

SECTION II: MANAGEMENT OBJECTIVES, GUIDELINES, AND ACTIONS

PERMANENT MANAGEMENT COMMITTEE

The LaPlatte Headwaters Town Forest (LHTF) Management Planning Committee is a temporary committee that will dissolve after the creation and approval of this plan. The Committee recognizes that the Town will be responsible for implementing and updating this plan over time and will likely need a permanent committee to fulfill this responsibility.

Since Hinesburg has two Town Forests and an exiting Town Forest Committee that oversees the management of the older Hinesburg Town Forest, **the LHTF Management Planning Committee recommends that the existing Town Forest Committee also be responsible for the management of the LHTF into the future.** Combining the management of both of Hinesburg's Town Forests under the responsibility of one permanent committee will allow the management of these different, but related, town properties to be well-coordinated and complementary.

The following is a summary list of the recommended responsibilities of the Town Forest Committee outlined in the following sections that are related to implementing this plan and overseeing the long-term management of the LHTF:

- Oversee implementation of management plan and update every five years.
- Approve specific project plans related to general, forest and wildlife habitat management, and recreation projects.
- Approve public events uses.
- Approve scientific uses, maintain a record of research and monitoring results, and use research to adapt management and update plan.
- Encourage educational uses of the LHTF.
- Coordinate and collaborate with the management of the Hinesburg Town Forest, as well as with other town committees, such as the Planning Commission and Conservation Commission.

LANDSCAPE CONNECTIONS

The management of the LaPlatte Headwaters Town Forest (LHTF) for “protection of Indiana Bat and wildlife habitat, biological diversity, natural communities, natural river processes aquatic habitat and wetlands , water quality native flora fauna...(Conservation Easement, Appendix B)” is made possible and further enhanced by the ownership pattern and known management goals and objectives of adjoining and nearby public and private conserved land. These management goals cannot be met on a single property, like the LHTF; they are met on a landscape scale across multiple properties.

Conservation of land that includes the LHTF (301 acres) and the other conserved parcels (about 345 acres) associated with the LaPlatte Headwaters Conservation Initiative on the Bissonette Farm was guided by an understanding of conservation planning principles recognizing that significant ecosystems and wildlife habitat are generally defined by the quality and quantity of natural features and their potential to insure important ecological functions and biological diversity. These include:

- Representative landform level ecosystems.
- Intact surface and groundwater ecosystems
- Undisturbed natural areas
- Connectivity and cohesiveness
- Priorities species/natural areas
- Rare/unique species & natural communities.

Management for the conservation values of the LHTF is also supported by the 2005 Hinesburg Town Plan. Several sections of the Town Plan reflect the importance of maintaining ecological complexity and connectivity in the Hinesburg landscape. Management of the LHTF serves to support these broader goals for the whole town. Chapter 3 of the Town Plan states that:

the permanently conserved private and public farmland and forests are important assets to the Town for their capacity to support a local economy and as natural infrastructure for ensuring water and air quality, recreation, and education. In addition to planning efforts targeting residential, agricultural and natural resource issues within the town, future planning should also consider the identification and preservation of wildlife corridors and habitat which contribute to both the rural character and recreation opportunities within the town as well as the preservation and restoration of the town's wetlands, streams, surface waters and ground waters.

Chapter 4 of the Town Plan is titled *Natural Resources* and includes descriptions and recommendations with "the overall objective of these recommendations [being] to protect the town's natural resources with special concern for the biological diversity and natural processes that sustain life."

The goals and recommendations in this section of the LHTF management plan identify both the broader landscape connections that are important to consider and the specific ways in which management of this property works to meet the objectives in the Hinesburg Town Plan.

A listing of the sections of the 2005 Town Plan that relate to management of the LHTF is found at the end of this section.

Goal: Maintain and enhance ecological connections between the LHTF and the larger landscape.

Objective: The LHTF will be a place where conservation planning principles are modeled and put into action as part of the town planning process.

Management Guidelines

- Encourage continued education, research and communication among and between LHTF management committee and other conservation organizations.

Actions

- Write a letter to the Planning Commission to clarify as to whether forestry uses are compatible with and considered important in the Agricultural District. The LHTF is within the Agricultural Zoning District. As currently written it appears that forestry is not as highly valued in the Agricultural District (See section 3.4.4 of the Hinesburg Town Plan).
- Meet and coordinate with local town committees such as: Conservation Commission, Planning Commission, Hinesburg Land Trust, and Trails Committee.
- Communicate with regional conservation organizations such as the Lewis Creek Association, the LaPlatte Watershed Partnership, the Nature Conservancy, and Audubon Vermont.

