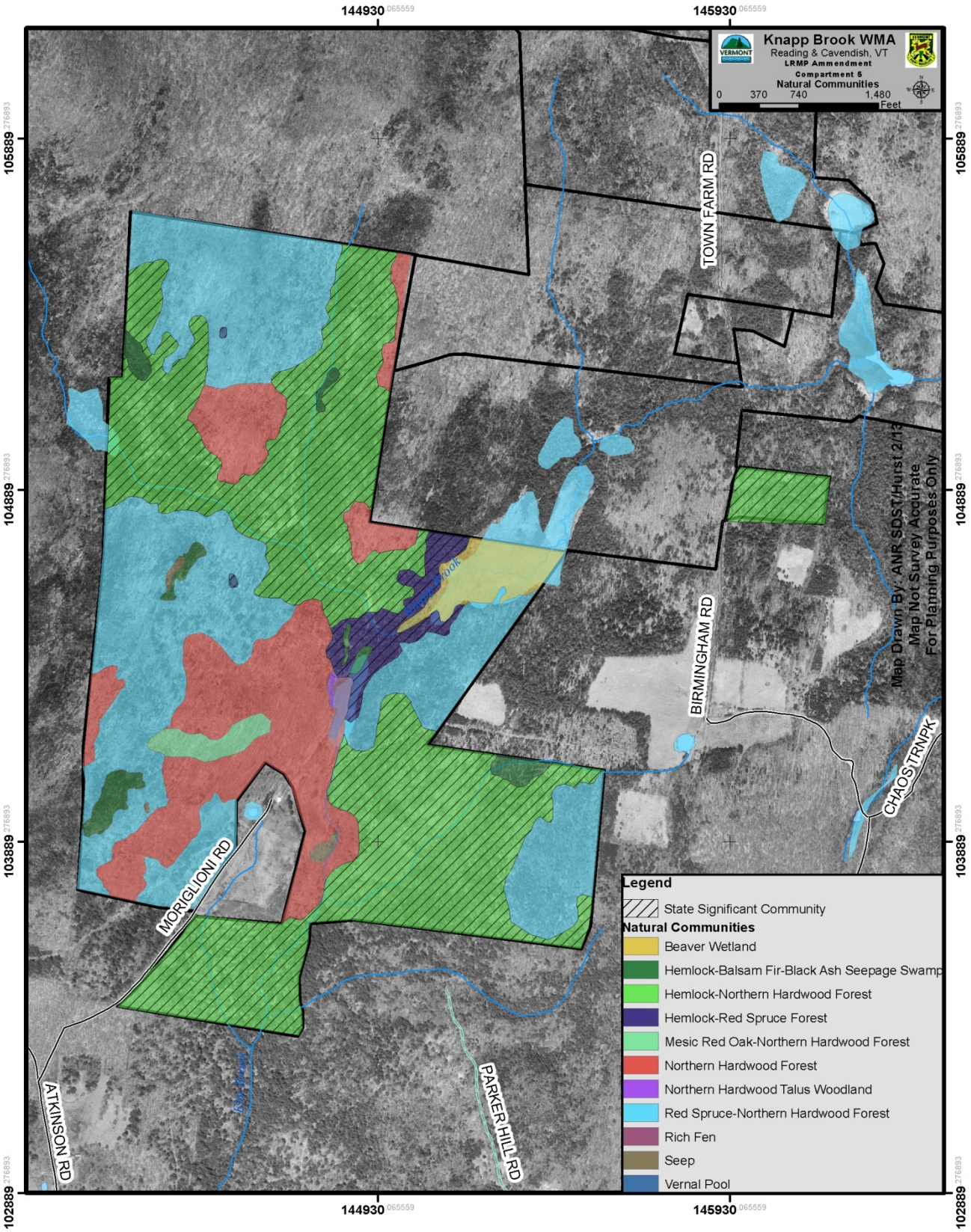
Natural Communities of Knapp Brook WMA				
Natural Community		**Acres**	**Vermont Distribution**	**Example of Statewide Significance?**
Wetlands	Beaver Wetland	13	very common	
	Hemlock-Balsam Fir-Black Ash Seepage Swamp	11	uncommon	
	Rich Fen	1.6	rare	yes
	Seep	1.3	common	
	Vernal Pool	0.3	uncommon	yes
Uplands	Hemlock-Northern Hardwood Forest	217.4	common	yes
	Hemlock-Red Spruce Forest	15	common	yes
	Mesic Red Oak-Northern Hardwood Forest	6	common	
	Northern Hardwood Forest	90	very common	
	Northern Hardwood Talus Woodland	0.4	uncommon	
	Red Spruce-Northern Hardwood Forest	173	common	
For more information on these and other natural communities, see Wetland, Woodland, Wildland: a Guide to the Natural Communities of Vermont, by Elizabeth Thompson and Eric Sorenson. Information may also be found online at: http://www.vtfishandwildlife.com/books.cfm?libbase_=Wetland,Woodland,Wildland				

Fine Filter Assessment

Rare, Threatened, Endangered Species

There are no known occurrences of rare, threatened, or endangered species on the parcel. For the most part, there are few habitats that would be likely sites to find RTE species; however, some sites, namely the many small wetlands, may warrant further inventory. In particular, the Rich Fen site could host RTE plants that make use of the specific nutrient and saturated conditions found in that community. If any RTE species are found at this location in the future, it may be appropriate to consider managing the beaver population in order to maintain suitable Rich Fen habitat.

Figure 4: Natural Communities Map



C. Forest Health Assessment

1) General Forest Health: While overall forest health appears good, individual trees throughout the parcel exhibit poor health vigor including:

    a. Balsam Fir and Red Spruce – appear in decline due to age, poor site, and stem/root decay.

    b. American Beech – varying levels of decline due to beech bark disease.

    c. Black Cherry – an uncommon species here, typically with crown dieback.

    d. Deciduous Species – exhibit older dieback and continued decline likely due to the ice storm of 1998 and a history of ice and snow damage in this area.

2) Site and Elevation, etc.: Parcel elevation is moderate, ranging from 1200 to 1760 feet MSL. Forest sites are reasonably productive but generally are either somewhat excessively drained or somewhat excessively poorly drained.

3) Browse Sensitivity Assessment: Heavy browsing by moose and deer was evident on most understory shrubs, seedlings, and saplings. Browsing is particularly heavy in and near winter cover. Regeneration success after harvesting may require prescription refinement taking into account browsing pressure.

4) Invasive Exotic Species Assessment:

    a. Plants

Non-native Species

There are many non-native plant species growing in the Evens Lot of Knapp Brook WMA. Most are not a threat to native vegetation, habitats, or wildlife; however, there are two notable exceptions (Table 2):

Table 2: Invasive Exotic Plants of Knapp Brook WMA

Invasive Plants of Knapp Brook WMA					
Species Name	**Common Name**	**Distribution**	**Estimated % Cover**	**Sites Where Found**	**Present Threat to Native Plant Communities**
Euonymus alatus	Burning Bush	One site	<1	Boundary with Evens	minimal
Alliana petiolata	Garlic Mustard	Two sites	<1	Parking lot, power line	moderate

1. Burning Bush (*Euonymus alatus*)

A single large individual of this species was located along the WMA property boundary, growing within Northern Hardwood Forest. It is unclear if the plant was growing on State-owned land or on adjacent private land. Burning bush poses a particular threat to forested natural communities because it can out-compete native vegetation, and is tolerant of full shade. Thus, it can persist and spread even in closed-canopy, relatively undisturbed forests. Numerous small burning bush seedlings were observed in the vicinity of the parent plant, indicating that this individual is spreading. Since there is only one large individual and control efforts would be relatively straightforward, it is recommended that this species be removed as soon as possible.

2. Garlic Mustard (*Alliaria petiolata*)

Garlic mustard was found growing at both the designated parking area, and in the powerline cut to the south of the Rich Fen natural community. In both cases it is growing in its preferred habitat of disturbed soil. It is likely that the species is also present at other locations along the powerline cut. Further inventory, conducted in spring and early summer when the plant is flowering and fruiting, may be needed to fully assess the threat of this population. This species out-competes native vegetation and tolerates a wide range of light conditions, so it poses a threat to the adjacent forest communities. Control of this species is recommended before it spreads further.

b. *Insects:* None known.

D. Wildlife and Habitat Assessment

Important Habitat Features

Core Forest

Core forest is a biological term used to refer to any forested areas that are greater than 100 meters from human-created, non-forested opening. While edges and transition zones are excellent habitat for some native plant and animal species, edges also negatively impact many forest resources. Increases in invasive species and in predation on many native songbirds, and a decrease in wildlife that prefer to use large blocks of intact forest, are all associated with an increase in forest edge. Additionally, unbroken forest allows for easy dispersal of plants and animals, without large barriers to this movement. The Evens Lot is located within a generally forested landscape that has inclusions of farms, fields, and low-density human development. The parcel overlaps a block of core forest that covers at least 2,400 acres. While not as large as some of the bigger blocks of core forest found further west in the Green Mountains, it is large enough to provide excellent habitat for many species. Immediately within the Evens Lot parcel, the primary fragmenting features are the powerline corridor that runs through the parcel, and the edges of the adjacent private fields that border the WMA.

Wildlife Movement Corridors

Connections between wild lands can serve an important role in maintaining the long-term health and viability of wildlife populations. Wildlife corridors not only allow individual animals (such as young individuals searching for new habitat) to move throughout the landscape, but also allow for the transfer of genetic information across the region. Even the occasional travel of a few

individual animals between otherwise isolated populations can substantially increase their long-term viability, because the genetic diversity within each group is effectively increased.

Locally, the Evens Lot is well-connected to surrounding lands, providing ample opportunities for many species to travel across the landscape. While there are some fragmenting features such as roads, fields, and low-density development, these features are all probably readily avoidable or easily crossed by most species. On a regional scale, Knapp Brook WMA is located on the edge of the Southern Green Mountain biophysical region, and thus plays an important role in connecting the large habitat blocks on the undeveloped spine of the mountain range to smaller habitat blocks on the edge of the mountains and in the Connecticut River Valley. In particular, Knapp Brook WMA is part of a relatively wild corridor that connects the Coolidge Range (around Killington Mountain) to Mount Ascutney, providing opportunities for moose, bear, and other large mammals to travel between these areas.

Critical Wildlife Habitat and Rare, Threatened, and Endangered (RT&E) Species

Critical habitats are features that are required for maintaining populations of certain species. These areas typically provide critical food or cover at important times of year such as winter or the breeding season. There are no known RT&E animal species or habitats on the Evens or Turco Lots.

Deer Wintering Areas (DWA)

A large mapped wintering area is found surrounding the wetlands on the northeast end of the parcel (Figure 5) which is also used by moose. Including the portion on adjacent Knapp Brook WMA lands, the total unit is approximately 271 acres in size. The quality of the DWA is good with varying aspects, dense cover, and proximity to oak and wetland feeding areas. Field review indicates that the DWA extends into softwood areas adjacent to the mapped portion (labeled as secondary DWA on the habitat map). Because a significant portion of the DWA is comprised of red spruce and balsam fir showing evidence of decay and decline, the portions of the DWA are at risk to tree mortality and blow down. Cultivating softwood cover in nearby areas will be important to long-term success of deer and moose on the parcel.

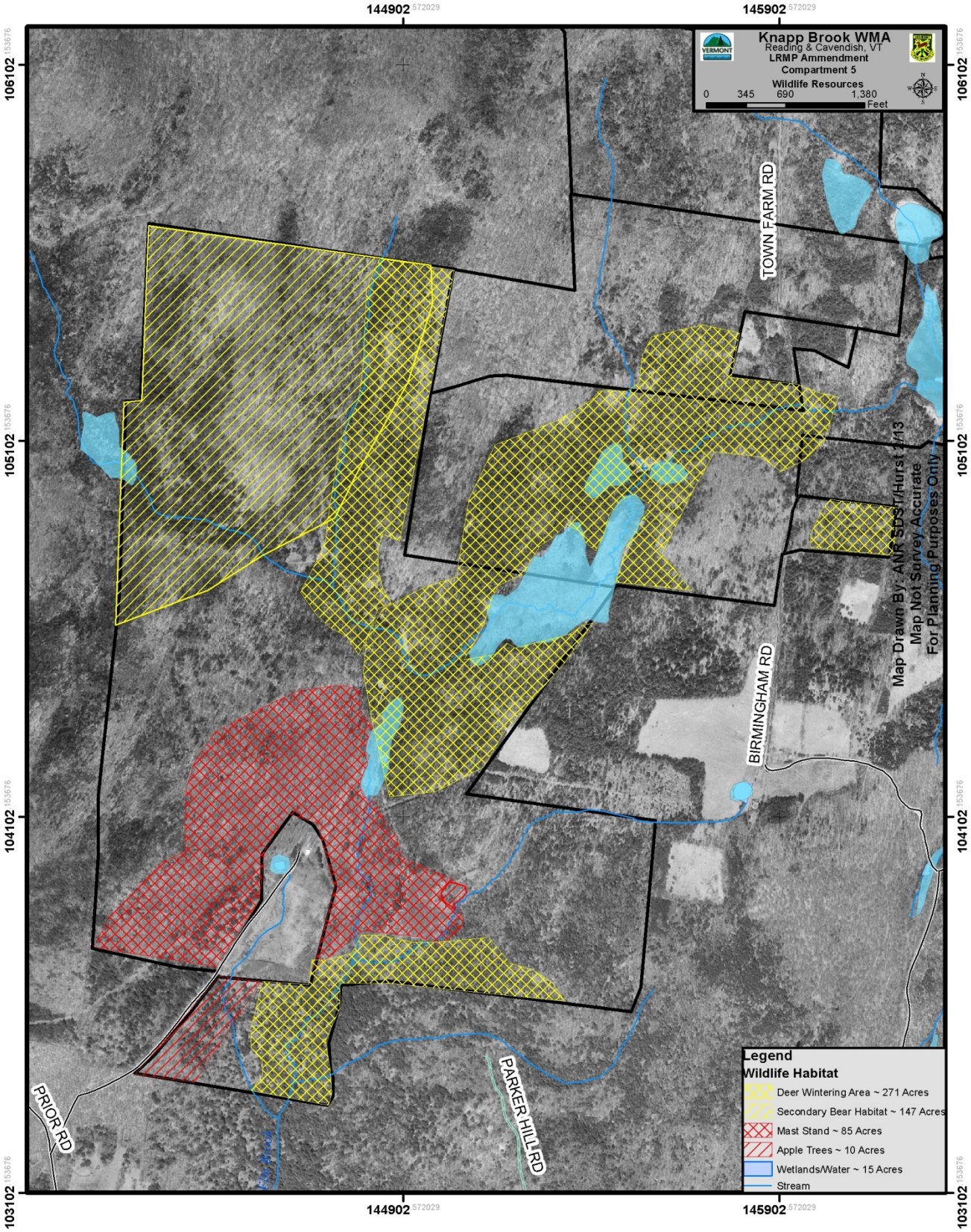
Wetlands and Riparian Areas

Wetlands, streams, pools, and riparian zones provide important feeding areas for wildlife such as bear, moose, and deer as well as critical breeding sites and habitats for amphibians. Generally, open wetlands are also important bat feeding areas due to the abundance of flying insects and open air. The complex of streams and shrub swamps found at the center of the Evens parcel are a highly important local habitat feature that contributes to flood resiliency that provides wet habitat refuge during droughts.

Bear Habitat

The northwestern portion of the parcel is mapped as secondary bear habitat though black bears likely use the entire parcel. Important features for bear use are apple trees, oak stands, and wetlands.

Figure 5: Wildlife Resources Map



Bobcat Denning Sites

Bobcat denning and crossing sites are believed to exist north of the parcel on private land (based on trapper questionnaires). It is highly likely that bobcats utilize the Evens and Turco parcels as part of their hunting range. Rocky, ledgy sites that may serve as denning habitat exist, but the proximity to a residence at the end of Moriglioni Road makes it less likely they are used.

