

# Preston Pond Conservation Area

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## Management Plan

Approved by the Bolton Conservation Commission on May 16, 2016

Approved by the Bolton Select Board on \_\_\_\_\_

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**Attachments:**

Baseline Documentation Report

Conservation Easement & Addendum Letter

Streeter Access Easement Deed

Forest and Wildlife Management Plan

Trail Map

Conservation Plan Map, including Ecological Protection Zones

Trapping Application Form

Forest Steward position description

Town of Bolton Volunteer Waiver

Risk Management Guidelines for Volunteers

## 1.1 The Management Planning Process

This Management Plan was created through a public process first led by the Preston Pond Management Plan Committee (PPMPC), a subcommittee of the Bolton Conservation Commission (BCC), created to write a formal management plan to replace the 2003 Interim Management Plan for the Preston Pond Conservation Area (PPCA). The monthly meetings of the PPMPC commenced in April 2012. In June and July of that year, the PPMPC sent a survey to all town members via the monthly Bolton Gazette newsletter and the Town's website. In addition to the response heard from these surveys, the PPMPC held two public meetings in the fall of 2012, one at the town office, the other as a field walk, to gather public input that would inform the rewriting of the 2003 Interim Management Plan.

In late 2015 and into 2016, the Conservation Commission led the effort to complete the plan, which involved further input from the public, especially regarding the issue of trapping.

In addition to public input, the PPMPC has sought updated natural resource and recreational information from local experts and interested parties including the Chittenden County Forester, Vermont Department of Fish and Wildlife, Vermont Land Trust, Vermont Audubon, the Vermont Reptile and Amphibian Atlas, Vermont Association of Snow Travelers, and CRAG-VT.

Members of the PPMPC were Joss Besse, Lars Botzjoorns, Lexie Haselton, Juliette Juillerat, and Rob Ricketson. Their dedication to the process and their knowledge of and experience with the many issues covered by this plan are greatly appreciated.

Once approved by the holder of the conservation easement, the Vermont Land Trust, and the Town of Bolton Select Board, the new formal management plan shall be in effect for ten years. The Conservation Commission shall report on management issues and activities annually and make any recommendations for interim changes to the management plan to the Select Board and the Vermont Land Trust. In the ninth year of this plan's implementation, the Conservation Commission shall begin the process to revise and update the plan for its next ten year cycle.

## 1.2. Objectives of the Management Plan

### Philosophy

The PPCA is remarkable for its physiographic diversity and a feeling of remoteness. It is intended that human uses shall be made to blend in with the landscape, both visually and aurally. All human uses of the PPCA shall meet rigorous standards for protection of wildlife habitat and scenic beauty. To date, a variety of human activities have coexisted in the PPCA because of their low density nature, and should be allowed to continue as long as they do not

create significant or enduring impact on the natural resources of the PPCA nor on any other allowed use. Human activities will be managed to emphasize a primitive experience and a minimum amount of conflict. At the same time the natural communities of the PPCA will continue to evolve from past heavy management, and in some cases a degraded condition, to a point where natural succession and disturbance regimes predominate, supported by light-handed human management. This plan coordinates management of the Preston Pond Conservation Area and establishes standards and guidelines for specific management practices in concert with the conservation easement.

### **Purposes and Attributes**

I. The two Primary Purposes, reflecting the conservation easement, are:

(a) To conserve and promote biological diversity, wildlife habitats, diversified forest structure, interior forest, natural communities, riparian buffers, and native flora and fauna in the PPCA, and the ecological processes that sustain these natural resource values as these values exist on the date of this instrument and as they may evolve in the future; and

(b) To foster compatible public use of the PPCA.

Where the two Primary Purposes are in conflict, the objectives of paragraph I(a) shall prevail within the Special Ecological Zones and the Surface Water Buffer Zones.

II. The three Secondary Purposes are:

(a) To make the PPCA available for dispersed non-commercial pedestrian public recreational opportunities. Snowmobile and equestrian access are allowed in defined recreational corridors as soil conditions allow;

(b) To protect open space values and scenic resources associated with the PPCA for present and future generations; and

(c) To encourage low-impact educational use and research of the PPCA by local schools and colleges.

The conservation easement also states as a secondary purpose the long-term improvement and sustainable harvesting of forest resources in a manner that minimizes negative impact and the duration of impact on surface water quality, recreational benefits to the public, wildlife habitat, and other conservation values. While this plan contains a forest management plan, its emphasis over the next ten years shall be to promote wildlife habitat. A potential longer term goal to create a sustained yield of high quality saw logs and other forest products shall not conflict with wildlife habitat management.

### 1.3. Area History, General Description & Landscape Context

The geographic location of the PPCA in the County makes it a very important protected piece of land. Chittenden County, Vermont's most populated County, is rapidly becoming suburbanized. Large blocks of forestland, connected wildlife habitat, and relatively remote areas now only exist in the eastern portion of the County, in the area known as the Chittenden County Uplands. A conservation project is working to preserve this connected forested habitat: the Uplands Partnership, which includes more than 14 local groups, town commissions, conservation organizations, and statewide agencies. These groups are working together to conserve the wildlife habitat, ecological integrity, timber resources, and recreational opportunities in the Chittenden County Uplands. The goal of the conservation effort is to ensure the existence of continuous forested tracks from the ridgeline of the Green Mountains to the Winooski River. Large blocks of forested land are essential for the survival of many wide ranging game and non-game wildlife species. The Preston Pond Conservation Area encompasses an expanse of productive forestland possessing Natural Heritage Sites and critical wildlife habitat and corridors that link the Champlain Valley to the Green Mountains. The PPCA (indicated in Figure 1 below) is a key piece of this conservation effort because it connects large continuous tracts of protected land in the Towns of Jericho and Richmond to conserved land in the Town of Bolton.

Water quality degradation in Lake Champlain, both from agricultural and urban storm water runoff, has long been a source of local and statewide concern. Blessed with a number of small ponds and cascading brooks that feed the Winooski River, the Chittenden County Uplands and Preston Pond represent a pristine watershed area within the Lake Champlain Basin and contribute to maintain good water quality in the watershed.

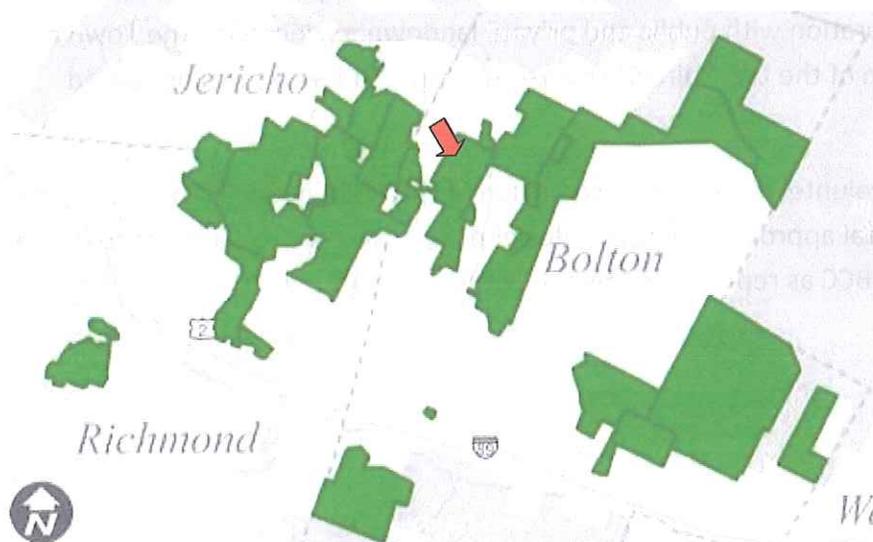


Figure 1: Land protected by the Chittenden County Uplands Conservation Project as of 2012. PPCA indicated by the arrow.<sup>1</sup>

<sup>1</sup> <http://www.vlt.org/news-publications/publications-archive/archived-articles/chittenden-county-uplands-conservation-project>

The Preston Pond Conservation Area was conveyed to the Town of Bolton by the Vermont Land Trust in 2003. The PPCA consists of forested land, streams, ponds, wetlands, trails, and frontage on Notch Road and Stage Road in Bolton. The previous owners, Jim Tiffany and Dan Morrissey, purchased the property in the late 1980s. Before that, the land was owned by Titanium Ventures (Mullen Family). Although the land is completely forested at this point, there are many signs of a previous history including previous roads, buildings, and farmland.

The PPCA contains 403 acres of land that includes the pristine small watershed of nine-acre Preston Pond, a 3500 year old water body designated as a significant feature by the Vermont Nongame & Natural Heritage Program. The outlet of Preston Pond is a tributary of Snipe Island Brook. The PPCA includes a peregrine falcon nesting site, important early season wetland habitat, extensive natural red pine stands (uncommon in VT), populations of state-threatened Hooker's orchis, and several other rare and uncommon plant species. In addition, sign of area-sensitive species and wide-ranging species such as black bear, bobcat, moose, fisher, otter, and mink are common.

The existing trail system is comprised of the VAST Trail, a section of the former Long Trail, and town trails. The VAST Trail runs for about 2.2 miles through the northern half of the PPCA.

There are entrances on both Stage and Notch Roads. It follows the Streeter Right Of Way and the shores of Upper Preston Pond before cutting across, west to east, to the cellar holes. The maintenance and management of the VAST trail is provided by the local snowmobile club, the Richmond Ruff Riders.

The former Long Trail is marked with blue paint blazes. Management of the Long Trail System is specifically governed by the Long Trail System Management Plan (LTSMP) as overseen by the Green Mountain Club in cooperation with public and private landowners, including the Town of Bolton. The Burlington Section of the GMC directly oversees maintenance of the blue-blazed trail.

The town trails were built by volunteers since the acquisition of the PPCA in 2003. They are marked with blue disks and total approximately 4.3 miles of pedestrian trail. Maintenance of these trails is overseen by the BCC as represented by the Forest Steward.

## 2. Access and Parking

The PPCA has multiple access points to disperse the physical and social impact of access to the conserved lands, to avoid the cost of developing a single larger access point, and to make it easier and more cost effective for the Town of Bolton to maintain public access to the PPCA.

Current designated access points (parking) are: The VAST trail corridor on the east side of Stage Road, and a small log landing on the west side of Notch Road in Bolton Notch, which also is the eastern end of the VAST trail within the PPCA

### Parking

- The Stage Road Access has received minor improvements (topfill and grading, and uphill ditching for drainage) to accommodate 2-3 cars immediately off of Stage Road. Ongoing maintenance entails occasional cleaning of drainage ditches and winter plowing.
- The Bolton Notch Access requires further minor improvements (pushing back brush and debris; however topfill and grading likely are not necessary) to accommodate 3-4 cars. Ongoing maintenance entails winter plowing and annual brushing.

The Stage Road and Bolton Notch parking areas are restricted to daylight hours only. Enforcement shall be done mainly through education by local volunteer stewards (in person, leaflets on cars) with occasional state police patrolling of access points.

## 3. Natural Resources and Wildlife

### 3.1. Natural Resources

It is helpful to consider the PPCA in the context of the surrounding landscape. The landscape around Preston Pond is approximately 78% forested with wetland and surface waters making up roughly 6%. About 14% of the surrounding landscape is broken up with residential areas, but that developed portion is rapidly increasing as more and more lots are cleared and homes are built along Notch Rd and Stage Rd. Beyond the adjacent road corridors both east and west are large blocks of mostly uninterrupted interior forest land. There is virtually no agricultural land in the landscape surrounding Preston Pond and very little early successional forest is present (young forest re-growing after agriculture, natural disturbance, or a tree harvest). The PPCA itself is un-fragmented forest with areas of open water and wetland responsible for most of the breaks in the otherwise continuous tree canopy. Upland early succession forest habitat (i.e. young or short dense tree stands) are mostly absent, except where beaver influence and shrub wetland communities provide this habitat type. Overall, the Northern Hardwood Forest present on the PPCA is relatively uniform, and the relatively small elevation gradient itself does not provide much change in habitat. Rather, the diversity of habitats found in the PPCA is a result of the cliffs, wetlands, and diversity of soils present on the PPCA, as well as the land use history (past farming and logging). Some of these habitats (e.g. red pine stands, Preston Pond headwater) provide unique and diverse habitats that make Preston Pond such an interesting piece of land from an ecological standpoint.

Numerous conservation planning efforts over the years, from The Vermont Biodiversity Project (VBP) and The Nature Conservancy's (TNC) ecoregional planning in the early 1990's; to the more recent Biofinder (2012), *Science to Action: Four Town Natural Resources Inventory* (2013), and Vermont Conservation Design (2015), have identified the Mt. Mansfield/Camel's Hump vicinity, including significant portions of the PPCA, as an important area for land protection in order to conserve biodiversity. Within the areas identified by these efforts, excellent examples of common natural community types are found, including some forest types that cover large land areas. Also found here are an exceptional diversity of small and large "patch communities" unique communities such as natural red pine stands embedded in the larger, more homogeneous northern hardwood forest. In addition, a wide range of aquatic features are present, from small headwater streams to the Winooski River.

#### 3.1.1 Geology and Soils

The geology of an area defines the soils and soil depth present in that area. The soil in turn, along with other factors, defines what plant communities can grow and therefore what wildlife species will be present. The geology of Preston Pond is characteristic of that of the northern

Green Mountains. The bedrock was first laid in the lower Cambrian era (~500 million years ago) and is categorized as the Camel's Hump Group. The majority of the rocks found in the Area consist of schist and quartz. The landscape has been altered over thousands of years by several glaciations. The direction of travel of the glacier during the last glaciations, more than 15,000 years ago, played an important role in shaping the cliffs, terraces, and dense basal till (glacial sediments compacted by the weight of the ice) and their location in the PPCA (Figure 2).

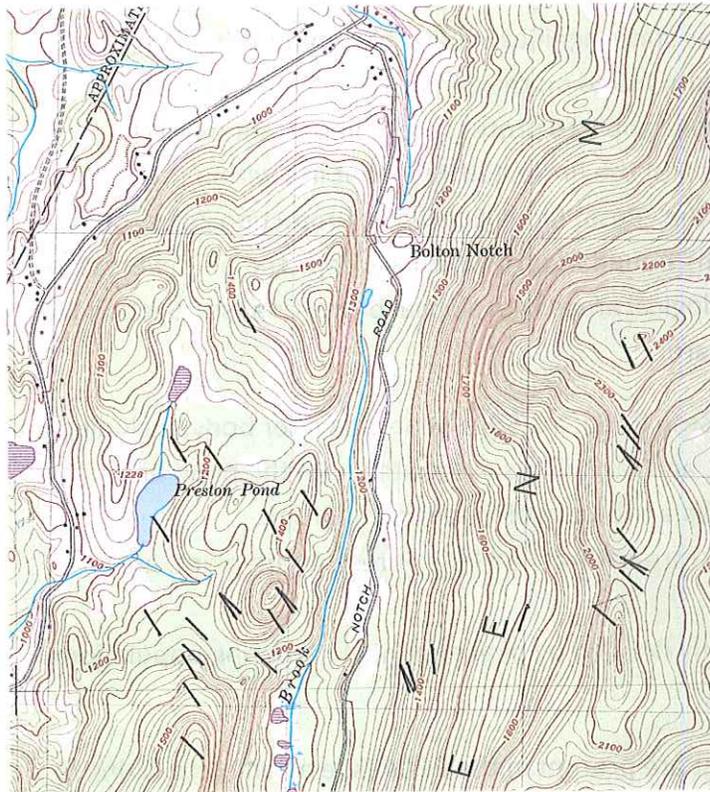


Figure 2: Topographic map of the Preston Pond area with black lines representing glacial striations (scratch marks on exposed rocks indicating a glacier's direction of travel: from northwest to southeast).<sup>2</sup>

Vermont was de-glaciated from southeast to northwest between approximately 15,500 and 13,200 years ago. As the ice sheet thinned and retreated northward and westward across the mountains, rivers were dammed producing a series of glacial lakes that inundated their drainage basins. Local features and sediments near the PPCA show that there were once glacial streams, a lake shore, and deltas nearby.

The area's soils have been mapped by the NRCS at a relatively coarse scale and a soil map can be found in Appendix 8.1. The soils (Lyman, Marlow, Peru, Cabot, and others) are primarily

<sup>2</sup> Ice Retreat Across The Green Mountain Foothills: Bolton And Jericho, Vermont, Stephen Wright, NEIGC 2011

spodosols and inceptisols formed over dense basal till. These soils tend to be acidic, of low fertility, and can vary from well-drained to poorly drained.

### 3.1.2. Natural communities

Northern Hardwood Forest (or a variant) is the dominant natural community over most of the PPCA, as it is throughout much of Vermont. The PPCA has examples of Red Pine Forest or Woodland, a rare natural community in Vermont, and Temperate Acidic Cliff, a relatively uncommon community, but one that is not usually as large as is present here. The Vermont Natural Heritage Inventory identifies these as state-significant natural communities. Long-leaved bluet (*Hedyotis longifolia*) is a rare plant found on the cliffs. In the Preston Pond and Resin Ridge Ecological Zones, special provisions apply to protect these important natural resources. The provisions apply to the portion of the Protected Area that lies within the “Preston Pond Ecological Protection Zone,” the “Resin Ridge Ecological Protection Zone,” and the “Hemlock Ecological Protection Zone” the boundaries of which are depicted on the Preston Pond Conservation Plan. The important ecological areas with special protection (see Section IV of the Easement for details on protections) are:

- The pristine, small watershed of Preston Pond, a 3,500+ year-old water body, including a wetland upstream of the pond itself, and rare plants associated with the pond and wetland. The outlet of Preston Pond is a tributary of Snipe Island Brook.
- Cliffs and a ridgetop which host the rare natural Red Pine Forest, a rare plant, and a peregrine falcon nesting site.
- A former hemlock swamp (now mostly flooded by beaver ponds) harboring populations of state-threatened Hooker’s orchids.

Among other important ecological areas that are present in the PPCA (see a complete listing in the attached Forest Management Plan) include:

- A recent large beaver pond complex containing numerous hemlock snags that can become nesting sites for birds, several small beaver ponds and their associated wetlands, as well as other important seasonal wetland habitat.
- An alder swamp that formed over dense glacial till is present at the heart of the PPCA and drains into Preston Pond. It provides a diversity of habitat that may attract species that are not usually present in unbroken northern hardwood forests. This swamp is characterized by red maple, alders, and some hemlocks. Tipped-up trees and their root balls may provide suitable conditions for Canada Warbler, a species that has been sharply declining regionally. The swamp may also provide valuable habitats for a variety of amphibians. A UVM soil morphology class sampled soils in this area and confirmed

the presence of hydric soils, confirming that this area is part of the extensive network of wetlands present in the Area (see wetland soil maps in Appendix 8.1).

In addition to the ecological benefits provided by the PPCA, its remarkable physiographic diversity, continuous forest cover, broken only by water bodies and wetlands, its wildlife, and its feeling of remoteness provide great aesthetic values.

In the future, as a result of global climate change, the natural communities of Preston Pond are likely to have to adapt to rapid changes possibly ranging from:

- warming resulting in forest pest species moving north (e.g. hemlock wooly adelgid is currently restricted in VT to the south of the state by cold winter temperatures),
- changes in drought patterns, changes in precipitation patterns and potential of leaching of some nutrients from the soil, more frequent extreme events (floods, wind storms, ice storms),
- species decline due to stress from changing climatic conditions (e.g. maple decline)
- more rain on snow and a reduction in snow cover leading to the ground freezing deeper,
- invasive plant species adapting more rapidly than native species and outcompeting them,
- the seemingly inevitable demise of white ash due to the emerald ash borer,
- and many other unknowns.

In addition to adapting to climate change, our forest will have to adapt to the non-native forest pests and disease that have been killing many trees across the country (e.g. Longhorn beetle, Emerald ash borer, beech bark disease, etc.). There is some evidence that forests which exhibit a diversity of plant species and a diversity of structure (varying tree height, understory, shrub layer) are more resilient to change. To prepare for changes to come, we should strive to maintain the diversity of Preston Pond's communities.

#### *Natural communities Recommendations:*

Higher priority recommendations are underlined.

- Diverse forests are thought to be more resilient to future threats than uniform forests. They also provide habitats for a wider diversity of wildlife species. Therefore this plan recommends that a forest management plan encourage a naturally diverse (in species and structure), mature forest.
- Monitor the presence of invasive plants, control any invasion identified (esp. wetland invasive species).

- If deemed necessary by a forester, the Resin Ridge natural community may require prescribed fire periodically to continue its existence.

### 3.1.3. Headwaters, Streams, Riparian Areas and Wetlands

Preston Pond is part of the Winooski Sub-Basin. Part of the water on the east side of the PPCA drains into Duck Brook but most of the water goes into the Snipe Island Brook. The entire PPCA is identified in the 2007 Bolton Town Plan as a Ground Water Source Protection Area. Several Public Drinking Water Sources are in the vicinity of the PPCA. Preston Pond itself is a 9-acre dystrophic (of low productivity) body of water in natural condition with a several-thousand-year-old pollen record. Torrey's bulrush (*Scirpus torreyi*) is a rare plant found on the margin of Preston Pond. The associated undeveloped wetlands of Preston Pond and the headwater basin of Snipe Island Brook are part of the Preston Pond Ecological Protection Zone. Numerous small beaver ponds, and swampy areas provide good habitat for amphibians and other wetland wildlife species.

### 3.1.4. Natural Resources Inventories

Thus far, the following groups have undertaken studies or inspections of the PPCA and these resources were used to inform the management plan:

- Liz Thompson (VBP/TNC) -rapid ecological assessment (2002)
- UVM Field Naturalist Program - Preston Pond studies (1990 and 1991)
- Chittenden County Forester Mike Snyder- four walk-throughs (2000, 2001)
- Greenleaf Forestry -forest management plan, including stand mapping for previous owners
- Bolton Keeping Track Monitoring Program- reconnaissance for key habitat features (1998, 2002)
- Brett Engstrom's thesis on Resin Ridge
- Nongame & Natural Heritage Program- documentation of Resin Ridge and Preston Pond
- UVM Graduate Ecological Planning- field final report, Jennifer Wright (2010)
- Stephen Wright of the Department of Geology at UVM -surveyed the geology of ice retreat across the Green Mountain foothills in Bolton and Jericho, VT
- Audubon Society Biologist- Bird habitat assessment (2009), update on bird habitat assessment and walk through with Audubon biologist Kristen Sharpless and Chittenden County forester Keith Thompson (2012)

- UVM Soil taxonomy class- alder swamp wetland delineation, and wetland soil classification (2012)
- Chittenden County Forester Keith Thompson – numerous walk-throughs (2012-2015)

#### ***Inventory Recommendations:***

**Additional inventories are needed** to improve our understanding of the Preston Pond ecology and allow for a tailored management plan:

- Inventory and monitoring of bird, reptile, and amphibian species present, potentially with Audubon Vermont's assistance, and including amphibians' migration paths across Stage and Notch Road.
- **Inventory and monitor mammals through Keeping Track and other means, including focusing on identifying major travelways for wildlife across Notch and Stage Roads.**
- **Identify and map seepage and vernal pools**
- Invasive plant species inventory and monitoring, including their location in the PPCA.
- Confirm the presence of previously documented rare plants (Hooker's orchis, Torrey's bulrush, long-leafed bluet) in the PPCA.

## **3.2. Wildlife**

### **3.2.1. Overview of Wildlife Presence in the PPCA**

#### ***Mammals***

A wide-variety of game and non-game mammals can be found in the PPCA. Fresh signs of common mammals such as beavers or deer can be seen on any outing. In addition, signs of area-sensitive species and wide-ranging such as black bear, bobcat, moose, fisher, otter, and mink is common. As such, this land is a critical part of Vermont's core wildlife habitat and of the essential wildlife corridors linking the Green Mountains to the Champlain Valley. However, connectivity with other conserved lands in the region is threatened by residential development along Notch and Stage Roads. In the past 15 years or so, ten new homes have been constructed on the Notch Road and a couple of clusters of homes have been built on Stage Road, potentially hindering the movement of wildlife to and from the PPCA. Preston Pond is also a critical area for bear wetland feeding. Beavers play an active role in developing and maintaining these wetlands, in and around the PPCA.

### **Birds**

A large diversity of forest and wetland birds can be seen and heard in the PPCA. Peregrine falcons, a bird formerly listed as endangered in Vermont and still a species of greatest conservation need, are known to be nesting annually in the northern end of the PPCA.

The PPCA is located in the Atlantic Northern Forest Bird Conservation Region (BCR 14) as delineated by the North American Bird Conservation Initiative. Audubon Vermont has identified the landscape around the PPCA as the Mansfield/Worcester Forest Bird Block, denoting its high importance to conserving responsibility bird species. *[A responsibility species is a bird species with a significant amount of its global breeding population found in the Northern Forest region; some of the species are showing long-term population declines.]* The Mansfield/Worcester block is roughly 75% forested. The forest of Preston Pond shows very little upland early succession habitat (young, dense forest stands), and therefore bird species that favor this type of habitat may not be found in abundance in the PPCA.

A large portion of the lower elevation portion of the Preston Pond forest is of uniform age, with a fairly consistent canopy height and little of the structural complexity seen in more mature, late successional forests. These conditions are not ideal to support a wide diversity of birds species. Providing more small openings is likely to benefit birds that seek out low brushy conditions within interior forest such as the Black-throated Blue Warbler. Providing additional openings of varying sizes and age classes would provide additional early succession habitat and a more diverse forest structure supporting a more diverse bird population. Providing abundant habitat for a diversity of bird species would require improving the overall existing interior forest conditions by incorporating varying canopy heights and pockets of thick understory development, thereby contributing to a structurally complex, uneven-aged forest (see section 4.1. for a more complete discussion of forest management goals). Desired features include varied tree ages, an overall closed canopy with dead and dying trees in varying stages of decay and size classes, so as to provide cavity nesters with nesting opportunities. A secondary management priority is to create new areas of open canopied, early-successional habitat conditions for disturbance dependent bird species. Near wetlands, beavers provide a cyclical state of these near-constant early succession conditions appropriate for a number of disturbance-dependent responsibility species such as the Chestnut-sided Warbler, Nashville Warbler and White-throated Sparrow.

### **Reptiles and Amphibians**

Most amphibians spend the majority of their lives away from water in the surrounding woods. So while wetlands, vernal pools, and ponds are critical for breeding of most species, the adjacent forests are critical for the foraging and wintering of those species. Some local amphibians migrate 300 meters or more from wintering and foraging areas to breeding ponds.

Most snakes, some turtles, and Vermont's only lizard spend the majority of their lives away from water.

Numerous seepage areas are present on the PPCA. These seepage areas are important for amphibians. Three species are regularly found using them: spring, northern two-lined, and northern dusky salamanders. Many other species use them during dry spells, and a few species overwinter in them, because the temperature in these seeps remains above freezing where groundwater surfaces. As seepages are important for many amphibians, any management should ensure that they are kept shaded and are buffered from logging (100 ft. minimum).

Management of wetlands and of the surrounding woods both have an impact on reptiles and amphibians. Some species of larger snakes and most land turtles require many years to reach breeding age. Direct mortality of breeding adults can have a devastating impact on a population. Logging can potentially result in a significant decrease in local salamander abundance. Management plans should look to conserve mole salamander species and other rare species proactively, in order to maintain the integrity of forest ecosystems. Increasing recognition of the importance of vernal pool habitats, particularly for amphibian species, has resulted in Best Management Practices (BMP) for forestry activities conducted near these particular wetlands.

Very little is known of which species of amphibian and reptile are present in the PPCA. There are reports of spotted salamanders (a mole salamander) in Bolton, and while there have been no reports of Jefferson or blue-spotted salamanders, they may be present. Mole salamander (blue-spotted, Jefferson, and marbled) populations are at risk from the loss, degradation, and fragmentation of both the aquatic breeding pool habitat required for reproduction and the terrestrial habitat needed for foraging, overwintering, growth and development. Maintaining forested land with vernal pools and other potential wetland breeding sites is vital to conserving viable populations of mole salamanders. Habitat degradation and the ultimate loss of hospitable terrestrial habitat for mole salamanders can occur if heavy equipment causes rutting and extensive soil compaction, leading to the loss of underground tunnels and burrows. Removal of coarse woody debris and other cover objects such as rocks can lead to the loss of suitable microhabitats within the forest, and disturbance to the leaf litter on the forest floor can be detrimental.

There have been no reports of wood turtles from the Town of Bolton, but they may very well be present. Maintaining forested land in forest use is vital to conserving viable populations of wood turtles. Wood turtles are found in and around rivers within forested watersheds. They require both aquatic and terrestrial habitats in order to complete their life cycles. The greatest concern during the actual forestry operations are turtles being run over and crushed by

mechanized logging equipment. The habitat alterations that are of concern with forestry practices include changes to the water quality and stream habitat that the Wood Turtle uses for overwintering, mating, and foraging.