Objective: Habitat connections between the LHTF and the larger landscape will be maintained.

Management Guidelines

- Be aware of sensitive plants and animals located within the LHTF, particularly those prone to isolation or seasonal disruption because of limited mobility or range restrictions.
- Avoid management activities that isolate streams, wetlands, vernal pools, deer wintering areas, cliffs and talus, and ridges or other sensitive habitats.
- Avoid management that blocks movement of wildlife between different habitats used during different seasons or at different times of day.
- Maintain the matrix of the LHTF landscape in relatively mature, well-stocked stands.
- Forested habitat connections should have a closed canopy with a minimum canopy height of 40 feet.
- Manage recreational trails, woods roads, and riparian areas as habitat corridors.

Actions

- Develop an understanding of the habitats found on adjacent lands and identify how plants and animals move between these habitats and habitats on the LHTF.
- Monitor wildlife use of travel corridors.

- Coordinate management of the LHTF with other properties in the area between Sliver Street, Gilman Road, Lewis Creek Road, and the Village through the creation of a neighborhood management plan.
- LHTF management committee participates in town plan and zoning regulation updates, and revisions.

Objective: Forest management decisions will be evaluated in the context of the larger landscape.

Management Guidelines

- Coordinate age-class distribution of forest stands across the connecting landscape whenever possible.
- Working with neighboring landowners to keep a the matrix of the forested landscape the LHTF is a part of as late-successional, closed-canopy forest.
- When considering even-aged management and maintaining early successional habitat, evaluate proposed treatments in relation to the presence and maintenance of similar habitats and forest types on adjacent lands.

Actions

- With the help of neighboring landowners, field visits and orthophotos, map the spatial layout of forest ages and types in the roughly 1000 acres surrounding the LHTF.

Objective: Beavers activity will be managed in a way that considers impacts on adjoining landowners and roads.

Management Guidelines

- Allow beavers to make homes and flood public land whenever possible.
- Work with neighboring landowners and the town road crew to resolve human-beaver conflicts in a way that allows beavers to remain active on the LHTF whenever possible (i.e. use of baffle systems to control flooding rather than trapping).

Actions

- Approach adjacent landowners about evaluating and planning for potential beaver conflicts before they happen.

Relevant 2005 Town Plan sections

3.4.5) To develop policies throughout the rural areas that preserve conservation lands for their ecological, recreational, and traditional uses.

- Revise zoning bylaws to create one or more conservation districts. Lands to be included within this district may include the Town Forest, Fred Johnson Wildlife Management Area, and other publicly owned lands to be protected from development or inappropriate use.
- Within conservation districts, permit only those uses that will preserve the natural and aesthetic values of these lands.

- Permit structures, roads and parking areas that further the recreational and education use of these lands only if their placement does not adversely impact sensitive areas.
- Ensure access and proper right of ways.

4.7.1) *To protect important natural areas, critical wildlife habitat and overall biodiversity, with the help of landowners.*

- Conduct and maintain inventories of natural areas and wildlife habitat, with the help of landowners.
- Protect areas of sufficient size and character to support continued preservation of critical wildlife habitat and hunting through mechanisms like landowner covenants, conservation easements, etc.
- When reviewing new development, encourage the preservation of small and large blocks of forest.

4.7.2) *To provide connectivity among natural areas and critical wildlife habitat.*

- Identify connections that would enhance existing wildlife habitat.
- When reviewing new development, encourage areas separate from housing sites to provide connectivity between forest blocks, riparian corridors, and wetlands.

Develop a greenway network with wildlife habitat corridors separate from trails and human movement. Consider protection of these corridors via lower levels of development (also see sections 3.4.5 and 4.9 for related recommendations).

Section 4.1

....Most of the Town's forest resources are managed by private landowners. However, a small percentage is in public ownership (both Town and State). These lands include the Town Forest, the Fred Johnson Wildlife Management Area, and other streambank lands owned by the State along Lewis Creek (Map 11, Town Facilities & Conserved Lands). Timber management on these lands is used as a tool to implement the primary goals of providing wildlife habitat (State lands & Town Forest) and recreational opportunities (Town Forest). The continued protection of these parcels is important in that they serve as anchors for the extensive forest land in the eastern portion of Town, and the Lewis Creek corridor.