Important Habitats

Hard Mast Stands

American beech and red oak trees are found scattered throughout hardwood areas and occasionally concentrated on dry rocky sites in a pole stand in the center of the parcel. The seeds of oak and beech are important wildlife food sources for game and non-game species. Most of these mast areas were thinned to promote growth of oak in the last five years.

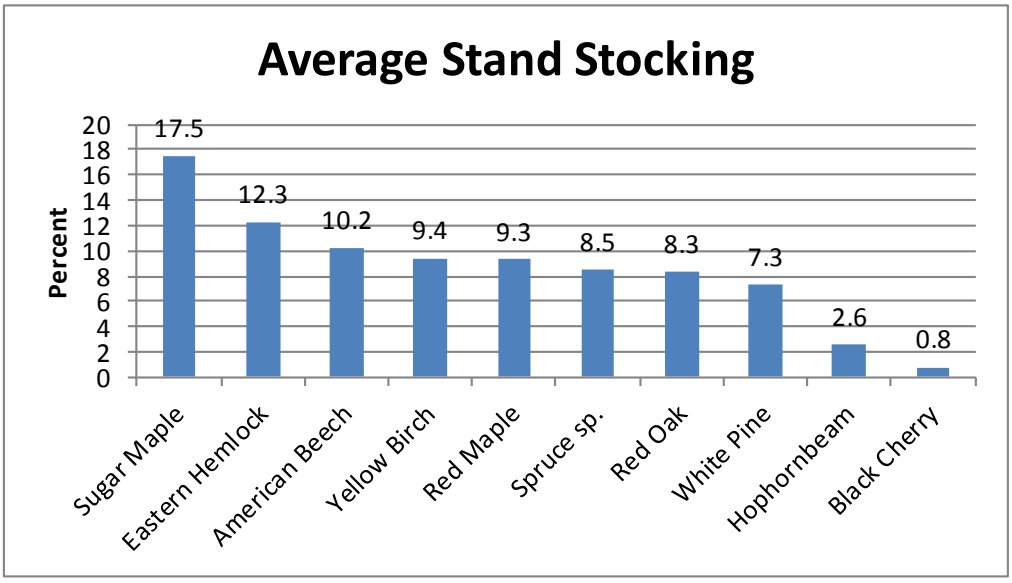
Soft Mast Trees and Shrubs

Apples, fruit trees and shrubs, raspberries, and blackberries are important summer and fall food species for birds, insects, and mammals. These food sources are limited on the parcel – the only significant area being an old apple orchard near the southern entrance to the Evens Lot. These trees were thinned recently and are very productive. Creation of blackberry and raspberry patches through periodic cutting of patches of trees would benefit many species. It would be most productive to locate patches in stands that were not providing other critical or important habitat function.

Habitat Diversity

Forest type and tree species composition is fairly diverse (Figure 6).

Figure 6: Average Stand Stocking



Forest types are diverse in composition but not in age distribution. The majority of the parcel is currently in a mid-successional condition with limited areas of young forest. Forest understories lack diversity as well, with a preponderance of beech and striped maple. A number of areas, however, have young coniferous growth underneath deciduous and spruce-fir stands.

The availability of early successional forest land is below desired levels to support early successional wildlife species. In addition, approximately half of the early successional habitat is at a point in its development when it will soon no longer serve as early successional habitat. As referenced in the State of Vermont Long Range Management Plan for Coolidge State Forest, "Data from pre-settlement estimates suggests that approximately 4% of the landscape should be in early successional habitat of the ages 1-15 years." Management to create additional early successional forest is needed to benefit a number of species in decline due to a lack of early successional habitat, including ruffed grouse, field sparrows, cottontail rabbit, and the Eastern towhee.

E. Timber Resource Assessment

Tree and Forest Resources

1. History of Vegetation Management

Road and trail networks as well as the common occurrence of large, old stumps indicate a typical history of diameter limit cutting dating from the 1980s and previously. In more recent history, aside from one large patch clearcut, harvesting and management was limited. After State acquisition in 1999 and up to 2010, approximately 35 acres of pre-commercial thinning to release for growth, hard and soft mast trees, and young softwood cover was completed.

2. Existing Conditions and Dominant Forest Types

Overall, tree health and quality is average. Health and vigor of oak, pine, and some stands of sugar maple is excellent. In general, however, hydric soils, past storm damage, beech bark disease, root and stem rot in spruce and fir, and a history of harvesting the largest most vigorous trees has created an abundance of low vigor stands. Many areas are well suited to regeneration harvests, which would achieve the goal of increasing growth of young, woody vegetation. Existing regeneration is often poor quality and of limited species diversity (Table 3).

Table 3: Dominant Forest Types

Type	Major Species	Condition	Quality	Regeneration
Northern Hardwood	sugar maple, beech	poor to good	poor to excellent	dense beech
Hemlock-Hardwood	hemlock, red spruce	poor to good	poor to fair	mixed-sparse to patchy
Pine-Hardwood	white pine, red maple	poor to good	poor to fair	mixed sparse
Oak-Hardwood	red oak, sugar maple	poor to excellent	poor to excellent	dense beech, striped maple, hardhack

3. Soils

Soil conditions are variable with 12 soil types represented occupying from 1 to 15% of the area. The most common soil types are stony to very stony fine sandy loams. Soil productivity is typically Site Class 1 or 2 for sugar maple (highly productive) and Site Class 2 for white pine (moderately productive). Ground conditions are generally favorable for equipment. Limitations are found for operations and growth in areas of mucky soil and/or areas with a high water table in valleys and depressions. Winter operation may be necessary due to the prevalence of wet ground and streams on or near the primary road network.

4. Important Issues and Concerns

- A dominance of unacceptable regeneration and lack of early successional stands.
- A harvest road network that is located in or near wet areas.
- An abundance of poor to medium quality stems.
- Low vigor stands due to wet or dry sites and/or past harvest practice.
- Poorly constructed or unsuitable access for trucks and equipment for most areas.

F. Historic Resource Assessment

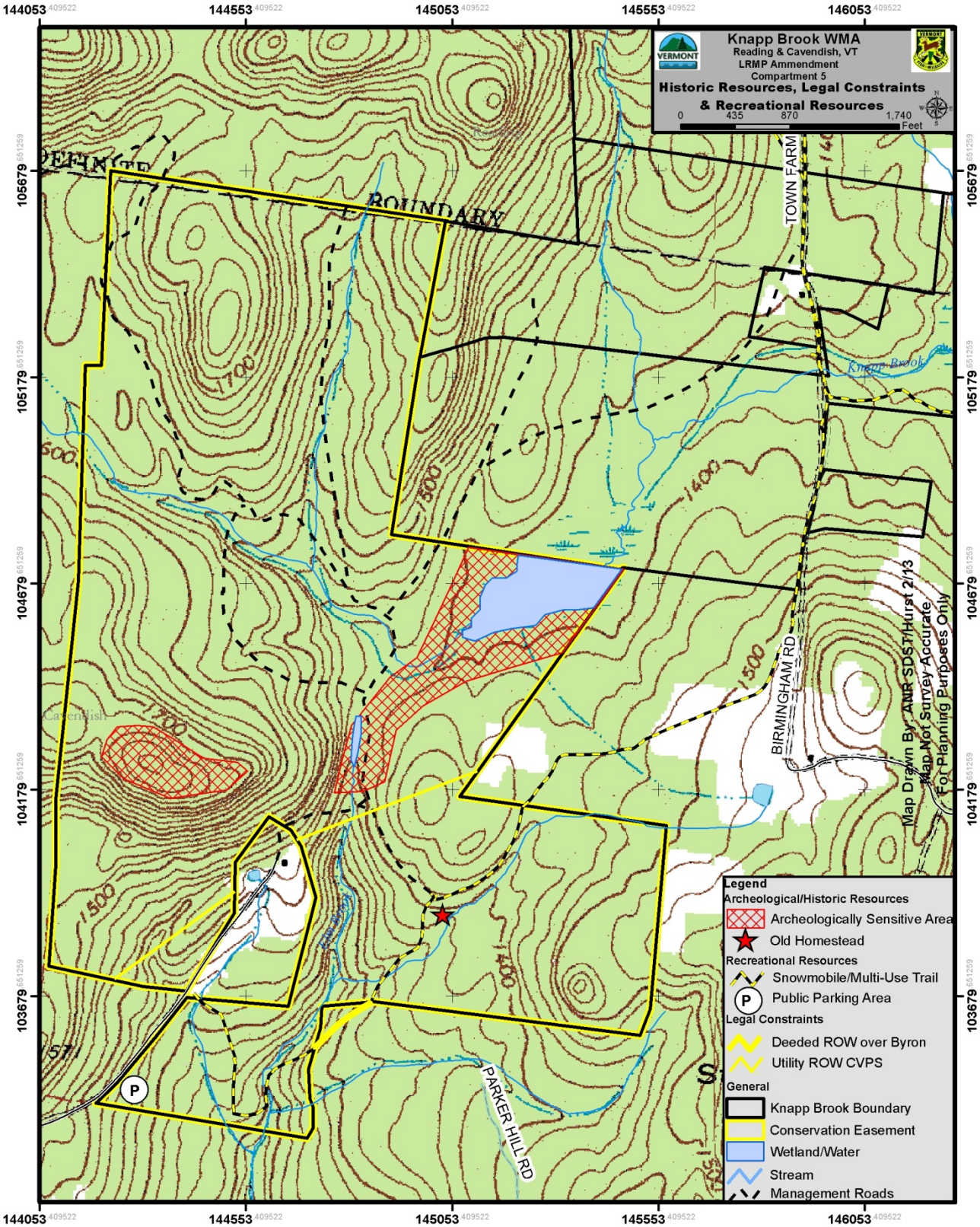
Two important historic/archeological features exist on the unit (Figure 7). One a large historic farm complex at the center of the Evens Lot and the other an area of greater than average likelihood of pre-settlement use by Native Americans surrounding the wetlands on the north-central end of the Evens Lot. Conservation of the sites and values associated with these sites will be protected by ANR guidelines outlined in the document *"Protocol to Protect Historic and Archeological Resources during Timber Harvesting Activities on ANR Lands."*

Highlights of the two assessments are:

- Historic Farmstead
  - Located in an active management area with several access roads, an oak mast tree release project site, and a VAST snowmobile trail.
  - Multiple intact structures and features date to mid-19th century including multiple stone foundations, root cellar remnant, dam and mill stone remnants, landscape plantings, and stone walls, and two stone-lined wells (both covered by FPR staff for safety)

- Pre-Contact Site Sensitivity
  - The site sensitivity model conducted by University of Vermont's Consulting Archeological Program in 2004 evaluates the landscape based on key features such as land form, proximity to water features, known Native American travel ways, and unique geological sites.

Figure 7: Historic Resources Map



G. Infrastructure and Public Access Assessment

The parcel has an excellent internal trail network though management access is limited. Legal access from the southeast travels through wet ground and over several streams without adequate crossing structures for large equipment. This area could provide winter access with improvement, primarily ditching and draining. This road is also a VAST trail used heavily in winter. Access from the end of Moriglioni Road is a possibility but would require permission of an adjoining private landowner. Access to the Turco Lot is over winter only woods roads that tend to be wet and stony.

H. Scenic Resource Assessment

Set within a largely undeveloped area of foothills, little of the parcel is seen from points other than off Moriglioni Road and from interior trails and roads. Impacts to aesthetics are primarily a consideration within the parcel itself.

IV. MANAGEMENT STRATEGIES AND ACTIONS

Compartment five has been categorized into three Land Use classes (LUC) where certain activities or uses will be emphasized. Other activities may be allowed within these areas as long as they are compatible with and do not detract from the emphasized activity.

Land Management Classification

Vermont ANR lands are managed using four categories of use or types of management to be emphasized on the land. In this section of the plan, the recommended levels of use or types of management will be shown for all the land area in this parcel. This section also describes generally how the land will be managed so that the activities occurring on the land are compatible with the category assigned. The four categories are: (1) *Highly Sensitive Management*; (2) *Special Management*; (3) *General Management*; and (4) *Intensive Management* (Figure 8).

As part of the planning process, the lands, resources, and facilities held by the ANR are evaluated and assigned to the appropriate land management category. Assignment of management categories for Knapp Brook WMA is based on a thorough understanding of the resources identified and the application of over-arching lands management standards. The resources include natural communities, plants, and wildlife as well as recreation, historic, timber, and water resources.

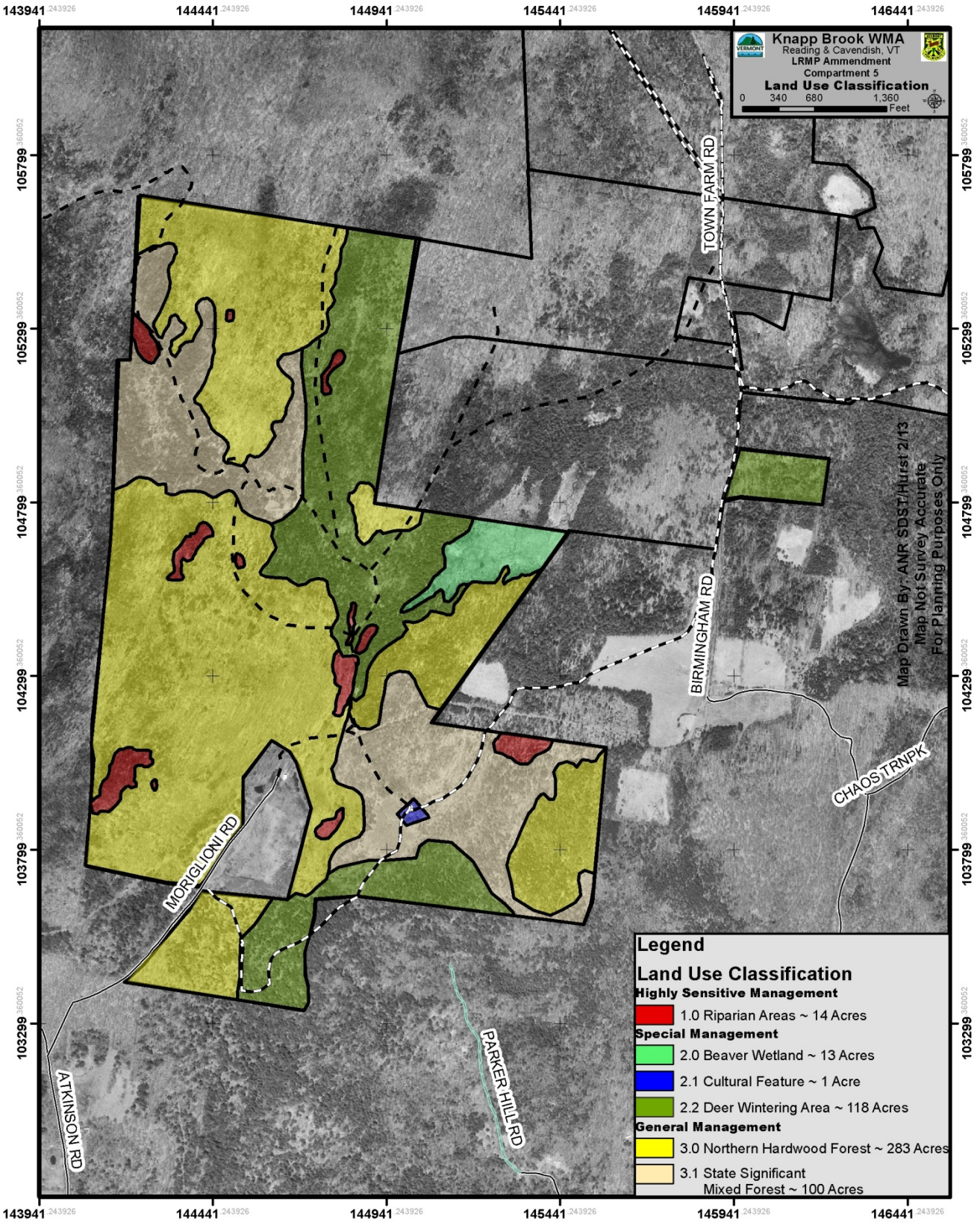
1.0) Highly Sensitive Management – Areas designated as Highly Sensitive Management are described as ***"areas with uncommon or outstanding biological, ecological, geological, scenic, cultural, or historical significance…"*** Acres managed under this category will have no timber management, salvage harvest, or active wildlife habitat management. However, trees and other vegetation may be cut to restore natural community species composition and structure in limited locations; manage specific habitat conditions for rare, threatened, and endangered species; and to maintain safe and enjoyable recreational conditions.