Many of the conditions favorable to reptiles and amphibians are present in the PPCA and any management activity should ensure these are maintained or enhanced:

General amphibian microhabitat requirements include:

- breeding locations that hold water at least through July,
- coarse woody debris in adjacent forested areas,
- foliage height diversity in adjacent forested areas,
- canopy cover over breeding and foraging areas,
- deep deciduous leaf litter for moisture retention and feeding,
- cool and moist conditions

General reptile microhabitat requirements include;

- coarse woody debris (standing and down),
- small open patches for basking, mixed with well shaded refugia for warm weather and feeding,
- undisturbed areas in and around wetlands for feeding and breeding,
- access to safe denning areas.

### 3.2.2 Wildlife Specific Recommendations:

Higher priority recommendations are underlined.

#### General:

- Inventory and monitoring of bird, reptile, and amphibian species present, potentially with Audubon Vermont's assistance, and including amphibians' migration paths across Stage and Notch Road.
- Inventory and monitor mammals through Keeping Track and other means, including focusing on identifying major travelways for wildlife across Notch and Stage Roads.

#### Mammals:

- Maintain habitat connectivity with other conserved land in the Chittenden Uplands. Explore further land conservation of key travel corridors and/or management agreements with surrounding private landowners to promote wildlife movement.

- Address beaver vs. adjacent landowner conflicts in a way that does not compromise the integrity of the waters and wildlife of the PPCA.
- Encourage (release or retain) tree species that provide fruit (apple), hard mast (oak, mature beech, and nut trees), and berry bushes/trees (e.g. cherry, blueberry) that provide food for deer, bear, etc.

**Birds:**

- **Inventory and monitoring of bird species present**
- **Create patches of early successional forest as prescribed by a forester.** Seek Natural Resource Conservation Service (NRCS) funding for non-commercial habitat enhancements (formerly WHIP), if available at the time of harvest. In order to provide habitat for a range of responsibility bird species, the landscape context lends itself to a focus on further developing mature (mid-late successional) closed canopy, un-fragmented forest conditions through the PPCA, and creating patches of early-successional habitat to increase this under-represented habitat type. See the Vermont Audubon document: *A Guide to Integrating Bird Habitat Data into a Vermont Forest Inventory*.
- Retain yellow birch: The branches and foliage of yellow birch are preferentially chosen foraging substrates for insect-eating responsibility bird species, including Blackburnian Warbler, Blackthroated Green Warbler, and Scarlet Tanager.
- **Retain standing snags and cavity trees:** Standing dead trees are of significant value to a number of responsibility bird species including Northern Flicker, Chimney Swift, and Olive-sided Flycatcher as well as many other species of wildlife.
- Retain large diameter aspen and birch: Yellow-bellied sapsuckers and northern flickers frequently excavate nest cavities in trees in the sawtimber size class (> 13 in. dbh) aspen and birch species.
- **Conduct harvesting operations outside the bird breeding season.** The forest bird breeding season roughly extends from May through August.
- **Retain coarse and fine woody material and a thick leaf litter.** Small tree limbs and branches on the forest floor, including the tops of harvested trees, provide cover and feeding sites for ground and understory foraging bird species such as Veery and White-throated Sparrow. Larger diameter logs serve as drumming sites for male ruffed grouse and singing perches for songbirds including Ovenbird.

**Amphibians:**

- **Inventory and monitoring of amphibian species present**
- **Identify and map seepage and vernal pools**
- Don't introduce fish in streams and ponds where they were not previously found.
- **Follow best-practice recommendations for any harvesting**, including but not limited to:
  - Identifying and maintaining buffers around streamside, wetlands, seepage, and vernal pools. As seepages are important for many amphibians, any management should ensure that they are kept shaded and are buffered from logging (100 ft. minimum).
  - Time the harvest to prevent salamander mortality. Minimize compaction of the soil and direct mortality by keeping heavy equipment off the site when the ground is saturated. (**winter logging or logging in late summer and early fall conditions** should help minimize this effect)
  - Maintain adequate canopy cover near critical habitats. Streams, ponds, and vernal pools should be kept shaded and silt should be kept out of the water.
  - Maintain large downed trees (2 per acre, 7 per hectare), dead standing trees, and a future supply consisting of older standing trees. Maintain standing trees with knotholes and dead branches.
  - Within areas that are heavily cut, patches of older trees should be left in addition to the scattered mature trees
  - Maintain a thick layer of deciduous litter.
  - Protect and maintain shrub cover in the forest and on forest edges.
  - **Avoid creating ditches and ruts that will hold water only briefly.** Amphibians often lay their eggs in these small patches of water which dry too soon to permit the larvae to transform and leave.

## 4. Forestry

### 4.1 General Description

As a natural community, a forest is constantly evolving. Part of this change is from external factors – strong winds, ice storms, drought, insects, disease, fires, and floods can each significantly alter what may otherwise seem a stable system in a very short period of time. In a longer timeframe, natural succession cause transitions in plant species from early successional stages (white birch, pine, poplar), to intermediate species (ash, red maple, black cherry), to mature successional stages (sugar maple, beech, yellow birch), along with changes in understory plants.

As the forest changes, various species that depend on it also change. Songbirds that rely on brushy vegetation will not remain as that vegetation grows taller - but they might return if a cluster of trees is blown down in a windstorm and new brushy vegetation starts again. Beavers that create new wetlands may move out after they have depleted readily available food sources - but they may return years later to feed on new growth. Prey and predator populations increase and decline as food sources vary from year to year, and as habitat changes over time.

The Preston Pond Conservation Area has changed as well, from farmland to forest, and at this point in time the forest is fairly uniform, with 10" to 14" dbh Red Maple as a dominant component of the forest cover, while sugar maple is common, and white ash, beech, yellow birch and white birch are associates. However, as noted in previous sections, a uniform forest cover does not provide great wildlife habitat, nor is it as resilient as a more diverse forest would be. With two of the primary objectives for this PPCA focusing on wildlife habitat and ecosystem diversity, this plan shall rely on limited forest management practices as a tool to meet those objectives. This will entail silvicultural treatments that diversify forest structure while maintaining a generally mature forest condition in most areas. There shall be a general goal of broadening the diversity of tree species in the forest canopy and creating a variety of age classes - from brushy regeneration to mature dominant trees. The intent is that operations be on smaller acreages, and with smaller volumes, as opposed to planning to log the entire property in one or two sales. This allows more age class diversity, consistent with the wildlife goals. This goal has to be balanced with the need to have large enough sales in operable stands to be economically viable.

Attached to this plan is a Forest Management (sub)plan, which identifies various forest stands and prescriptions made for management of operable stands. Other areas are identified in the subplan where harvesting is not appropriate based on the easement restrictions, access limitations or fragile nature of a particular site. Any tree harvesting in the PPCA shall be undertaken as a means of furthering other goals and objectives outlined in this plan.

## 4.2 Forest Stand Descriptions

See the Forest Management Plan.

## 4.3 General Forest Management Principles

- Allow limited forest harvesting that furthers the goals and objectives of this plan – ecological diversity, wildlife habitat improvement, recreation/public uses, scenic resources, education and research.
- Ensure that any forest harvesting is laid out and supervised by a professional forester.
- Avoid the Ecological Protection Zones when planning any forest harvesting activities.
- Construct and maintain all logging roads consistent with the Plan goals, and Vermont’s Acceptable Management Practices, which minimize erosion, and prevent siltation in any water courses.
- Lay out skid trails in a way that does not compromise recreation trails. These skid trails should generally be closed after logging use to allow them to revegetate rather than allowing ongoing use for other purposes.
- Retain dead trees, occasional wolf trees, and large trees with cavities as outlined in section 3.2. Also see the Vermont Audubon document: *Options for Integrating Timber and Songbird Habitat Management in Northern Hardwood Stands in Vermont*
- Practice small scale silvicultural treatments, rather than large scale operations.
- Retain adequate fine and coarse woody debris on the ground to provide habitat and improve soil productivity as outlined in section 3.2.
- Follow best practice recommendations regarding bird and amphibian protection and habitat enhancement outlined in section 3.2.2.

## 4.4 Recommendations

- Re-establish boundary lines for the PPCA
- Any revenues from forest harvesting should be retained in a separate fund to be used for the management and maintenance of the PPCA

- Map and find funding to stabilize all existing skid trails.
- Work with adjacent landowners to find an additional access point that would facilitate forest management activities on the southern end of the PPCA, which is a long distance from existing access points on the Notch and Stage Roads. **If necessary, discuss this need with VLT vis-à-vis crossing of Ecological Protection Zones.**

## 5. Recreational Uses

The PPCA has proven to be a great resource for many types of outdoor recreationists. This section shall serve as a blueprint and set guidelines for those recreational activities. The objective is to provide access to as many user groups as possible while protecting and conserving the natural resources and wildlife habitat existing within the PPCA.

### 5.1. Unrestricted Uses

The following activities are allowed throughout the PPCA both on and off trails, subject only to the general rules and to potential seasonal restrictions:

- Hiking & Jogging
- Wildlife Viewing & Bird Watching
- Skiing & Snowshoeing
- Walking Dogs: Dogs are permitted on and off trails. Leashes are suggested, but not required. Dog owners are required to keep their pets under voice control and to clean up after them.
- Educational Activities: Public and private educational groups
- Rock and ice climbing
- Non-motorized boating

### 5.2. Uses on Designated Trails/ Areas

The following activities are allowed throughout the PPCA on designated trails/areas. Individual users shall be responsible for making sure their use does not cause severe or enduring negative impact on any trails and shall abide by the general rules laid out in section 5.7.

- Horseback Riding – VAST trail (not in winter and when excessively muddy).
- Snowmobiling – VAST trail.

### 5.3 Uses Requiring Permission from the Town

- Trapping: Trapping shall only occur to protect natural habitats or to protect natural habitats or to protect public health or safety, as determined by the Conservation Commission. The criteria in Appendix 8.2 shall aid the Bolton Select Board in permitting trapping on the PPCA.

### 5.4 Uses Requiring a State License/Registration

The following uses are allowed in the PPCA with a valid state license/registration.

- Hunting ,Fishing & Trapping: Hunting, fishing and trapping (see Sec. 5.3) are permitted in the PPCA in compliance with the laws of the Vermont Fish & Wildlife Department. A valid state hunting, fishing and/or trapping license is required. The Town, through the Forest Steward (see Sec. 7), shall make an effort to inform the public about proper safety precautions during hunting and trapping seasons.
- Snowmobiling: the Vermont Association of Snow Travelers (VAST) maintains a trail that passes through the PPCA. As required by State Law, snowmobiles must be registered with the State.

### 5.5. Motorized Recreational Use

Current policy of Vermont Land Trust (VLT) and Vermont Housing Conservation Board (VHCB), co-holders of the Conservation Easement for the Town Forest, prohibits the use of motorized vehicles—with the exception of snowmobiles and special needs use—on all of its properties.

### 5.6 Prohibited Uses

The following uses are prohibited in the PPCA.

- Mountain Biking
- All-terrain vehicles (ATV's)
- Off-road vehicles
- Motor boats

- Paragliding
- Camping and campfires

## 5.7. General Rules for Recreational Use

In general, recreational users should adhere to Leave-No-Trace (LNT) principles (see Section 6 – Education). Faster users shall yield to slower users on all trails, except the VAST trail, where pedestrian users shall yield to snowmobiles. Recreation management (through personal contact and trailhead signage) shall follow the Leave No Trace ethic (see [www.LNT.org](http://www.LNT.org)), such as: carrying out all trash, proper sanitation, avoiding camping and fires, respecting other users, respecting wildlife and wildlife habitats, avoiding designated protected areas during critical times, and minimizing impact on natural resources, including avoiding muddy trails. Off-trail foot travel is not discouraged, including use of the network of informal trails and old skid paths, however these routes shall not be promoted nor maintained.

### 5.7.1. Seasonal Restrictions

At a minimum of every five years, potential incompatibilities and trail impacts shall be evaluated. In the interim, the Town, through the Forest Steward (see Sec. 7), and cooperating organizations shall make an effort to publicize and post on trail kiosks the dates of hunting seasons, peregrine falcon nesting periods, periods of muddy conditions, and proper safety precautions. Users are strongly requested to avoid using trails that are muddy or wet, and to follow proper safety precautions, so as to avoid undue natural resource degradation, personal injury, or necessitating seasonal restrictions by dates.

## 5.8 Guidelines

### 5.8.1 Developing New Trails

The existing trail system (as depicted on the attached trail map) will serve expected uses likely without significant changes. Any proposed new trail, or significant relocation of an existing trail (i.e., greater than 500' in length and/or 100' laterally from the existing location), in the PPCA shall undergo review by the Conservation Commission and the Vermont Land Trust, according to the following guidelines.

1. Any party interested in building new trails shall identify a liaison for the group to facilitate communication with the BCC.

2. Proposed trail locations shall be flagged in blue with each terminus marked by three blue flags.

3. In reviewing the proposed trail location and design, the Conservation Commission and VLT shall consider the proposed trail with regards to:

- provisions of the Conservation Easement
- any adverse impacts to any natural resources
- ability to be shared with other user groups (e.g., hiking / cross-country skiing)
- ability to be used by special needs populations (in certain cases near access points accessible trails may be promoted)
- providing a logical and desirable connection within the current trail system
- potential access for timber management or other land management activities
- educational opportunities
- needs for ongoing maintenance
- requirements of unusual resources (financial, technical, labor, materials) for installation

#### **5.8.2 Trail Maintenance**

The Forest Steward (see Sec. 7), or her/his designee, shall be responsible for trail development and maintenance, including organized events. The Forest Steward shall keep the Conservation Commission informed of maintenance activities. Individual volunteers may engage in blowdown removal, limbing or clipping, bridge repair, treadway hardening, and erosion control, but only in conformance with best practices (see AMC's Complete Guide to Trail Building and Maintenance) and safety standards. All trail volunteers shall have a signed waiver form (see Attachments) on record with the town, as provided by the town. The Forest Steward, through the Conservation Commission, may deem it necessary to acquire funding for hiring a professional trail crew for a special project, however the emphasis will be on volunteers to conduct ongoing maintenance.

#### **5.8.3 Trail Structures and Signs**

The PPCA's trail system is designed to be primitive, with minimal improvements beyond those designed to prevent soil erosion and facilitate drainage. Trail markings are provided by blue disks nailed to trees. Signs at junctions are not painted and provide only essential information (destinations and distances), and are mounted on posts if at all possible.

## 5.9 Recommendations

The following trail issues need to be addressed:

- Approx. 600' of the VAST trail deviates from the protected corridor onto private land shortly above the Stage Road access. The current location of the trail is more stable and less steep than the protected corridor, however pedestrian access could be relocated if necessary. The BCC shall work with VAST to reach a long-term agreement (easement?) with the private landowner to maintain the current route.
- A portion of the Libby's Look loop passes onto private land on the northwestern corner of the PPCA. Official permission should be obtained from the landowner.
- The Libby's Look Trail from the eastern junction with the VAST trail to the Look-out is in the greatest need of drainage, stabilization and erosion control. Minor relocations of the route, as well as additional rock structures (steps, stairs and waterbars), will likely serve the need. However, scouting of an alternative route may be warranted.
- The VAST trail has the most substantial structures (culverts, ditches) for keeping the trail well-drained. VAST shall remain primarily responsible for maintaining those structures to minimize wash-outs and extensive muddy sections.
- The section of the VAST Trail on the western edge of the Upper Pond needs to have the tread raised to avoid periodic flooding. The Town shall look to cooperate with VAST and the Streeter family to improve this section. A beaver baffle will be maintained in the nearby dam to help control water levels.

## 6. Education

While the PPCA is currently used mainly by local citizens, it remains a unique resource for Chittenden County and the State of Vermont. It shall be available for low impact research by scientists and students of all ages. There is the opportunity to establish a research agenda in cooperation with area schools and colleges. Interpretation of the area's natural and cultural significance shall be conducted unobtrusively. Groups using the area shall be carefully managed so as to not adversely impact other uses or the land itself.

The PPCA shall continue to serve as a demonstration site for natural resource protection, sustainable recreational uses, and sustainable forestry. This Plan is responsible for promoting activities that advance the educational and community involvement goals of the PPCA.

Education and community involvement goals include:

- Inclusive community dialogue around PPCA management topics.
- Easily accessible information about all PPCA topics, including access, use restrictions, educational programs, and stewardship activities.
- Place-based nature programs and facilitated independent explorations that are safe, supportive, and available to everyone in some format. (While not everyone is able to explore the forest on foot, programming can include accessible classroom and community lessons, 'virtual tours', interpretive slideshows, etc.)
- Community service projects that improve the forest's recreational access, educational outreach and impact, and sustainable forest products.

## Recommendations

*Research* -- Formal scientific research plans shall be submitted to the Stewardship Committee for review at least one month prior to implementation, including the planned placement of stakes, ropes, wires, fencing, netting, flagging, signs, paint, branches, brush or other materials. Placement of such materials must be done so as not to endanger humans, pets or wildlife. All such materials must be removed in a timely manner. Research activities shall minimize impacts to flora and fauna.

*Educational and interpretive signage* -- Promote the Leave No Trace ethic (see [www.LNT.org](http://www.LNT.org)), such as: carrying out all trash, sanitation, avoiding camping and fires, respecting other users, respecting wildlife and wildlife habitats, avoiding designated protected areas during critical times, and minimizing impact on natural resources, including avoiding muddy trails. Trailhead

kiosks at the Bolton Notch and Stage Road trailheads shall display LNT information, trail maps, seasonal restrictions, and a list of management partners (VLT, VAST). The kiosks will not be available for general community information. In the interior of the PPCA, there may be the opportunity to interpret certain features (e.g., the cellar holes, active beaver wetlands). These displays shall be subject to review by the Stewardship Committee.

*Outreach and promotion* -- Provide information and educational resources about the PPCA to town residents, such as through the Bolton Gazette, public meetings, listserv messages, Town website, guides and brochures, maps, signs, and classroom and field programs. Active promotion of the PPCA shall be limited to local schools of the Chittenden East Supervisory Union.

## **7. Forest Stewardship**

It is the responsibility of the Town of Bolton to take the lead on all monitoring and enforcement of this management plan.

### **7.1 Forest Steward**

To assist the Select Board and Conservation Commission in the implementation of this plan, a volunteer from the town shall be elected as Forest Steward every two years, subject to renewal by the Conservation Commission and the Select Board. The Conservation Commission shall work with the Select Board to appoint the volunteer Forest Steward responsible for implementing this plan. The Forest Steward shall be a volunteer citizen of Bolton, and will work under the guidance of the Conservation Commission to fulfill his/her role as primary contact alongside the chair of the Commission for all management-related issues for the Preston Pond Conservation Area (see attached position description).

### **7.2 Structure & Decision-making**

The Preston Pond Forest Steward shall work directly with the Conservation Commission and Vermont Land Trust to ensure enforcement of the Management Plan and compliance of the plan with the Conservation Easement.

The Forest Steward shall report semi-annually to the Conservation Commission and Select Board about management of the PPCA.

If and when matters of legal, policy or controversial consequence arise, the Forest Steward shall make recommendations for action to the Conservation Commission, and VLT where appropriate. The BCC shall make recommendations to the Select Board for a final decision. The Forest Steward shall also assess whether various user groups are self-enforcing and implement their respective policies in the Management Plan.

## 8. Appendices

### 8.1 Maps

#### 8.1.1 Soils

##### Additional Soil information

United States Department of Agriculture, 18989)

Soils consist of Cabot extremely stony silt loam (CbD 3-25%), (Lyman-Marlow very rocky loams (5-30% LyD, 30-60% LyE), Marlow extremely stony loams (5-20% MeC, 20-60% MeE), and Peru extremely stony loam, 0-20% slopes (PsC).

The Cabot series is deep, somewhat poorly drained and poorly drained soils that have a fragipan and are loamy throughout their profile. They formed in glacial till derived from mica schist and limestone. They have natural fertility. They are mostly used for trees or idle.

The Lyman series are shallow, rocky, very rocky and somewhat extremely well drained and loamy throughout their profile. They formed in glacial till derived from mica schist. They have very low fertility and moderately low moisture capacity. These soils dry up quickly and cannot provide the necessary water for vegetation to grow during longer dry periods in the summer. These soils are mostly wooded.

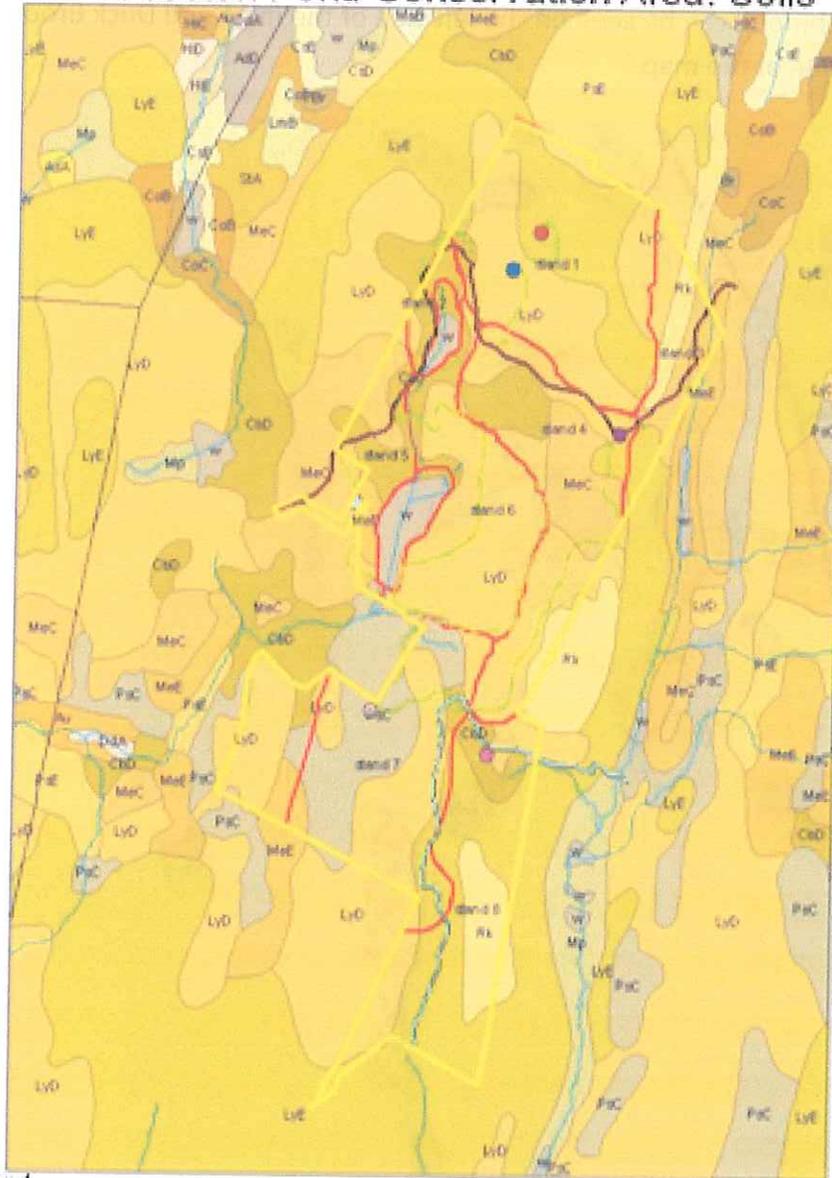
The Marlow series are deep, stony and extremely stony, rocky and very rocky, and well-drained. They are loamy throughout their profile. They formed in glacial till derived from schistose rocks. They have low natural fertility and moderate moisture capacity. These soils dry up quickly and cannot provide the necessary water for vegetation to grow during longer dry periods in the summer. Marlow soil can be used for pasture if slopes permit.

The Peru series are deep, stony and extremely stony, and moderately well-drained. They are loamy throughout their profile. They formed in glacial till derived from quartzite, phyllite, and schistose rocks. Peru soils have low natural fertility. In almost all places the Peru soils were originally too stony to farm but in many places the stones have been removed to allow farming. On stoned-cleared areas, these soils are mainly used for hay and pasture, but a small acreage is wood or idle.

Marlow soils of lesser slope (MeC) have moderate to severe limitations for streets and parking, and picnic areas. All soil types on the PPCA have severe limitations for all recreation activities and associated management identified in the Soil Survey of Chittenden County.

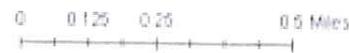
Potential productivity for commercial timber Ly series fair, Me series and PeC good, Cabot not suitable.

### Preston Pond Conservation Area: Soils



**Legend**

- City
- town\_forest\_bound
- special features**
- descript**
- cellar hole
- Ibbey's (toxic) overlook
- log landing
- new beaver activity
- upland seep
- Phoebe L. Longstreth memorial
- BTF\_VAST
- misc\_fraks
- chf\_stream
- stands
- BTF\_longrad



### 8.1.2 Vermont significant wetland map

Class II wetlands are indicated by a yellow hash pattern, hydric soils (in brown are wetland advisories that should be confirmed by on-the-ground soil sampling). The border between Bolton and Jericho and Richmond can be seen on the left side of the map, and Duck Brook is represented on the right side of the map.



## 8.2 Trapping in the PPCA

### 8.2.1 Criteria for requesting and approving applications

If the Bolton Conservation Commission determines that trapping is required to protect natural habitats or public health and safety in the PPCA, a request for applications shall be made to trappers who are residents of Bolton, and, if no town residents are available, then to the larger trapping community. In order to be considered, trappers shall have submitted the most recent annual mail survey to the Vermont Department of Fish & Wildlife (VTDF&W) to demonstrate their commitment to responsible and state-mandated furbearer management.

An on-site assessment of the PPCA, regarding the capacity of the targeted furbearer population to be trapped, maybe requested by the Conservation Commission of a VTDF&W wildlife biologist or other qualified biologist prior to decision-making.

A trapper shall file the town's trapping application with the Bolton Select Board, which shall warn the item on its agenda, and invite the Conservation Commission to attend the meeting to provide input.

The Select Board's decision shall consider the permission form, these criteria, information from the biologist's site review, and the Conservation Commission's recommendation.

### 8.2.2 Conditions on approved trapping applications

Traps shall be placed at least 30yards from any trail.

Snowmobiles can be used only on the VAST trail and direct access to traps shall be by foot.

VTDF&W regulations shall be explicitly followed, including the frequency of checking traps and the trapper's name and address labeled on each trap.

The trapper shall notify the Conservation Commission within 24 hours of traps being set.

The Conservation Commission shall post information at trailhead kiosks to make visitors generally aware that hunting, fishing and trapping are allowed on the property. Notification of specific trapping activity may also be signed on the trails in the vicinity of the traps.

Trappers shall inform the Conservation Commission of the number and sex of target species taken, as well as incidental take, within two weeks of the conclusion of the permit.

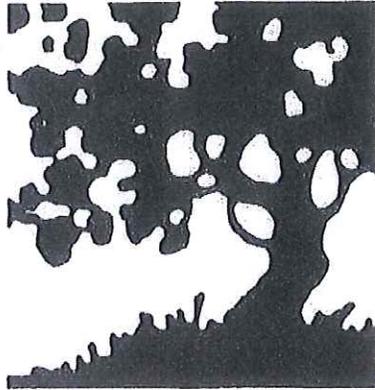
### 8.3 Resources

AMC Trails Department. AMC's Complete Guide to Trail Building and Maintenance, 4th ed.  
Appalachian Mountain Club. 2008.

Leave No Trace ethic: [www.LNT.org](http://www.LNT.org)



# BASELINE DOCUMENTATION REPORT



**Vermont Land Trust**

**PRESTON POND**

**Bolton, Vermont**

**VLT Project No. 400339**

**VHCB No. 2003-013**

Prepared by:  
Vermont Land Trust  
The King Farm  
3117 Rose Hill  
Woodstock, VT 05091  
(802) 457-2369

### **Vermont Land Trust ■ Conservation Stewardship**

The Stewardship Program, located at the historic King Farm in Woodstock, is staffed by a director, landowner services coordinator, stewardship forester, stewardship assistant, and conservation field assistants. The 154-acre King Farm was left to the Vermont Land Trust as a bequest of the late Francisca King Thomas.

The responsibilities of the Conservation Stewardship Program include maintaining land related records, tracking changes in land ownership, monitoring conserved properties at least annually, photo-documenting land uses periodically, answering landowner questions, interpreting or approving permitted activities, and correcting violations through voluntary compliance or, if necessary, legal proceedings.

The Conservation Stewardship Program publishes a newsletter, *Stewards of the Land*, three times annually for the more than 800 owners of property protected by conservation easements. Stewardship Program staff also support landowners as stewards of their land by offering information and advice on sound and sustainable uses of conserved properties.

### **This Report Contains the Following Information:**

- Signature pages
- Introduction and description of the current uses of the property
- Summary of Grantor's and Grantee's rights
- References
- Conserved property location map
- USGS topographic map
- Orthophoto map
- Conservation Easement Map
- Soil map
- Photopoint map
- Photographic Documentation

I, W.G. LIVINGSTON, duly authorized agent of the Vermont Land Trust, Inc., have signed this Baseline Documentation Report with the understanding and agreement that this Report will be used for, but not limited to, monitoring the property depicted and described in this Report for compliance with the Grant of Development Rights, Conservation Restrictions and Public Access Easement, dated today and signed by me. I have read this Report and understand it. I agree that this Report, including the maps and photographs, accurately describes and depicts the physical features, relevant site conditions, and current structures and land uses on the property conserved by the Grant. I affirm that there are no activities ongoing on the property that are inconsistent with the Grant.