2.0) Special Management – Areas designated as Special Management include areas ***"…where protection and/or enhancement of those resources is an important consideration for management."*** Timber harvesting and wildlife habitat management as well as recreation are considered to be complementary uses within this classification to the extent that they do not impact special features.

3.0) General Management – The General Management category includes areas where ***"dominant uses include vegetation management for timber and wildlife habitat, concentrated trail networks, and dispersed recreation…"*** A primary consideration for management is minimizing conflict between activities. Sensitive resources that occur within these areas may require special attention.

4.0) Intensive Management – The Intensive Management category is characterized by a ***"high level of human activity and high intensity development on/or adjacent to State land."*** Aesthetics and safety are the primary management considerations in these areas. However, more sensitive resources that occur within these areas may require special attention.

Figure 8: Land Use Classification Map



Management Goals and Objectives for Knapp Brook WMA

Primary Goals:

1) Protect and improve high quality critical and important habitats including:
    - Wetlands
    - Deer wintering areas
    - Hard mast stands and trees (red oak)
    - Early successional forest

2) Protect and restore unique natural communities, riparian areas, and riparian flood mediation function.

3) Redesign and relocate management access and road network to protect riparian and historic resources, and to improve water quality of streams and wetlands.

Secondary Goals:

1) Provide winter-time recreation (VAST) trail.

2) Sustainable production of high quality timber.

3) Provide low-impact recreational opportunities.

Management Objectives for the WMA:

1) Create age class and habitat diversity within the parcel by utilizing two different styles of management, even and uneven aged.

    a. Focus even-aged management on Land Use Classification #3.0 (General Management) to provide and maintain early successional habitat for grouse and deer. Provide up to 10% of the parcel in early successional habitat this planning period.

    b. Focus all-aged management on Land Use Classification #2 (Special Management) and Land Use Classification 3.1 where softwood cover and wetland function are the goal. Where appropriate, occasional patch clearcuts of up to two acres will be conducted in this area to meet early successional goals.

2) Protect and enhance important wildlife habitat.

    a. Maintain or enhance deer wintering habitat including softwood cover and browse.

    b. Maintain or enhance hard and soft mast habitat component.

c. Maintain den and snag trees for use by cavity nesting species and bats and as future source of large material on forest floor for wildlife habitat and nutrient cycling.

d. Maintain or enhance amphibian and reptile habitat including basking and nesting sites and travel corridors between wetlands.

e. Manage riparian buffers to protect water quality and to protect and enhance habitat for amphibians, reptiles, and mammals.

3) Develop and improve appropriate non-motorized recreation opportunities for wildlife-based activities including hunting, fishing, trapping, and wildlife viewing while maintaining and protecting infrastructure and historic sites.

a. Facilitate use of access roads by the public that are compatible with wildlife habitat and conservation by upgrading the access road to accommodate management and providing foot access into the parcel for users. Any upgrades should avoid sensitive sites, such as cultural and historic districts and wetlands. Limit road construction into the west side of the parcel to limit illegal use such as ATVs and discourage the spread of exotic plants and animals.

b. Re-route existing harvest road network, where needed, to protect streams and wetlands. Explore snowmachine trail relocation where conflicts with habitat exist. Follow Agency guidelines closely in historic areas to protect historic resources.

4) Protect historic resources.

a. Identify and document historic resources within the WMA.

b. Follow *Protocol to Protect Historic and Archeological Resources During Timber Harvesting Activities on Vermont Agency of Natural Resources Lands* (October, 2004) for the protection of archeological resources during harvesting operations.

c. Conduct archeological review prior to ground disturbing activities.

1.0 HIGHLY SENSITIVE MANAGEMENT AREAS — 14 acres

Highly Sensitive Management Areas represent approximately 14 acres or 3% of the parcel.

The lands within this LUC include 13 riparian areas:

- Seven Hemlock-Balsam-Fir-Black Ash Seepage Swamps with a state rank of Uncommon
- Three seeps with a state rank of Common
- Two vernal pools with a state rank of Uncommon

This area supports a diversity of wildlife species particularly those associated with riparian habitat. Widely dispersed, non-motorized, non-mechanized recreational uses may be accommodated including access by foot; and existing roads will continue to be available for pedestrian and management access. These areas offer opportunities for hunting, fishing, trapping, walking, and wildlife viewing. Recreational experiences within these areas are characterized as having a moderate degree of remoteness in a natural setting with a low level of interaction between users.

In some instances, historic wood roads are adjacent to riparian areas resulting in occasional siltation. These sections will be relocated where feasible. Where roads cannot be moved and are critical to management, they will be stabilized and/or armored with crushed stone.

Primary uses, features, and featured management include:

- Protection of riparian function and habitat.
- Creation and/or maintenance of shaded cover for amphibian movement.
- Stabilization of road infrastructure.

2.0 SPECIAL MANAGEMENT AREAS — 132 acres

Special Management represent approximately 132 acres or 25% of the parcel.

The lands within this LUC include 13 riparian areas as well as:

- A large beaver wetland (currently not active)
- Historic farmstead
- Mapped deer wintering areas
- A portion of snowmobile trail in a deer wintering area (southeast section of parcel)

Lands designed as Special Management areas include some of the less accessible lands within the WMA from a management perspective due to steep banks and roads located in low, wet terrain.

Primary uses, features, and featured management include:

- VAST trail – potential to relocate snowmobile trails out of deer wintering area low due to terrain. Management of this conflict as follows:
    - limit trail improvements or increases in capacity;

    - monitor impacts to deer wintering area and deer use; and
    - prioritize relocation if impacts determined to be significant.
- Deer wintering areas
- Riparian area protection and management
- Interior roads and trails common
- Habitat management to improve deer wintering areas and mast (acorn) production

A small portion of VAST trail passes through the edge of the deer wintering area. No obvious alternative routes exist due to steep slopes, streams, and wet ground but this will be further explored in this management period.

Use of roads in winter for management will conflict with snowmobiles and in summer result in damage on wetter sections. Harvest activities will therefore often be during winter months.

The main access road passes through the center of the historic farmstead on the original road with no practical option for relocation.

SMA 2. 0 – *Beaver Wetland (13 Acres)*
A large wetland on the northeast section. In 2012 beaver were absent and the site featured dense stands of speckled alder, steeple bush, wildflowers, and ferns. Adjacent forest is primarily red spruce and balsam fir with inclusions of northern hardwood.

Management Actions:

- Assess area for potential to establish new areas of young hardwood to re-establish beaver habitat. Design and implement beaver habitat management that is sensitive to ecological values and the maintenance of state significant natural communities.

SMA 2.1 – *Historic Farmland (1 Acre)*
Contains multiple stone foundations, root cellar remnant, and numerous stone walls. Two stone-lined wells were capped for safety reasons by staff in 2008. Site is adjacent to an oak mast release site and is bisected by two woods roads.

Management Actions:

- None.

SMA 2.2 – *Deer Wintering Area (118 Acres)*
Two units, located in the north and south end of the parcel are utilized by white-tailed deer and moose in winter for cover.

Quality of cover is variable due to decline of red spruce and balsam fir. Areas with a higher density of hemlock provide high quality winter habitat for white-tailed deer. Dense thickets of conifer regeneration are found in a number of areas though browse pressure is increasing on those stems that are below six feet in height.

Management Actions:

- Remove deciduous trees and declining red spruce and balsam fir to allow conifer regeneration to grow into the main canopy.

- Relocate or stabilize roads adjacent to riparian areas and streams.
- Relocate snowmobile trail if warranted and feasible.

3.0 GENERAL MANAGEMENT AREAS — 383 acres

General Management Areas within the parcel represent approximately 383 acres or 72% parcel.

General management areas are primarily forest stands of Northern Hardwood and Red Oak/Red Spruce/Hemlock/Northern Hardwood associations. Soils are generally dry and modestly to highly productive. Terrain ranges from gently sloping to steep and rocky. Riparian areas (Land Use Classification 1) are embedded within this classification. The common Natural Communities, Hemlock-Northern Hardwood and Hemlock-Red Spruce, are rated state significant due to their occurrence in a largely undeveloped landscape and the potential for a more complex structure to develop.

Primary uses and featured management include:

- Habitat improvement
- Riparian area protection
- Non-motorized recreation, particularly hunting
- Use and maintenance of VAST snowmobile trail
- Maintenance or improvement of the quality ranking for state significant communities

Resolving access problems will be an important consideration here as in most of the parcel. Rerouting or rebuilding roads is likely to occur in several areas. Management activities done in winter will conflict with snowmobiles but may be necessary to avoid using wet roads in other times of year when the possibility of damage is high.

GMA 3.0 – *Northern Hardwood Forest (283 Acres)*

Management Actions (Table 4)***:***

- Road relocation and/or rebuilding
- Creation of early successional habitat and woody browse
- Improvement of mast production

GMA 3.1 – *State Significant Mixed Forest (100 Acres)*

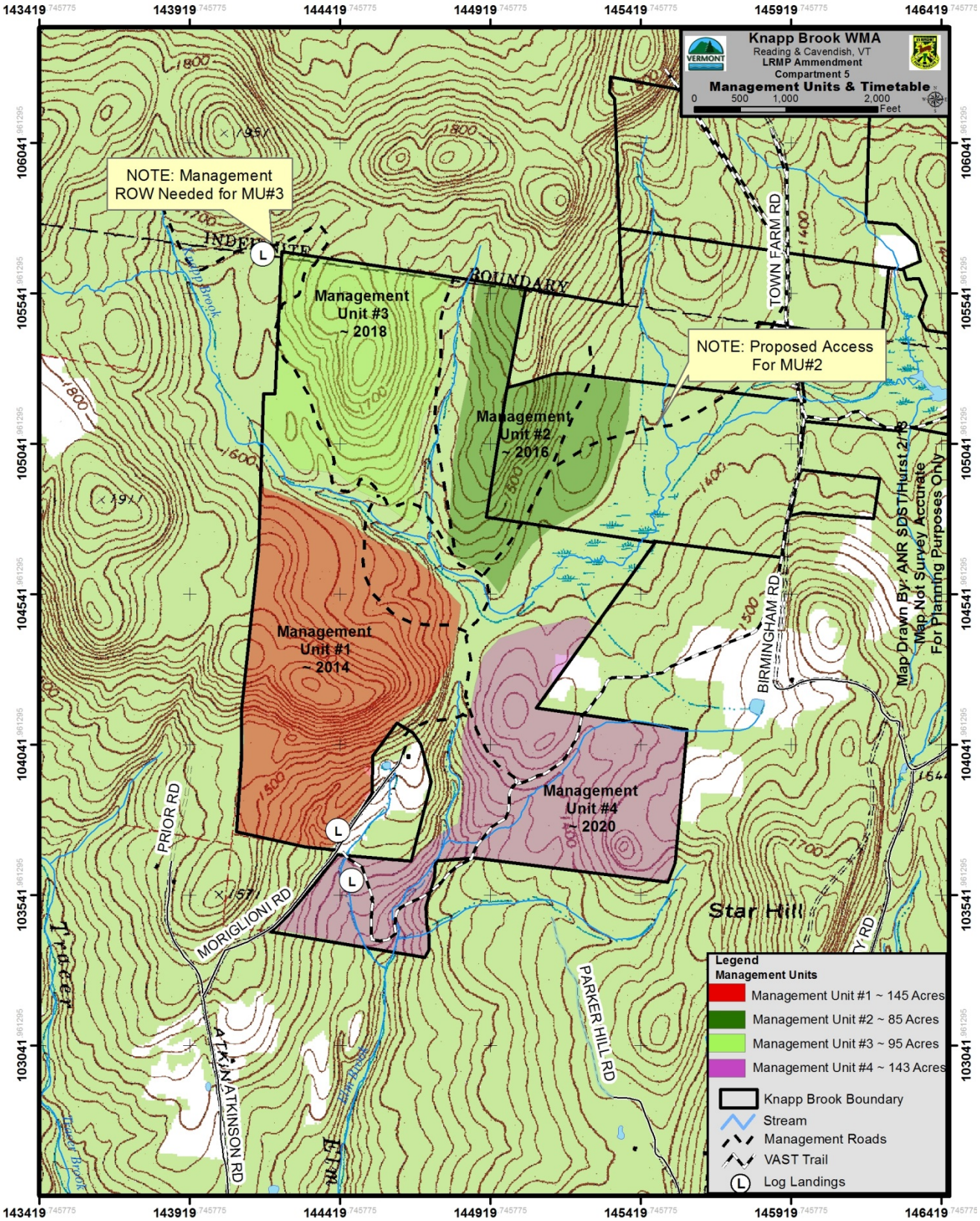
Management Actions:

- Road relocation and/or rebuilding
- Improvement of mast production
- Improved vigor of conifers and recruitment of conifer regeneration

Table 4: Implementation Schedule

Activity	Location	Acreage	Goal	Year	Outcome
Habitat Improvement Project – Commercial Timber Sale (Figure 9)	MU 1	145	Improve browse production and mast tree vigor. Re-locate landing and main skid trail.	2014	20-30 acres patch clearcut. Improved acorn production. Stabilized interior roads.
Apple Tree Release	MU 4	3	Fully release and prune apple trees.	2014	Improved apple production.
Habitat Improvement Project – Commercial Timber Sale	MU 2	85	Enhance winter cover, release existing softwood regeneration, generate browse.	2016	Declining spruce and fir salvaged to release spruce-fir regeneration. Ten acres of browse in ¼ to ½ acre groups.
Habitat Improvement Project – Commercial Timber Sale	MU 3	95	Improve browse production and mast tree vigor. Re-locate landing and main skid trail.	2018	20-30 acres patch clearcut. Improved acorn production. Stabilized interior roads.
Habitat Improvement Project – Commercial Timber Sale	MU 4	143	Enhance winter cover, generate browse, and improve access.	2020	Vigorous stands of pine and hemlock. Improved (mast) acorn production. Interior roads/access improved.

Figure 9: Management Unit and Timetable



V. MONITORING AND EVALUATION

During the life of the LRMP for Knapp Brook WMA, periodic monitoring and evaluation will be conducted to ensure that the resources are protected from fire, insect and disease, encroachments, or unforeseen problems that may occur within the WMA. Management activities will be evaluated to determine how closely the results matched those projected within the plan. Minor adjustments in management may be made to reflect changed conditions or unanticipated results.

As long-term management for Knapp Brook WMA continues, inventory, monitoring, assessment, and research are necessary to: evaluate the status of the resource; assess progress toward achieving stated goals; and determine the effectiveness of management actions and activities.

- Were proposed strategies and actions carried out?
- Did the strategies and actions have the intended effect?
- Were the results consistent with expectations and predictive models?
- Do we have the necessary information to understand and evaluate actions taken on Knapp Brook WMA?

Obtaining quality information is critical to making informed decisions and conducting sound, thoughtful management actions. Research projects on Knapp Brook WMA are directed by the District Stewardship Team to ensure that they do not conflict with the goals and objectives for Knapp Brook WMA as set forth in the LRMP. It is important that individual research projects be assessed for their effects on the resource, potential conflicts with other uses or users, and consist of quality proposals from credible institutions and individuals. All data from private research will be shared with the Agency of Natural Resources.

Ecological/Wildlife

Maintaining the biological diversity of Knapp Brook WMA requires long-term research and monitoring projects in a number of areas. Some of the efforts at meeting these goals include:

Strategies and Actions:

- Continue ongoing inventory and assessment projects promoting the collection and documentation of quality long-term information critical to the assessment and evaluation of management on Knapp Brook WMA (including forest inventory, aerial insect and disease surveys, amphibian, and reptile surveys).
- Monitor rare, threatened, and endangered species and natural communities.
- Consider and support appropriate, credible research project proposals which further understanding of ecological elements and wildlife habitat on Knapp Brook WMA and the impacts of management activities.

Timber and Wildlife Habitat

Timber management and harvest is an important tool used to achieve wildlife habitat and forest management objectives. An effective monitoring and assessment program is essential for ensuring the long-term sustainability of a quality timber management program. Careful analysis of the forest, its resource capabilities, potential impacts on other important management goals, protection of rare and/or threatened endangered species, water quality, management or protection of rare and/or state significant natural communities, and the documentation of the occurrence of natural processes (i.e., insect and disease outbreaks, blowdown events) is important in the execution and understanding of the effects of timber management actions.

Timber harvests and wildlife management activities completion within the WMA will be periodically reviewed by the stewardship forester and the District Stewardship Team to determine how well management objectives are being met. If monitoring results indicate that there is a significant difference between the outcomes predicted by the plan and actual conditions, changes to the plan may be recommended.

Strategies and Actions:

- Continue to support ongoing assessment and mapping efforts (e.g., forest inventory, aerial insect and disease surveys).
- Conduct periodic, standardized post-practice assessments to assess effectiveness of management activities.
- Support proposals for appropriate research addressing long-term evaluation of forest management activities. Gather baseline data as necessary and practical to support assessment of management effectiveness and impacts.

Recreation

Public recreation will be periodically monitored across the parcel by the District Stewardship Team to identify where recreational uses are in conflict with or may be damaging natural resources. Changes in recreational uses may be implemented including new management strategies designed to minimize or eliminate conflicts. State game wardens will be utilized to assist with maintaining compliance with state laws where specific and/or ongoing problems are occurring.

Strategies and Actions:

- Document illegal use and damage of resources.
- Support appropriate research projects including the collection of baseline data to expand knowledge of recreational carrying capacity, resource impacts, and user conflicts.

Historic

There are both historic and suspected pre-contact resources within the WMA. Current understanding and documentation of these resources varies by site. Detailed documentation and study of field evidence is an important component to the understanding, protection, and interpretation of the individual sites and the greater historic context of Knapp Brook WMA and surrounding areas.

Strategies and Actions:

- Continue to inventory, map, and document historic features.
- Monitor and document condition of known historic features using standardized forms and photo documentation.
- Support efforts to research the history of Knapp Brook WMA.

Invasive Exotic Species

Invasive exotic species are known to be a problem in many areas of the state negatively impacting wildlife habitat, timber management, natural community composition, recreation, and economics. The District Stewardship Team will monitor the WMA for the presence of invasive exotic species and work with cooperating partner organizations to develop a monitoring protocol. The District Stewardship Team will work to identify populations of invasive exotic species and implement control measures where feasible.

Strategies and Actions:

- Identify invasive species when populations are small. Develop control goals and implement.
- Assess and document levels of introduction of invasive exotic plants by species and location.
- Monitor timber harvest areas before and after timber sale activities. Control invasive species as necessary and practical.
- Evaluate invasive species control projects for effectiveness.

Climate Change

If the most conservative current models of climate change are accurate (Iverson, Prasad, Hale, & Sutherland), Knapp Brook WMA, like the rest of the region, will experience strong impacts over the next 50-100 years. These changes may have important consequences for forest nutrient cycling, timber productivity, forest pest ecology, wildlife habitat, and our enjoyment of the forest.

Strategies and Actions:

- Monitor ground conditions, results of management, research, and adaptations of silvicultural guides to inform management decisions and adapt treatment prescriptions as appropriate.
- Support appropriate research project proposals which further understanding of climate change on Knapp Brook WMA.

VI. NEW USES AND PLAN AMENDMENT PROCESS

The long range management plan provides guidance for the long-term management and development of a parcel of state land. However, the future cannot be fully determined at the time of plan development. The departments of Fish & Wildlife and Forests, Parks and Recreation undertake an amendment or plan update process when significant changes to the current long range management plan are proposed. These may include:

1) Substantial changes to any goals, management objectives, and implementation actions contained in the current plan;

2) Major change in land use, land classification, or species management direction;

3) Designation of non-developed camping sites (via statute regarding camping on state lands);

4) Permanent closure of existing trails and/or permanent creation of new recreation corridors not identified in the current plan;

5) Major rerouting, reclassification, permanent closing or creation of new roads (not including forest management access roads not meant for normal vehicle traffic) within state land boundaries not identified in current plan;

6) Major land acquisitions added to the existing parcel;

7) Major capital expenditures for new projects;

8) Facility closures;

9) Transfers in fee ownership;

10) Leasing of new acreage (e.g., ski resort); and

11) Renaming of natural features (prior to recommendation to Department of Libraries) or lands.

When the amendment process is triggered, a public involvement process begins. The type of process is determined at the time and is dependent upon the extent and type of amendment. If applicable, the easement holders are notified to discuss the proposed amendment.

There may be times when the public input and comments are sought regarding plan changes that are less significant than those triggering the plan amendment process. This is left to the discretion of the District Stewardship Team.

On Wildlife Management Areas, a number of uses may be allowed by designation or special use permit, without public involvement in accordance with 10 V.S.A. App. §15.

VII. FUTURE ACQUISITION/DISPOSITION

Through its October 1999 *Vermont Agency of Natural Resources Lands Conservation Plan*, the Agency outlined priorities for acquiring new lands as well as for acquiring additions to existing ANR lands. It is the State's policy to acquire additions to ANR state lands parcels that are:

1) necessary for maintaining or enhancing the integrity of existing state holdings;

2) lands, such as inholdings and other parcels that serve to consolidate or connect existing state holdings and contain important public values and/or facilitate more efficient ANR land management;

3) parcels that enhance or facilitate public access to ANR lands; and

4) parcels that serve an identified facility, infrastructure, or program need.

All new acquisitions of land to Knapp Brook WMA will be guided by this plan and must have a willing seller, as the Agency does not have the authority to exercise eminent domain. They will also be done in consultation with the regional planning commissions and the town(s) in which the parcel is located.

Any future disposition of land from Knapp Brook WMA will be approved by the Agency of Natural Resources Land Acquisition Review Committee (LARC) and the Secretary of the ANR after consultation with the regional planning commission and the town(s) in which the parcel is located.

APPENDICES

- APPENDIX 1: Evens to F&W Warranty Deed
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APPENDIX 1: Evens to F&W Warranty Deed

WARRANTY DEED

WHEREAS, the VERMONT LAND TRUST, INC. is the owner in fee of certain real property in Cavendish, Vermont, and which has aesthetic, recreational, and natural resource values in its present state;

WHEREAS, this property contains 500 acres, more or less, of undeveloped land in agricultural and forestry use, and which provides wildlife habitat as well as recreational opportunities; and

WHEREAS, the Trust desires to convey this property subject to permanent conservation restrictions allowing agricultural, forestry, open space, and other uses as described herein, in order to further the purposes set forth in Title 10 V.S.A., Section 6301.

NOW THEREFORE,

KNOW ALL PERSONS BY THESE PRESENTS that the VERMONT LAND TRUST, INC. a non-profit corporation with its principal offices in Montpelier, Vermont, on behalf of itself and its successors and assigns (hereinafter "Grantor"), pursuant to Title 10 V.S.A. Chapters 34 and 155 and in consideration of the payment of Ten Dollars and other valuable consideration paid to its full satisfaction, does freely give, grant, sell, convey and confirm unto the STATE OF VERMONT, AGENCY OF NATURAL RESOURCES, DEPARTMENT of FISH and WILDLIFE, and their respective successors and assigns (hereinafter "Grantee") forever, a certain parcel of land in the Town of Cavendish, Windsor County, Vermont (hereinafter "Protected Property") said parcel being more particularly described in Schedule A attached hereto and incorporated herein.

GRANTOR RESERVES AND EXCEPTS from this conveyance the following rights and interests:

1) All development rights in the Protected Property, except those rights as Grantee shall reasonably require to carry out the uses hereinafter permitted on the Protected Property;

2) A perpetual conservation easement and restrictions as more particularly set forth below. The conservation easement and restrictions hereby reserved by the Grantor consist of covenants on the part of the Grantee to do or refrain from doing, severally and collectively, the various acts set forth below. Grantor reserves said rights and interests in order to conserve the Protected Property's wildlife habitats, non-commercial public recreational opportunities, forestry values, and scenic resources all as more particularly described in Section I, below.

3) A perpetual Right of Re-entry as more particularly described in Section V, below.

It is hereby acknowledged that said development rights, conservation easement and restrictions, public access easement and right of re-entry shall constitute a servitude upon the land and shall run with the land.

I. Purposes of the Reserved Easement and Restrictions.

Grantor and Grantee acknowledge that the Purposes of this Reservation are as follows (hereafter "Purposes of Reservation"):

1) To contribute to the implementation of the policies of the State of Vermont designed to foster the conservation of the state's wildlife habitats, agricultural, forestry, and other natural resources through planning, regulation, land acquisition, and tax incentive programs.

2) To conserve wildlife habitats, non-commercial recreational opportunities, forestry values, and scenic resources associated with the Protected Property for present and future generations.

3) These objectives will be advanced by conserving the Protected Property because it possesses the following attributes:

   (a) provides a large (500 acre) addition to the Knapp Brook Wildlife Management Area (WMA) bringing the total to 1,241 acres;

   (b) provides habitat, or habitat buffer, for numerous songbird species, amphibians, and small and large mammals, including part of a large deer wintering area mapped by the Department;

(c) contains part of a large Class 2 wetland also located in the WMA and headwater streams feeding several brooks and Knapp Brook Ponds;

(d) provides access to the State of Vermont to the WMA that was not previously accessible due to the large Class 2 wetland;

(e) provides critical feeding areas with a significant oak component, hop hornbeam and apple trees and seasonal movement corridors for black bear traveling to and from nearby Arthur C. Davis Wildlife Management Area;

(f) contains a Vermont Association of Snow Travelers Trail (VAST Trail #5A) used by the public for skiing and snowmobiling.

Grantor and Grantee further acknowledge that the principal objective of this instrument is to conserve wildlife habitats, and that the secondary objective is to conserve non-commercial public recreational opportunities, forestry values, and scenic resources described in the foregoing paragraph I(3), as those primary and secondary values exist on the date of this instrument and as they may naturally evolve in the future. The Permitted Uses afforded Grantee under this instrument shall be exercised to accomplish this principal objective; further, the Permitted Uses shall also be exercised to accomplish the secondary objectives, provided the timing and scope of such uses are compatible with the primary objective of conserving wildlife habitats.

Grantee shall, within one (1) year of the date of this conveyance, develop a comprehensive Management and Operating Plan for the Protected Property, and Grantee will from time-to-time thereafter, amend, revise or replace said Plan (hereafter "Management Plans"). The Management Plans shall:

1. Provide for the use and management of the Protected Property in a fashion which is consistent with the Purposes of this Reservation, and with all other terms and conditions of this Reservation;

2. Provide for reasonable public access to recreational values and opportunities associated with the Protected Property; and

3. With respect to habitat values described in paragraph I(3), above, the Management Plans shall be designed to protect the health and viability of said habitat values by drawing on expertise from recognized experts in the field of conservation biology. Prior to the development of the first Management Plan and periodically thereafter, Grantee shall conduct an inventory of rare and endangered species on the Protected Property and the Management Plans shall be designed to protect special species identified through this inventory. Grantee shall also consult with its Non-Game and Natural Heritage Program) in the development of said Management Plans.

Prior to the final adoption of each Management Plans, Grantor shall: (a) secure appropriate public input from the Town of Cavendish and from the general public; and (b) provide Grantees with a copy of each such Management Plan. When the provisions of Sections II or III, below, require Grantee to secure Grantor's prior approval for an activity or use, Grantor may rely upon the advice and recommendations of the Non-Game and Natural Heritage Program or such other wildlife habitat professionals as the Grantor may select to determine whether the proposed activity or use would be detrimental to wildlife or wildlife habitat potential of the Protected Property.

Grantor and Grantee recognize these wildlife habitats, non-commercial recreational opportunities, forestry values, scenic resources of the Protected Property, and share the common purpose of conserving these values by the reservation of development rights, conservation easement and restrictions, public access easement, and right of re-entry to prevent the use or development of the property for any purpose or in any manner which would conflict with the maintenance of these wildlife habitats, non-commercial recreational opportunities, forestry values, and scenic resources. Grantor retains such development rights, conservation easement and restrictions, public access easement, and right of re-entry in order to conserve these values for present and future generations.

II. Restricted Uses of Protected Property.

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

1. The Protected Property shall be used for habitat protection, non-commercial recreation, forestry, and open space purposes only. No residential, commercial, industrial, or

mining activities shall be permitted, and no building, structure, or appurtenant facility or improvement shall be constructed, created, installed, erected or moved onto the Protected Property, except as specifically permitted under this Grant.

2. Except as otherwise specifically permitted under this Grant, no rights-of-way, easements of ingress or egress, driveways, roads, or utility lines or easements shall be constructed, developed or maintained into, on, over, under, or across the Protected Property, without the prior written permission of the Grantor. Grantor may grant such permission if they determine, in their sole discretion, that any such improvement would be consistent with the Purposes of this Grant.

3. There shall be no signs, billboards, or outdoor advertising of any kind erected or displayed on the Protected Property; provided, however, that the Grantee may erect and maintain reasonable signs including but not limited to signs indicating the name of the Protected Property and its ownership by Grantee, boundary markers, directional signs, memorial plaques, informational and interpretive signs, and signs limiting access or use (subject to the limitations of Section IV, below). Grantor may erect and maintain signs designating the Protected Property as land under the protection of the Grantor.

4. The placement, collection or storage of trash, human waste, or any other unsightly or offensive material on the Protected Property shall not be permitted except at such locations, if any, and in such a manner as shall be approved in advance in writing by Grantor. The temporary storage of trash in receptacles for periodic off-site disposal, shall be permitted without such prior written approval.

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

6. The Protected Property shall not be subdivided or conveyed in separate parcels without the prior written permission of the Grantor.

7. There shall be no operation of motorized vehicles on the Protected Property except for uses specifically reserved, such as wildlife and forest management, trail grooming and/or maintenance, and for emergency purposes, and excepting that snowmobiling may be permitted at the discretion of the Grantee. Snowmobile trails may be designated and may cross the Protected Property, provided the location and use of such trail(s) are consistent with the Purposes of this Grant as stated in Section I, above (including the non-motorized recreation goals of paragraph I(3)(f)).

8. There shall be no manipulation of natural watercourses, marshes, or other water bodies, nor shall there be activities conducted on the Protected Property which would be detrimental to water purity, or which could alter natural water level or flow, except as reasonably necessary to carry out the uses permitted on the Protected Property under this Grant.

III. Permitted Uses of the Protected Property.

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

9. The right to use the Protected Property for all types of non-motorized dispersed recreational purposes (e.g. hunting, trapping, bird-watching, walking, snowshoeing, cross-country skiing) not inconsistent with the Purposes of this Grant as set forth in Section I.

10. The right to issue special use permits or licenses authorizing the commercial or non-commercial use of the Protected Property for recreational, educational, agricultural, forestry, or research purposes, provided any such permit or license is for uses consistent with the Purposes of the Grant as stated in Section I, above, and provided such permit or license does not authorize any use of or action on the Protected Property otherwise prohibited by Sections II, III or IV of this instrument.

11. The right to conduct maple sugaring operations. Further, the right to harvest timber and other forest products, together with the right to construct and maintain roads necessary for such activities, in accordance with the publication "Acceptable Management Practices for Maintaining Water Quality on Logging Jobs in Vermont," a Vermont Department of Forests, Parks and Recreation publication dated August 15, 1987 (or such successor standard approved by Grantor) and in accordance with a forest management plan which has been developed in consultation with the Vermont Department of Fish and Wildlife, and which forest management plan shall be a

component of the Management Plans described in Section I, above.