GRANTOR, VERMONT LAND TRUST, INC.

Justa Smith  
Witness

By: W.G. Livingston  
Its Duly Authorized Agent

3/24/03  
Date

STATE OF VERMONT  
WASHINGTON COUNTY, SS

At Montpelier, Vermont, on this 24<sup>th</sup> day of March, 2003, personally appeared W.G. LIVINGSTON, duly authorized agent of the Vermont Land Trust, Inc. 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.

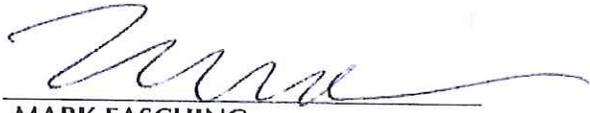
Before me, Justa Smith  
Notary Public  
My Commission Expires: 2/10/2007

Bolton – Preston Pond

We, **MARK FASCHING** and **PIETER VAN LOON**, have signed and prepared this updated Baseline Documentation Report with the understanding and agreement that this Report will be used for, but not limited to, monitoring the property depicted and described in this Report for compliance with the Grant of Development Rights, Conservation Restrictions and Public Access Easement, about to be executed. We affirm that we visited this property personally and that this Report including the maps and photographs accurately describes and depicts the physical features, relevant site conditions, and current structures and land uses on the property conserved by the Grant.

VERMONT LAND TRUST, INC.

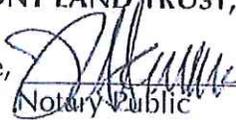
  
\_\_\_\_\_  
Witness

By:   
\_\_\_\_\_  
MARK FASCHING

8/11/04  
\_\_\_\_\_  
Date

STATE OF VERMONT  
CHITTENDEN COUNTY, SS

At Richmond, this 11 day of August, 2004, **MARK FASCHING**, 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 to be the free act and deed of the **VERMONT LAND TRUST, INC.**

Before me,   
\_\_\_\_\_  
Notary Public  
My Commission Expires: 2/10/2007

ManBeth De  
Witness

By: PIETER VAN LOON

8/11/04  
Date

STATE OF VERMONT  
WINDHAM COUNTY, SS

At Brattleboro, this 11<sup>th</sup> day of August, 2004, PIETER VAN LOON, 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 to be the free act and deed of the VERMONT LAND TRUST, INC.

Before me, Joska Mia  
Notary Public  
My Commission Expires: 2/10/2007

## **PRESTON POND Bolton, Vermont**

### **Introduction**

The purpose of the enclosed information is to describe the physical features and current land uses of **Preston Pond** on which the development rights, perpetual conservation easement and restrictions, and public access easement will be conveyed to the Vermont Land Trust, Inc. (VLT), and the Vermont Housing and Conservation Board (VHCB) and recorded in the Bolton Land Records.

This report is based, in part, on a documentation visit by Mark Fasching (Conservation Field Assistant) for the Vermont Land Trust on February 7, 2003. Pieter van Loon (VLT Stewardship Forester) and Lars Botzjorns (Bolton Conservation Commission) were also present during the visit. Pieter made a subsequent visit to the property on September 18, 2003 for the purposes of gathering additional information about the property. Mark and Pieter assembled the report and digital photographs; maps were prepared by Mark, Chris Moore (GIS Assistant), and Pieter.

### **Description and Current Use**

Jim Tiffany and Dan Morrissey purchased a  $\pm 434$  acre piece of forested property in Bolton, including Preston Pond, in the late 1980s. They have sold  $\pm 403.2$  acres of the property to the Vermont Land Trust, Inc. and retained the remainder. The property consists of forested land, streams, ponds, wetlands, trails and frontage on Notch Road and Stage Road in Bolton.

The Vermont Land Trust has placed a conservation easement on the property that includes a public access component and protection of sensitive ecological zones. The Vermont Land Trust is conveying the property to the Town of Bolton. The town is required to develop a Management Plan for the property.

### **Purposes of the Grant**

The two Primary Purposes are:

1. To conserve and protect biological diversity, wildlife habitats, unfragmented forest, natural communities, riparian buffers, and native flora and fauna on the Protected Property, and the ecological processes that sustain these natural resource values as they values exist on the date of this instrument and as they may evolve in the future; and
2. To foster compatible pedestrian use and utilization of the Protected Property.

The three Secondary Purposes are:

1. To make the property available for dispersed non-commercial public recreational opportunities, and to provide for snowmobile, bicycle and equestrian access to defined recreational corridors;

2. To protect open space values and scenic resources associated with the Protected Property for present and future generations; and
3. To assure that any improvement or harvesting of forestry resources on the Protected Property encourages the long-term, professional management of those resources and facilitates the economically sustainable production of forest resources in a manner that minimizes negative impact and the duration of impact on surface water quality, recreational benefits to the public, wildlife habitat, and other conservation values.

Resource Attributes of the Protected Property

The purposes will be advanced by conserving the Protected Property because it possesses the following attributes:

- (1) Preston Pond, a 9-acre dystrophic (of low productivity) body of water in natural condition with an old pollen record that has been designated a Biological Natural Area by the Vermont Nongame & Natural Heritage Program, and the associated undeveloped wetlands and headwater basin of Snipe Island Brook;
- (2) Good examples of two upland natural communities, red pine forest and temperate acidic cliff, on two prominent summits along Resin Ridge, a Biological Natural Area designated by the Vermont Nongame & Natural Heritage Program;
- (3) Two rare plants, Torrey's bulrush (*Scirpus torrey*), found on the margins of Preston Pond, and long-leaved bluet (*Hedyotis longifolia*), found on the cliffs of Resin Ridge; a nesting site for peregrine falcons (*Falco peregrinus*), a state-endangered raptor; populations of state-threatened Hooker's orchis (*Platanthera hookeri*); two uncommon plants associated with rich northern hardwood forest, wild millet (*Milium effusum*) and three-leaved snakeroot (*Sanicula trifoliata*);
- (4) Core habitat for area-sensitive and wide-ranging species such as bobcat, moose, bear, fisher, otter, and mink; and part of a growing expanse of conserved lands in the Chittenden County Uplands, a region that stretches from and provides connectivity between the lower-elevation forests, wildlife habitat and natural communities of the Winooski and Champlain Valley and those of the Green Mountains;
- (5) Approximately 3,750 feet of the Long Trail and a mile of trail managed by the Vermont Association of Snow Travelers; dispersed recreation opportunities such as hunting, fishing, back-country skiing, snowshoeing, and hiking;
- (6) A prominent rocky outlook known locally as "Libby's Look" that provides scenic views of Preston Pond and the small headwaters basin of Snipe Island Brook, as well as long-distance views of the Adirondacks, Green Mountains, and Champlain Valley;

## Preston Pond ♦ Bolton, Vermont

- (7) Opportunities for nature observation, study, and research by students of all ages and abilities; and
- (8) Productive forestland.

### Inventory of Existing Buildings

The only structure on the property is a small platform (approximately 5 feet by 5 feet) on the western edge of Preston Pond (see photo 18).

### Excluded Parcels

The following has been excluded from the terms of the Grant:

- Lots One and Two as depicted on a survey entitled "Subdivision Map, James Tiffany, Nancy Mazel Tiffany and Daniel Morrissey" prepared by Brooks Land Surveying Inc., dated June 11, 1993, last revised June 5, 1997, and recorded at Map Slide 33-B of the Town of Bolton Land Records; and
- 23.89 acres depicted on a survey entitled "Plat Showing Survey and Proposed Subdivision of Property of James L. Tiffany, Nancy R. Mazel Tiffany and Daniel B. Morrissey, Stage Road, Bolton, Vermont," prepared by Button Professional Land Surveyors, P.C., dated 11-27-02, revised 03-05-03, and recorded in Map Slide \_\_\_\_ of the Town of Bolton Land Records.

### Natural Resources

Data from the Vermont Center for Geographical Information (see reference section) shows the occurrence of **wetlands** including Preston Pond and Upper Preston Pond and **wetlands** in the northeast corner of the property near Notch Road. In addition, two natural communities are identified; a lacustrine natural community at Preston Pond (Preston Pond Ecological Protection Zone) and a terrestrial natural community located on a ridgeline (Hemlock Ecological Protection Zone).

### Ecological Protection Zones & Surface Water Buffer Zones

#### **Preston Pond, Resin Ridge, and Hemlock Ecological Protection Zones**

- Timber harvesting, other forest management activities, or any other ground-disturbing activities are not allowed.
- Non-motorized recreational trails may be constructed and maintained within the Zones upon prior written approval of the Vermont Land Trust. They should not have a significant negative impact on the ecological values of the Zones.

## Preston Pond ♦ Bolton, Vermont

- Maintenance of existing VAST trail as depicted on Preston Pond Conservation Plan is allowed. Relocation of the VAST trail requires prior written approval of the Vermont Land Trust and should not have a significant negative impact on the ecological values of the Zones.

### **Surface Water Buffer Zones**

- Harvesting or other forest management activities are **not allowed** within 100 feet of the thread of Duck Brook, and within 50 feet of the thread of all other streams depicted on the Preston Pond Conservation Plan, or successor maps.
- Stream crossings are permitted for the purpose of constructing roads for transporting forestry machinery and harvested timber. The number and width of such crossings should be kept to a minimum and must include the installation of erosion control devices as described in the Acceptable Management Practices (AMPs).

### **Management Plans**

#### **General Provisions**

The landowner is required to develop a comprehensive Management Plan including updates, revisions and amendments. The landowner shall solicit public input from residents of Bolton, the general public, biologists and resource professionals from state agencies and non-profit organizations such as the Vermont Dept. of Fish & Wildlife and The Nature Conservancy. The Management Plan should be developed in a timely and responsive manner and the Vermont Land Trust shall be provided a copy of each draft Management Plan and a copy of each final adopted Management Plan. The successor landowner, Town of Bolton, has developed an interim Management Plan. The Town of Bolton shall develop the first Management Plan on or before April 1, 2005. The Management Plans shall include:

- Provisions for the use and management of the Protected Property consistent with and advancing the Purposes of the Grant; and
- At a minimum shall identify and/or address and balance resource attributes and human uses of the Protected Property, to minimize the impact on water quality, plant, wildlife, and aquatic habitat. The Management Plans shall address the following elements, at a minimum:
  1. Protection of Ecological Zones, natural communities, and other ecologically sensitive areas or species;
  2. Wildlife habitat for area-sensitive and wide-ranging species such as bear, moose, bobcat, otter, fisher and mink;
  3. Sustainable forest management;
  4. Recreational uses (trails, rock climbing) and, if appropriate, recreation linkage to private and public lands;
  5. Public access and parking;
  6. Education, interpretation, and research;
  7. Signage and sanitary facilities (if any).

**Forest Management Plan**

All harvesting of timber and other wood products, construction and maintenance of skid roads and forestry roads shall be conducted in a manner consistent with a forest management plan. The forest management plan shall be a component of the Management Plans.

**Wildlife Habitat Management**

Wildlife management shall be a component of the Management Plans. The Plan shall describe practices and strategies to preserve the natural values and to maintain the natural functions of the Protected Property as wildlife habitat. The Plan shall address the planting, maintenance and cutting of vegetation (if any), and other activities related to maintaining wildlife habitat. The Plan shall also address how the Protected Property's managed habitat (if proposed) will impact animal and plant communities situated on other conserved lands in the area.

If the landowner chooses to conduct wildlife management activities, the activities shall be conducted as contemplated in the most recently approved Management Plan. Research and educational activities related to the Purposes of this Grant, including, but not limited to, wildlife, plant life, and associated ecology are allowed.

**Public Access**

The landowner shall allow access to the general public for all types of dispersed non-commercial pedestrian public recreational opportunities and educational purposes (including, but not limited to, bird-watching, boating, cross-country skiing, fishing, hiking, hunting, snowshoeing, swimming, walking and wildlife observation). Intensive, concentrated uses for motorized access by snowmobiles, for non-motorized, mechanized recreation such as mountain biking, for access by disabled persons, for equestrian trails, and for hiking trails may be permitted in the discretion of the landowner, but shall be located in identified, mapped recreation corridors consistent with the Purposes of this Grant and permitted under the Management Plan.

The landowner 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. If the Vermont Land Trust approves a conveyance of the Protected Property, then they may also require that a separate Grant of Public Access Easement also be conveyed to the Vermont Land Trust.

The landowner may assign its rights and obligations with regard to the management of recreational uses to another entity (the "Manager"), provided (1) the Manager is qualified and has the capacity to perform the management functions of the landowner; (2) the Manager undertakes in writing to fulfill the management obligations of the landowner; and (3) Landowner first provides written notice to the Vermont Land Trust of the name, address and other means of contacting the Manager.

### Summary of Grantee('s)<sup>1</sup> Rights

Conservation restrictions allow the property to be used for habitat conservation, natural area, forestry, education, non-commercial recreation, and open space purposes. The following restricted and permitted uses have been granted.

### **RESTRICTED USES OF THE PROPERTY**

The following are limitations on the landowner's use of the conserved property:

1. **General:** This conserved property may be used for habitat conservation, natural area, forestry, educational, non-commercial recreational, and open space purposes only. Unless specified in the easement, no residential, commercial, industrial, or mining activities are permitted.
2. **Rights of Way and Easements:** The easement prohibits rights of way and access easements including driveways, roads, and utility lines unless specifically permitted in the document or unless **written permission** for new easements is obtained from VLT. Existing rights of way and easements are unaffected.
3. **Signs:** Signs are generally prohibited. However, exceptions include property identification signs, boundary markers, directional signs, signs posting the property against trespass, memorial plaques, and temporary signs indicating the property is for sale or lease. VLT, with the permission of the landowner, may erect signs indicating that the property has been conserved by VLT and VHC.B.
4. **Trash:** The storage of trash, human waste, or unsightly material on the property is prohibited unless VLT approves such storage in advance. No permission is required for temporary trash storage.
5. **Excavation:** The easement prohibits filling, excavation, removal of topsoil, sand, gravel, rocks, or minerals, or any change to topography unless the change is necessary to carry out the uses otherwise permitted by the conservation easement. Surface mining is expressly prohibited.
6. **Subdivision:** Subdivision of the property is prohibited unless the owner first secures **VLT's written permission**. Since the intent of the conservation restrictions is to maintain the protected property as a single parcel, except when a right to subdivide is specifically permitted in the Grant, approval to subdivide is rarely granted. Any subdivided parcel remains protected by the conservation easement. The original Grantor, Vermont Land Trust Inc., has the right to convey the Protected Property to the Town of Bolton without first securing approval.
7. **Motor Vehicle Use:** is not allowed on the property except for uses specifically reserved in the Grant, such as wildlife and forest management, trail grooming, maintenance, handicap access, and for safety and emergency purposes. Snowmobiling may be permitted by the landowner on designated trails only. All-terrain vehicles are not allowed on the property except for emergency or management purposes. The landowner may permit motor-driven

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<sup>1</sup> Grantor includes VERMONT LAND TRUST, INC., its successors, and assigns.

Preston Pond ♦ Bolton, Vermont

- wheelchairs or all-terrain vehicles for use by handicapped persons, if consistent with the Grant and permitted in the Management Plans.
8. **Water Resources:** The easement requires that the natural course of existing surface water, marshes, wetlands, or other water bodies not be unnecessarily disturbed, except where required to carry out the trail, parking, and forestry uses.
  9. **General Clause:** The easement includes a general clause which ensures that no uses will be made of the property which are inconsistent with the purposes of the conservation easement.

**PERMITTED USES OF THE PROPERTY**

The following activities on and uses of the conserved property are permitted:

1. **Dispersed Public Recreation:** The property may be used for all types of dispersed non-commercial pedestrian public recreation (bird watching, boating, cross country skiing, fishing, hiking, etc.). Snowmobiling, horseback riding, and mountain biking may be allowed on designated trails.
2. **Management Plan Activities:** Activities permitted in the Management Plan are allowed provided they are reasonably necessary to carry out the Purposes of the Grant. Such activities may include management of vegetation and wildlife.
3. **Forest Management:** The landowner has the right to harvest timber and conduct maple sugaring operations, along with the right to construct and maintain logging roads. The harvesting of timber must be in accordance with a **Forest Management Plan which shall be a component of the Management Plans.**
4. **Recreational Trails:** The landowner may repair, improve and maintain **existing trails** as depicted on the Preston Pond Conservation Plan. The landowner may also clear, construct and maintain **new trails** provided that the location, use and construction of new trails comply with the Grant, are provided for in the Management Plans, and the landowner receives **VLT approval prior to construction.**
5. **Parking Lots:** The landowner may construct, maintain and repair up to two (2) unpaved, low-impact parking lots in the areas depicted as "Parking Zone" on the Preston Pond Conservation Plan.
6. **Fees:** The landowner may charge reasonable fees to the public for admission to and use of the Protected Property for education and recreation. In addition, fees may be charged to organizations for recreational use provided that the use does not interfere with the access of the general public to the property.
7. **Minor Structures:** A minimal number minor, rustic structures may be constructed and maintained (such as deer stands, gazebos, hunting blinds, tent platforms, tree houses, kiosks, outdoor fireplaces) provided that such structures shall not have any access roads or drives, utilities, waste disposal systems or plumbing. These minor structures are not for year-round, continuous residential occupancy or for any commercial activity of any nature. Structures shall not exceed 600 sq. feet of floor space and 15 feet in height. The

landowner needs **written approval of VLT prior to construction** of any such minor structure.

***This is a summary of the actual legal rights. For a complete description of these rights, refer to the Grant of Development Rights, Conservation Restrictions and Public Access Easement.***

### **Summary of Grantees<sup>2</sup> Rights**

The Grantees' primary intent is to conserve and promote non-commercial recreational opportunities and activities and other natural resource and scenic values of the protected property for present and future generations. Aside from holding the development rights on the protected property, the Grantees have the right to periodically monitor the property and enforce the Conservation Restrictions.

***This is not a description of the actual legal rights. For a complete description of these rights, refer to the Grant of Development Rights, Conservation Restrictions, and Public Access Easement***

### **References**

- Grant of Development Rights, Conservation Restrictions, and Public Access Easement, Preston Pond, 2003
- Vermont Center for Geographic Information, GIS data: Deer wintering areas: last GIS update 1999, last field update in 1993. Ground accuracy is  $\pm$  500 feet. Rare, threatened and endangered species and significant communities: Last GIS update 1997, field visits conducted in 1990s. All areas in each town have not been inventoried. Actual area represented by the point may range from a few square meters to hundreds of hectares, or even a kilometer long stretch of river. Wetlands: Last GIS update 2001. Wetland boundaries are generalized National Wetland Inventory digital data files and are records of wetlands location and classification as defined by the U.S. Fish & Wildlife Service.

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<sup>2</sup> "Grantees" refers to the Vermont Land Trust, Inc., and the Vermont Housing and Conservation Board, their successors and assigns.

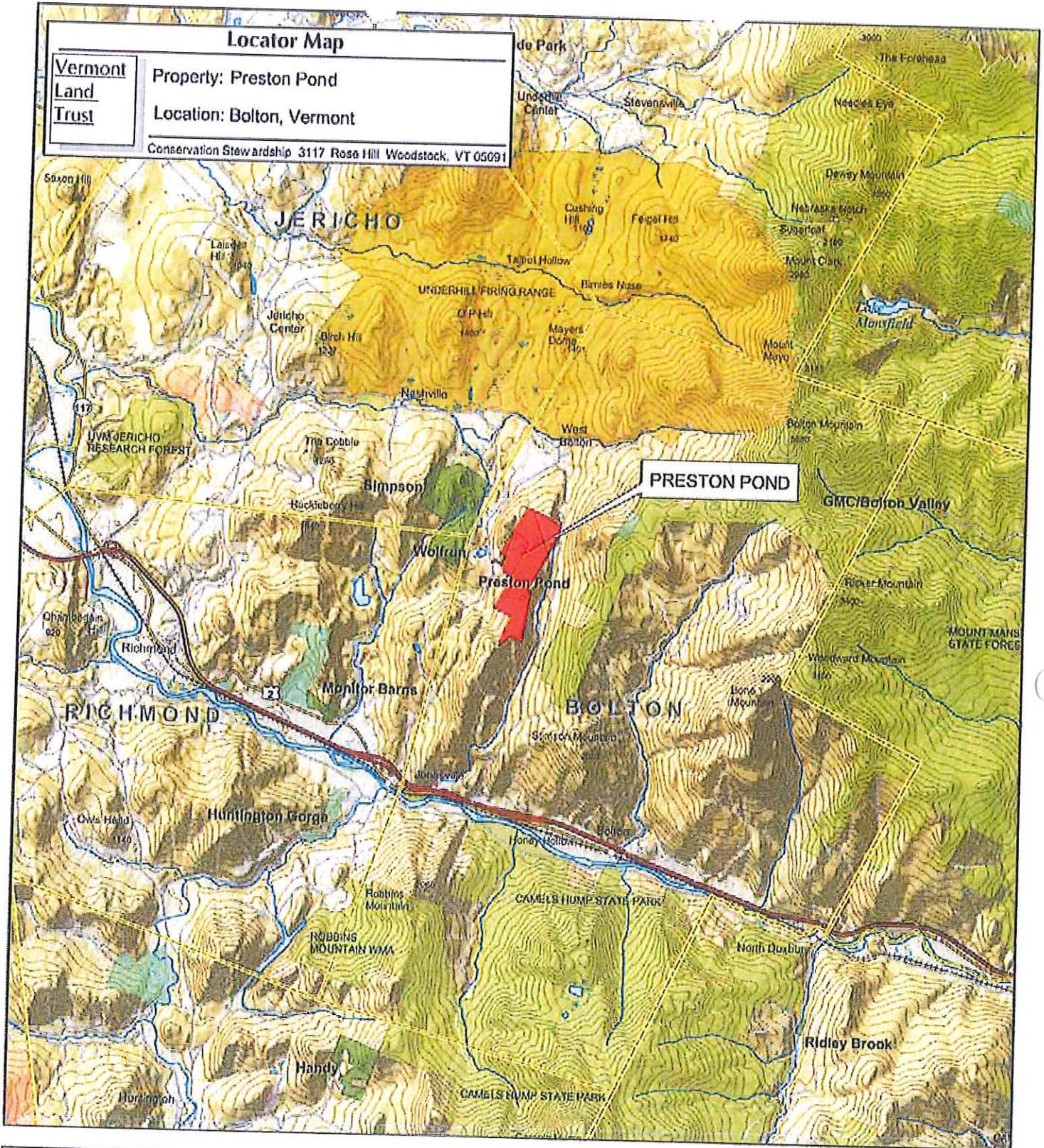
### Locator Map

Vermont  
Land  
Trust

Property: Preston Pond

Location: Bolton, Vermont

Conservation Stewardship 3117 Rose Hill Woodstock, VT 05091



#### Directions to the property:

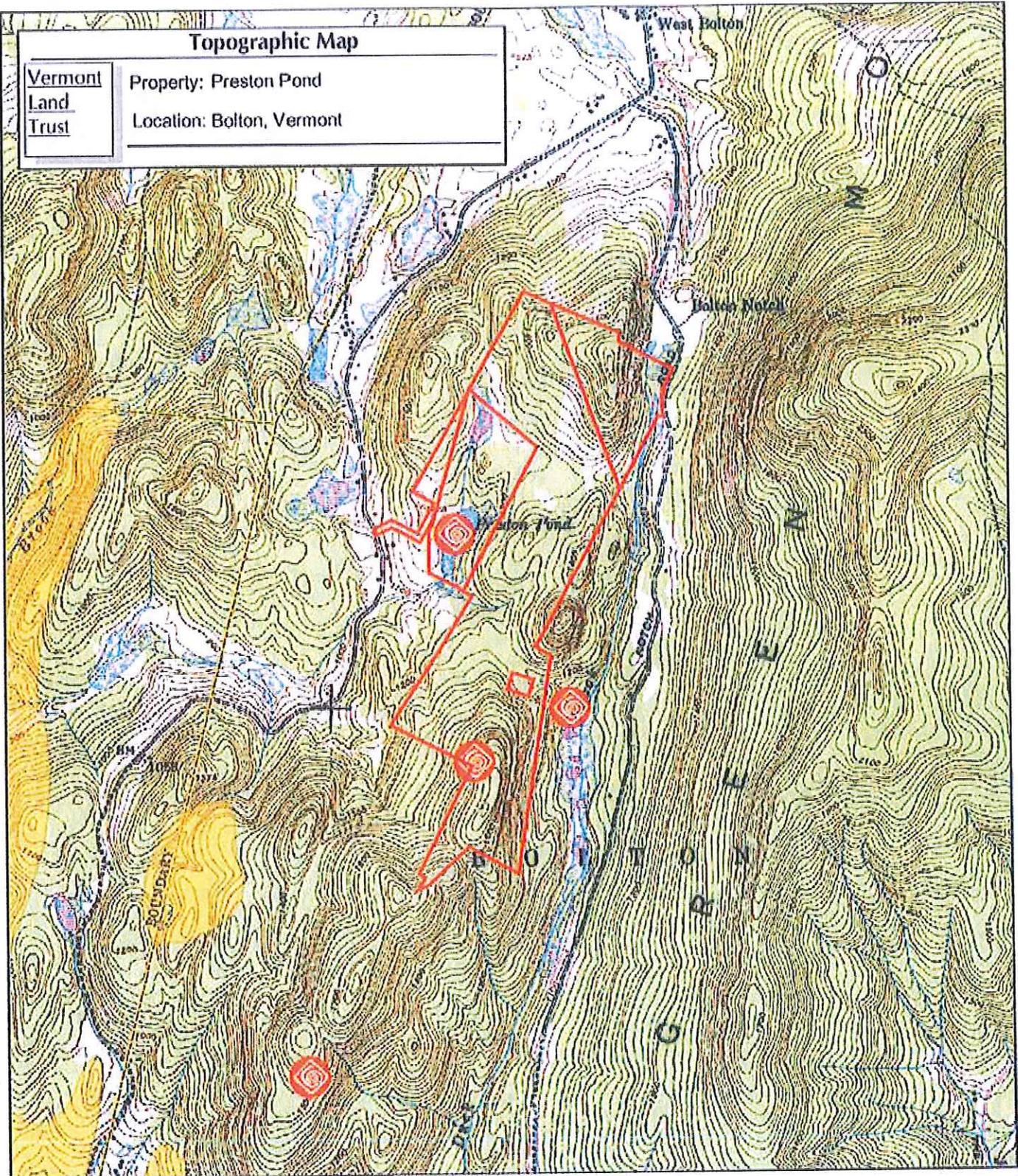
From the Richmond VLT Office: Head north on Bridge Street, take a right at the stoplight and head east on Route 2. At 4.3 miles take a left onto Notch Road and continue 3.8 miles up Notch Road to the property. The property can also be reached via Stage Road.

1:99,784

Topographic Map

Vermont  
Land  
Trust

Property: Preston Pond  
Location: Bolton, Vermont



USGS 7.5 Minute Quadrangle(s):  
Richmond, VT 1983

Scale: 1:24,000



Rare, Threatened or Endangered  
Species and/or Community



Wetlands (NWI)



Deeryards



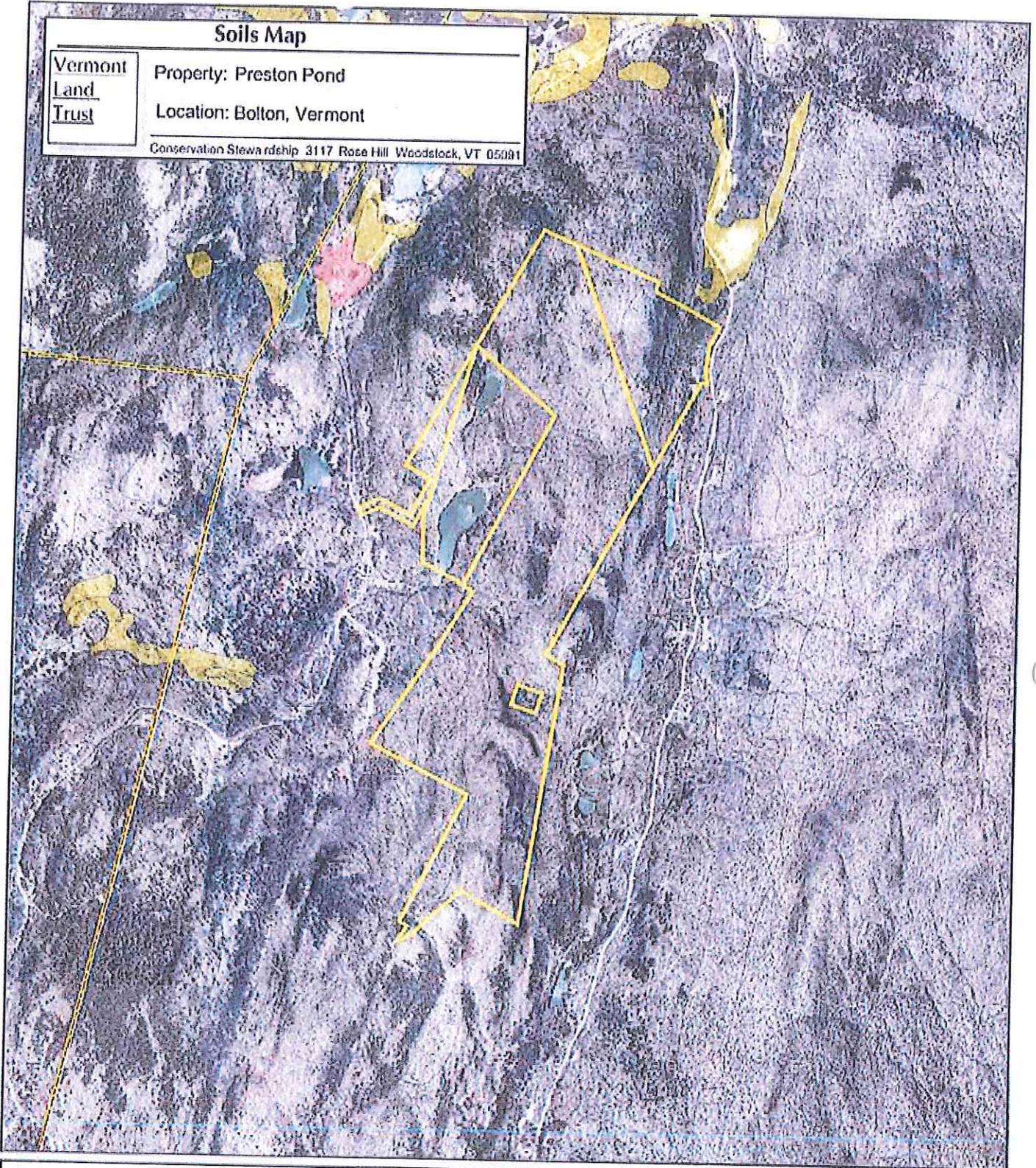
# Soils Map

Vermont  
Land  
Trust

Property: Preston Pond

Location: Bolton, Vermont

Conservation Stewardship 3117 Rose Hill Woodstock, VT 05081



Soil Conservation Service Soil Survey:  
Chittenden County - 1974

Not Rated



Water



Prime



Statewide

Scale: 1:20,000



**Orthophoto Map**

**Vermont  
Land  
Trust**

Property: Preston Pond

Location: Bolton, Vermont

8 Bailey Avenue Montpelier, VT 05602

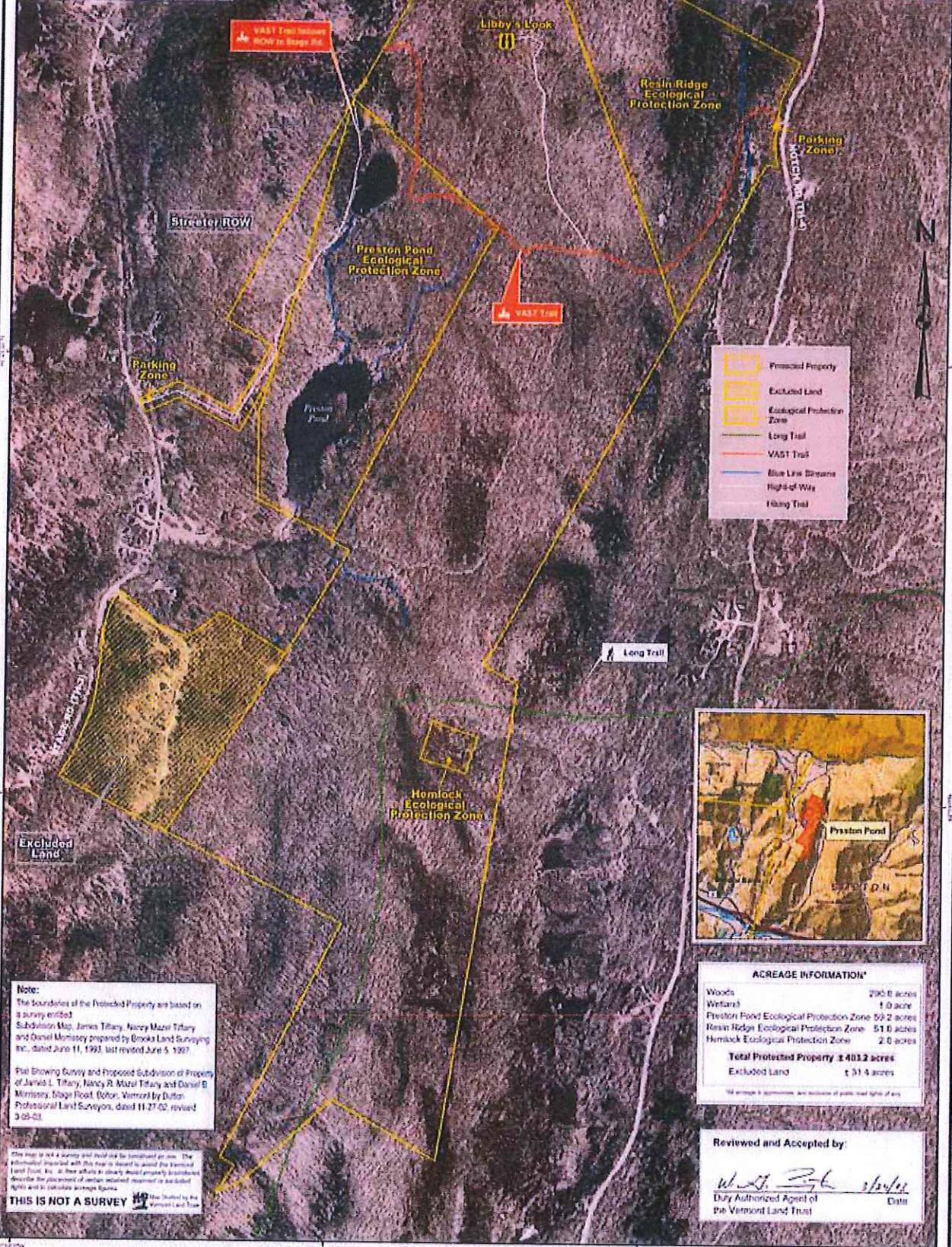
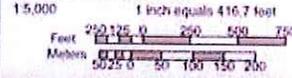


**Vermont Land Trust**  
**Preston Pond Property**  
 Town of Bolton  
 Chittenden Co., VT

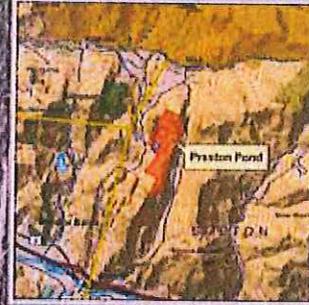
March 2003

VLT Project #400339 VHC# #2003-013

The Preston Pond Property Conservation Plan is based on the following State of Vermont Base Map 1:5000 orthophoto(s):  
 Bolton Notch, #120212, 1999;  
 Richmond Pond, #116212, 1999



	Proposed Property
	Excluded Land
	Ecological Protection Zone
	Long Trail
	VAST Trail
	Blue Line Stream
	Right-of-Way
	Hiking Trail



**ACREAGE INFORMATION\***

Woods	290.0 acres
Wetland	1.0 acre
Preston Pond Ecological Protection Zone	59.2 acres
Resin Ridge Ecological Protection Zone	51.0 acres
Hemlock Ecological Protection Zone	2.0 acres
<b>Total Protected Property</b>	<b>± 403.2 acres</b>
Excluded Land	± 51.4 acres

\*All acreage is approximate, and exclusive of public road rights of way.

**Note:**  
 The boundaries of the Protected Property are based on a survey entitled:  
 Subdivision Map, James L. Tiffany, Nancy Mazer Tiffany and Daniel M. Tiffany prepared by Brooks Land Surveying Inc., dated June 11, 1993, last revised June 5, 1997.  
 Plus Browning Survey and Proposed Subdivision of Property of James L. Tiffany, Nancy R. Mazer Tiffany and Daniel E. Tiffany, Stage Road, Bolton, Vermont by Dutton Professional Land Surveyors, dated 11-27-02, revised 3-09-03.

**THIS IS NOT A SURVEY**  
 This map is not a survey and should not be used as such. The information included with this map is intended to assist the Vermont Land Trust, Inc. in their efforts to identify and protect property boundaries. It is not intended to constitute a survey or to be used as such. It is not intended to constitute a survey or to be used as such. It is not intended to constitute a survey or to be used as such.

**Reviewed and Accepted by:**  
  
 Duty Authorized Agent of the Vermont Land Trust

# Photopoint Map

Vermont  
Land  
Trust

Property: Preston Pond

Location: Bolton, Vermont

8 Bailey Avenue Montpelier, VT 05602





Photo	1	Direction	N	Date	February 7, 2003
Subject: Frontage on Notch Road					



Photo	2	Direction	W	Date	February 7, 2003
Subject: Access to parcel - VAST trail from Notch Rd					



Photo	3	Direction	W	Date	February 7, 2003
Subject: Cliffs of Resin Ridge Ecological Protection Zone					



Photo	4	Direction	NE	Date	February 7, 2003
Subject: VAST trail/trail just inside Resin Ridge Zone					



Photo	5	Direction	W	Date	February 7, 2003
Subject: VAST trail/trail on protected property					



Photo	6	Direction	S	Date	February 7, 2003
Subject: View south from Libbys Look					



Photo 7 Direction W Date February 7, 2003  
 Subject: View west from Libbys Look



Photo 8 Direction SW Date February 7, 2003  
 Subject: Property boundary line, property on left



Photo 9 Direction E Date February 7, 2003  
 Subject: Upper Preston Pond



Photo 10 Direction NE Date February 7, 2003  
 Subject: VAST Trail/Trail along Upper Preston Pond



Photo 11 Direction SE Date February 7, 2003  
 Subject: Streeter ROW in property corridor



Photo 12 Direction E Date February 7, 2003  
 Subject: Property Corridor access from Stage Road



Photo	13	Direction	NE	Date	February 7, 2003
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Subject: ROW and property corridor

Photo	14	Direction	NE	Date	February 7, 2003
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Subject: Preston Pond

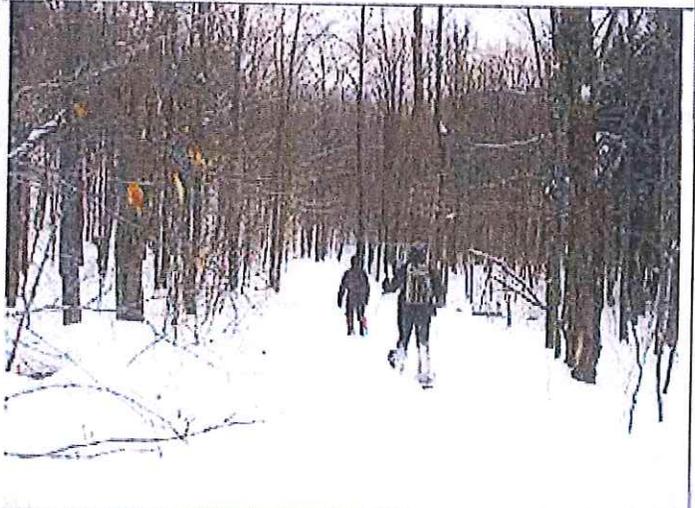


Photo	15	Direction	SE	Date	February 7, 2003
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Subject: Preston Pond

Photo	16	Direction	N	Date	February 7, 2003
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Subject: Long Trail on protected property

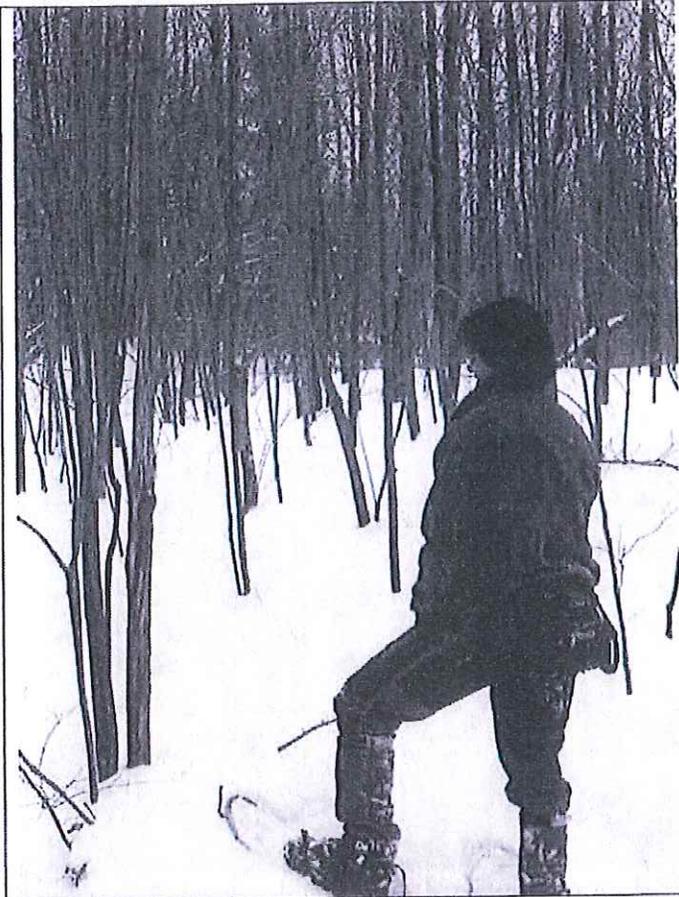
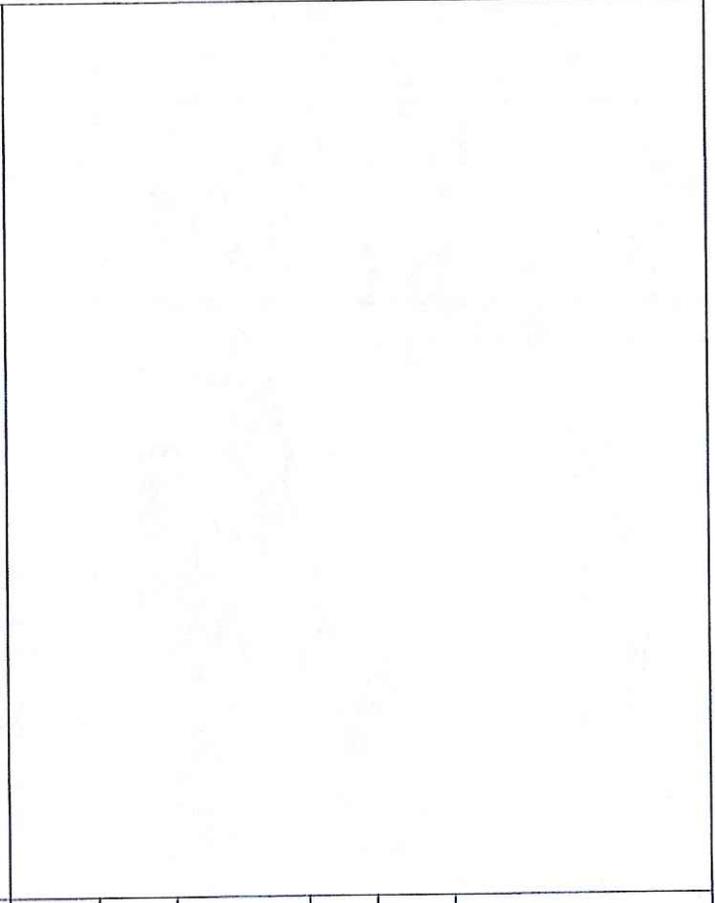


Photo	17	Direction	E	Date	February 7, 2003
Subject: Moose browse					



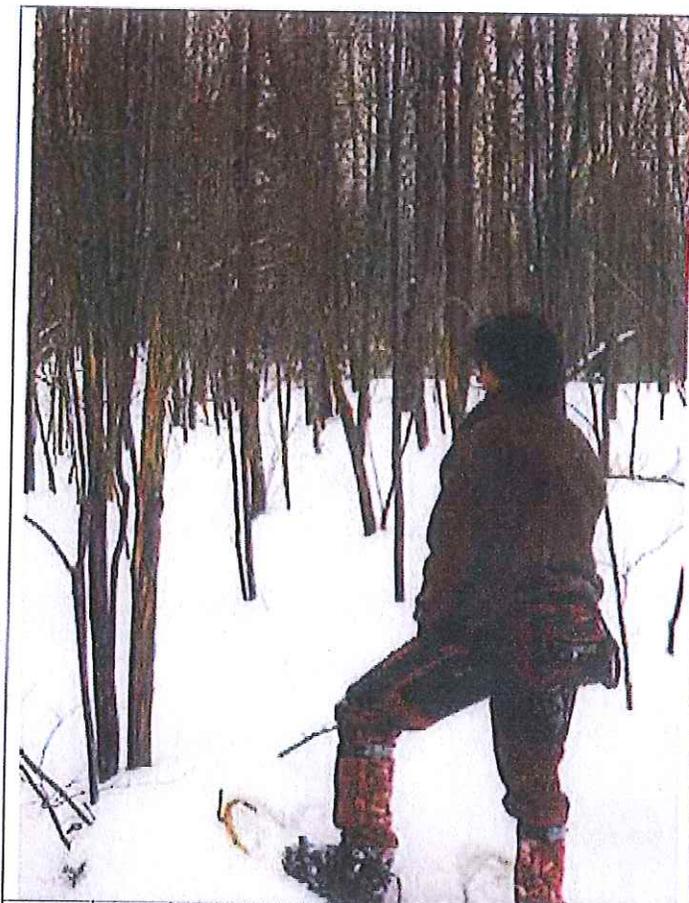


Photo	17	Direction	E	Date	February 7, 2003
Subject: Moose browse					

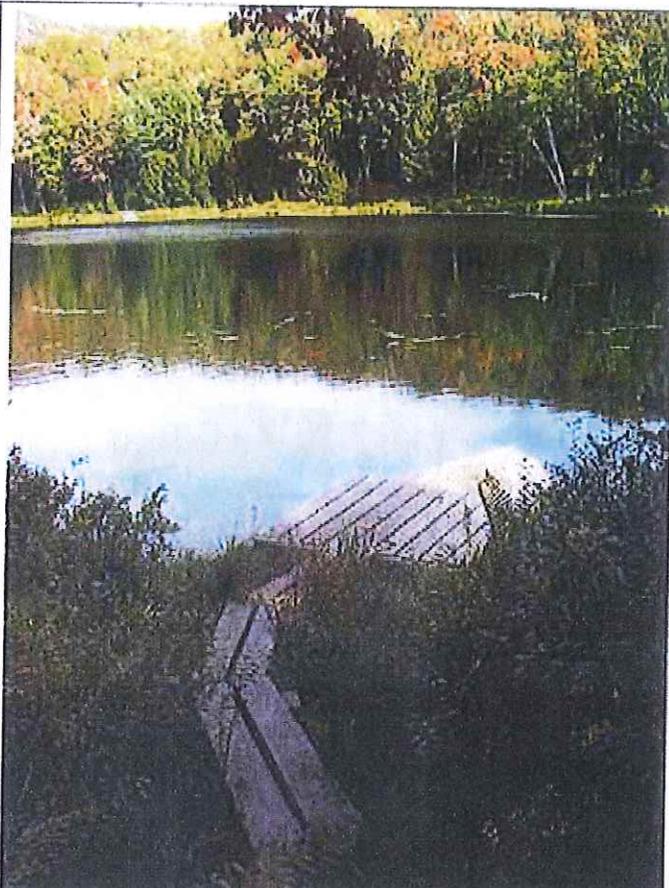


Photo	18	Direction	NE	Date	September 18, 2003
Subject: Platform on Preston Pond					



Photo	19	Direction	NE	Date	September 18, 2003
Subject: Hemlock STA					

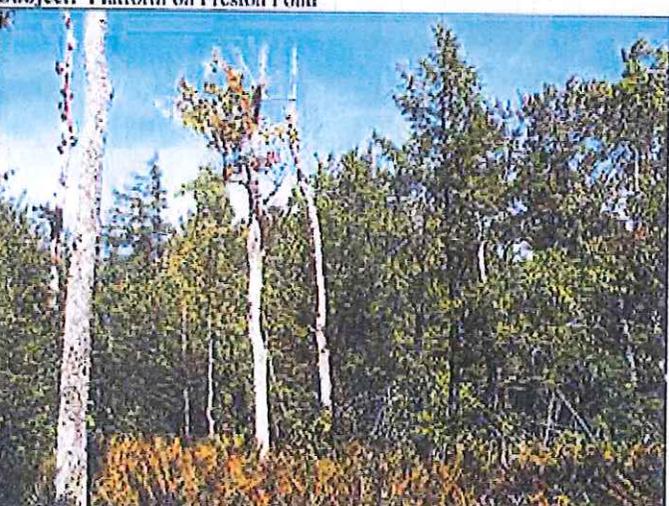


Photo	20	Direction	N	Date	September 18, 2003
Subject: Hemlock STA					

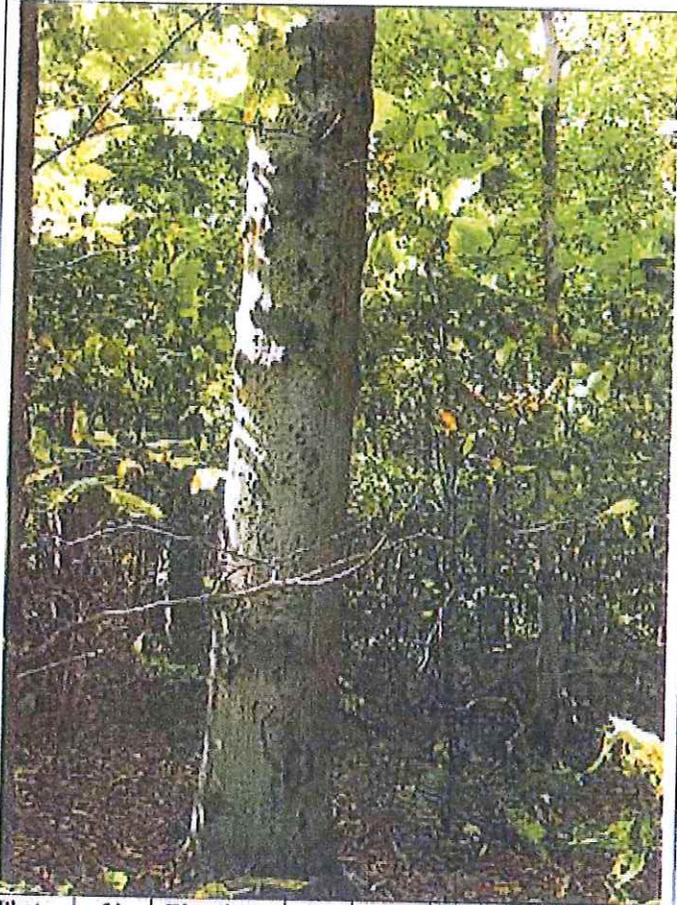


Photo	21	Direction	W	Date	September 18, 2003	Photo	22	Direction	N	Date	September 18, 2003
Subject: Bear-scarred beech on ridge in southern portion of the property.						Subject: Long Trail near the height of land in southeastern area.					

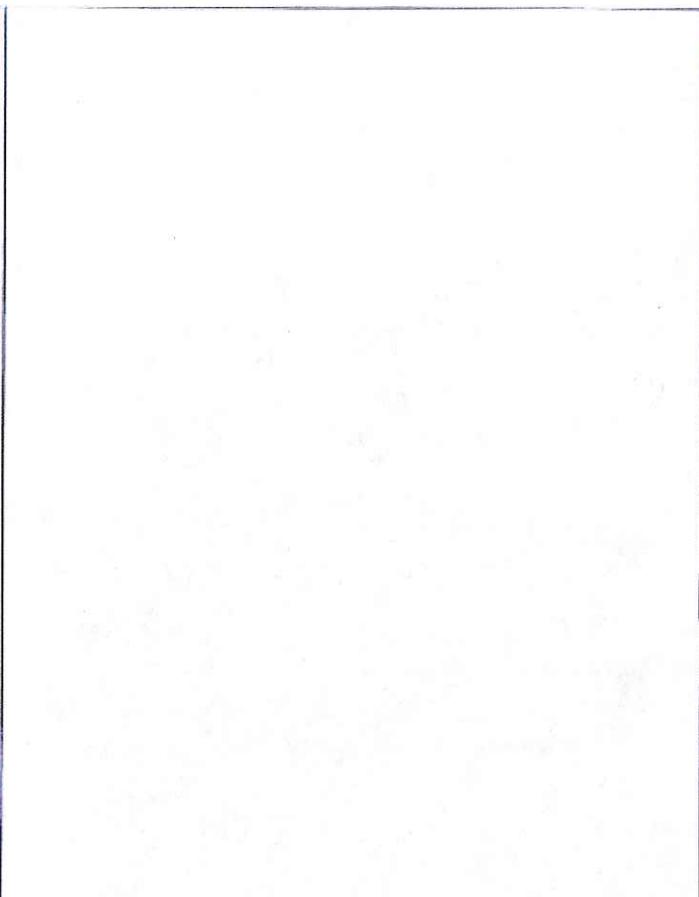
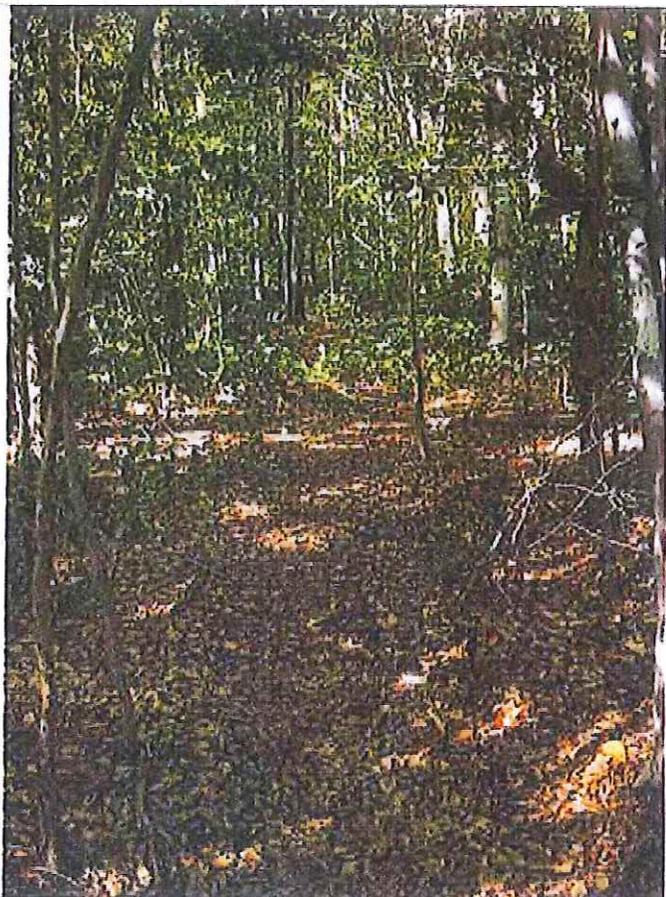


Photo	23	Direction	N	Date	September 18, 2003
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Subject: Long Trail near the SE corner of the protected property.

PRESTON POND  
GRANT OF DEVELOPMENT RIGHTS, CONSERVATION RESTRICTIONS and  
PUBLIC ACCESS EASEMENT

KNOW ALL PERSONS BY THESE PRESENTS that the **VERMONT LAND TRUST, INC.**, a non-profit corporation organized under the laws of the State of Vermont, 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 itself, the **VERMONT LAND TRUST, INC.**, and the **VERMONT HOUSING AND CONSERVATION BOARD**, an independent board of the State of Vermont with its offices in Montpelier, Vermont, and their respective successors and assigns (hereinafter "Grantees") tenants in common, forever, the development rights, perpetual conservation easement restrictions, and public access easement (all as more particularly set forth below) in a certain tract of land (hereinafter "Protected Property") situated in the Town of Bolton, Chittenden County, State of Vermont, the Protected Property being more particularly described in Schedule A attached hereto and incorporated herein.

The development rights hereby conveyed to Grantees shall include all development rights except those specifically reserved by Grantor herein and those reasonably required to carry out the permitted uses of the Protected Property as herein described. The development rights, perpetual conservation easement restrictions, and public access easement, hereby conveyed to Grantees consists of covenants on the part of Grantor to do or refrain from doing, severally and collectively, the various acts set forth below. It is hereby acknowledged that the development rights, perpetual conservation easement restrictions, and public access easement shall constitute a servitude upon and shall run with the land.

I. Purposes of this Grant

A. Statement of Primary and Secondary Purposes.

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

1. The two Primary Purposes are:

- (a) To conserve and protect biological diversity, wildlife habitats, unfragmented forest, natural communities, riparian buffers, and native flora and fauna on the Protected Property, and the ecological processes that sustain these natural resource values as these values exist on the date of this instrument and as they may evolve in the future; and
- (b) To foster compatible pedestrian use of the Protected Property.