12. The right to establish, maintain and use fields, orchards and pastures for agricultural and/or horticultural purposes, and/or for the purpose of maintaining or enhancing wildlife habitat on the Protected Property, provided that the initial forest clearing activity required to establish such fields, orchards and pastures is a component of a forest management plan which is an element of the Management Plan described in paragraph III(12), above.

13. The right to maintain existing roads and trails for walking, horseback riding, cross-country skiing, and other non-motorized recreational activities. Further, the right to clear, construct, and maintain new trails for such activities within and across the Protected Property, provided Grantee shall secure the prior written approval of the Grantor, which approval shall not be unreasonably withheld or conditioned, provided the location, use and construction of such new trails are consistent with the Purposes of this Grant as stated in Section I, above, and with the Management Plan for the Protected Property. Use of the Protected Property for non-motorized, mechanized recreation such as mountain biking may be permitted in the discretion of Grantee. Further, VAST Trail #5A may be managed and maintained by Grantee for public snowmobiling.

14. The right to construct parking facilities for members of the public using the Protected Property, and the adjacent Knapp Brook Wildlife Management Area, provided that Grantee shall secure the prior written approval of Grantor. Said approval shall not be unreasonably withheld or conditioned, provided the size and location of such parking facilities are consistent with the Purposes of this reservation.

15. The right to extract sand and gravel within the confines of one (1) gravel extraction site to be identified by Grantee, provided such gravel and gravel are used exclusively on the Protected Property and in association with uses permitted by this deed, and provided further that such extraction is conducted in conformance with a gravel extraction, sedimentation and erosion control plan ("Extraction Plan") prepared in consultation with the United States Department of Agriculture, Natural Resource Conservation Service and submitted to and approved by Grantor prior to the commencement of extraction. Grantor' approval of any such Extraction Plan shall not be unreasonably withheld or conditioned, provided the location and operation of the extraction site, and the substance of the Extraction Plan are consistent with the Purposes of the Grant described in Section I, above.

16. No use shall be made of the Protected Property, and no activity thereon shall be permitted which, in the reasonable opinion of the Grantor, is or may possess the potential to become inconsistent with the purposes of this Grant as stated in Section I, above. However, activities on or uses of the Protected Property which are not expressly referenced in this Grant and which are consistent with said Purposes may be permitted, in the discretion of the Grantee and with the prior written approval of Grantor, provided such activities are also consistent with the Management Plan.

IV. Public Access.

Grantee covenants and agrees that the Protected Property shall be available to the general public for all types of non-motorized dispersed recreational purposes (e.g. hunting, trapping, bird-watching, walking, snowshoeing, cross-country skiing) not inconsistent with the Purposes of this Grant as set forth in Section I. Further, VAST Trail #5A shall remain open to the public for snowmobiling. Notwithstanding the foregoing, Grantee may limit or restrict public access to the Protected Property to assure compliance with the requirements of this Grant, to protect natural habitats, or to protect the public health or safety (including hunter safety).

In the event Grantee proposes to transfer the Protected Property into the ownership of an individual or entity which does not undertake in writing at the time of transfer to provide recreational opportunities to the general public on the Protected Property, Grantee shall convey to Grantor or their designee, a public access easement. Said easement shall provide reasonable public access to recreational opportunities, shall be consistent with the Purposes of the Grant as set forth in Section I, above, and shall be in a form approved by Grantor.

V. Right of Entry.

Grantor, Vermont Land Trust, Inc., hereby reserves and retains, for itself and its successors and assigns forever, a Right of Re-entry in the Protected Property. Said Right of Re-entry shall be subject to the terms and conditions set forth in this Section V. Grantee covenants and agrees as follows:

1) Grantee shall use and maintain the Protected Property exclusively for uses permitted under this Grant, consistent with the Purposes of this Grant as set forth in Section I, and shall make the Protected Property available for public access as provided in Section IV hereof.

2) Grantee shall periodically inspect the Protected Property to assure compliance with the terms and conditions of this Grant and shall, upon request, report the results of the inspections to Grantor.

3) Grantee shall take all reasonable steps to correct any violation of the terms and conditions of this Grant in the event a breach is discovered.

4) Grantee shall not give, grant, sell, convey, transfer, mortgage, pledge or otherwise encumber the Protected Property without the prior written approval of Grantor.

In the event Grantee takes or fails to take any action which could result in a breach or could reasonably be interpreted as expressing an intent to breach the obligations set forth in this Section, Grantor reserves the right of entry for conditions broken or an executory interest, which right, if exercised by Grantor upon such breach of, or intention to breach, the above covenants, shall be exercised by mailing a notice of violation ("Notice") by certified mail to Grantee. Said Notice shall declare that the power of termination has been exercised and shall state the breach which caused the action. Grantee shall have a period of sixty (60) days from the date of its receipt of said notice to correct the breach causing the termination. If in the reasonable opinion of Grantor the breach is not cured within said sixty-day period, the termination shall become final and a copy of the Notice shall be recorded in the Town of Cavendish Land Records. Grantor's rights and remedies under this Section V shall be in addition to the rights and remedies set forth in Section VI, below. No delay or omission by Grantor in the exercise of its rights under this Section V shall impair Grantor's rights under this clause or be construed as a waiver of the right of re-entry.

VI. Enforcement of the Restrictions.

Grantor shall make reasonable efforts from time to time to assure compliance by Grantee with all of the covenants and restrictions herein. In connection with such efforts, Grantor may make periodic inspection of all or any portion of the Protected Property, and for such inspection and enforcement purposes, the Grantor shall have the right of reasonable access to the Protected Property. In the event that Grantor becomes aware of an event or circumstance of non-compliance with the terms and conditions herein set forth, Grantor shall give notice to Grantee of such event or circumstance of non-compliance via certified mail, return receipt requested, and demand corrective action by the Grantee sufficient to abate such event or circumstance of non-compliance and restore the Protected Property to its previous condition. In the event there has been an event or circumstance of non-compliance which is corrected through negotiation and voluntary compliance, Grantee shall, at Grantor's request, reimburse Grantor for all reasonable costs incurred in investigating the non-compliance and in securing its correction.

Failure by the Grantee to cause discontinuance, abatement, or such other corrective action as may be demanded by the Grantor within a reasonable time after receipt of notice and reasonable opportunity to take corrective action shall entitle the Grantor to bring an action in a court of competent jurisdiction to enforce the terms of this Grant and to recover any damages arising from such non-compliance. Such damages, when recovered, may be applied by the Grantor to corrective action on the Protected Property, if necessary. If the court determines that the Grantee has failed to comply with this Agreement, Grantee shall reimburse the Grantor for any reasonable costs of enforcement, including court costs and reasonable attorneys' fees, in addition to any other payments ordered by such court. In the event that Grantor initiates litigation and the court determines that the Grantee has not failed to comply with this Agreement and that the Grantor has initiated litigation without reasonable cause or in bad faith, then the Grantor who commenced the court proceedings shall reimburse Grantee for any reasonable costs of defending such action, including court costs and reasonable attorneys' fees; provided this clause shall not apply to any Grantor protected by the doctrine of sovereign immunity. The parties to this Grant specifically acknowledge that events and circumstances of non-compliance constitute immediate and irreparable injury, loss, and damage to the Protected Property and accordingly entitle Grantor to such equitable relief, including but not limited to injunctive relief, as the court deems just. The remedies described herein are in addition to, and not in limitation of, any other remedies available to the Grantor at law, in equity, or through administrative proceedings.

No delay or omission by the Grantor in the exercise of any right or remedy upon any breach by Grantee shall impair the Grantor rights or remedies or be construed as a waiver. Nothing in this enforcement section shall be construed as imposing a liability upon a prior owner of the Protected Property, where the event or circumstance of non-compliance shall have occurred after

said prior owner's ownership or control of the Protected Property has terminated.

VII. Miscellaneous Provisions.

1. Where Grantee is required, as a result of this Grant, to obtain the prior written approval of the Grantor before commencing an activity or act, and where the Grantor has designated in writing another organization or entity which shall have the authority to grant such approval, the approval of said designee shall be deemed to be the approval of the Grantor, provided that Grantee has given its written consent to such designation, which consent shall not be unreasonably withheld. Grantee shall reimburse Grantor or Grantor's designee for all extraordinary costs, including staff time, incurred in reviewing the proposed action requiring Grantor's approval; but not to include those costs which are expected and routine in scope. When Grantor has authorized a proposed action requiring approval under this Grant, Grantor shall, upon request, provide Grantee with a written certification in recordable form memorializing said approval.

2. It is hereby agreed that the construction of any buildings, structures or improvements, or any use of the land otherwise permitted under this Grant, shall be in accordance with all applicable ordinances, statutes and regulations of the Town of Cavendish and the State of Vermont.

3. The Grantor shall transfer the development rights, right of first refusal, and conservation easement and restrictions conveyed by Grantee herein only to a State agency, municipality, or qualified organization, as defined in Chapter 34 or Chapter 155 Title 10 V.S.A., in accordance with the laws of the State of Vermont and the regulations established by the Internal Revenue Service governing such transfers. Grantee understands that and hereby consents to Grantor's assignment of all or any portion of Grantor's right, title and interest reserved under this deed to the VERMONT HOUSING AND CONSERVATION BOARD, an independent board of the State of Vermont, and its successors and assigns.

4. In the event the development rights or conservation restrictions reserved by the Grantor herein are extinguished by eminent domain or other legal proceedings, Grantor shall be entitled to any proceeds which pertain to the extinguishment of Grantor's rights and interests. Any proceeds from extinguishment shall be allocated between Grantor and Grantee using a ratio based upon the relative value of the development rights and conservation restrictions, and the value of the fee interest in the Protected Property, as determined by a qualified appraisal performed at the direction of either the Grantor or Grantee in the year of this conveyance. Grantor shall use any such proceeds to preserve undeveloped and open space land in order to protect the aesthetic, cultural, educational, scientific, and natural resources of the state through non-regulatory means.

5. In any deed or lease conveying an interest in all or part of the Protected Property, Grantee shall make reference to the conservation easement, restrictions, and obligations described herein and shall indicate that said easement and restrictions are binding upon all successors in interest in the Protected Property in perpetuity. Grantee shall also notify the Grantor of the name(s) and address(es) of Grantee's successor(s) in interest.

6. Grantor shall be entitled to rerecord this Grant, or to record a notice making reference to the existence of this Grant, in the Town of Cavendish 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.

7. The term "Grantor" shall include the successors and assigns of the original Grantor, Vermont Land Trust, Inc. The term "Grantee" shall include the successors and assigns of the original Grantee, State of Vermont, Agency of Natural Resources, Department of Fish and Wildlife

INVALIDATION of any provision hereof shall not affect any other provision of this Deed.

TO HAVE AND TO HOLD said granted premises, subject to Grantor's reservation of development rights, conservation easement and restrictions, with all the privileges and appurtenances thereof, to the said Grantee, STATE OF VERMONT, AGENCY OF NATURAL RESOURCES, DEPARTMENT OF FISH AND WILDLIFE, its heirs successors and assigns, to their own use and behoof forever, and the said Grantor, VERMONT LAND TRUST, INC., for itself and its successors and assigns, does covenant with the said Grantees, their successors and assigns, that until the ensealing of these presents, it 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 easements and use restrictions of record as set forth in Schedule B attached hereto and incorporated herein, and it hereby engages to warrant and defend the same against all lawful claims whatever.

IN WITNESS WHEREOF, W. G. Livingston, duly authorized agent for Vermont Land Trust, Inc., sets his hand and seal this 27 day of March, 1998.

Signed, sealed and delivered
In The Presence Of:

Witness to VLT

GRANTOR
VERMONT LAND TRUST, INC.

By: W. G. Livingston
Its Duly Authorized Agent

Witness to VLT

STATE OF VERMONT
WINDSOR COUNTY, ss.

At Springfield, this 27 day of March, 1998, W. G. Livingston, duly authorized agent of the Vermont Land Trust, Inc., personally appeared and he acknowledged this instrument, by him sealed and subscribed, to be his free act and deed and the free act and deed of the Vermont Land Trust, Inc.

Notary Public
My commission expires: 2/10/99

Approved as to form by the Vermont Housing and Conservation Board.

By:
Its Duly Authorized Agent

SCHEDULE A
PROTECTED PROPERTY

Being all of the same land and premises conveyed to Grantor by Warranty Deed of Lucille Evens, of even date herewith and to be recorded in of the Cavendish Land Records.

Generally described as containing 500 acres, more or less, and lying on both sides of Town Highway #14 (also known as Moriglioni Road) in the Town of Cavendish, Vermont.

The property is also benefited by a right of way granted by Robert D. Byron and Stella V. Byron dated _____ and to be recorded in the Cavendish Land Records.

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

SCHEDULE B
EASEMENTS AND USE RESTRICTIONS

The Protected Property is subject to the following easements and use restrictions of record:

1. Rights of the public and others entitled thereto to use that portion of the Protected Property lying within the boundaries of roads maintained by one or more of the town, state or federal jurisdictions for all purposes commonly used for roads in the State of Vermont.

2. Power line easement to Central Vermont Public Service Corporation dated September 27, 1947, recorded Book 29, Page 119 of the Cavendish Land Records.

3. Power line easement to Central Vermont Public Service Corporation dated October 6, 1947, recorded Book29, Page 111 of the Cavendish Land Records.

4. Power line easement to Central Vermont Public Service Corporation and New England Telephone and Telegraph Company dated October 18, 1962 and recorded book 31, Page 278 of the Cavendish Land Records.

5. Right of way over and across the orchard lot behind the buildings for purposes of crossing and recrossing with men and teams from the highway to a pasture as reserved in a deed from Hattie L. Stearns and George A. Stearns to Earl S. Bates and Anna H. Bates dated June 9, 1914 and recorded Book 25, Page 23 of the Cavendish Land Records.

6. Right of way conveyed to George L. Pratt to Gary J. Holt by Warranty Deed dated July 14, 1966 and recorded Book 32, Page 85 of the Cavendish Land Records.

7. Spring rights conveyed to Matthew T. Birmingham Jr. and Jane Birmingham by Warranty Deed of George L. Pratt dated December 27, 1962 and recorded in Book 31, Page 288 of the Cavendish Land Records.