Where the two Primary Purposes are in conflict, the objectives of paragraph 1(a) shall prevail within the Special Ecological Zones and the Surface Water Buffer Zones described in Section IV.

2. The three Secondary Purposes are:

- (a) To make the Protected Property available for dispersed non-commercial pedestrian public recreational opportunities; and to provide for snowmobile, bicycle and equestrian access to defined recreational corridors;
- (b) To protect open space values and scenic resources associated with the Protected Property for present and future generations; and
- (c) To assure that any improvement or harvesting of the forestry resources on the Protected Property encourages the long-term, professional management of those resources, and facilitates the economically sustainable production of forest resources in a manner that minimizes negative impact and the duration of impact on surface water quality, recreational benefits to the public, wildlife habitat, and other conservation values. While Grantor and Grantees recognize that both the resource values of the Protected Property and responsible forest management standards will evolve over time, in the event that productive development or harvesting of the forestry resources on the Protected Property is to occur, the following forest management objectives will govern:
  - (1) Forest stands will be managed for long rotations that maximize the opportunity for harvesting high quality sawlogs, sustained over time, while maintaining a

healthy and biologically diverse forest. "Long Rotations" means management for the production of target products consisting of saw timber quality trees within a range of at least the following diameters at breast height (DBH), where conditions are adequate:

- i) Red oak, sugar maple, white ash, yellow birch - 18" - 20" DBH
  - ii) Beech - 16" - 18" DBH
  - iii) Paper Birch, Black Birch, Red Maple - 14" - 16" DBH
  - iv) Red Spruce - 14" - 16" DBH
  - v) Hemlock - 18" - 20" DBH
  - vi) White Pine - 20" - 22" DBH
- (2) Forest management and harvesting activities (including the establishment, maintenance and reclamation of log landings and skid roads) shall utilize the best available yet economically feasible management practices in order to prevent soil erosion and to protect water quality.
  - (3) Create a sustained yield of forest products and prevent liquidation harvest practices.

B. Resource Attributes of the Protected Property

The foregoing purposes will be advanced by conserving the Protected Property because it possesses the following attributes:

- (1) Preston Pond, a 9-acre dystrophic (of low productivity) body of water in natural condition with an old pollen record that has been designated a Biological Natural Area by the Vermont Nongame & Natural Heritage Program, and the associated undeveloped wetlands and headwater basin of Snipe Island Brook;
- (2) Good examples of two upland natural communities, red pine forest and temperate acidic cliff, on two prominent summits along Resin Ridge, a Biological Natural Area designated by the Vermont Nongame & Natural Heritage Program;
- (3) Two rare plants, Torrey's bulrush (*Scirpus torreyi*), found on the margins of Preston Pond, and long-leaved bluet (*Hedyotis longifolia*), found on the cliffs of Resin Ridge; a nesting site for peregrine falcons (*Falco peregrinus*), a state-endangered raptor; populations of state-threatened Hooker's orchis (*Platanthera hookeri*); two uncommon plants associated with rich northern hardwood forest, wild millet (*Milium effusum*) and three-leaved snakeroot (*Sanicula trifoliata*);
- (4) Core habitat for area-sensitive and wide-ranging species such as bobcat, moose, bear, fisher, otter, and mink; and part of a growing expanse of conserved lands in the Chittenden County Uplands, a region that stretches from and provides connectivity between the lower-elevation forests, wildlife habitat and natural communities of the Winooski and Champlain Valley and those of the Green Mountains;
- (5) Approximately 3,750 feet of the Long Trail and a mile of trail managed by the Vermont Association of Snow Travelers; dispersed recreation opportunities such as hunting, fishing, back-country skiing, snowshoeing, and hiking;
- (6) A prominent rocky outlook known locally as "Libby's Look" that provides scenic views of Preston Pond and a small headwaters basin of Snipe Island Brook, as well as long-distance views of the Adirondacks, Green Mountains, and Champlain Valley;
- (7) Opportunities for nature observation, study, and research by school children and college students; and
- (8) Productive forestland.

Grantor and Grantees recognize the Purposes of this Grant and share the common goal of conserving the values of the Protected Property by the conveyance of conservation restrictions, and development rights, to prevent the use or development of the Protected Property for any purpose or in any manner which would conflict with the Purposes of this Grant. Grantees accept such conservation restrictions, development rights and public access easement in order to conserve these values for present and future generations.

C. Management Plans

1. General Provisions

Grantor will, from time-to-time develop comprehensive Management Plans, including updates, revisions and amendments, for the Protected Property (hereinafter "Management Plans"). Original Grantor, Vermont Land Trust, Inc. has developed an abbreviated, interim Management Plan dated \_\_\_\_\_ . On or before April 1, 2005, Successor Grantor, Town of Bolton, shall develop the first Management Plan meeting the requirements of this Section II. The Management Plans shall:

- a) Be consistent with and advance the Purposes of this Grant and comply with the requirements of Sections III, IV, and V, below; and
- b) At a minimum, identify and/or address the following issues and appropriately balance all the resource attributes and human uses of the Protected Property, so as to impose a minimal impact on the water quality and plant, wildlife, and aquatic habitat of the Protected Property:
  - (1) Protection of Ecological Zones, natural communities, and other ecologically sensitive areas or species;
  - (2) Wildlife habitat for, at a minimum, area-sensitive and wide-ranging species such as bear, moose, bobcat, otter, fisher, and mink;
  - (3) Sustainable forest management;
  - (4) Recreational uses, including the management needs associated with trails and uses such as rock climbing that may need special attention; and, if appropriate, recreation linkage to private and public lands;
  - (5) Public access and parking;
  - (6) Education, interpretation, and research;
  - (7) Signage and sanitary facilities (if any); and
- c) Otherwise be consistent with this Grant.

Prior to the final adoption of each Management Plan, including updates, revisions and amendments, Grantor shall: (a) solicit public input from residents of Bolton, the general public, biologists and resource professionals from state agencies and non-profit organizations such as the Vermont Department of Fish & Wildlife and The Nature Conservancy; (b) develop the Management Plans in a timely and responsive manner, and (c) provide Grantees with a copy of each such Management Plan as well as a copy of each final adopted Management Plan.

2. Forest Management Plan

As provided in Section III(3), below, all harvesting of timber and other wood products (except for maple sugar production), if any, and the construction and maintenance of skid roads and forestry roads, if any, shall be conducted in a manner consistent with a forest management plan (Forestry Plan) for the Protected Property which Forestry Plan shall be a component of the Management Plans provided for in this Section I(b). The Forestry Plan shall comply with this Grant, and shall include at least the following elements (except that those elements of the Forestry Plan which do not change need not be re-submitted in updates, amendments or changes to the Forestry Plan):

- a) Grantor's forest management objectives;
- b) An appropriately scaled, accurate map indicating such items as forest stands, streams and wetlands, and major access routes (truck roads, landings and major skid trails);
- c) Forest stand ("treatment unit") descriptions (forest types, stocking levels before and after harvesting, soils, topography, stand quality, site class, insect and disease occurrence, previous management history, and prescribed silvicultural treatment);
- d) Plant and wildlife considerations (identification of known significant habitats and management recommendations);
- e) Aesthetic and recreational considerations (impact on viewsheds from public roads, trails, and places); and
- f) Historic and cultural resource considerations (identification of known resources and associated management recommendations).

The Forestry Plan shall be updated at least once every ten (10) years if Grantor intends to

harvest timber or other wood products. Amendments to the Forestry Plan shall be required in the event that Grantor proposes a treatment not included in the Forestry Plan, but no such amendment shall be required for any change in timing or sequence of treatments if such change does not vary more than five (5) years from the prescription schedule set forth in the Forestry Plan as approved by Grantee. In the event that any treatment unit is substantially damaged by natural causes such as insect infestation, disease, fire or wind, Grantor may elect to conduct an alternative treatment in which event Grantor shall submit an amendment to the Forestry Plan for Grantee's approval prior to conducting any alternative treatment.

Disapproval by Grantee of a Forestry Plan proposing a heavy cut (as defined below) shall not be deemed unreasonable. Grantee, however, may approve a Forestry Plan in its discretion if consistent with the Purposes of this Grant, such as to permit the planting of different species of trees, promote natural regeneration, or establish or re-establish a field, orchard or pasture. "Heavy cut" shall mean the harvesting of wood products below the "C-Line" or minimum stocking level on the Protected Property as determined by applying the protocol set forth in the current U.S. Department of Agriculture, Forest Service Silvicultural Guidelines for the Northeast or by applying a similar, successor standard approved by Grantee.

### 3. Wildlife Habitat Management

- a) The management of wildlife on the Protected Property shall be a component of the Management Plans. Said Plan shall describe practices and strategies to preserve the natural values of the Protected Property and to maintain the natural functions of the Protected Property as wildlife habitat. Said Plan shall address the planting, maintenance and cutting of vegetation (if any), and other activities related to maintaining wildlife habitat. If the Plan proposes active wildlife management, then the Plan shall also address how management of the Protected Property's habitat will impact animal and plant communities situated on other conserved lands in the area.
- b) In the event Grantor elects to conduct wildlife management activities, such activities shall be conducted as contemplated in the most recently approved Management Plan, and Grantor shall have the right to conduct, or permit to be conducted, research and educational activities related to the Purposes of this Grant, including, but not limited to, wildlife, plant life and associated ecology. This clause shall not be construed to impose any obligation on Grantor to perform activities required in the Management Plans, but should Grantor elect to perform said activities they shall be performed in accordance with the Management Plans.

## II. Restricted Uses of Protected Property.

1. The Protected Property shall be used for habitat conservation, natural area, educational, dispersed non-commercial pedestrian public recreational opportunities, forestry, and open space purposes only, except as otherwise specifically permitted under this Grant. No residential, commercial, industrial or mining activities shall be permitted. No building or structures shall be constructed, created, erected or moved onto the Protected Property, including but not limited to, telecommunication towers, except as specifically permitted in both Section III below and the Management Plans.

2. No rights-of-way, easements of ingress or egress, driveways, roads, utility lines, other easements, or other use restrictions shall be constructed, developed, granted, or maintained into, on, over, under, or across the Protected Property, without the prior written permission of Grantees, except as otherwise specifically permitted under this Grant, and as set forth in Schedule B attached hereto and incorporated herein. Grantees may grant permission for any rights-of-way, easements of ingress or egress, driveways, roads, utility lines, other easements, or other use restrictions, if they determine, in their sole discretion, that any such rights-of-way, easements of ingress or egress, driveways, roads, utility lines, other easements or other use restrictions are 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 Grantor may erect and maintain reasonable signs including but not limited to signs indicating the name of the Protected Property and its ownership by Grantor, boundary markers, directional signs, memorial plaques, informational and interpretive signs, and signs limiting access or use (subject to the limitations of Section V, below). Grantees may erect and maintain signs designating the Protected Property as land under the protection of Grantees, with the prior written permission of Grantor.

4. The placement, collection or storage of trash, human waste, or any other unsightly, harmful 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 Grantees and shall be consistent with the Grant and the Management Plans. 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 trail, parking, and forestry uses permitted on the Protected Property under this Grant. In no case shall surface mining of subsurface oil, gas, or other minerals be permitted.

6. Grantor shall not give, grant, sell, convey, subdivide, convey in separate parcels, transfer, mortgage, pledge, lease or otherwise encumber the Protected Property without the prior written approval of Grantees which approval may be granted, denied or conditioned in the Grantees' sole discretion; provided, however, the original Grantor Vermont Land Trust, Inc. shall have the right to convey the Protected Property, subject to the this Grant, to the Town of Bolton without first securing said approval.

7. There shall be no operation of motor vehicles on the Protected Property except for uses specifically reserved in Section III below, such as wildlife and forest management, trail grooming, maintenance, handicap access, and for safety or emergency purposes. Snowmobiling on designated trails only may be permitted at the discretion of Grantor. There shall be no all-terrain vehicle use permitted on the Protected Property except for emergency or management purposes. However, Grantor may permit motor-driven wheelchairs or all-terrain vehicles for use by handicapped persons on the Protected Property if consistent with the Purposes of this Grant and permitted in the Management Plans. For purposes of this Grant, all-terrain vehicles include motorized four-wheel, three-wheel and two-wheeled or tracked vehicles.

8. There shall be no manipulation of natural watercourses, marshes, wetlands 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 trail, parking, and forestry uses permitted on the Protected Property under section III of this Grant.

9. No use shall be made of the Protected Property, and no activity thereon shall be knowingly permitted which, in the reasonable opinion of Grantees, is not or is not likely to be consistent with the Purposes of this Grant.

### III. Permitted Uses of the Protected Property.

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

1. The right to use the Protected Property for all types of dispersed non-commercial pedestrian public recreation (including, but not limited to, bird-watching, boating, cross-country skiing, fishing, hiking, hunting, snowshoeing, swimming, walking and wildlife observation) consistent with the Purposes of this Grant. Use of the Protected Property for snowmobiling, and for non-motorized, mechanized recreation such as mountain biking and by animals capable of transporting humans (including, but not limited to, horses) on designated trails, may be permitted in the discretion of Grantor if such uses are permitted in the Management Plans, and are consistent with the Purposes of this Grant.

2. The right, but not the obligation, to use the Protected Property to conduct all activities allowed by the Management Plans, provided that such activities are reasonably necessary to carry out the Purposes of this Grant and are consistent with the Purposes of this Grant, and provided further that such activities are permitted in the Management Plans. Such activities may include, but shall not be limited to the management of vegetation and wildlife, and the use and management of the Protected Property for dispersed non-commercial pedestrian public recreational opportunities. This Section III(2) shall not be construed to authorize the construction of new structures not otherwise specifically permitted by this Grant.

3. 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 forestry and skid 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 Grantees) and in accordance with, a forest management plan that shall be a component of the Management Plans. Nothing in this clause shall be interpreted to require Grantor to harvest a treatment unit (as defined in Section I(C)(2), above), but only to require that any such harvest be conducted in accordance with the Forestry Management Plan should Grantor elect to harvest.

4. The right to maintain, repair, and improve existing recreational trails as depicted on a plan entitled "Vermont Land Trust - Preston Pond Property, Town of Bolton, Chittenden Co., VT" (hereinafter "Preston Pond Conservation Plan"). Further, the right to clear, construct, repair, improve, maintain and replace new trails, provided:

- a) The location, use and construction of such new trails are consistent with the Purposes of this Grant, and complies with this Grant;
- b) The new trails are provided for in the Management Plans; and
- c) Grantor shall secure the written approval of Grantees prior to construction of new trails, which approval shall not be unreasonably withheld or conditioned provided said trails comply with the requirements of this paragraph III(4).

5. The right to construct, maintain, repair and use up to two (2) unpaved, low-impact parking lots on the Protected Property in the areas depicted as "Parking Zone" on the Preston Pond Conservation Plan, including associated access drives, together with the right to construct improvements normally associated with a low-impact parking lot, in a manner consistent with the Purposes of this Grant. All structures within the Parking Zones shall be constructed, maintained, repaired and used in a manner that is not inconsistent with the Purposes of the Grant.

6. The right to charge members of the public reasonable fees for admission to and use of the Protected Property, provided that such fees are collected only for public recreation or education on the Protected Property or such fees are reasonably necessary to support Grantor's management of the Protected Property. The right to charge organizations reasonable fees for recreational use of a portion of the Protected Property provided that such use does not unreasonably interfere with the access of the general public to the Protected Property. Fees shall not be based on place of residency. All fees charged for admission to or use of the Protected Property shall be consistent with the Purposes of this Grant, especially that of public access, and shall be provided for in the Management Plans

7. The right to construct, repair, maintain, and use a minimal number of minor structures (for example: deer stands, gazebos, hunting blinds, lean-tos, adirondack shelters, tent platforms, tree houses, children's play houses, privies, kiosks, outdoor fireplaces) on the Protected Property provided that such structures shall not have any access roads or drives, utility services or facilities, waste disposal systems, or plumbing, and shall not be used for year-round, continuous residential occupancy or for any commercial activity of any nature (except as Grantees may permit in its sole discretion pursuant to the accessory use clause in this Section III), and shall not exceed 600 square feet of floor space and fifteen feet in height. Grantor shall secure the written approval of Grantees prior to the construction of any such minor structure, which approval shall not be unreasonably withheld or conditioned, provided that the structure complies with the requirements of this Section III(7) and the number and location of such structures are consistent with the Purposes of the Grant.

#### IV. Ecological and Surface Water Buffer Zones.

Within the following ecological and buffer zones, the following provision shall apply, and shall supersede inconsistent provisions of Sections II and III:

##### 1. Ecological Protection Zones

The following provisions shall apply to that portion of the Protected Property that lies within the "Preston Pond Ecological Protection Zone," the "Resin Ridge Ecological Protection Zone," and the "Hemlock Ecological Protection Zone" the boundaries of which are depicted on the Preston Pond Conservation Plan:

- a) There shall be no harvesting or other forest management activities, or any other ground-disturbing activities performed within the Zones.
- b) Non-motorized recreational trails may be constructed and maintained within the Zones, provided Grantor secures the prior written approval of Grantees. Said approval shall not be unreasonably withheld or conditioned provided Grantees

determine that the location, construction and use of the trails is consistent with the Primary Purposes of the Grant and will not have a significant negative impact on the ecological values of the Zones.

- c) The right to maintain the existing VAST trail as depicted on the Preston Pond Conservation Plan for snowmobile use. Any relocation of the VAST trail shall be subject to the prior written approval of Grantees. Said approval shall not be unreasonably withheld or conditioned provided Grantees determine that the relocation of the trail is consistent with the Primary Purposes of the Grant and will not have a significant negative impact on the ecological values of the Zones.

2. Surface Water Buffer Zones.

- a) **Harvesting Limitations:** In those portions of the Protected Property lying within 100' of the thread of Duck Brook, and within 50' of the thread of all other streams depicted on the Preston Pond Conservation Plan, or any successor maps approved by Grantor and Grantees, there shall be no harvesting or other forest management activities conducted.
- b) **Stream crossings:** Stream crossings are permitted for the purpose of constructing roads for transporting forestry machinery and harvested timber, but the number and width of such crossings shall be kept to a minimum and said crossings shall include the installation of all erosion control devices and practices described in the AMPs.

V. Public Access.

Grantor covenants and agrees that the Protected Property shall be available to the general public for all types of dispersed non-commercial pedestrian public recreational opportunities and educational purposes (including, but not limited to, bird-watching, boating, cross-country skiing, fishing, hiking, hunting, snowshoeing, swimming, walking and wildlife observation) consistent with the Purposes Grant. Intensive, concentrated uses of the Protected Property for motorized access by snowmobiles, for non-motorized, mechanized recreation such as mountain biking, for access by disabled persons, for equestrian trails, and for hiking trails may be permitted in the discretion of Grantor, but shall be located in identified, mapped recreation corridors consistent with the Purposes of this Grant and permitted under the Management Plan.

Notwithstanding the foregoing, Grantor 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, but not limited to, the right to permit, regulate or prohibit fishing, hunting and trapping). If Grantees approve a conveyance of the Protected Property, then Grantees may also require that a separate Grant of Public Access Easement also be conveyed to Grantees in a form approved by Grantees.

Grantor may assign its rights and obligations under this instrument with regard to the management of recreational uses to one or more other entities (the "Manager"), provided (1) the Manager is qualified and has the capacity to perform the management functions of Grantor; (2) the Manager undertakes in writing to fulfill the management obligations of the Grantor; and (3) Grantor first provides written notice to Grantees of the name, address and other means of contacting the Manager.

VI. Enforcement of the Restrictions.

Grantees shall make reasonable efforts from time to time to assure compliance by Grantor with all of the covenants and restrictions herein. In connection with such efforts, Grantees may make periodic inspection of all or any portion of the Protected Property and for such inspection and enforcement purposes, Grantees shall have the right of reasonable access to the Protected Property. In the event that Grantees become aware of an event or circumstance of non-compliance with the terms and conditions herein set forth, Grantees shall give notice to Grantor of such event or circumstance of non-compliance by hand or by certified mail, return receipt requested, and demand corrective action by Grantor sufficient to abate such event or circumstance of non-compliance and, to the extent reasonably possible, to restore the Protected Property to its previous condition.

Failure by Grantor to cause discontinuance, abatement or such other corrective action as may be demanded by Grantees within a reasonable time after receipt of notice and reasonable opportunity to take corrective action shall entitle Grantees to bring an action in a court of competent jurisdiction to enforce this Grant and to recover any damages arising from such non-compliance. Such damages,

when recovered, may be applied by Grantees to corrective action on the Protected Property, if necessary. If the court determines that Grantor has failed to comply with this Grant, Grantor shall reimburse Grantees 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 Grantees initiate litigation and the court determines that Grantor has not failed to comply with this Grant and that Grantees have initiated litigation without reasonable cause or in bad faith, then Grantees shall reimburse Grantor for any reasonable costs of defending such action, including court costs and reasonable attorneys' fees. 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 Grantees to such equitable relief, including but not limited to injunctive relief and ex parte relief, as the Court deems just.

The remedies described herein are in addition to, and not in limitation of, any other remedies available to Grantees at law, in equity, or through administrative proceedings. No delay or omission by Grantees in the exercise of any right or remedy upon any breach of Grantor shall impair Grantees' rights or remedies or be construed as a waiver. Nothing in this enforcement section shall be construed as imposing a liability:

- (a) Upon a prior owner of the Protected Property, when the event or circumstance of non-compliance occurred after said prior owner's ownership or control of the Protected Property has terminated; or
- (b) Upon the Grantor for changes to the Protected Property caused by fire, storm or other Acts of God, or the intentional acts or neglect of independent third persons acting without the consent or authority of the Grantor.

VII. Miscellaneous Provisions.

1. Where Grantor is required, as a result of this Grant, to obtain the prior written approval of Grantees before commencing an activity or act, and where Grantees have designated in writing one of the other Grantees herein or 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 Grantees. Grantor shall reimburse Grantees or Grantees' designee for all extraordinary costs, including staff time, incurred in reviewing the proposed action requiring Grantees' approval; but not to include those costs which are expected and routine in scope. When Grantees have authorized a proposed action requiring approval under this Grant, Grantees shall, upon request, provide Grantor with a written certification in recordable form memorializing said approval.

2. While title is herein conveyed to Grantees as tenants in common, the rights and interests described in this Grant, including enforcement of the conservation easement and restrictions, may be exercised by Grantees collectively, or by any single Grantee individually, provided that court enforcement action by a single Grantee shall foreclose action on the same issue(s) by the other Grantees who shall be bound by the final determination.

3. 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 and regulations of the Town of Bolton and the laws and regulations of the State of Vermont.

4. Grantees shall transfer the development rights, right of first refusal, and conservation easement and restrictions conveyed by Grantor 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.

5. In the event the development rights or conservation restrictions conveyed to Grantees herein are extinguished by eminent domain or other legal proceedings, Grantees shall be entitled to any proceeds which pertain to the extinguishment of Grantees' rights and interests. Any proceeds from extinguishment shall be allocated between Grantor and Grantees 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 Grantor or Grantees in the year of this conveyance. Grantees 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.

6. In any deed or lease conveying an interest in all or part of the Protected Property, Grantor shall make reference to the conservation easement, restrictions, and obligations described

herein and shall indicate that this easement and restrictions are binding upon all successors in interest in the Protected Property in perpetuity. Grantor shall also notify Grantees of the name(s) and address(es) of Grantor's successor(s) in interest.

7. Grantees shall be entitled to rerecord this Grant, or to record a notice making reference to the existence of this Grant, in the Town of Bolton 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.

8. The term "Grantor" shall include the successors and assigns of the original Grantor, the Vermont Land Trust, Inc. In the event that fee title to the Protected Property is conveyed by the Vermont Land Trust, Inc. to the Town of Bolton subject to this Grant, the term "Grantor" shall, following said conveyance, denote the Town of Bolton, its successors and assigns as to the Protected Property or any portion thereof. The Vermont Land Trust, Inc. shall, after said transfer to the Town of Bolton, have no liability or obligation whatever under this Grant, excepting as to title warranties contained herein. The term "Grantees" shall include the respective successors and assigns of the original Grantees, Vermont Land Trust, Inc. and Vermont Housing and Conservation Board.

9. Any signs erected on the Protected Property which mention funding sources shall include the Vermont Housing and Conservation Board and the Vermont Land Trust, Inc.

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

TO HAVE AND TO HOLD said granted development rights and conservation easement and restrictions, and executory interest, with all the privileges and appurtenances thereof, to the said Grantees, VERMONT HOUSING AND CONSERVATION BOARD, and VERMONT LAND TRUST, INC., their respective successors and assigns, to their own use and behoof forever, and the said Grantor, VERMONT LAND TRUST, INC., on behalf of 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 of the Vermont Land Trust, Inc., has executed this Grant on this 20<sup>th</sup> day of March, 2003.

IN THE PRESENCE OF:

Lewis V. Luce  
Witness

GRANTOR  
Vermont Land Trust, Inc.  
By: W.G. Livingston  
Its Duly Authorized Agent

STATE OF VERMONT  
COUNTY OF CHITTENDEN, SS.

At Burlington, Vermont, on this 20<sup>th</sup> day of March, 2003, personally appeared W.G. Livingston, duly authorized agent of the Vermont Land Trust, Inc. 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., before me.

Lewis V. Luce  
Notary Public  
My Commission Expires: 2/10/07

Approved by the VERMONT HOUSING AND CONSERVATION BOARD:

3/17/03  
Date

By: [Signature]  
Its Duly Authorized Agent

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SCHEDULE A  
PROTECTED PROPERTY

Being all and the same lands and premises conveyed to the Vermont Land Trust, Inc., by warranty deed of James L. Tiffany, Nancy R. Mazel Tiffany, and Daniel B. Morrissey of even date and recorded herewith in the Town of Bolton Land Records.

Meaning and intending to include in this description of the Protected Property all of the land commonly known as Preston Pond and generally described as containing 403.2 acres, more or less, lying easterly of Town Highway #3 (also known as Stage Road) and westerly of Town Highway #4 (also known as Notch Road) in the Town of Bolton, Vermont. The Protected Property consists of all of the lands and premises depicted on a survey entitled "A Boundary Survey of the Remaining Lands of Titanium Ventures, Inc., Bolton, Vermont" prepared by Brooks Land Surveying Inc., dated July 28, 1989, and recorded at Map Slides 9A, 9B, 10A, 10B and 11A of said Land Records, **excepting and excluding** the following described real estate:

- a) Lots One and Two as depicted on a survey entitled "Subdivision Map, James Tiffany, Nancy Mazel Tiffany and Daniel Morrissey" prepared by Brooks Land Surveying Inc., dated June 11, 1993, last revised June 5, 1997, and recorded at Map Slide 33-B of said Land Records; and
- b) 24.86 acres depicted on a survey entitled "Plat Showing Survey and Proposed Subdivision of Property of James L. Tiffany, Nancy R. Mazel Tiffany and Daniel B. Morrissey, Stage Road, Bolton, Vermont," prepared by Button Professional Land Surveyors, P.C., dated 11-27-02, revised 3-5-03 and recorded on March 13, 2003 in said Land Records.