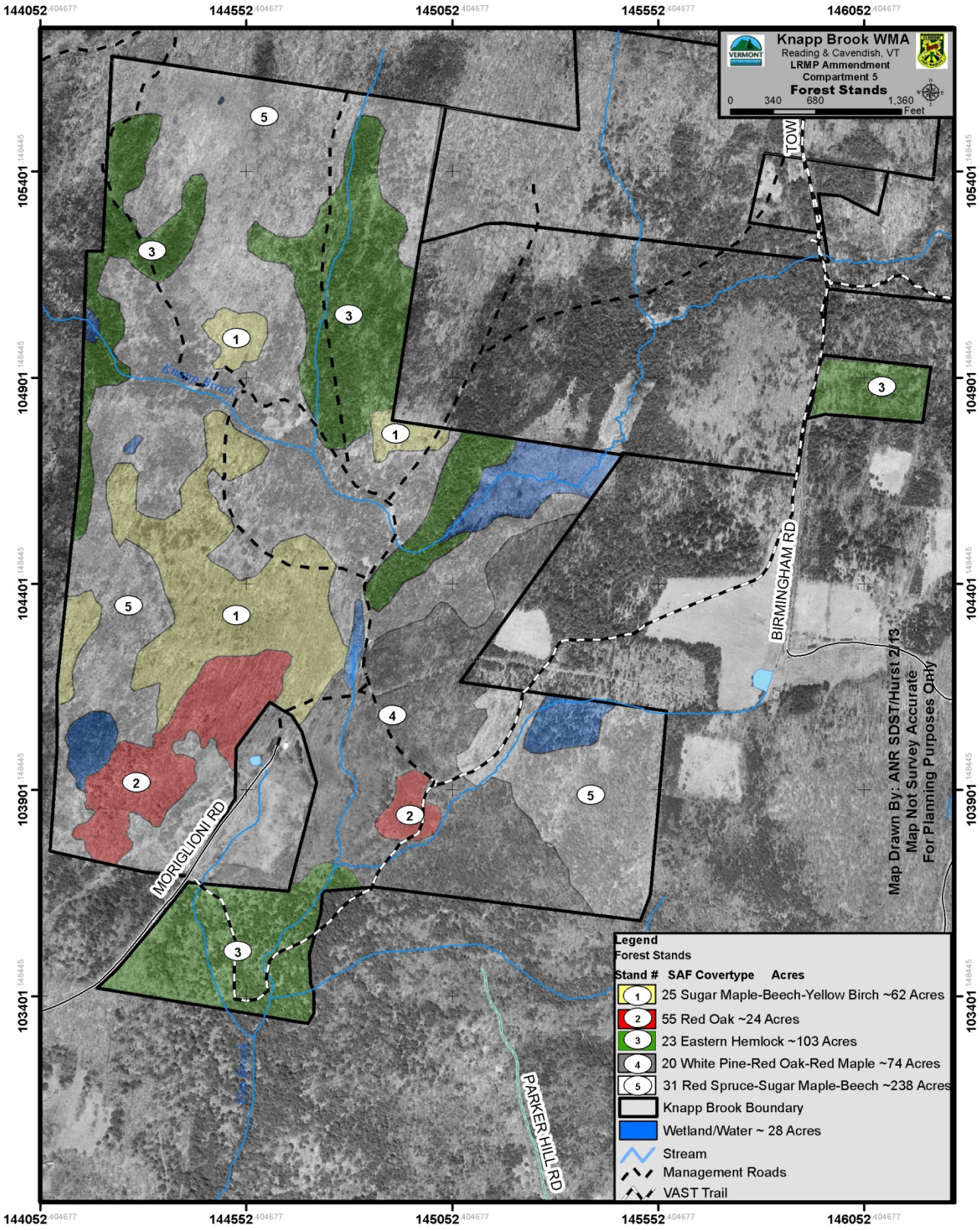
8. Right, privilege and easement to shoot, take and kill any and all wild game as conveyed by George Pratt to the State of Vermont by deed dated February 26, 1964 and recorded Book 31, Page 375 of the Cavendish Land Records.

9. Enrollment in the Agricultural Land, Forest Land and Farm Buildings Use Value Appraisal Program on June 6, 1991. Said application was approved but not filed in the Land Records.

Vermont Property Transfer Tax
32 V.S.A. Chap. 231
-ACKNOWLEDGEMENT-
Return Rec'd. - Tax Paid including Certificate & if required Act 250 Disclosure Statement.
Return No. 97-88
Signed _____, Clerk
Date 3-27-98

VERMONT LAND TRUST, INC., 8 BAILEY AVENUE, MONTPELIER, VERMONT 05602 (802) 223-5234

APPENDIX 2: Forest Stands Map



APPENDIX 3: Forest Inventory Data

Forest Stand Information (Evens Lot):

Comp./Stand	Acres	MSD	BA A Total/ Dom-condom	Acc. BA/A	Unacc. BA/A	Cull BA/A	Timber Type*	Species % BA	Regeneration – Understory Condition	Volume/Acre
1	62	10.3	108	82	15	37	25	SM 30 AB 28 YB 15	Beech saplings dominate	2.5 MBF 15 Cords
2	24	12.5	66	42	12	30	55	RO 31 SM 28 HH 12	Unacceptable – primarily beech, striped maple & Hophornbeam	1.2 MBF 10 Cords
3	93	11.2	116	110	16	19	23	EH 49 RS 10	Mixed-sparse to moderate	6.1 MBF 15 Cords
4	74	7.6	88	60	15	12	20	WP 34 RS 18 RM 15 RO 6	Mixed-sparse	4.8 MBF 10 Cords
5	238	11.2	92	72	0	20	31	YB 18 RM 16 SM 16 RS 12	Mixed-moderate	3.5 MBF 10 Cords

*25 – Beech-Birch-Maple
55 – Northern Red Oak (w/NH associates)
23 – Eastern Hemlock
20 – White Pine-Northern Red Oak-Red Maple
31 – Red Spruce-Sugar Maple-Beech

Forest Stand Information (Turco Lot): No data collected – no immediate management scheduled.

APPENDIX 4: Byron Right-of-Way

EASEMENT DEED

KNOW ALL MEN BY THESE PRESENTS that, ROBERT D. BYRON and STELLA V. BYRON, both of Milford, New Haven County, Grantors, in the consideration of **ONE DOLLAR and other valuable consideration** paid to their full satisfaction by the STATE OF VERMONT, DEPARTMENT OF FORESTS, PARKS and RECREATION, Grantee, by these presents, do freely **GIVE, GRANT, SELL AND CONFIRM** unto the said Grantee, State of Vermont, Department of Forests, Parks and Recreation, its successors and assigns, forever a perpetual easement and right of way for limited vehicular and pedestrian access on, over, through and across a + certain piece of land in Cavendish, County of Windsor and State of Vermont, described as follows, viz:

> Being all and the same lands and premises conveyed to Grantors herein by warranty deed of Gerald and Roberta Bowser, dated August 15, 1970, and recorded in Book 33, Page 87 of the Town of Cavendish Land Records. Said right-of-way shall be located as follows: three rods wide along the existing VAST snowmobile trail which crosses the northwestern boundary of the Byron property.

PROVIDED, HOWEVER, that the right of way and easement herein conveyed shall be subject to the following conditions and limitations:

1) Grantee shall have the right, at Grantee's sole expense, to construct, maintain and repair a gravel-surfaced roadway within the right-of-way, including the installation of ditches and culverts, the improved surface of which shall not exceed twelve (12) feet in width.

2) The right-of-way and roadway shall be used exclusively for:

   (a) Forestry and wildlife management of adjoining lands now or formerly owned by Lucille Evens, and more particularly described in Schedule A attached hereto and incorporated herein, such activities to include the development and implementation of forest management plans, conducting timber stand improvement activities, and harvesting and removal of wood products.
   (b) Access for recreational use by snowmobiles provided such access is managed by the Vermont Association of Snow Travelers or a comparable, responsible organization.
   (c) Non-motorized, non-mechanized, public pedestrian access for hunting purposes.

3) Grantee shall at all times maintain a locked gate at the roadway's intersection with Moriglioni Road, sufficient to prevent unauthorized vehicular access to the right-of-way.

TO HAVE AND TO HOLD all the above rights and interests in and to said easement premises, with appurtenances thereof, to the said Grantee, STATE OF VERMONT, DEPARTMENT OF FORESTS, PARKS AND RECREATION, its successors and assigns, forever.

AND FURTHERMORE, the said Grantors, ROBERT D. BYRON and STELLA V. BYRON, do for themselves, and for their heirs, administrators, executors and assigns, covenant with the said Grantee, STATE OF VERMONT, DEPARTMENT OF FORESTS, PARKS AND RECREATION, its successors and assigns, that from and after the ensealing of these presents the said ROBERT D. BYRON and STELLA V. BYRON will have and claim no right in or to said easement premises.

IN WITNESS WHEREOF, we have hereunto set our hand and seals this 13th day of April, A.D. 1998.

IN PRESENCE OF:

Anastasia Magoulas
WITNESS

Robert D. Byron
Robert D. Byron

Stella V. Byron
Stella V. Byron

STATE OF Connecticut
New Haven COUNTY, SS.

At Milford, Connecticut, this 13th day of April, A.D. 1998, personally appeared Robert D. Byron and Stella V. Byron, and they acknowledged this instrument, by them sealed and subscribed, to be their free act and deed.

Before me,

Anastasia Magoulas
Notary Public
My Commission Expires:

My Commission Expires May 31, 2000

Vermont Property Transfer Tax
32 V.S.A. Chap. 231
-ACKNOWLEDGEMENT-
Return Rec'd. - Tax Paid including Certificates & if required Act 250 Disclosure Statement.
Return No. 98-03
Signed Jane D. Cilley Clerk
Date 4-20-98

VERMONT LAND TRUST, INC., 8 BAILEY AVENUE, MONTPELIER, VERMONT 05602 (802) 223-5234

APPENDIX 5: Evens Easement Summary

State Lands Block ID: Knapp Brook Wildlife Management Area

Vermont Land Trust Conservation Restrictions Summary for ANR Lands

We are here to answer any questions you may have about these restrictions. Please call us at 802-457-2369 or send a message to Pieter van Loon, VLT forester at pieter@vlt.org.

Property Name and Location: Evens, Cavendish, Moriglioni Road

Conservation Restrictions Held By: Vermont Land Trust and Vermont Housing and Conservation Board

Core Conservation Objective: habitat for birds, amphibians, mammals, and scenic attributes
Special Protection Zones: None
VLT Monitoring Schedule: once annually on the ground
Standard Permitted Uses (Activities you can do without a Management Plan):

- All types of non-motorized, non-commercial pedestrian recreational purposes (fishing, hunting, bird watching, walking, snowshoeing, cross-country skiing, and swimming, etc.).
- Routine maintenance of existing recreational trails and roads.
- Snowmobiling.
- Issue special use permits or licenses for uses consistent with the conservation restrictions.
- Established dispersed tent sites but not concentrated camping areas.

Uses Permitted only if there is a Management Plan in place:

- Construction of new trails.
- All types of habitat protection and enhancement that involve timber management.
- Non-motorized, mechanized uses (mountain biking) and animal uses (horseback riding)
- Forestry, agriculture, maple sugaring and other open space purposes consistent with public access.
- Construct parking area.
- Extract sand and gravel.

Standard Restrictions (There may be some exceptions with our prior written approval; **give us a call**, for example handicapped access is a standard exception. How that access is provided we want to discuss.):

- No houses, no commercial activities, and no other structures or improvements.
- No rights-of-way, restrictions, roads, utilities or other rights to other persons.
- No signs, billboards, or advertising except for signs indicating the name of the land, state ownership, boundary markers, directional signs, memorial plaques, informational and interpretive signs, and signs limiting access or use.
- No trash, human waste, or any other unsightly or offensive material except as provided in the Management Plans. The temporary storage of trash in receptacles for off-site disposal is fine.

- No disturbance of the surface or change of the topography of the land in any manner, except as may specified in the Management Plans. No mining ever.
- No subdivision, conveyance, transfer, mortgage, lease, pledge or other encumbrance.
- No operation of motorized vehicles except for uses specifically reserved, such as wildlife and forest management, trail grooming and/or maintenance, and for emergency purposes.
- No change of natural watercourses, marshes, or other water bodies.
- No activities detrimental to water purity, or which could alter natural water level or flow.
- No use and no activity inconsistent with the objectives of the conservation restrictions.
- No prohibition of general public access for non-motorized, non-commercial pedestrian recreation.
- No concentrated camping areas.

When to call or write us:

- You wonder if a land management decision may conflict with the conservation restrictions.
- If you think there are compelling circumstances for an exception to a standard restriction.
- If you want help informing others about the conservation restrictions.
- You see any structures not permitted by the conservation easement.
- You want to build anything on the land.
- Public uses that are causing significant soil erosion, compaction, rutting or other damage.
- You note any adverse impact on wildlife, aquatic life, and plant life.
- If you see any timber, boundary, or other encroachment.
- Before any transfer, encumbrance, subdivision, or separate conveyance of the conserved land.
- Prior to constructing any parking facilities for members of the public.
- Prior to establishing dispersed tent sites or constructing rustic shelters.
- Any changes to your annual work plan.

To help us stay informed about activities on the parcel, please send us a copy of:

- Your annual work plan.
- The management plan and any changes to it.
- The interim stewardship plan if no management plan exists.

Please call the state lands general counsel if you have any legal interpretation questions. The counsel will talk with the VLT stewardship attorney to resolve any legal questions. For resource issues, please call use directly at the numbers below. Please refer to the conservation restrictions, map and baseline documentation report, copies attached, then call us for detailed explanations of any particular questions you have. **We are always happy to hear from you.** The King Farm, 3117 Rose Hill, Woodstock VT 05091; Phone: 802-457-2369; Fax: 802-457-5132.

Pieter van Loon, forester and state lands monitor, pieter@vlt.org

Our function is to help you accomplish your objectives within the limits of the conservation restrictions. Ultimately, we are also responsible for ensuring compliance with the conservation restrictions. We prefer to work on a cooperative basis with each ANR District. Please call, send a message, or write any time you have a question about any aspect of the conservation restrictions. We are here to help.

APPENDIX 6: Natural Community and Ecological Assessment

Natural Communities

A natural community is an assemblage of biological organisms, their physical environment (e.g., geology, hydrology, climate, natural disturbance regime, etc.), and the interactions between them (Thompson and Sorenson 2000). More than a simple collection of species, a natural community is characterized by complex webs of mutualism, predation, and other forms of interaction. The 89 natural community types described in Vermont repeat across the landscape in patches (or "polygons") of various sizes. These patches (or groups of patches in close proximity to each other) are referred to as natural community occurrences, and are to be distinguished from broad descriptions of community types. Natural community occurrences vary greatly in their size. Matrix communities, such as Northern Hardwood Forests, occur in broad expanses across the landscape, and form the context in which other, smaller communities are found. Large patch communities, such as Hemlock-Northern Hardwood Forests, typically occur at scales of 50-1000 acres. Small patch communities such as Hemlock-Balsam Fir-Black Ash Swamps are usually less than 50 acres in size; many (such as Seeps and Vernal Pools) are much smaller and owe their existence to highly localized site and disturbance characteristics.

Natural communities at the Evens Lot parcel of Knapp Brook WMA were identified through aerial photograph interpretation and field surveys. A Geographic Information System (G.I.S.) map of natural communities was produced using ArcView software from ESRI, Inc. Because some natural communities occur at very small scales (e.g., less than ¼ acre), this mapping effort is probably incomplete. Natural community mapping is an iterative process, and our knowledge improves with each mapping effort. Thus, the map presented here should not be viewed as a final statement on community distribution at Evens Lot parcel of Knapp Brook WMA; instead, it should be treated as a first attempt at describing natural communities in this area. Land managers and members of the public should be aware that additional examples of small patch natural communities may occur on the management unit. As subsequent inventories and site visits are conducted, this map will be improved.

Natural community occurrences are assigned a quality rank, a statement of their overall ecological value which helps guide management. An "A"-ranked occurrence is of high quality relative to others of its type in the state, while a D-ranked example is of comparatively low quality. Quality ranks are objectively assigned on the basis of three factors: occurrence size, current condition, and landscape context. The three factors vary in the degree to which they influence overall quality in different communities. For example, size and landscape quality are more important factors than current condition in the quality ranking of Northern Hardwood Forests, while current condition and landscape context receive greater attention in the ranking of Rich Northern Hardwood Forests. It is important to recognize that assignment of low quality ranks may be due to small size rather than poor current condition. When community occurrences are either rare or of high quality (or a combination of these factors), they may be designated as being of "statewide significance". This designation is applied according to objective guidelines established by the Vermont Department of Fish and Wildlife and which are available upon request. It is recommended that state-significant natural communities be afforded a higher level of protection than other areas of the management unit.

Beaver Wetland

There is a 13-acre beaver wetland found on the western boundary of the Evens Lot parcel, created by beaver activity along Knapp Brook. When inventoried in 2002, this area was described as being similar to an herb dominated Shallow Emergent Marsh natural community. Ten years later, it is characterized by a dense cover of 4-8' tall Speckled Alder (*Alnus incana*), indicating substantial change in the vegetation cover. Other plant species present include Steeplebush (*Spiraea tomentosa*), Blue Flag (*Iris versicolor*), an *Impatiens* species, Common Joe-pye Weed (*Eupatorium maculatum*), Marsh Fern (*Thelypteris palustris*), Tall Meadow-rue (*Thalictrum pubescens*), Dwarf Blackberry (*Rubus pubescens*), Sensitive Fern (*Onoclea sensibilis*), and Broad-leaved Cattail (*Typha latifolia*). Soils are a mix of mucks and alluvial mineral soil along Knapp Brook. It is expected that this area will continue to change, depending on future beaver activity, and thus it is not mapped as any one particular natural community type, nor assigned a quality rank. Because they are dynamic sites that offer a wide variety of terrestrial and aquatic habitats (especially terrestrial early successional habitat), beaver wetlands are important ecological features on the landscape.