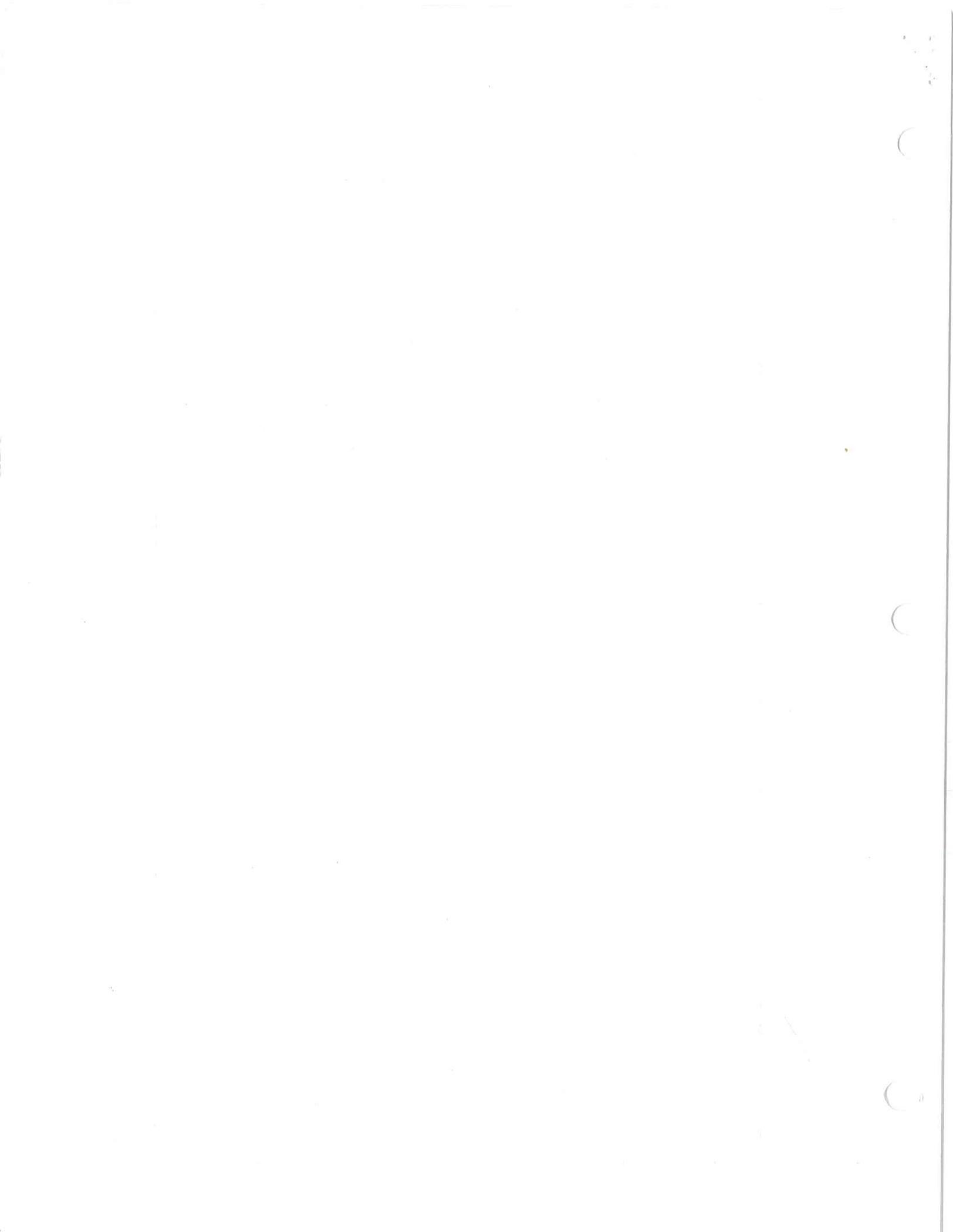
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SCHEDULE B  
EASEMENTS AND USE RESTRICTIONS

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. Rights of the public to use waterways and bodies of water as implied by the Public Trust Doctrine.
3. Access Easement Deed conveyed by the Vermont Land Trust to Richard & Marion Streeter, of even date herewith and to be recorded in the Bolton Land Records.
4. 50' wide utility line easement to Vermont Electric Cooperative, Inc. dated February 22, 1990 and recorded in Book 42, Page 327 of the Bolton Land Records.
5. 50' wide utility line easement to Vermont Electric Cooperative, Inc. dated May 2, 1997 and recorded in Book 50, Page 902 of the Bolton Land Records.
6. Drainage easement with appurtenant culvert rights, as set forth in a quit claim deed from Daniel B. Morrissey to James L. Tiffany and Nancy Mazel Tiffany, dated June 5, 1997 and recorded in Book 50, Page 874 of the Bolton Land Records.
7. Rights and easements conveyed to Vermont Electric Cooperative, Inc. by deeds dated and recorded as follows:
  - a) May 6, 1986; Book 33, Page 263
  - b) September 8, 1979; Book 27, Page 367
  - c) September 25, 1970; Book 23, Page 448
  - d) August 28, 1967; Book 22, Page 481
8. Right of way for ingress and egress conveyed by deed to Campagna, dated December 11, 1971 and recorded Book 24, Page 172
9. Water rights and related easements and a conditional access easement conveyed by deed to Mullen, dated March 15, 1986 and recorded Book 33, Page 33.
10. Spring rights and related easements conveyed by deed to Streeter, dated April 7, 1974 and

recorded Book 24, Page 572.

11. The following matters disclosed by survey entitled "A Boundary Survey of the Remaining Lands of Titanium Ventures, Inc., Bolton, Vermont To Be Conveyed to James Tiffany, Nancy Mazel-Tiffany and Daniel Morrissey, dated January 25, 1990, prepared by Brooks Land Surveying, Inc., Job No. JI-1299:
- a) Title to area encompassed by corners 10, 11, 12, and 13 subject to claim of ownership by adjoining landowner. See notation 8 on Sheet B of survey.
  - b) Logging road. See sheet E of survey.
  - c) Easements and rights of way not depicted on survey. See General Note 2 on Sheet B of survey.
  - d) Spring located near boundary between corners 18 and 19. See Sheet D of the survey.
  - e) Uncertainty as to boundary line along property of Gerald and Jane Mullen, between corner 27 and corner 28.
  - f) Uncertainty as to boundary line extending from corner 1 to corner 23.
12. Notice of Claim, dated October 31, 1989 filed by Xenophon C. Wheeler in Book 41, Page 302.
13. Certain "well shield isolation easements" as described in the warranty deed of James L. Tiffany, Nancy R. Mazel Tiffany, and Daniel B. Morrissey to the Vermont Land Trust, Inc., of even date and recorded herewith in the Town of Bolton Land Records.

Bolton Town Clerk's Office  
Rec'd. for record March 20 2003 A.D.  
at 1 o'clock 30 minutes P M  
Recorded in Book 59 Page 948-53  
By Jane Atwell  
Asst. Town Clerk



**DRAFT**

**ACCESS EASEMENT DEED  
Vermont Land Trust to Richard & Marion Streeter**

**KNOW ALL PERSONS BY THESE PRESENTS** that, the **VERMONT LAND TRUST, INC.**, a Vermont non-profit corporation with its principal place of business in Montpelier, County of Washington and State of Vermont, Grantor, in the consideration of one dollar and other valuable consideration paid to its full satisfaction by **RICHARD STREETER, SR. and MARION STREETER** both of Bolton, Chittenden County and State of Vermont, Grantees, by these presents, does freely **GIVE, GRANT, SELL AND CONFIRM** unto the said Grantees, **RICHARD STREETER, SR. and MARION STREETER**, their heirs, administrators, successors and assigns, forever a perpetual easement and right of way for access through and over a certain piece of land in Bolton, County of Chittenden:

Being all and the same lands and premises conveyed to the Vermont Land Trust, Inc. by warranty deed of James L. Tiffany, Nancy R. Mazel Tiffany, and Daniel B. Morrissey, dated December \_\_\_\_\_, 2002, and recorded in Book \_\_\_\_\_, Page \_\_\_\_\_ of the Town of Bolton Land Records "Property." The Property is depicted on a survey entitled "A Boundary Survey of the Remaining Lands of Titanium Ventures, Inc., Bolton, Vermont" prepared by Brooks Land Surveying Inc., dated July 28, 1989, and recorded at Map Slides 9A, 9B, 10A, 10B and 11A of said Land Records ("the Brooks Survey"). The Property consists of all lands depicted on the Brooks Survey, **excepting and excluding** lands retained by James L. Tiffany, Nancy R. Mazel Tiffany, and Daniel B. Morrissey as follows:

- a) Lots One and Two as depicted on a survey entitled "Subdivision Map, James Tiffany, Nancy Mazel Tiffany and Daniel Morrissey" prepared by Brooks Land Surveying Inc., dated June 11, 1993, last revised June 5, 1997, and recorded at Map Slide 33-B of said Land Records; and
- b) 23.89 acres depicted on a survey entitled "Plat Showing Survey and Proposed Subdivision of Property of James L. Tiffany, Nancy R. Mazel Tiffany and Daniel B. Morrissey, Stage Road, Bolton, Vermont," prepared by Button Professional Land Surveyors, P.C., dated 11-27-02, and recorded in Map Slide \_\_\_\_\_ of said Land Records.

The easement and right of way shall be on and over an existing logging road described as follows:

Commencing on the easterly side of Stage Road (T.H. #3) between corners number 20 and 21 as depicted on the Brooks Survey; thence

Continuing within a 100' corridor depicted on said survey, and passing between corners 19 and 22, and 18 and 23; thence

Continuing parallel and adjacent to the boundary marked by corners 18 and 17 on said survey; thence

Continuing on the logging road in a generally northerly direction, passing on the west side of the water body marked "beaver pond" on the Brooks Survey; thence

Terminating at a point situated on the common boundary of lands of Grantor and Grantees, which line is marked by a fence, and which point is approximately 1,600' northeasterly of corner number 16 depicted on the Brooks Survey.

Use of the easement and right-of-way by Grantees, their successors and assigns, shall be subject to the following terms and conditions:

1. The easement and right-of-way is exclusively for the benefit of, and shall be an easement appurtenant to, the lands adjacent to the Property owned by Grantees ("Streeter Parcel"), and this easement shall not be assigned, conveyed or otherwise transferred except appurtenant to title to the Streeter Parcel.
2. The easement and right of way shall be in common, and not exclusive to Grantees. In particular, but not by way of limitation, the use of the easement and right-of-way shall remain available for use by Grantor, its successors and assigns, for all forms of motor vehicle, pedestrian, equestrian, snowmobile, and mechanized access to the Property, and for the installation of utilities, and for any other lawful purposes associated with ownership, use and management of the Property by Grantor and its successors and assigns. Further, Grantor shall be entitled to convey to others, by deed, license or otherwise, permanent or temporary use of the easement and right-of-way. Grantor may use gates and other methods of managing access to the Property, but shall do so in a manner which continues to afford Grantees access as provided in this instrument.
3. Use of the easement and right of way by Grantees, their successors and assigns, invitees and licensees, shall be limited to providing access to one single-family, seasonal recreational camp on the Streeter Parcel, and for no other use. Such access shall be limited to pedestrian, snowmobile and all-terrain-vehicle use, but not including other motor vehicle use.
4. Upon prior written notice to Grantor, Grantees may maintain the existing logging road in a condition suitable for the access described in paragraph 3. Grantees shall not install culverts or bridges, or change the location of the existing logging road without the prior written consent of Grantor. Grantor shall have no obligation to maintain the right-of-way for the benefit of Grantees and Grantees shall have no obligation to maintain the right-of-way for the benefit of Grantor.
5. Entry onto the Property by Grantees, their successors, assigns, licensees and invitees, pursuant to this easement and right-of-way, shall occur at the sole risk of Grantees. Grantees shall indemnify and hold Grantor harmless from and against any and all claims, damages, losses and causes of action which may be asserted by Grantees, or Grantees' successors, assigns, licensees, invitees, agents or any third party who enters onto the Property pursuant to Grantees' right-of-way and easement. Said indemnification and hold harmless shall include any expenses, including reasonable attorneys fees, incurred by the Grantor in defending or otherwise responding to any such claims, damages, losses and causes of action **provided** that such indemnification and hold harmless shall not apply to claims, damages, losses, or causes of action arising out of the intentional or willful conduct of the Grantor.

**TO HAVE AND TO HOLD** all the above rights and interests in and to said easement premises, with appurtenances thereof, to the said Grantees, **Richard Streeter, Sr. and Marion Streeter**, their heirs, administrators, successors and assigns, forever.

**AND FURTHERMORE**, the said Grantor, **Vermont Land Trust, Inc.**, does for itself and its successors and assigns, covenant with the said Grantees, **Richard Streeter, Sr. and Marion Streeter**, their heirs, administrators, successors and assigns, that from and after the ensealing of these presents the said **Vermont Land Trust, Inc.** will have and claim no right in or to said Grantees' interest in the non-exclusive easement premises, except as provided herein.

**IN WITNESS WHEREOF**, \_\_\_\_\_, duly authorized agent of the Vermont Land Trust, Inc., has hereunto set his hand and seal this \_\_\_\_ day of \_\_\_\_\_, A.D. 2002.

**IN PRESENCE OF:**

Vermont Land Trust, Inc.

\_\_\_\_\_  
WITNESS

By: \_\_\_\_\_  
Duly Authorized Agent

STATE OF VERMONT  
\_\_\_ COUNTY, SS.

At \_\_\_, Vermont, this \_\_\_ day of \_\_\_\_\_, A.D. 200\_\_\_, personally appeared \_\_\_\_\_, Duly Authorized Agent for the Vermont Land Trust, Inc., and said agent acknowledged this instrument, by said agent sealed and subscribed, to be said agent's free act and deed and the free act and deed of the Vermont Land Trust, Inc.

Before me,

\_\_\_\_\_  
Notary Public

My Commission Expires:

1.  $\frac{1}{x^2} = x^{-2}$   
Derivative:  $-2x^{-3} = -\frac{2}{x^3}$

2.  $\frac{1}{x^3} = x^{-3}$   
Derivative:  $-3x^{-4} = -\frac{3}{x^4}$

3.  $\frac{1}{x^4} = x^{-4}$   
Derivative:  $-4x^{-5} = -\frac{4}{x^5}$

4.  $\frac{1}{x^5} = x^{-5}$   
Derivative:  $-5x^{-6} = -\frac{5}{x^6}$

5.  $\frac{1}{x^6} = x^{-6}$   
Derivative:  $-6x^{-7} = -\frac{6}{x^7}$

6.  $\frac{1}{x^7} = x^{-7}$   
Derivative:  $-7x^{-8} = -\frac{7}{x^8}$

7.  $\frac{1}{x^8} = x^{-8}$   
Derivative:  $-8x^{-9} = -\frac{8}{x^9}$

8.  $\frac{1}{x^9} = x^{-9}$   
Derivative:  $-9x^{-10} = -\frac{9}{x^{10}}$

9.  $\frac{1}{x^{10}} = x^{-10}$   
Derivative:  $-10x^{-11} = -\frac{10}{x^{11}}$

10.  $\frac{1}{x^{11}} = x^{-11}$   
Derivative:  $-11x^{-12} = -\frac{11}{x^{12}}$

11.  $\frac{1}{x^{12}} = x^{-12}$   
Derivative:  $-12x^{-13} = -\frac{12}{x^{13}}$

12.  $\frac{1}{x^{13}} = x^{-13}$   
Derivative:  $-13x^{-14} = -\frac{13}{x^{14}}$

13.  $\frac{1}{x^{14}} = x^{-14}$   
Derivative:  $-14x^{-15} = -\frac{14}{x^{15}}$

**Forest Management Plan  
For Property Belonging to  
The Town of Bolton  
In  
Bolton, Vermont  
Preston Pond**



Prepared by Keith Thompson

111 West Street

Essex Junction, Vermont 05452

(802) 498-5169

VT Department of Forests, Parks & Recreation

**Forest Harvest Plan**  
**For Property Belonging to**  
**The Town of Bolton**  
**In**  
**Bolton, Vermont**  
**“Preston Pond”**

**Prepared by: Keith Thompson, Essex Junction, Vermont**

**VT Department of Forests, Parks & Recreation**

**January, 2016**

**Property Summary**

Landowner's Name: Town of Bolton, Vermont

Town Where Land is Located: Bolton, Vermont between Stage and Notch Road

403.2 acres of forests, wetlands, ponds, streams, cliffs and recreational trails.

**Introduction**

The following forest management plan was developed for the Town of Bolton for the Preston Pond Property. This plan is intended to describe conditions and recommended management activities for productive and operable forest stands on this property in a manner consistent with the existing management plan. This document should be considered supplemental, and perhaps act as an appendix, building on top of the existing plan as opposed to being a stand-alone document.

The conditions described in this document, and recommendations made are based on data collected in the summer of 2014 and confirmed in the spring of 2015.

**Methodology**

This property was divided in to areas of relatively homogenous forest cover (stands) based on review of orthophotography and soils maps. These stands were then verified/modified on the ground using gps and orthophotography in the field. Once stand boundaries were established a cruise grid was laid out with inventory plots occurring every 417'. In the summer of 2014 data were collected at each plot on the grid. This means that one plot was taken every 4 acres. At each plot quantitative data were collected on overstory tree species, diameters and conditions. Other features such as regeneration, conditions of vegetative layers (understory, midstory and overstory) and other structural habitat features like coarse

woody material, fine woody material, snags and cavity trees were assessed qualitatively. While data were collected across the property it has only been quantitatively summarized for operable and productive stands. These are areas that exhibit relatively dry ground that is not too steep. This plan focuses on the description and management recommendations for these areas, which will be referred to as the Operable Stands. The Operable Stands comprise 269 acres of the total 405 acres of this property.

Several areas throughout this property are wet, steep or shallow to bedrock. In many cases these areas are hotspots for diversity and are uniquely sensitive to manmade disturbance. These areas are shown on the Forest Stand Map, and briefly described in this plan. However, because the value of these areas would not benefit from harvesting, and conditions may be compromised by using heavy machinery they have not been assessed through the lens of timber management in this plan.

### **Landowner Goals and Objectives**

The existing management plan for this parcel does an excellent job articulating the overarching objectives. In summary, this forest is intended to be managed for ecosystem health and public access. Some areas such as Resin Ridge, and the various water resources like Preston Pond and other beaver ponds and wetland areas are of local and statewide ecological significance. In these areas ecological integrity trumps other management objectives. Outside of these significant areas, which are generally stable soils occupied by northern hardwood forest, recreational access is among the top objectives. In these areas, where management is compatible with recreation AND supportive of ecological values, some limited harvesting or habitat management may be considered.

A conservation easement is held by Vermont Land Trust. This easement protects biological diversity, wildlife habitats, unfragmented forest, natural communities, riparian buffers and native flora and fauna on the property. In addition, the easement protects recreational, scenic and forest management potential of the parcel. It achieves this by imposing some restrictions on the property which are articulated in the conservation easement. The easement extends across the property, though an additional layer of protections extends to the Ecological Protection Zones (EPZ). Those areas which are part of the Ecological Protection Zones may not be harvested, and with the exception of the existing VAST trail, recreational trails may not be maintained within these zones. Areas that overlap with the EPZ are identified in this plan.

### ***General Conditions within the Operable Stands:***

***Overall Description:*** *The Operable Stands are dominated by hardwoods. Red maple is the most common species (36%), followed by sugar maple (26%). White ash (9%), American beech (7%), yellow birch (6%) and paper birch (6%) are significant associates. 11 other species of primarily hardwoods comprise the remainder of the stocking.*

*The forest is primarily small sawtimber with the bulk of the overstory comprised of trees that are between 12 and 16 inches in diameter at breast height.*

**Forest Health:** No major diseases were observed. Only a couple invasive plants were noted. One mature/seed producing Japanese barberry was noted on the western shore of Preston Pond. Japanese knotweed, common buckthorn and honeysuckle have been documented on Notch Road north of the parking lot. While invasive species are not currently well established on the property they have been mapped on surrounding roads. In particular, Japanese knotweed is well established near the property boundary on Notch Road near the wetlands in the north, and honeysuckle, buckthorn and Japanese barberry are scattered along Notch Road and Stage Road.

It should be noted that some portions of the property have a high proportion of white ash trees. Stand 2 and 6 have roughly 20% of the stocking in ash. When emerald ash borer becomes established here, it will have a significant impact on these stands. This potential should be taken in to account when considering management options.

**Timber Production:** There is not much mature sawtimber on this property right now. However, this property has potential for producing sawtimber. Right now there are enough well-formed trees to fully stock the forest. Currently, these well-formed trees are competing with poorly formed trees and due to this competition it is likely that they are all growing slowly. Based on current markets sugar maple has the best potential to produce valuable sawlogs. Well conducted management for sawtimber will require focus on removing low quality/value trees and increasing species diversity into the foreseeable future.

**Water Quality:** The water features on this property are among its most prominent and ecologically valuable features. They deserve extreme care and thought in the planning and implementation of management activities. Preston Pond, numerous small beaver ponds, and several intermittent streams are found on this property.

Currently the VAST trail is the main access and is used by ATVs, pedestrians and mountain bikers and as a Right of Way for a neighboring land owner. Currently, the culverts on this trail are undersized and few waterbars exist to divert water from the trail surface. On occasion it appears that erosion results in discharge of sediment in to a stream or wetland.

Some streams are shown on the map, and any wetlands or streams not mapped should be flagged out on the ground prior to conducting management activities. Only those treatments that are compatible with protection of water quality will be pursued. The Acceptable Management Practices for Maintaining Water Quality on Logging Jobs in Vermont (AMPs) will be employed to the maximum practicable extent, and where they are insufficient to protect water quality or unable to be applied, no treatment should occur.

Furthermore, the easement establishes surface water buffer zones. Within 100 feet of the thread of Duck Brook and within 50' of the thread of all other streams depicted on the Preston Pond Conservation plan, there shall be no harvesting or other forest management activities conducted. In addition stream crosses are permitted for the purpose of constructing roads for transporting forestry machinery but the number and width must be kept to a minimum and include adherence to the AMPs.

**Soils Information:** The Area's soils have been mapped by the NRCS at a relatively coarse scale and a soil map can be found in Appendix 8.1 of the management plan. The soils (Lyman, Marlow, Peru, Cabot, and others) are primarily spodosols and inceptisols formed over dense basal till.

**Soil Considerations:** These soils tend to be acidic, of low fertility, and can vary from well-drained to poorly drained. The mapping does appear to be generally accurate and reflective of site productivity on the ground. Due to the variability some sites have high potential for timber growth (particularly in the southern portion of the property) while other areas offer limited timber growth potential.

**Native Biodiversity:** The diversity from acre to acre is not particularly high on this property, however, this property exhibits some features that contribute significantly to the biodiversity of the landscape. Much of this diversity is driven by topography and soils and the resulting growing conditions differ dramatically from conditions found locally. The "hotspots" for diversity are generally those areas outside the "operable stands". These areas include Resin Ridge and the associated red pine stand, the cliff faces, the hemlock swamp (now beaver pond) near the long trail access in the central portion of the property and Preston Pond and associated beaver ponds. These areas are of particular importance and on the margins of Preston Pond is Torrey's bulrush (*Scirpus torreyi*) and on Resin Ridge can be found the long-leaved bluet (*Hedyotis longifolia*), both are rare plants. In addition, Resin Ridge offers nesting sites for the state endangered peregrine falcon, and habitat for populations of the state threatened Hooker's orchid (*Platanthera hookeri*). In the northern portion of the property several rock outcroppings may not approach the scale of Resin Ridge, but offer islands of unique growing conditions within the northern hardwood matrix. A small alder swamp exists next to an old building foundation along the VAST trail in the central portion of the property. This diversity is of significant value to the resilience of the Bolton landscape, the aesthetic appeal, and wildlife habitat in the area. These sites are delineated on the map and very briefly described at the end of this document. Some of these areas intersect with areas designated as Ecological Protection Zones which have specific restrictions outlined in the conservation easement. These restrictions include the requirement that there not be harvesting or other forest management activities or any other ground-disturbing activities performed within the Zones.

The diversity within the northern hardwood stands is somewhat limited. Limited diversity of tree species is only one component of this. Some features that are generally lacking that can contribute to diversity include: diversity of tree size/age, availability of coarse and fine woody material, dead and dying trees. Management options should address how these features are maintained and enhanced. However, some enriched sites within the northern hardwood forest is habitat for two uncommon plants including wild millet (*Milium effusum*) and three-leaved snakeroot (*Sanicula trifoliata*).

**Wildlife Considerations:** This property makes both landscape and local contributions to wildlife habitat particularly for interior forest species. On the landscape level this property is part of a large area of contiguous forest that ranks high among Vermont's habitat blocks (Vermont Fish and Wildlife Department habitat blocks). This property offers connectivity between surrounding habitats for wide ranging animals like moose, black bear, fisher, bobcat and otter. Within the property the cliffs offer the most obvious wildlife feature as they often serve as nesting sites for peregrine falcon. The small pockets of softwood throughout the parcel offer some protection from the elements for deer and other species and enough conifer to support the presence of species dependent on even a little softwood like the Blackburnian warbler. Preston Pond and associated beaver ponds offer significant value to those species of birds, mammals, amphibians and reptiles dependent on water and early successional conditions like the Chestnut sided warbler, or the Eastern kingbird, otter and mink.

*Access:* Access to this property is made from small parking lots on Stage Road and Notch Road. These access points are reasonable for recreational purposes, but pose challenges for management purposes and access for machinery. Historical access for skidders throughout the property was often poorly located and maintained. One primary landing south of Preston Pond was not conveyed with the parcel making the removal of timber difficult. The current map illustrates the known existing skid trails. One of the first efforts should be to design a functional road network which protects the ecological integrity of the forest and waters of the parcel while enabling access for management purposes.

**Primary Recommendations:** All recreational and skid trails should be mapped and maintained or repaired to ensure stability. Local trail groups including VAST, Green Mountain Club, and perhaps Vermont Mountain Bike Association should be contacted to be involved with repair of specific trail sections. The Chittenden County Forester will be able to support the development and maintenance of the skid trail network. This mapping should occur in 2016, grants should be pursued in 2016 and 17, and work should begin in 2018.

Limited harvesting has been prescribed for areas outside the Ecological Protection Zones in stand 1, 3, 4 and 5. Prescription details are found within the stand summaries below.

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## Stand 1

Size: 27 acres

**Forest Type:** Sugar Maple – Northern Hardwood

**Structure & Composition:** This is an uneven aged stand of moderate to low quality. The stand is primarily comprised of sugar maple (60% of the basal area) with associates of American beech (19%), white ash (9%) and both yellow and paper birch (5%). Portions of this stand had a higher proportion of large diameter trees than found elsewhere on

the property. Some pockets of the stand were exhibiting wind damage which is recruiting coarse and fine woody material and improving habitat. Generally speaking though, this stand is lacking snags, coarse and fine woody material which are features that can help support species like fisher, northern flickers or flying squirrels.

**General Description:** This stand occupies some of the deeper soils in the northern portion of the property. The stand is variable occupying various slopes and topography, but was delineated based on its slight enrichment and trend towards sugar maple. The site appears to have the potential to grow quality sawtimber as suggested by rich site indicators like wild leeks, maiden hair fern and blue cohosh. The composition of the herbaceous layer in this stand was unique on this property. However, only about half of the stocking will ever produce a sawlog. Stocking ranged from 100 sq.ft./acre to 200 sq.ft./acre, which is quite high and suggests growth rates are likely limited by available light and space. Some of the trees in the south eastern portion of the stand on the steeper slopes are extremely large which is unique to this property. Pileated woodpecker and scarlet tanager were observed in this area. Negligible portions of this stand overlap with the Ecological Protection Zone which precludes any harvesting of trees.

Stand 1	Total	AGS
>=4" and <=8"	14	10
>8" and <=12"	27	17
>12" and <=16"	29	11
>16" and <=20"	38	20
>20"	19	10

Figure 1. Basal area by diameter



**Stand Summary:** 7 plots, 10 BAF prism

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Total Basal Area/Acre:	127 ft <sup>2</sup>
Acceptable Basal Area/Acre:	67 ft <sup>2</sup>
Quadratic Mean Stand Diameter:	12.6 in.
Trees/Acre:	147

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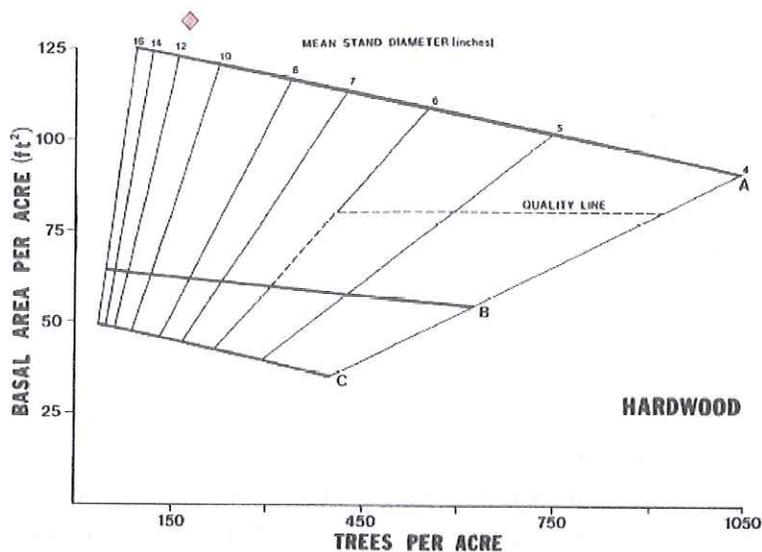


Figure 6.—Stocking guide for main crown canopy of even-aged hardwood stands (beech-red maple, beech-birch-maple) shows basal area and number of trees per acre and quadratic mean stand diameter. The A line is fully stocked, the B line is suggested residual stocking. The C-line is minimum stocking. The quality line is the density required to produce high quality stems of beech, sugar maple, yellow birch, and red maple.

**Approximate Stand Age:** 85 years (with pockets of 120+)

**Stand Health:** Tree form is generally poor in this stand. Only half of the stocking has the potential to produce a sawlog. The stand is not very diverse, which is a liability in terms of stand resilience. Some dense pockets of white ash may be susceptible to emerald ash borer when it arrives. Some areas of beech are strongly affected by beech scale necrotia, which will often kill beech. No health considerations are cause for serious concern or immediate action, but they are worth keeping an eye on.

**Invasive Species:** None noted.

**Soil Types:** *Peru and Lyman Marlow*

**Site Index:** 60 for sugar maple

**History/Previous Activity:** This stand was harvested more than 30 years ago. Some stumps are visible particularly in the northeastern portion of the property though very little evidence of harvesting remains.

**Slope:** 5- 30%

**Aspect:** North and westerly

**Access and Operability:** Currently no clear road accesses the southern portion of this stand. Development of a road would be possible though the areas that are dry are steep and the areas that are relatively level are wet. It is expected that there are suitable locations for a road, though it would require careful planning. Historically, it appears that the northern portion of the property was accessed from the north as opposed to the south. Because of slopes and boundary locations it would be difficult to access the northern portion of this stand.