Hemlock-Balsam Fir-Black Ash Seepage Swamp

Seven patches of this community (forming six ecological occurrences) have been identified in the Evens Lot. These swamps appear to be primarily influenced by bedrock-controlled groundwater seepage, though the influence of seepage may vary from patch to patch. Soil sampling in one swamp found 2.5 feet of peat accumulation, over one foot of mucky silt, over bedrock. Hemlock-Balsam Fir-Black Ash Seepage Swamps generally have some development of hummocks and hollows. Canopy cover is sparse, ranging from 30-60% cover. Canopy species include Hemlock (*Tsuga canadensis*), Red Spruce (*Picea rubens*), Yellow Birch (*Betula alleghaniensis*), and Red Maple (*Acer rubrum*). The same species were observed in the sub-canopy layers, along with Black Ash (*Fraxinus nigra*). Red spruce regeneration is abundant in some swamps, but hemlock regeneration was also noted. Shrubs are a small component of these swamps, but Winterberry Holly (*Ilex verticillata*) and Meadow-sweet (*Spiraea alba*) are present. Herb cover averages around 60% and includes abundant Cinnamon Fern (*Osmunda cinnamomea*), along with Turtlehead (*Chelone glabra*), Golden Saxifrage (*Chrysosplenium americanum*), Sensitive Fern (*Onoclea sensibilis*), Marsh Fern (*Thelypteris palustris*), Harry Woods' Grass (*Brachyeletrum erectum*), Slender Mannagrass (*Glyceria melicaria*), and Three-seeded Sedge (*Carex trisperma*). Non-vascular plants identified include Sphagnum mosses (*Sphagnum squarrosum*, *Sphagnum subtile*, *Sphagnum warnstorfii*), and a liverwort (*Bazzania trilobata*). Wetlands such as these can be important spring feeding locations for black bear, and abundant bear sign was observed in and around these wetlands during May inventories. Although all of these swamps provide very important wetland habitat for the local landscape, they are not considered to be state-significant examples of this natural community type.

Hemlock-Northern Hardwood Forest

Hemlock-Northern Hardwood Forest is one of the matrix forest types found in the Evens Lot, covering 217 acres of the 526-acre compartment. It is found in steep valleys and on flats, with shallow soils of varying texture. In general, sampling found 6-12" of mineral soil over rock, but with texture from sands to silt loams. Many sites feature a pronounced hummock and hollow microtopography, suggesting that windthrow may be a common natural disturbance in this community. The closed canopy (80-90% cover) contains Hemlock (*Tsuga canadensis*), Sugar Maple (*Acer saccharum*), and Yellow Birch (*Betula alleghaniensis*). Red Spruce (*Picea rubens*) is often abundant, and in places is co-dominant with the hemlock. There are some patches of

spruce regeneration, indicating that the species will likely persist in this community. Northern Red Oak (*Quercus rubra*) is present at a few of the better drained sites. Some areas have a dense understory of Balsam Fir (*Abies balsamea*) which is in the process of dying out. Shrub cover is variable, but when present generally consists only of Striped Maple (*Acer pensylvanicum*) and American Beech (*Fagus grandifolia*). Herbs (avg. 30% cover) include Bracken Fern (*Pteridium aquilinum*), Christmas Fern (*Polystichum acrostichoides*), Canada Mayflower (*Maianthemum canadense*), Shining Clubmoss (*Lycopodium lucidulum*), Tree Clubmoss (*Lycopodium obscurum*), and Indian Pipes (*Monotropa uniflora*). At least one survey site within this community had evidence of mild enrichment, with Jack-in-the-pulpit (*Arisaema triphyllum*) and Common Oak Fern (*Gymnocarpium dryopteris*). Almost all of the Hemlock-Northern Hardwood Forest in the Evens Lot has been mapped as deer wintering area or potential deer wintering area. Although this patch has a history of harvesting, and is currently only in 'fair' ecological condition, the landscape context, size, and potential for future recovery make this patch an example of statewide significance.

Hemlock-Red Spruce Forest

Hemlock-Red Spruce Forest (a variant of Hemlock Forest) is found along Knapp Brook just west of the beaver wetland complex. This softwood-dominated patch is likely maintained because of cold-air drainage into the valley, and preferentially feeding on hardwoods by beavers. Unlike the drier, rockier Hemlock-Northern Hardwood Forest found elsewhere on the parcel, this patch is more mesic, and has soils with a thick 8" layer of decomposing leaf litter over 6" over coarse sandy/gravelly loam. The canopy (approximately 40-50' tall; 90% cover) is dominated by Hemlock (*Tsuga canadensis*) and Red Spruce (*Picea rubens*), with some Red Maple (*Acer rubrum*), and Balsam Fir (*Abies balsamea*). Shrubs (20% cover) include Striped Maple (*Acer pensylvanicum*), Hobblebush (*Viburnum lantanoides*), American Beech (*Fagus grandifolia*), and Northern Wild Raisin (*Viburnum cassinoides*). Regeneration of Red Spruce (*Picea rubens*) is also present, along with the low shrub Lower Lowbush Blueberry (*Vaccinium angustifolium*). Herb cover is approximately 30% and includes Wild Sarsaparilla (*Aralia nudicaulis*), Canada Mayflower (*Maianthemum canadense*), Starflower (*Trientalis borealis*), Evergreen Woodfern (*Dryopteris intermedia*), Bunchberry (*Cornus canadensis*), Creeping Snowberry (*Gaultheria hispidula*), Tree Clubmoss (*Lycopodium obscurum*), and Goldthread (*Coptis trifolia*). Updated deer wintering area mapping by the Department of Fish and Wildlife indicates that this entire patch is mapped deer winter habitat. Other species that might be found in this community include saw-whet owl, red-breasted nuthatch, and black-throated green warbler. Though somewhat small, this patch is considered to be an example of statewide significance.

Mesic Red Oak-Northern Hardwood Forest

In contrast to the hemlock, spruce, and northern hardwood forest that characterize the majority of the Evens Lot, a patch of Mesic Red Oak-Northern Hardwood Forest is found on the top and on the steep southeast face of a 1700' ridge. In this example, the 30-40' tall, moderately closed canopy (70% cover) is dominated by Northern Red Oak (*Quercus rubra*), but Sugar Maple (*Acer saccharum*) and White Ash (*Fraxinus americana*) are also present. A sub-canopy contains Sugar Maple (*Acer saccharum*), Striped Maple (*Acer pensylvanicum*), Hop Hornbeam (*Ostrya virginiana*), and American Beech (*Fagus grandifolia*). Saplings include Northern Red Oak (*Quercus rubra*) and Black Cherry (*Prunus serotina*). Many of the young trees appeared heavily browsed by deer. Herbs include Common Oatgrass (*Danthonia spicata*), Marginal Wood Fern (*Dryopteris marginalis*), Blue-stemmed Goldenrod (*Solidago caesia*), Common Bellwort (*Uvularia sessilifolia*), Sheep Sorrel (*Rumex acetosella*), Fringed Bindweed (*Polygonum*

cilinode), Silver-rod (*Solidago bicolor*), and Christmas Fern (*Polystichum acrostichoides*). Soil is very thin over the schist bedrock, with soil samples indicating just 3-6" of sandy loam. White-tailed deer, turkey, and black bear are all large mammals that feed on acorns, and evidence of deer was abundant in this community during inventories. Since this patch is a small (5-acre) example of this community type, it is not considered to be of statewide significance.

Northern Hardwood Forest

Approximately 90 acres of Northern Hardwood Forest have been mapped in the Evens Lot. It occurs on somewhat warmer and more enriched sites than the forest communities with more Red Spruce (*Picea rubens*) and Hemlock (*Tsuga canadensis*). Soils are generally shallow and rocky; one typical sample found 6" of sandy loam between rocks, and all samples ranged from 2" to 12". The canopy (averaging 40' tall and 75% closed) is characterized by Sugar Maple (*Acer saccharum*), American Beech (*Fagus grandifolia*) and Yellow Birch (*Betula alleghaniensis*). White Ash (*Fraxinus americana*) can be moderately abundant in places. Northern Red Oak (*Quercus rubra*) is also not uncommon, but is probably the result of past harvesting and land clearing, and the species seems unlikely to naturally persist as an important canopy component in these patches. The understory, which can be dense (up to 60% cover) features regeneration of Sugar Maple (*Acer saccharum*), Yellow Birch (*Betula alleghaniensis*), and White Ash (*Fraxinus americana*), along with Hop Hornbeam (*Ostrya virginiana*). Tall shrubs include American Beech (*Fagus grandifolia*) and Striped Maple (*Acer pensylvanicum*). Herbs (30% cover) include Christmas Fern (*Polystichum acrostichoides*), Evergreen Woodfern (*Dryopteris intermedia*), Marginal Wood Fern (*Dryopteris marginalis*), Small Solomon's-seal (*Polygonatum pubescens*), Blue-stemmed Goldenrod (*Solidago caesia*), and Jack-in-the-pulpit (*Arisaema triphyllum*). Within this community are a few small enriched microsites, which feature a more diverse set of species, including Basswood (*Tilia americana*), Purple-flowering Raspberry (*Rubus odoratus*), Common Maidenhair (*Adiantum pedatum*), Herb Robert (*Geranium robertianum*), Small Enchanter's Nightshade (*Circaea alpina*), and Common Stinging Nettle (*Urtica dioica*). Northern Hardwood Forest provide habitat for many species of wildlife, including large mammals such as white-tailed deer and bear, forest songbirds such as black-throated blue warbler, and amphibians such as red-backed salamander. Because this is a small, unexceptional example of a very common natural community type, this occurrence is not of statewide significance.

Northern Hardwood Talus Woodland

On the west side of the Rich Fen is a steep, rocky slope with large boulders (3-4' on the longest side) and exposed bedrock, which hosts a small but distinct Northern Hardwood Talus Woodland community. The talus and exposed bedrock at this site is likely the result of a contact between two different rock types, with the boulders comprised of the resistant schist. The canopy contains Sugar Maple (*Acer saccharum*), Hop Hornbeam (*Ostrya virginiana*), White Ash (*Fraxinus americana*), Basswood (*Tilia americana*), Yellow Birch (*Betula alleghaniensis*), and Northern Red Oak (*Quercus rubra*). Unlike many examples of Northern Hardwood Talus Woodland, this patch has few if any shrubs. There is, however, a fairly diverse herb assemblage that includes Evergreen Woodfern (*Dryopteris intermedia*), Small Solomon's-seal (*Polygonatum pubescens*), Marginal Wood Fern (*Dryopteris marginalis*), Early Saxifrage (*Saxifraga virginiensis*), Jack-in-the-pulpit (*Arisaema triphyllum*), Herb Robert (*Geranium robertianum*), Narrow beach Fern (*Phegopteris connectilis*), Zig-zag Goldenrod (*Solidago flexicaulis*), Blue-stemmed Goldenrod (*Solidago caesia*), and Fragile Fern (*Cystopteris fragilis*). Large areas of talus woodland can provide excellent habitat for some wildlife species—particularly small mammals—but this 0.4

acre patch is likely of limited value as specific wildlife habitat. Similarly, because of its small size, this patch is not considered to be an example of statewide significance.

Red Spruce-Northern Hardwood Forest

Red Spruce-Northern Hardwood Forest is mapped on 173 acres in the Evens Lot. This community is typically found on north-facing slopes, areas with cold air drainage, and on shallower soils than Northern Hardwood Forest. It is likely that all three of these factors influence the distribution of Red Spruce-Northern Hardwood Forest in the Evens Lot. Detailed ecological data was not collected from this community, but forest inventory cruise data indicates that Red Spruce (*Picea rubens*), Sugar Maple (*Acer saccharum*), American Beech (*Fagus grandifolia*), Yellow Birch (*Betula alleghaniensis*), along with some Hemlock (*Tsuga canadensis*) and Northern Red Oak (*Quercus rubra*), are all found in the canopy. Tree diameter distributions and the presence of Big-toothed Aspen (*Populus grandidentata*), Black Cherry (*Prunus serotina*), Balsam Fir (*Abies balsamea*), and Paper Birch (*Betula papyrifera*) suggest that this is a young forest re-growing after harvesting. It is expected that spruce will continue to be an important canopy component. This forest probably has few herbs, but expected species would include Hay-scented Fern (*Dennstaedtia punctilobula*), Evergreen Woodfern (*Dryopteris intermedia*), Canada Mayflower (*Maianthemum canadense*), Starflower (*Trientalis borealis*), Woodlily (*Clintonia borealis*), and Shining Clubmoss (*Lycopodium lucidulum*). The Red Spruce-Northern Hardwood Forest is not considered an example of statewide significance.

Rich Fen

A small Rich Fen has been mapped near the center of the Evens Lot. Rich Fens are characterized by mineral-rich groundwater seepage and a unique suite of herbs and shrubs. This example has been heavily influenced by beaver activity, and is not a typical example; nevertheless it retains many of the species and characteristics of this globally rare community type. This fen has just a thin veneer of poorly decomposed organic matter over sand/gravel and bedrock, and the pH measured around 5.6-5.8. There are some hummocks with mineral soil (similar pH) at the downstream end of the wetland. It is dominated by Variegated Scouring Rush (*Equisetum variegatum*), which in some places reaches 100% cover over the peat and mosses. Other species include Common Scouring Rush (*Equisetum hyemale*), Royal Fern (*Osmunda regalis*), Shrubby Cinquefoil (*Potentilla fruticosa*), Yellow Sedge (*Carex flava*), Swamp Saxifrage (*Saxifraga pensylvanica*), Canadian Rush (*Juncus canadensis*), Common Rush (*Juncus effusus*), and Gynandrous Sedge (*Carex gynandra*). 'Brown' mosses (non-*Sphagnum* mosses) are abundant but were not individually identified. Hummocks host Red Spruce (*Picea rubens*), Lower Lowbush Blueberry (*Vaccinium angustifolium*), and Cinnamon Fern (*Osmunda cinnamomea*). Interestingly, a thin band at the eastern edge of this wetland contains Hemlock (*Tsuga canadensis*), Red Pine (*Pinus resinosa*), Red Spruce (*Picea rubens*), Tamarack (*Larix laricina*), and Paper Birch (*Betula papyrifera*), with blueberries (*Vaccinium* spp.), Creeping Snowberry (*Gaultheria hispidula*), lichens, and *Sphagnum* mosses. No rare species were observed during inventories, but mineral-rich fens are likely locations to encounter rare or uncommon species. Additional inventories for these species should be conducted. As noted, beaver activity is extensive in this wetland. While this is a normal disturbance for small wetlands, it could have negative impacts for many plant species that depend on the specific growing conditions found in Rich Fens.

Seep

Three Seep patches have been mapped in the Evens Lot, though there may be more found on the parcel. Although found in different landscape positions and varying in size from just a few tenths of an acre to a half-acre, all three seeps are characterized by very shallow (<6") mucky soil over bedrock or hardpan. Two patches are fairly typical forest seeps, characterized by Cinnamon Fern (*Osmunda cinnamomea*), Sensitive Fern (*Onoclea sensibilis*), Golden Saxifrage (*Chrysosplenium americanum*), Turtlehead (*Chelone glabra*), Wood Horsetail (*Equisetum sylvaticum*), Marsh Fern (*Thelypteris palustris*), and a few scattered Red Spruce (*Picea rubens*), Yellow Birch (*Betula alleghaniensis*), and Balsam Fir (*Abies balsamea*). The third seep is found on a moderate slope above an intermittent stream. This seep had a more diverse herb cover, including Sensitive Fern (*Onoclea sensibilis*), Cinnamon Fern (*Osmunda cinnamomea*), an *Impatiens* species, Rough-stemmed Sedge (*Carex scabrata*), Long-hair Sedge (*Carex crinita*), Turtlehead (*Chelone glabra*), Swamp Saxifrage (*Saxifraga pensylvanica*), Interrupted Fern (*Osmunda claytoniana*), Jack-in-the-pulpit (*Arisaema triphyllum*), and a *Cinna* grass. Seeps can be very important spring feeding habitat for deer and bear. During an inventory conducted in May, there was evidence of recent bear use of one seep. These patches are probably also used by amphibians and species of insects, but these were not studied during inventories. While none of these three seeps is an example of statewide significance, all three are important habitat features for the local landscape.