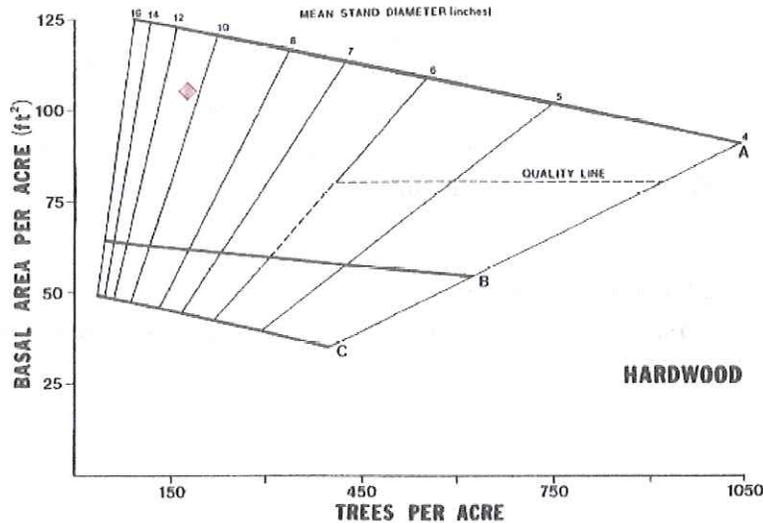


Figure 6.—Stocking guide for main crown canopy of even-aged hardwood stands (beech-red maple, beech-birch-maple) shows basal area and number of trees per acre and quadratic mean stand diameter. The A line is fully stocked, the B line is suggested residual stocking. The C-line is minimum stocking. The quality line is the density required to produce high quality stems of beech, sugar maple, yellow birch, and red maple.

**Approximate Stand Age:** This estimated age of this stand is 75 years.

**Stand Health:** This prevalence of white ash in this stand is currently good to see, however it can be expected to be significantly impacted when emerald ash borer becomes established in Bolton. It would be prudent to monitor which species will benefit when the white ash declines. If the species that will benefit are desirable then no action is warranted. If the species to benefit are unclear or undesirable it may be prudent to consider steps to insure an acceptable transition away from white ash. The beech is affected by beech scale and would be a likely successor as the ash declines. It is likely that red maple will be most successful in response to the loss of ash, but red spruce, hemlock and red oak may increase in their frequency. At this point the loss of ash would result in the development of desirable species.

**Invasive Species:** None noted.

**Soil Types:** Lyman

**Site Index:** 45 for n. hardwoods

**History/Previous Activity:** There was no evidence of harvesting in this stand.

**Access and Operability:** No well established roads access this stand. Due to the slopes development of roads will require careful planning. Roads would likely access this stand from the existing VAST trail south of the stand.

**Management Objectives:** For the foreseeable future this stand should be managed for wildlife, biodiversity and recreational use. This stand includes the upper access to Libby's Look and provides the buffer to the more critical ecological features in the northern portion of the property like Resin ridge, and some of the softwood inclusions.

**Management Activities:** No forest management for timber. Recreational trails should be maintained to limit erosion and negative impacts to seeps and streams in this stand. When EAB becomes established in the local area this stand should be monitored to project the likely response of the stand to decline of the ash trees and identify any appropriate management activities. The website [www.vtinvasives.org](http://www.vtinvasives.org) is an excellent resource for up to date information on the status of EAB in Vermont and appropriate management.

**The trail accessing Libby's Look needs attention. There are few water diversions and significant erosion in places. Many portions of the trail should be rerouted. It is possible that trail grants would be available for this work.**

DRAFT

**Management Objectives:** This stand should be managed for an uneven aged condition producing northern hardwood sawtimber (sugar maple, healthy beech, basswood, red spruce) interior forest wildlife habitat (pileated woodpecker, scarlet tanager) and herbaceous species ( wild leek, maiden hair fern, blue cohosh) adapted to this site.

**Management Activities:** No stand wide treatment should be conducted at this time. Any treatment in the northern portion of this stand is contingent upon modification of Ecological Protection Zones identified under the current easement. If feasible in the areas outside of the Ecological Protection Zone a volunteer group (UVM students?), should support the development of sawtimber and recruitment of structural diversity for wildlife by conducting small improvement treatments every year in this stand. Each treatment should consist of an improvement cutting reducing the stocking by 1/4 but reducing the stocking no less than 80 sq.ft./acre in a 1 acre area. Well formed sugar maple, healthy beech, yellow birch and of all sizes should be favored for retention and release. All softwood, basswood and productive mast producing trees should be retained. Of the trees to be removed, half should be girdled to create snags (especially if they are >14"), and half of the trees should be dropped and left in place. No trees over 20" should be cut or killed at this point. Areas which lack established regeneration, snags or woody material should be prioritized for treatment. After 10 acres have been improved the stand should be allowed to grow for about 10 years. It is likely that a commercial harvest will be viable at that time.

Target Diameters:

*Red oak, sugar maple , white ash, yellow birch – 18 to 20" DBH*

*Beech – 18"*

*Paper birch, red maple - 16"*

## Stand 2

Size: 33 acres

Forest Type: Red Maple Hardwoods

**Structure & Composition:** From a species composition perspective this is a relatively diverse stand. Red maple is the most common species in this stand comprising 35% of the stocking. White ash comprises 20% of the stocking representing a higher proportion than usual for this species. Other species present include paper birch 13%, Eastern hemlock 10%, sugar maple 10%, red pine 5% and beech 3%. The red pine and hemlock occur in pockets throughout the stand while other species are more broadly dispersed. Most of the trees in this stand are less than 14" dbh though pockets of larger trees and scattered super-dominant trees exist. In many cases these are white ash or pine trees. There are few snags and very little coarse woody material.

**General Description:** This stand occupies the dry soils on somewhat steep south-west facing slopes in the northern portion of the property. The trees are generally slow growing and access for management purposes would be challenging due to slopes. Because of the uniquely dry conditions of this stand it may offer potential for the development of oaks and bitternut hickory as species like white ash and paper birch decline in dominance. Beech is common in the understory, and there is little herbaceous cover.

**Portions of this area coincide with the Ecological Protection Zones and are afforded additional protections in the Conservation Easement.**

Stand 2	Total	AGS
>=4" and <=8"	29	19
>8" and <=12"	37	19
>12" and <=16"	26	21
>16" and <=20"	13	10
>20"	7	1



**Stand Summary:** 7 plots, 10 BAF prism

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Total Basal Area/Acre:	111 ft <sup>2</sup>
Acceptable Basal Area/Acre:	70 ft <sup>2</sup>
Quadratic Mean Stand Diameter:	10.11 in.
Trees/Acre:	227

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### Stand 3

Size: 94 acres

Forest Type: Red maple

**Structure and Composition:** This stand is an overstocked red maple stand (62%). Other species present include black cherry 8%, white ash 7%, paper birch 5%, sugar maple 5%. This is a small sawtimber stand with patch areas of regeneration. There are few snags and not much woody material on the ground. Many of the smaller trees appear to be low quality.

Stand 3	Total	AGS
>=4" and <=8"	21	12
>8" and <=12"	41	15
>12" and <=16"	30	20
>16" and <=20"	20	12
>20"	4	1

**General Description:** This is the largest stand on the property. It is the most easily accessed stand as it surrounds Preston Pond on the west side of the property and portions of it extend to the eastern portion of the property along the existing VAST trail. The stand is relatively homogenous though trees to the east of Preston pond tend to be a little bit larger than elsewhere and some sections to the north of Preston Pond can be very wet. The overstory in this stand is dominated by red maple with components of white ash and black cherry. The midstory varies by soils and in some



locations exhibits pockets of sugar maple, yellow birch or beech. There is very little understory. Only about half of the stocking has the potential to develop a sawlog. The proximity of this stand to water features make portions of it incredibly important to wildlife like ducks, herons and geese, beavers, otters, mink, moose, painted turtles, spotted salamanders and garter snakes. Beavers are active within a few hundred feet of open water, contributing to the structural diversity. In the interior forest the contribution of this stand to wildlife is not as significant as it could be due to the lack of diversity and habitat features. Some exceptions are that black cherry offers excellent soft mast for birds like scarlet tanager, but there is limited structure for nesting for cavity dependent birds like pileated woodpecker, or for birds that nest in the understory like black throated blue warbler. There are some pockets of service berry where the soils become shallow and there is evidence of use by bear. This stand does serve to connect important habitats within and beyond the parcel and should be managed to support this value. **Portions of this area coincide with the Ecological Protection Zones and are afforded additional protections in the Conservation Easement.**

**Stand Summary:** 21 plots, 10 BAF

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Total Basal Area/Acre:	116 ft <sup>2</sup>
Acceptable Basal Area/Acre:	62 ft <sup>2</sup>
Quadratic Mean Stand Diameter:	10.7 in.
Trees/Acre:	187

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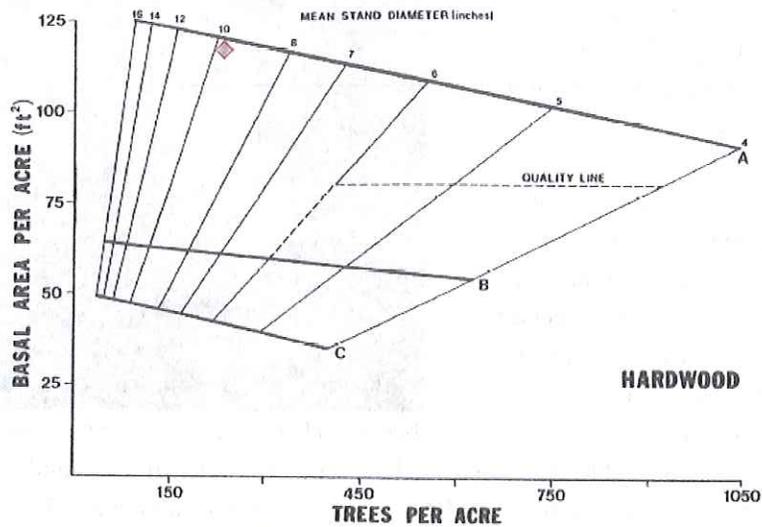


Figure 6.—Stocking guide for main crown canopy of even-aged hardwood stands (beech-red maple, beech-birch-maple) shows basal area and number of trees per acre and quadratic mean stand diameter. The A line is fully stocked, the B line is suggested residual stocking. The C-line is minimum stocking. The quality line is the density required to produce high quality stems of beech, sugar maple, yellow birch, and red maple.

**Approximate Stand Age:** 60 years

**Stand Health:** The trees are generally healthy but there is limited species or structural diversity in this stand.

**Invasive Species:** One large, seed producing Japanese barberry was identified about 150' from the middle of the western shore of Preston Pond.

**Soil Types:** Lyman-Marlow, Marlow and Cabot

**Site Index:** 50 for n. hardwoods

**History/Previous Activity:** This stand appears to have been thinned in the nineties.

**Access and Operability:** Access and operability of this stand are okay in close proximity to the VAST trail. Access can be gained from Stage road or Notch road but the distance to move wood can be long.

**Management Objectives:** The primary objective for this area is the protection of water quality and ecological functioning of Preston Pond and associated streams and wetlands. This stand should be managed for a diverse structure and composition to benefit interior forest wildlife species connectivity between habitats and to support the riparian habitat values.

**Management Activities:** Currently, much of this stand overlaps with the Ecological Protection Zones outlined in the conservation easement. Because of the way these zones are currently described, only portions of this stand may be treated.

A treatment should be conducted to increase available woody material, regeneration, the proportion of non-red maple species and to improve timber quality. Small canopy gaps (1/8<sup>th</sup> to 1 acre in size) should be created to contribute to the diversity and habitat value of this stand providing soft mast for songbirds, black bear, fisher and browse for deer and moose, and otherwise unavailable habitat for insects. Generally, groups should not be located where fern is dominant in the understory. Where groups are appropriate, but fern is established, groups greater than 1/2 acre should be used. Larger groups should be used to favor yellow birch. Smaller groups should be used where beech or sugar maple show promise. No more than 8% of the treated area should be regenerated in gaps. Outside of gaps, crop tree release should occur favoring the release of any sized stems of species like healthy beech, black cherry, red oak, yellow birch, red spruce, sugar maple and hemlock. Where these species are not available, red maple should be favored. Stocking should be reduced to about 80 sq.ft./acre where hardwood is dominant. Harvesting should occur where access poses little or no risk to water resources and because of this restriction and the Ecological Protection Zones, this treatment will only benefit about 60% of the stand. This treatment will produce mostly firewood and should be conducted when the ground is frozen.

In accordance with the easement, no cutting should occur within 50' of streams. This treatment should occur in 2020. This treatment is dependent on establishing a functional skid trail network. The trail network should be mapped and in place prior to conducting any activities. The target date for trail completion is 2018.

Target Diameters:

*Red oak, sugar maple, white ash, yellow birch – 18 to 20" DBH*

*Beech – 18"*

*Paper birch, red maple - 16"*

## Stand 4

Size: 39 acres

Forest Type: Red Maple – Sugar Maple

**Structure & Composition:** This is a young stand with a higher proportion of red maple (42%) than sugar maple (36%), and does not differ dramatically from the composition of stand 5. However, the stand appears to have potential to regenerate more sugar maple. Other species present include beech (8%), yellow birch (5%) and white ash (4%). In places ferns dominate the understory. The midstory is comprised of sugar maple, beech and yellow birch. There are few snags and little coarse woody material.

Stand 4	Total	AGS
>=4" and <=8"	23	18
>8" and <=12"	54	36
>12" and <=16"	34	23
>16" and <=20"	15	11
>20"	5	3

**General Description:** This stand occupies a strip of western facing slopes on the eastern side of the parcel. The soils are enriched in places and seem to support sugar maple to a larger degree than stand 3 or 5. The stand is overstocked and it is likely that trees are growing slowly. For the most part this is a pole stand though some red maple, white ash and paper birch approach 18" DBH. Sugar maple, beech and yellow birch tend to be pole or small sawtimber size. Any wildlife species accessing Resin Ridge from the west must pass through this stand. Due to the difficult terrain to the east of this stand, it is likely that this stand is an important corridor for species moving north south, or those moving east west and in search of suitable places to cross the ridge.



**Stand Summary:** 8 plots, 10 BAF prism

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Total Basal Area/Acre:	130 ft <sup>2</sup>
Acceptable Basal Area/Acre:	91 ft <sup>2</sup>
Quadratic Mean Stand Diameter:	10.29
Trees/Acre:	225

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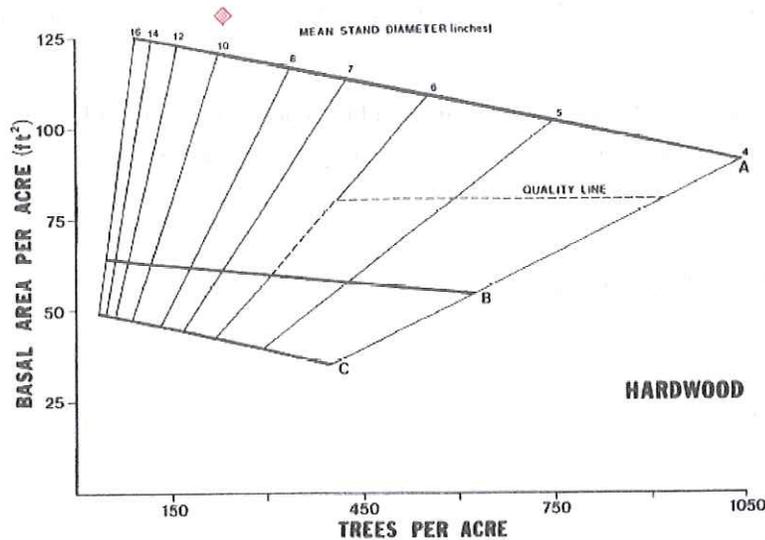


Figure 6.—Stocking guide for main crown canopy of even-aged hardwood stands (beech-red maple, beech-birch-maple) shows basal area and number of trees per acre and quadratic mean stand diameter. The A line is fully stocked, the B line is suggested residual stocking. The C-line is minimum stocking. The quality line is the density required to produce high quality stems of beech, sugar maple, yellow birch, and red maple.

**Approximate Stand Age:** 70 years

**Stand Health:** This stand has a high fern density in places which limits the potential for regeneration. In some places maple borer has damaged many of the sugar maple stems.

**Invasive Species:** None noted.

**Soil Types:** Marlow and Lyman-Marlow

**Site Index:** 50 for n. hardwoods

**History/Previous Activity:** Some light cutting occurred in portions of this stand in the 90s.

**Access and Operability:** Access to this stand would likely be from Notch Road. If permission were granted the southern section could be most easily accessed from the historic access south of Preston Pond, however this access is not currently owned by the Town of Bolton.

**Management Objectives:** This stand should be managed for a multi-aged condition for the benefit of wildlife habitat/connectivity and production of sawtimber.

**Management Activities:** In 2020 this stand should be treated through Crop Tree Release with Canopy Gap Formation. 40 crop trees should be identified and released/ acre. Crop trees should include well-formed red and sugar maple, yellow birch, black cherry and healthy beech in the midstory or canopy. Softwood should be retained where it occurs. Where suitable crop trees and ferns are absent, canopy gaps should be created that are up to 75' in diameter. 8% of the stand should be regenerated in these gaps. They will favor sugar maple, red maple and beech with some black cherry and yellow birch. Due to the lack of large diameter trees in this stand the treatment should retain trees exceeding 20 inches during this entry. This will help ensure that the management does not reduce the habitat value of the stand. Stocking between canopy gaps should be reduce to about 85 sq.ft./acre. This treatment will produce mostly firewood.

This treatment is dependent on establishing a functional skid trail network. The trail network should be mapped and in place prior to conducting any activities. The target date for trail completion is 2018.

Target Diameters:

*Red oak, sugar maple, white ash, yellow birch – 18 to 20" DBH*

*Beech – 18"*

*Paper birch, red maple - 16"*

## Stand 5

Size: 32 acres

Forest Type: Red Maple – Sugar Maple

**Structure & Composition:** This is a young stand with a higher proportion of red maple (38%) than sugar maple (32%), and does not differ dramatically from the composition of stand 4. However, the stand appears to have potential to regenerate more red maple. Other species present include paper birch (11%), yellow birch (11%). Other minor components include white ash and beech. In places ferns dominate the understory. The midstory is comprised of striped maple, beech, yellow birch and occasional sugar maple. There are some paper birch snags developing and due to the locally high water table, there are some tip ups in this stand.

**General Description:** It appears that this stand was the last portion of the property to be abandoned as pasture. The trees are generally less than 60 years old. More than 80% of the basal area is in trees between 6 and 12 inches in diameter. Portions of the stand were cut in the 1990s. The roads going through the stand have few water diversions and are actively eroding in a few places. The soils seem to be a bit deeper than found elsewhere on the property and offers good potential to grow a species rich stand. **Portions of this area coincide with the Ecological Protection Zones and are afforded additional protections in the Conservation Easement.**

Stand 5	Total	AGS
>=4" and <=8"	41	34
>8" and <=12"	49	37
>12" and <=16"	21	17
>16" and <=20"	3	3
>20"	1	0



**Stand Summary:** 7 plots, 10 BAF prism

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Total Basal Area/Acre: 116 ft<sup>2</sup>  
Acceptable Basal Area/Acre: 91 ft<sup>2</sup>  
Quadratic Mean Stand Diameter: 8.4  
Trees/Acre: 268

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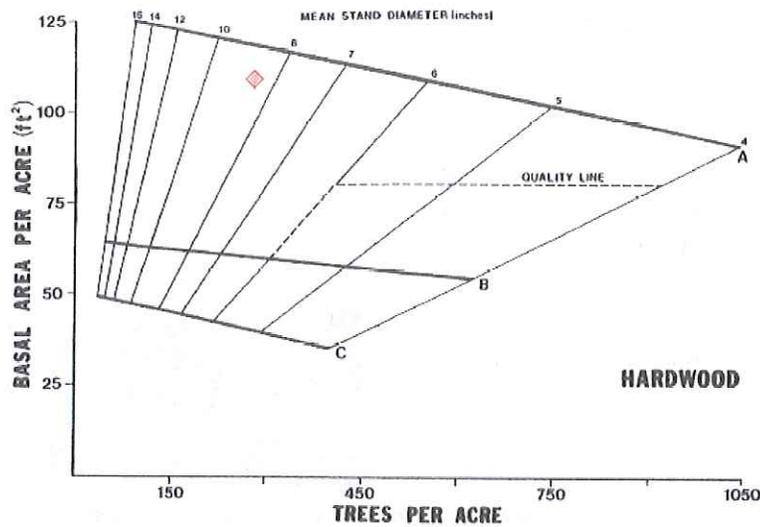


Figure 6.—Stocking guide for main crown canopy of even-aged hardwood stands (beech-red maple, beech-birch-maple) shows basal area and number of trees per acre and quadratic mean stand diameter. The A line is fully stocked, the B line is suggested residual stocking. The C-line is minimum stocking. The quality line is the density required to produce high quality stems of beech, sugar maple, yellow birch, and red maple.

**Approximate Stand Age:** 60 years

**Stand Health:** There are portions of this stand that have a high water table. These areas are prone to windthrow. The wildlife contribution of these pockets of windthrow are significant and requires no action.

**Invasive Species:** None noted.

**Soil Types:** Peru

**Site Index:** 50 for n. hardwoods

**History/Previous Activity:** Some light cutting occurred in portions of this stand in the 90s.

**Access and Operability:** Access to this stand was historically from the West. This is the most reasonable access, and due to the location of beaver ponds to the north and the distance to the Notch road and Stage Road access (1 mile and 1.5 miles respectively), there are few alternatives.

**Management Objectives:** This stand should be managed for a multi-aged condition for the benefit of wildlife habitat/connectivity and production of sawtimber. In support of this objective, approximately 10% of this stand should be managed to support early successional habitat.

**Management Activities:** If access from neighboring parcels is able to be established, in 2017 create either one 3 acre patch cut, or two 2 acre groups. Which approach is taken should depend on suitability of locations and should be determined on the ground.

These openings should be located in areas that are at least 50' from surface waters and where there are concentrations of poorly formed trees. Ideal locations would exhibit poplar and paper birch and the potential to regenerate these species. The objective of these openings will be to simultaneously regenerate trees for sawtimber such as poplar, paper and yellow birch, red maple and white ash, while also creating habitat conditions that that will support early successional species like chestnut sided warbler, American woodcock, or roughed grouse.

These openings should be located close to the existing access point or along the western boundary south of the access to Stand 5. This location will amplify the benefit of the openings creating accessible habitat in close proximity to edge habitat associated with roads and houses, while minimizing the edge effect that would result from creating large openings in the interior of the property.

Outside of the openings the stand should be thinned to about 85 sq.ft/acre. The thinning should favor the retention and growth of single stemmed red maple, well-formed sugar maple and yellow birch.

## Stand 6

Size: 52 acres

Forest Type: Sugar Maple

**Structure & Composition:** This stand is dominated by sugar maple (48%), and white ash (20%). Beech and red maple and yellow birch each comprise about 8% of the stocking. Other species present include paper birch, striped maple, red spruce and service berry. The midstory is dominated by striped maple. The understory is generally quite sparse, though there are areas with blue cohosh, Christmas fern and auralia. There is some coarse woody material in this stand resulting from tip ups and harvesting in the 1990s. While predominantly a small sawtimber stand, some areas exhibit older trees with some maple and ash trees approaching 30" DBH. Also, this stand has a good availability of snags and likely cavity trees as well.

Stand 6	Total	AGS
>=4" and <=8"	30	19
>8" and <=12"	34	27
>12" and <=16"	34	30
>16" and <=20"	15	10
>20"	2	1

**General Description:** This is the southernmost operable stand on the property. It seems to occupy the same soils and growing conditions as stand 4 and favors sugar maple. However, unlike stand 4 it appears that this stand reverted to forest from pasture decades before stand 4. This is understandable because much of this stand is shallow to bedrock on western facing slopes. The stand has pockets of enriched soils and exhibits some of the greatest diversity of herbaceous plants (outside of the wetlands and ledges). There are skid trails accessing this stand, however they originate off property and skid distances to the legal access points owned by Bolton exceed a mile. **Portions of this area coincide with the Ecological Protection Zones and are afforded additional protections in the Conservation Easement.**



**Stand Summary:** 11 plots, 10 BAF prism

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Total Basal Area/Acre:	115ft <sup>2</sup>
Acceptable Basal Area/Acre:	87ft <sup>2</sup>
Quadratic Mean Stand Diameter:	10.1
Trees/Acre:	204

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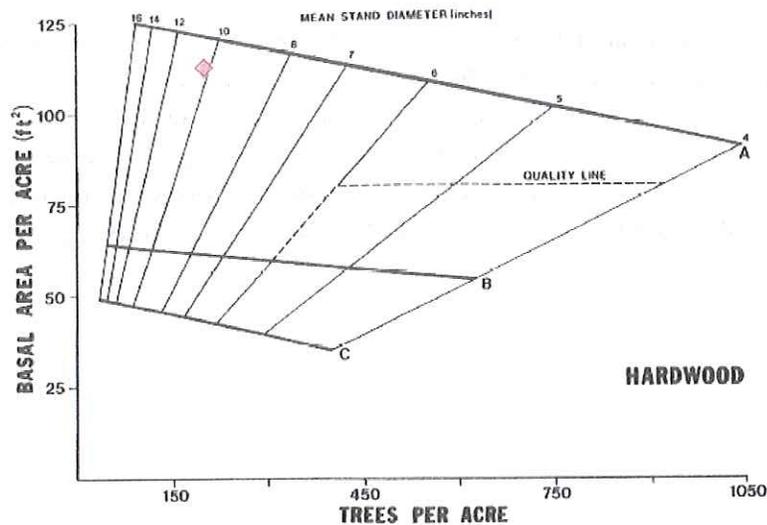


Figure 6.—Stocking guide for main crown canopy of even-aged hardwood stands (beech-red maple, beech-birch-maple) shows basal area and number of trees per acre and quadratic mean stand diameter. The A line is fully stocked, the B line is suggested residual stocking. The C-line is minimum stocking. The quality line is the density required to produce high quality stems of beech, sugar maple, yellow birch, and red maple.

**Approximate Stand Age:** 100 years

**Stand Health:** Generally good. While the prevalence of white ash in this stand is currently good to see, it can be expected to be significantly impacted when emerald ash borer becomes established in Bolton. It would be prudent to monitor which species will benefit when the white ash declines. If the species that will benefit as the white ash dies are desirable species then no action is warranted. If the species to benefit are unclear or undesirable it may be prudent to consider steps to insure an acceptable transition away from white ash. In some areas the decline of ash will favor regeneration of sugar maple and beech. In other areas it will temporarily favor striped maple. The success of striped maple may slow the regeneration response of trees that are more valuable for wildlife habitat or sawtimber.

**Invasive Species:** None noted.

**Soil Types:** Lyman-Marlow

**Site Index:** 50 for n. hardwoods

**History/Previous Activity:** Light thinning 1990s.

**Access and Operability:** Terrain in this stand is favorable for forest management; however, access would be best gained through adjacent ownerships.

**Management Objectives:** Using uneven-aged management techniques this stand should be managed for mature forest habitat values and sawtimber.

**Management Activities:** No management should occur in this stand at this time. This is the recommendation for one main reason: The distance from established access is prohibitive to management. Any work in this stand will have significant cost and without significant ecological or economic return management is difficult to justify.

Currently, this portions of this stand are uniquely mature for this property and is in pretty good shape with reasonable stocking (albeit a little high). Ideally this stand would be treated to favor regeneration through treatment of striped maple and removal of low quality trees, reduce stocking slightly and address potential losses of white ash to EAB. However, much of this work would have marginal returns on a high economic and energy investment. If comfortable access is established from the southern portion of the property this treatment should be revisited and treatment of the stand may become a priority for the parcel.

### Ecologically Significant Sites:

The following areas have been delineated because they exhibit conditions and values that are unlikely to be enhanced through harvesting or timber management. These areas contribute significant diversity to the parcel and the landscape. For a variety of reasons they deserve further description and monitoring than is within the scope of this plan. However, the following descriptions attempt to illustrate the soils, terrain and vegetative conditions that make these areas unique. Areas 8,9,10 and 22 coincide with designated Ecological Protections Zones in the easement which have some additional restrictions to protect the values of these areas. These additional restrictions are found in the conservation easement and extend beyond those which apply to the rest of the property.

**ESS 7:** This is a small area between Notch Road and the beaver ponds along Duck Brook. While portions of this stand may be operable, it really has its highest value buffering the wetland from the road and connecting and forested areas for the benefit of wildlife. This entire area is about 2 acres. This includes the Notch Road parking lot and access. This area is dominated by northern hardwoods including yellow birch, red maple overstory with a sugar maple and beech midstory. The undstory is variable with Aurelia, various fern species and occasional shrub species including service berry, choke cherry and hazelnut.



**ESS 8:** This area also serves to protect the Duck Brook wetlands and the Resin Ridge cliff features. This area is characterized by steep slopes with large boulders and areas of talus. This area was not fully explored but it was clear that the habitat offered by this area for animals like porcupine, bobcat, weasels, fisher, black bear and others could be quite valuable. The boulders and rock features offer significant protection for denning animals, and the proximity to the very productive wetlands compounds the value of the site. At the same time, much of the area provides enough soils to support large trees and other

vegetation which contributes to the value of the site for interior forest animals like black throated blue warbler and the scarlet tanager. This area was extremely variable but this site had a yellow birch and red maple overstory with a red spruce and beech understory. Auralia, clintonia, polypody and starflower were common herbaceous species. Other areas are more open with elderberry, hobblebush, and mountain maple extremely common. This area is 8 acres and includes the trail that accesses the bulk of the parcel from the Notch Road access. **Portions of this area coincide with the Ecological Protection Zones and are afforded additional protections in the Conservation Easement.**

**ESS 9:** The cliffs that are visible from Notch Road comprise this area. The vegetative conditions of this cliff were not reviewed for purposes of this plan. It is acknowledged that this cliff feature is of statewide significance. Peregrine falcon are known to nest on this cliff, it is associated with Resin Ridge, a state significant occurrence of Red Pine Forest or Woodland and a rare plant is known to occur at the base of the cliff. Currently it seems that rock climbers are the most likely to disturb this site and the Town of Bolton should work to ensure that the climbing community is aware of the sensitivity of the site, and how to protect it. **Portions of this area coincide with the Ecological Protection Zones and are afforded additional protections in the Conservation Easement.**



**ESS 10:** This is the area which comprises the bulk of the red pine on the Preston Pond parcel and this site occupies about 7 acres. This site is well described by the Natural Heritage program. Portions of this area are dominated by red pine with associates of red maple and white pine. Further south on the ridge red oak and red maple with service berry and scattered red pine becomes more prominent. In many areas with bedrock slab close to the surface a heath understory is present. **Portions of this area coincide with the Ecological Protection Zones and are afforded additional protections in the Conservation Easement.**



**ESS 11:** This small rock outcrop in the northwest corner of the parcel exhibits a dense area of red spruce, hemlock, balsam fir, red maple and service berry. It's only a couple of acres but it is so distinct from the surrounding forest it is worth acknowledging. Most of the trees are very small likely due to the shallow nature of the soils. The dense softwood cover and topography offers good bedding areas for deer and good winter cover for grouse.



**ESS 12: Libby's Look and Hemlock Rocky Slope.** This stand is dominated by hemlock with scattered red maple beech and service berry. These shallow soils support the hemlock that is relatively unique on this property and may support scattered red pine. Where soils are too thin to support much vegetation there are areas with lady slipper, heath, bracken fern and auralia.



A few bedrock slabs fail to support any vegetation and offer excellent views to the west over to the Adirondacks including the well known Libby's look which is afforded trail access.

**ESS 13:** This bedrock outcrop supports a handful of red pine with hemlock and spruce regeneration. There a few young red pine here, though they don't appear to be frequently regenerating. Recent winds have knocked down a mature red pine.



**ESS 14:** This hemlock stand occupies 6 acres to the west of the beaver meadow north of Preston Pond. Most of this stand is within the EPZ as delineated by the Vermont Land Trust and so cannot be harvested. The area is dominated by the hemlock and red spruce likely because of the droughty shallow soils. Some areas a pure hemlock, others exhibit other species include red spruce, red maple, black cherry and paper birch. Shrubs like service berry and hobblebush are present and in dappled sunlight conditions favor bracken fern, goldthread, and blueberry.



**ESS 15:** This yellow birch alder swamp is an interesting 6 acre wetland. It exhibits variable cover, many areas are red maple and yellow birch over cinnamon and sensitive fern. Other areas exhibit alder, mountain ash and mountain holly. This wetland is unique among those on the parcel and is recognized as being state significant. There is virtually no open water, and is partially wooded. Bear may use this wetland in the spring for its sedges and species like Canada warbler or mourning warbler may use it for its wetland, and young tree characteristics. Special care should be taken to insure that the hydrology in this wetland is not manipulated.



**ESS 16:** This is a bedrock ridge that is an extension of Resin Ridge. The soils on this portion tend to be deeper than Resin Ridge, and it is less exposed than other areas so it doesn't currently support red pine, however it is a distinct condition from the surrounding forest. It is characterized by red maple and yellow birch over hemlock and red spruce. A few patches of hemlock exist on bedrock slabs. A few large erratic are scattered in this 3 acre area.



**ESS 17:** This is a bedrock driven forest patch of about 3 acres. It is variable, with some areas dominated by hardwoods over fern, other areas exhibit white pine and spruce over service berry and stripe maple. The open condition over ferns will provide good feeding opportunities for birds like the Eastern wood-pewee, and the softwood knobs will provide good bedding sites for deer or predators like coyote. Portions of this area are mapped as being part of a state significant Red Pine Woodland community.

**ESS 18:** This small area is the western facing slope of one of the peaks along Resin Ridge. While the peak is not located on the Preston Pond property the slope is, and it offers unique conditions. The western facing slope is talus, with Christmas fern elderberry, striped maple and mountain maple in the understory. The overstory is comprised of yellow birch, sugar maple and red maple. There is evidence of use by porcupine and bobcat. A few game trails head up the slope to access the peak which is comprised of a large proportion of red spruce. Portions of this area are mapped as being part of a state significant Red Pine Woodland community.



**ESS 19:** At the time of conservation in 2006 this area was a hemlock swamp. It has since been turned to beaver ponds. It is part of a small EPZ delineated by the Vermont Land Trust. The EPZ on the Conservation Plan does not seem sufficient in size to protect the scale of the wetlands now present on site which cover about 6 acres. The vegetation is largely hay scented and bracken fern. Some areas have blackberry, red maple and beech regeneration. The area is actively used by beavers, Canada geese, moose, snapping turtles, wood frogs and green frogs, Eastern kingbirds and yellow-rumped warblers, all which have been seen here.



**ESS 20:** Much of this 7 acre area may fit the definition of a hemlock swamp. The soils are saturated most of the year. The area is dominated by hemlock though areas with wetter soil and some openings exhibit a few black ash, yellow birch, and red maple over hobblebush, witch hazel and cinnamon fern. In 2015 this area was identified as a state significant example of a hemlock swamp, which is very unique in the state.



**ESS 21:** This series of beaver ponds is surrounded by cinnamon fern and saplings of yellow birch, paper birch, red maple and occasional sugar maple. The ponds seem to be intermittently maintained by the beavers. Due to the proximity to Preston Pond, they likely contribute to the population of wetland obligates that utilize the various waterbodies on this property including great blue herons, beaver, otter, mink and wood ducks.



**ESS 22:** This hemlock hardwood slope rises above the beaver ponds of ESS 19. There are not any particularly unique vegetative conditions on this site, however, the presence of hemlock on this slope above the wetland may allow the beaver ponds to eventually revert to the hemlock swamp that they have been in the past. This softwood condition on the ridge likely serves as a valuable wildlife corridor for species seeking to access the wetland. **As mapped, portions of this area coincide with the Ecological Protection Zones and are afforded additional protections in the Conservation Easement.**



**ESS 23:** This hardwood stand occupies somewhat shallow soils on a fairly exposed ridge. The timber quality is extremely low, and the utility of this site as a corridor for species moving along the ridge seems important. The site is dominated by beech and red maple over hobblebush, fern and striped maple. Portions of this area are mapped as being part of a state significant Red Pine Woodland community.



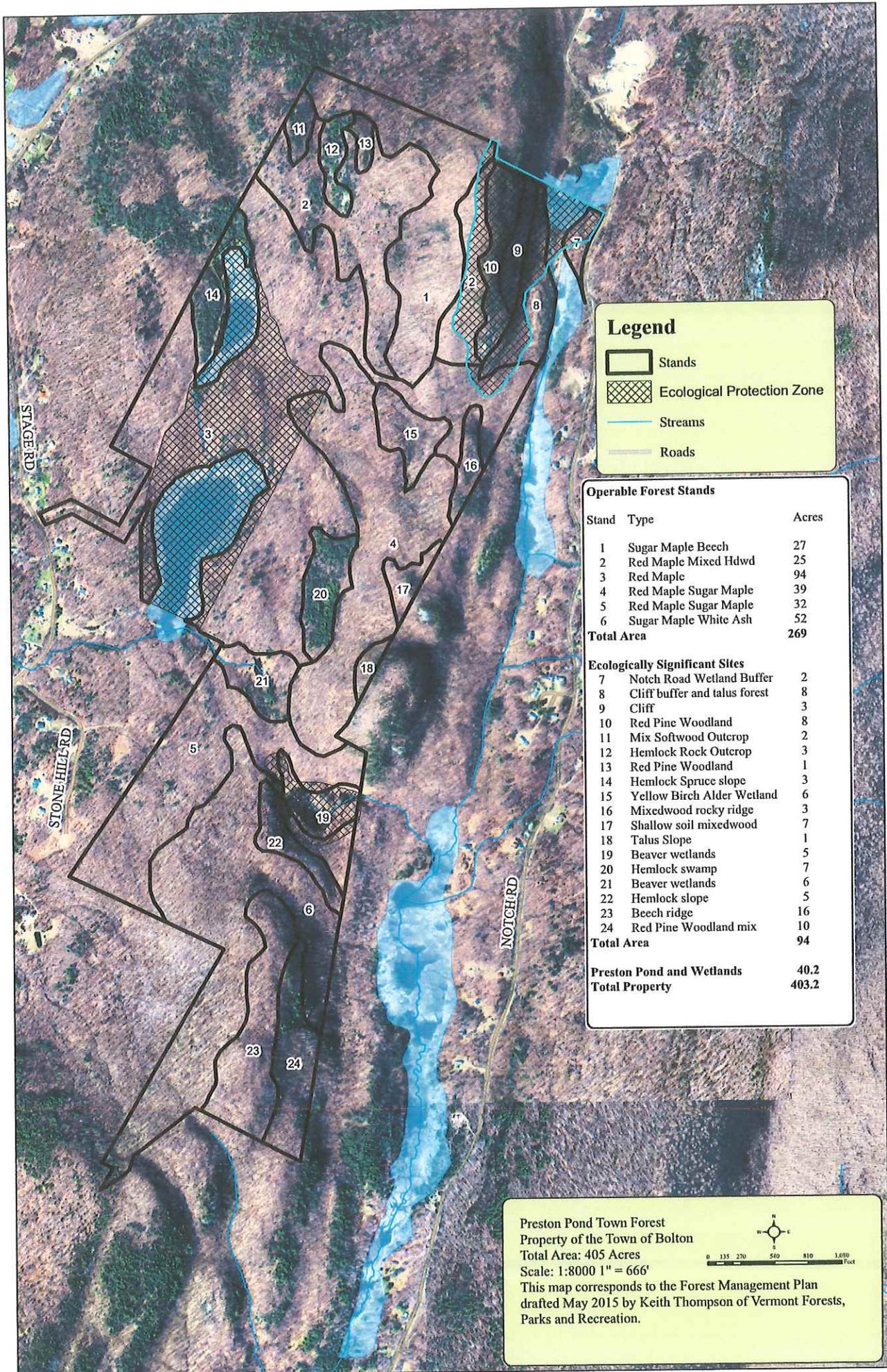
**ESS 24:** This area occupies the eastern facing slopes on the southernmost portion of the property. This slope is highly variable with some areas exhibiting pockets of enriched soils and others have rock slabs or shallow excessively drained soils. Because of these variable soil conditions there is also a lot of diversity. The overstory can be comprised of beech, serviceberry, hemlock, red pine, yellow birch red spruce or red maple, and the understory includes Aurelia, bracken fern, hobblebush, heath and goldthread. Portions of this area are mapped as being part of a state significant Red Pine Woodland community.



DRAFT

**Schedule of Management Activities**

<b>Stand</b>	<b>Year</b>	<b>Management Activity</b>
All Stands	2016-2018	Map, repair and reroute recreational trails and logging access trails.
1	Annual	Improvement Cutting
2		No management for timber; monitor and consider EAB impacts
3	2020	Group Selection and Crop Tree release
4	2020	Crop Tree Release with Canopy Gap Formation
5	2017	Patch or gap creation and thinning
6	2015	No management for timber; monitor and consider EAB impacts
All Stands	2025	Revise and update management plan



### Legend

- Stands
- Ecological Protection Zone
- Streams
- Roads

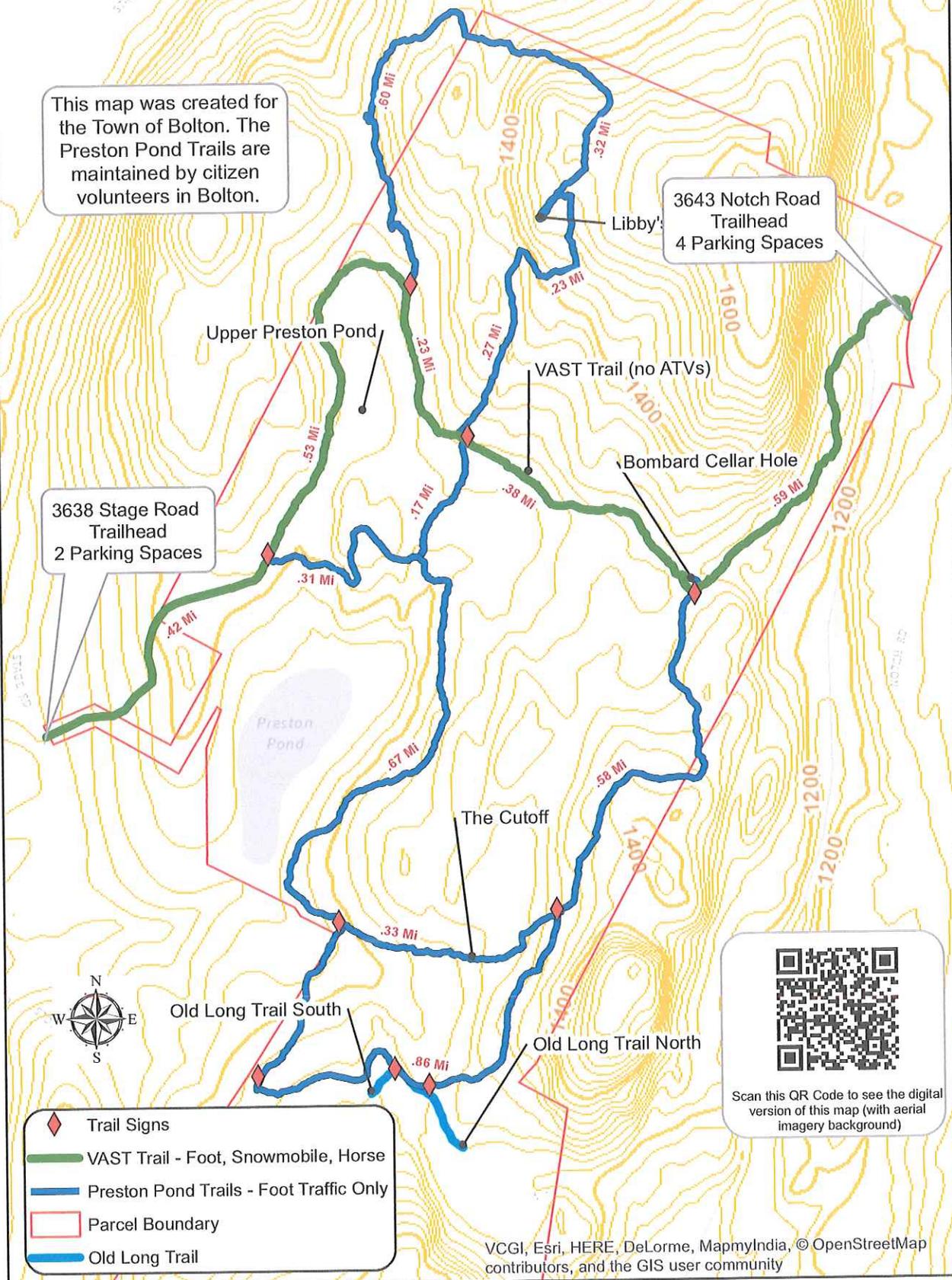
Operable Forest Stands		
Stand	Type	Acres
1	Sugar Maple Beech	27
2	Red Maple Mixed Hdwd	25
3	Red Maple	94
4	Red Maple Sugar Maple	39
5	Red Maple Sugar Maple	32
6	Sugar Maple White Ash	52
<b>Total Area</b>		<b>269</b>
Ecologically Significant Sites		
7	Notch Road Wetland Buffer	2
8	Cliff buffer and talus forest	8
9	Cliff	3
10	Red Pine Woodland	8
11	Mix Softwood Outcrop	2
12	Hemlock Rock Outcrop	3
13	Red Pine Woodland	1
14	Hemlock Spruce slope	3
15	Yellow Birch Alder Wetland	6
16	Mixedwood rocky ridge	3
17	Shallow soil mixedwood	7
18	Talus Slope	1
19	Beaver wetlands	5
20	Hemlock swamp	7
21	Beaver wetlands	6
22	Hemlock slope	5
23	Beech ridge	16
24	Red Pine Woodland mix	10
<b>Total Area</b>		<b>94</b>
<b>Preston Pond and Wetlands</b>		<b>40.2</b>
<b>Total Property</b>		<b>403.2</b>

Preston Pond Town Forest  
 Property of the Town of Bolton  
 Total Area: 405 Acres  
 Scale: 1:8000 1" = 666'  
 This map corresponds to the Forest Management Plan  
 drafted May 2015 by Keith Thompson of Vermont Forests,  
 Parks and Recreation.



# The Preston Pond Conservation Area Trail System

This map was created for the Town of Bolton. The Preston Pond Trails are maintained by citizen volunteers in Bolton.



3638 Stage Road Trailhead  
2 Parking Spaces

3643 Notch Road Trailhead  
4 Parking Spaces



- ◆ Trail Signs
- VAST Trail - Foot, Snowmobile, Horse
- Preston Pond Trails - Foot Traffic Only
- Parcel Boundary
- Old Long Trail

Scan this QR Code to see the digital version of this map (with aerial imagery background)

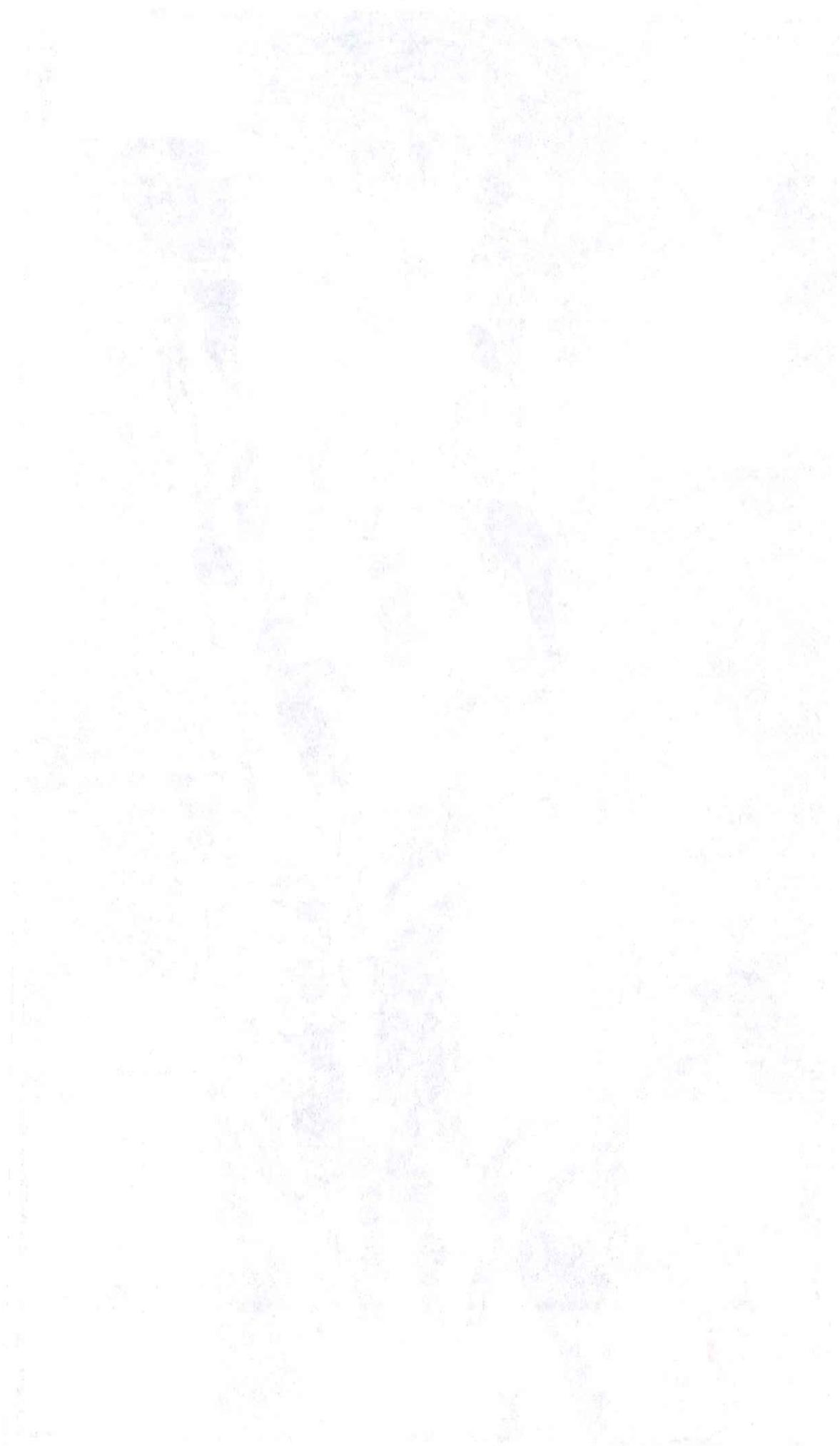


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**Town of Bolton**

**Application for Trapping in the Preston Pond Conservation Area**

Name of Applicant:

Applicant's address:

Applicant's phone:

E-mail:

Applicant's Vermont Trapper License number:

Have you submitted the most recent annual mail survey to the Vermont Department of Fish and Wildlife?  
\_\_\_\_\_ **[This is a requirement to trap in the PPCA.]**

Have you trapped previously in the PPCA? \_\_\_\_\_

How many traps, for what duration, and for what species do you intend to set? [Please indicate their general location on the map on the reverse.]

<b>Species</b>	<b>Number of Traps</b>	<b>Duration</b>

**FOR TOWN USE ONLY**

Received by Town Office on:

Action by Bolton Selectboard on:

Signed \_\_\_\_\_

Approved / Denied / Pending further review

for the Select Board

Additional Conditions:

# The Preston Pond Conservation Area Trail System

This map was created for the Town of Bolton. The Preston Pond Trails are maintained by citizen volunteers in Bolton.

3643 Notch Road Trailhead  
4 Parking Spaces

Upper Preston Pond

VAST Trail (no ATVs)

Bombard Cellar Hole

3638 Stage Road Trailhead  
2 Parking Spaces

The Cutoff



Old Long Trail South

Old Long Trail North



Scan this QR Code to see the digital version of this map (with aerial imagery background)

-  Trail Signs
-  VAST Trail - Foot, Snowmobile, Horse
-  Preston Pond Trails - Foot Traffic Only
-  Parcel Boundary
-  Old Long Trail

VCGI, Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community, Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community



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**VOLUNTEER WAIVER**

The undersigned, having volunteered to \_\_\_\_\_ acknowledges that he/she has been instructed to confine his/her activities to that which is reasonable and necessary to accomplish\_\_\_\_\_.

The undersigned further acknowledges that he/she is aware that certain risks may be involved with this undertaking, but that he/she fully recognizes said risk and voluntarily chooses to \_\_\_\_\_.

The undersigned further acknowledges that he/she is not being compensated in any way for volunteering to \_\_\_\_\_, and the undersigned agrees to hold harmless the Town of Bolton for any injuries he/she may sustain due to involvement in \_\_\_\_\_.

Dated: \_\_\_\_\_ Signed: \_\_\_\_\_



**Position:** Preston Pond Conservation Area Steward ['Forest Steward']

**Date:** April 1, 2016

**Status:** Volunteer, part-time (May-October: approx. 10-20 hours /month; November – April: 5-10 hours/month.)

**Term:** Two years with renewal at the recommendation of the Bolton Conservation Commission ('BCC') and approval by the Select Board ('SB').

**Oversight:** Bolton Conservation Commission (via the Chairperson)

**General duties:**

Become intimately familiar with and assist the SB and BCC in the implementation of the Management Plan for the 400+ acre Preston Pond Conservation Area ('PPCA') in West Bolton. The Forest Steward serves as the primary contact for partner organizations (including, but not limited to, Vermont Land Trust ('VLT'), Chittenden County Forester, CRAG-VT, VAST, Vermont Audubon, VT Peregrine Project) and the general public regarding use and management of the PPCA.

The Forest Steward will work directly with the BCC and VLT to ensure enforcement of the Management Plan and compliance of the plan with the Conservation Easement.

The Forest Steward prepares semi-annual reports on management issues, by November 1 to cover the field season, and by May 1 to cover the winter and plan for the following field season, for the BCC and SB.

If and when matters of legal, policy or controversial consequence arise, the Forest Steward makes recommendations for action to the BCC, which then makes recommendations for action, as necessary, to the SB. The Forest Steward is also responsible for making sure the various user groups are self-enforcing and implement their respective policies of the Management Plan.

**Specific duties:**

Periodically patrol the trail system, collect usage data, and interact with the public in a non-confrontational and education manner. Police the PPCA only as it remains safe to do so; otherwise contact local law enforcement.

Coordinate site visits with partner organizations, members of town boards, and other interested parties. Assist as possible with research and inventory of natural features.

Promote community service projects that support the goals of the Management Plan. Maintain a contact list of interested volunteers for trail maintenance and other activities.

Conduct and coordinate trail maintenance, including erosion control, trail hardening and delineation, brush removal, marking and signage, bridge repair, and parking lot maintenance, as well as storing the PPCA's tool cache. On occasion a project may necessitate hiring a professional contractor or trail crew, which will be planned and funded well in advance. However, emphasis will be on volunteers to conduct ongoing maintenance. Reference: AMC's Complete Guide to Trail Building and Maintenance, 4<sup>th</sup> ed.

Compile a plan and a rough budget for management every six months (as part of the above reporting process), to be approved by the BCC out of its annual budget. Track expenses and submit reimbursement requests with proper documentation to the BCC as needed.

Promote and coordinate visits by area schools.

Develop or update resources for on-site and off-site education of the public, e.g., web page, social media (e.g., Facebook), slide show, trail maps, interpretive signage and brochures, in association with other volunteers as needed.

## Risk Management Guideline for Volunteers

Following are suggested Risk Management Guidelines that should be considered and implemented when volunteers are used within the local government setting.

- A policy and procedure should clearly document and define the scope of duties in which the volunteer is required to perform.
- When permissive use is granted for driving vehicles, a local government should check for a valid drivers license. You may also want to review the Motor Vehicle Record of the volunteers. In addition, ensure that volunteers have a commercial drivers license and the proper endorsement including a medical card when required.
- A local government should provide and mandate the use of personal protection equipment for volunteers who are working with special machinery, tools, or encountering specific hazards.
- On a regular basis review the job performance of all volunteers.
- Inform the volunteer as to whom, where, and how problems, hazards or suggestions should be reported.
- Be consistent, fair and non-discriminatory in your treatment of volunteers.
- Proper training and supervision are critical to the safe and effective use of volunteers. Specific training needs depend on the type of work a volunteer will be performing.
- Properly address the specific hazards a volunteer may encounter and procedures to follow for performing activities in a safe manner.
- Supervision is paramount to proper training.
- Consider a written safety checklist for volunteers to follow and complete.
- When mandated by law or the standard policies within your organization, volunteers must meet the required screening and placement in positions where they are serving vulnerable populations.
- A volunteer's application should request skills and experience, current and past employment, education and knowledge, and references. This application should become a part of the volunteer's permanent file.
- Accident and incident reporting should be an essential requirement for volunteers to follow in case of bodily injury or property damage.

- Where appropriate, consider background and reference checks.
- Request volunteers to sign an authorization for release of confidential or privileged information.
- Consider an indemnification and release agreement, where appropriate. Have your attorney approve prior to use.
- Consider a volunteer coordinator to take overall responsibility of your volunteer program. This is especially beneficial to local governments with large volunteer programs.
- The consistent use of appropriate recruiting, screening and background checking techniques help assure that properly qualified individuals are selected.

You may have volunteers serving your local government for many different personal reasons. They may want to learn new skills, meet new people, make a difference in the community where they live or work, or gain expertise in certain areas of volunteerism. Whatever their reasons are, managed properly, the liability risks associated with volunteerism can be reduced or minimized. Use your volunteers wisely considering their level of knowledge, skills and abilities.

VLCT Loss Control can be of assistance with any questions related to volunteers. We can also assist with training and providing sample policies.