Vernal Pool

Vernal Pools are small basins that are often dry, but fill with water in the spring (and occasionally in other seasons) due to heavy rain and snowmelt. Because they lack fish, these pools are excellent breeding habitat for amphibians—frogs and salamanders—that migrate to the pools to reproduce and lay eggs. Two Vernal Pools have been mapped on the Evens Lot, and both had evidence of amphibian breeding. Both are considered to be examples of state-wide significant. One, which measured 60'x20' in size and was at least 10" deep, had more than 10 mole salamander egg masses and more than 20 wood frog egg masses. This pool is surrounded by Red Spruce-Northern Hardwood Forest which likely provides decent upland amphibian habitat. The other pool (75'x25'x12") had at least one mole salamander egg mass, and many hatched amphibians. This pool is surrounded by a young Red Spruce-Northern Hardwood Forest community that currently has a canopy of Paper Birch (*Betula papyrifera*) and Red Maple (*Acer rubrum*), which may not offer ideal upland amphibian habitat. When surveyed in the spring, these sites had few distinctive plant species; likely species at these sites would include sensitive fern (*Onoclea sensibilis*), marsh fern (*Thelypteris palustris*), cinnamon fern (*Osmunda cinnamomea*), and bladder sedge (*Carex intumescens*).

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APPENDIX 7: Implementation Notes

Evens/Turco:

MU1	2014	even-aged management

Objectives:

- Browse production, mast tree release
- New landing and woods roads, enhance stream quality by stabilizing existing skid trails
- Begin regenerating stand

Prescriptions:

- Stands 1 and 5 – Development of younger age classes in patches of 2-3 acres. Crop tree release between patches
- Stand 2 – crop tree release to favor red oak and others for mast production

Special Features/Treatment/Issues:

- Stream and wetland buffers
- Pockets of "healthy" beech
- Old skid roads that were not properly closed by previous owner – need stabilization
- Mast trees to be retained beyond typical diameters for food production
- No areas of archeological or historic significance

MU2	2016	all-aged management

Objectives:

- Enhance softwood cover (deer wintering area), generate woody browse

Prescriptions:

- Stand 1 – clearcut for browse production
- Stand 3 – Thinning to B-level, salvage declining red spruce and balsam fir, and remove hardwood to develop browse. Primary retention species Eastern hemlock, red oak, and sugar maple
- Stand 5 – Salvage red spruce and balsam fir, retain hemlock, and white pine for riparian function and wildlife travel cover

Special Features/Treatment/Issues:

- Riparian areas, streams, and wetlands
- Deer wintering area
- Several existing roads need stabilization

MU3	2018	even-aged management

Objectives:

- Browse production, mast tree release
- New landing and woods roads, enhance stream quality by stabilizing existing skid trails

Prescriptions:

- Stands 1 and 5 – Development of younger age classes in patches of 2-3 acres. Crop tree release between patches
- Stand 3 – Thinning to B-level, salvage red spruce, and remove hardwood to develop browse. Primary retention species Eastern hemlock, red oak, and sugar maple

Special Features/Treatment/Issues:

- Need to develop access to northeast and new skid trail network and secure temporary or permanent landing site/access on adjoining parcel
- Moderate archeological significance along streams
- Old skid roads that were not properly closed need stabilization

MU4	2020	all-aged management

Objectives:

- Enhance softwood cover, browse production, and access

Prescriptions:

- Single tree and group selection (groups up to ½ acre)
- Residual BA 60-90
- Primary retention – Eastern hemlock, white pine, and red oak

Special Features/Treatment/Issues:

- Important and heavily-used VAST trail
- Wet ground and streams in places (winter logging?)
- Portion of existing access in Byron right-of-way
- Significant historical site
- Oak component, trees released in 2008, may be ready for additional release

APPENDIX 8: 10 V.S.A. App. § 15 Rule Governing Public Use of Vermont Fish and Wildlife Department Lands

10 V.S.A. App. § 15 Rule Governing Public Use of Vermont Fish and Wildlife Department Lands

1.0 Authority

1.1 This rule is adopted pursuant to 10 V.S.A. §4145(a) which authorizes the Board to adopt rules to "regulate the use by the public of access areas, landing areas, parking areas or other lands or waters acquired or maintained pursuant to 10 V.S.A. § 4144."

2.0 Purpose

2.1 The purposes of this rule is to regulate public activities and use at Wildlife Management Areas, Riparian Lands, Conservation Camps, and Fish Culture Stations in order to protect, manage, and conserve the fish, wildlife, vegetation, and other natural and cultural resources of the state, to provide for the safe and efficient operation of the developed facilities of the Department and to protect the health, safety, and welfare of the public.

2.2 To foster quality hunting, fishing, trapping, and other fish-based and wildlife-based activities at these lands and facilities.

2.3 This rule does not apply to Fishing Access Areas governed by 10 V.S.A. § 4145.

2.4 This rule is not intended to interfere with deed restrictions, easements, rights-of-way or other applicable legal agreements.

3.0 Definitions

3.1 "Board" means the Vermont Fish and Wildlife Board as defined in 10 V.S.A. § 4041.

3.2 "Department" means Vermont Fish and Wildlife Department.

3.3 "Commissioner" means Commissioner of the Vermont Fish and Wildlife Department.

3.4 "Wildlife Management Area" or "WMA" means any lands or portions of lands of the Department so designated by the Department.

3.5 "Riparian Land" means any lands or portions of lands of the Department other than WMAs, Fish Culture Stations, Fishing Access Areas, and Conservation Camps so designated by the Department, such as but not limited to stream bank parcels, dams, and pond sites.

3.6 “Conservation Camp” means any facilities, lands or portions of lands of the Department so designated by the Department.

3.7 “Fish Culture Station” means any facilities, lands or portions of lands of the Department so designated by the Department.

3.8 “Designated Site” means a delineated area at a WMA, Riparian Land, Conservation Camp or Fish Culture Station that the Department has designated for a particular activity or prohibition on an activity, and so identified and demarcated with signage or identified on a Department-issued map.

3.9 “Designated Corridor” means a road, trail, path or other linear travel route at a WMA, Riparian Land, Conservation Camp or Fish Culture Station that the Department has designated for travel by a particular means or vehicle, and so identified with signage or identified on a Department-issued map.

3.10 “Authorized Activity” means an activity for which a person does not need prior permission to engage in, and can engage in at a WMA, Riparian Land, Conservation Camp or Fish Culture Station, or at a Designated Site or on a Designated Corridor within a WMA, Riparian Land, Conservation Camp or Fish Culture Station.

3.11 “Prohibited Activity” means an activity that no person, group, business or entity shall be allowed to engage in under any circumstances, and for which no Permit, License or Lease shall be authorized, except as provided for in Sections 6.0 of this regulation.

3.12 “Commercial Activity” means any activity or service that produces income for any person, group, business or entity, including any activity or service by any non-profit entity where a fee is required or requested.

3.13 “Special Use Permit” means a written authorization issued by the Department or its designee issued to a person, group, business or entity to undertake an activity.

3.14 “Group” means ten (10) or more persons.

3.15 “Primitive Camping” means temporary overnight occupancy in a natural environment with no developed facilities leaving the site in its original condition so there is no or minimal evidence of human visitation.

3.16 “Self-contained Camping” means camping with a portable shelter equipped with a self-contained, portable, sanitary toilet.

3.17 “Artifact” means an object produced or shaped by human craft, especially a tool, weapon, or ornament or archaeological or historical interest.

3.18 “Emergency situation” means an unintended or unforeseen situation that poses a risk to health or life of a person or animal.

3.19 “Field processing” means the gutting or dressing or other removal of non-consumptive parts of an animal for the preservation of the carcass to include the boning and quartering.

3.20 “Tree stand” means a platform or structure (placed for any period of time) which is fastened to a tree by nails, bolts, wire, or other fasteners that intrude through the bark into the wood of the tree, or around the tree.

3.21 “Ground blind” means a structure or manufactured enclosure made of natural or man-made materials placed on the ground to assist in concealing or disguising the user or occupant. This does not apply to blinds constructed for purposes of hunting waterfowl which are governed by 10 V.S.A. App. § 23.

3.22 “Bait” means any animal, vegetable, fruit or mineral matter placed with the intention of attracting wildlife.

3.23 “All-terrain vehicle” or “ATV” means any non-highway recreational vehicle, except snowmobiles, having no less than two low pressure tires (10 pounds per square inch, or less) or tracks, not wider than 60 inches with two-wheel ATVs having permanent, full-time power to both wheels, and having a dry weight of less than 1,700 pounds, when used for cross-country travel on trails or on any one of the following or a combination thereof: land, water, snow, ice, marsh, swampland, and natural terrain.

3.24 “Utility task vehicle” means a side-by-side four-wheel drive off-road vehicle that has four wheels, or tracks, and is propelled by an internal combustion engine with a piston displacement capacity of 1,200 cubic centimeters or less, and has a total dry weight of 1,200 to 2,600 pounds.

3.25 “Waterbody” means any lake, pond, river, or stream.

4.0 Authorized Activities

4.1 The following activities are authorized on all lands under this rule:

a) Hunting, fishing, trapping, and target shooting at designated shooting ranges, as well as all other activities authorized under 10 V.S.A. Part 4;

b) Fish and wildlife viewing and photography;

c) Boating, including launching and landing, for fish-based and wildlife-based activities where not otherwise prohibited by any other relevant regulations or statutes;

d) Dispersed, wildlife-based pedestrian activities including walking, snowshoeing, swimming, cross-country skiing, and collection of shed antlers;

e) Non-commercial picking of berries, nuts, fungi, and other wild edibles except ginseng;

f) Camping for purposes of hunting, fishing or trapping:

i. Primitive camping on WMAs designated by the Department for no more than 3 consecutive nights. Camp sites must be at least 200 feet from any waterbody, property line, or road;

ii. Self-contained camping on sites designated by the Department for this purpose, for no more than 16 days during the periods of May 1-31, September 1 through December 15. No individual parcel will have more than three designated sites for self-contained camping unless that site's use has been demonstrated to have preceded January 1, 2007.

g) Fish-based and wildlife-based commercial activities limited to those specified in 4.a-4.c of this subsection when conducted by a person. This shall include guiding for purposes of fishing, hunting, and trapping.

5.0 Prohibited Activities

5.1 The following activities are strictly prohibited, unless otherwise authorized in accordance with Section 6:

a) The operation of any ATV, UTV, or any wheeled or tracked motorized vehicle not registered for public highway use, except as noted as provided for under this subsection and section 6.0 of this regulation:

i. Pursuant to 23 V.S.A. § 3506 (b) (4), ATV use is prohibited on, "any public land, body of public water…unless the secretary has designated the area for use by all-terrain vehicles pursuant to rules promulgated under provisions of 3 V.S.A., chapter 25."

ii. If the Secretary has previously designated an area of state land for use by ATVs pursuant to 23 V.S.A. § 3506 (b) (4), the Commissioner shall authorize a designated corridor on Department lands for under section 6.0 of this rule subject to the terms and conditions the Commissioner deems appropriate.

b) Use of motorized vehicles except on roads specifically designated for such use;

c) Snowmobiling except as approved by the Department and on designated corridors;

d) Horseback riding, dog sledding, non-motorized cycle riding, or use of motorized vehicles except on designated corridors;

e) Draft and pack animals except for retrieval of legally harvested moose, deer, and black bear during the respective hunting season(s);

f) Commercial Activities except those allowed under 4.1(a-c);

g) Artifact or fossil collection;

h) Fires except in emergency situations, or for non-primitive and primitive camping in accordance with 4.1(f);

i) Abandoning, or disposing of any animal carcass, or their parts, except that portions of fish or game legally harvested on the property may be deposited on site during routine field processing for preservation and transport, or parts used in conjunction with legal trapping;

j) Construction or placement of temporary or permanent structures, except as provided under Section 7 of this rule or for primitive and non-primitive camping in accordance with Section 4.1(f);

k) Collection of plants, trees, evergreen brush or limbs, except wild edibles as allowed under Section 4.1(e) of this rule;

l) Use of any fireworks or pyrotechnic devices except signal flares in an emergency situation;

m) Feeding or baiting of wildlife except if otherwise authorized by law;

n) Taking of fish from a fish culture station except during special events established by the Department, including but not limited to fishing derbies, clinics, and educational events;

o) Entering within 500 feet of any building or other associated infrastructure that is associated with a Department Fish Culture Station or Conservation Camp during times of the day other than those times posted for public use;

p) Parking of vehicles except while engaged in an Authorized Activity;

q) All other activities not specifically authorized by this rule, or authorized in writing by the Commissioner including, but not limited to: para-sailing, hang-gliding, recreational rock climbing, and geocaching.

6.0 Special Use Activities and Designated Sites on Vermont Fish and Wildlife Department Lands

6.1 The Commissioner may grant a Special Use Permit, Lease or License for any activity under this rule, subject to Section 5.1(a), so long as the Commissioner has determined that there will be no adverse impact on Authorized Activities or other adverse impacts on Authorized Activities or other adverse impacts on the primary purposes of ownership.

6.2 The Commissioner may designate a site, by means of signage, or being identified on a Department-issued map, for any activity under this rule, subject to Section 5.1(a), so long as the Commissioner has determined that there will be no adverse impact on Authorized Activities or other adverse impacts on the primary purposes of ownership.

6.3 The Commissioner may permit accommodations to persons with a qualified disability pursuant to the Americans with Disabilities Act.

7.0 Use of Tree Stands and Ground Blinds on WMAs

7.1 Permanent tree stands and ground blinds are prohibited on state-owned WMAs.

7.2 Temporary tree stands and ground blinds are permitted on state-owned WMAs under the following conditions:

a) Tree stands and ground blinds may be erected and used without written permission from the Department during the time period from the third Sunday in August through the third Saturday in December annually, May 1 through May 31, all dates inclusive, or during any Youth Hunting Day or Weekend. This does not include blinds constructed for purposes of hunting waterfowl pursuant to 10 V.S.A. App. § 23.

b) Tree stands and ground blinds may be erected and used at other times of the year with advance notice to, and written permission from, the Department's District office staff responsible for managing and administering state land in the District in which the land is located.

c) Tree stands and ground blinds used on WMAs must be constructed and erected in such a way that:

i. No damage is done to any living tree in erecting, maintaining, using, or accessing the stand or blind except that:

a) Dead limbs, trees or shrubs may be removed as needed to erect and use the stand or blind, and;

b) No live limbs, trees or shrubs may be cut for any purpose except those one inch or less in diameter at either ground level or from the main stem or branch of the tree where the stand or blind is located as appropriate (for guidance, a United States quarter is .9 inch in diameter), and;

c) No nails, bolts, screws (including access steps), wire, chain or other material that penetrates through the bark and into the wood of live trees shall be used in erecting any stand or blind, and;

d) All tree stands or ground blinds used on WMAs must be clearly and legibly marked with the owner's name and address. Marking shall be legible and placed in a manner that enables a person to conveniently and easily read it.

7.3 Tree stands and ground blinds that do not conform to this regulation are prohibited and may be confiscated and/or destroyed by the Department. Building, erecting, maintaining, using or occupying a non-conforming tree stand or ground blind is prohibited. Construction of any tree stand or ground blind does not confer exclusive use of its location to the person who built it. Any person may use that location for purposes consistent with this rule.