Planning for all of Hinesburg's forest resources could be improved through a more thorough evaluation of site-specific potential and value to the community. Frequently, during local development review, town boards find it difficult to assess the value of a particular area for residential development versus timber production versus conservation. Given the wealth of GIS data available, it may be possible to develop a system or model that better establishes the value of a particular area for a number of competing values.

3.4.4) *To develop policies throughout the rural areas that preserve forestry uses.*

- Examine density in forested areas (e.g., RR1 & RR2 districts (Need to be sure that Ag district also recognizes value of the forests in this western part of town) for compatibility with the conservation of forest lands. Implement zoning using a form of area-based density for these districts, which may consider changing the overall density.

- Develop zoning techniques for the preservation of Hinesburg's forest resources. The techniques may include a separate forestry district, overlay districts for important forest land or other development and management standards specific to forest preservation.
- Direct development in areas with forest resources to land that is less suitable for active timber management because of poor soils, existing forest conditions or size and location of the parcel.
- Give strong consideration to preservation of wildlife corridors, viable wildlife habitat, groundwater recharge areas, and ridgelines in planning any development of lands with forest resources.
- Establish guidelines for placement of roads, utilities, and house lots in locations that do not disrupt the forestry or natural resource potential of a parcel.
- Site new development to minimize fragmentation of forest lands and to maintain access to forest lands

EDUCATION AND COMMUNITY USES

Goal: Promote educational and community uses of the LHTF that are compatible with other management goals.

Management Guidelines

- Design parking areas to accommodate parking and turn around space for at least one school bus.
- Scientific studies should avoid causing any negative impact on the condition of the ecological communities at the LHTF or leaving any lasting markers whenever possible (i.e. flagging, plot markers, etc).
- Teachers and tour leaders should avoid taking their groups into the STAs or other sensitive areas where they could have a collectively damaging impact. Access to these areas should be limited to the perimeter whenever possible (i.e. observing woodland flowers at the base of talus slopes).
- Small groups and individuals should minimize use of STAs and should take care to minimize their negative impact.
- Large groups (20+ participants) should minimize their off-trail access of the LHTF.
- Teachers and group leaders should be aware that hunting on the LHTF is allowed during legal seasons.
- If educational or community uses begin to conflict with each other or other management goals, stakeholders should work together with the LHTF management committee to devise and implement a solution(s).
- Allow periodic, temporary, non-commercial events in the designated “Public Events Area” (Bissonette Meadow), assuring that there is adequate provision for parking and septic disposal, and that there will be no lasting harm to natural systems. Such events require advance written permission from the Management Committee (see Recreation Section).
- Proposed scientific research projects taking place on the LHTF should be submitted to the LHTF management committee for review and approval.
- Use the Town website to list information about and contacts related to scientific projects happening on the LHTF.
- Publicize community events on the Town website.

- Ask or require researchers to share their findings with the LHTF management committee and/or the public through a copy of a written publication, a walk, a talk etc.

Management Objectives and Actions

Objective: Teachers and students at HCS, CVU, UVM and other educational organizations and institutions will use the LHTF as an outdoor classroom.

Actions

- Offer opportunities for teachers to learn about the LHTF at the LHTF.
- Seek funds to offer small incentive grants to cover fieldtrip costs for teachers to bring their classes to the LHTF.
- Develop a list of potential service-learning projects that the TF Committee could partner on with teachers and their students at the LHTF (i.e. development of interpretive/informational material at a kiosk or creating and maintaining trail markers).
- Make *A Local Educator's Field Guide to Owl's Knoll on the Bissonette Farm* available to any educators who might want to use the LHTF as an outdoor classroom.
- Expand *A Local Educator's Field Guide to Owl's Knoll on the Bissonette Farm* to include information on the northern parcel.
- Seek input from local teachers on what resources would be helpful for bringing their students to the LHTF.
- Find a way to make Port-a-lets available in the parking areas during the times when teachers are likely to bring their students to the LHTF (fall and spring).

Objective: Student, academic, and government scientific researchers will use the LHTF as a study site.

Actions

- Designate a contact person on the LHTF management committee to act as a liaison with scientists who are using or may want to use the LHTF as a study site. List contact information on Town website and in all relevant documents.
- Coordinate with academic and state scientists to accomplish monitoring goals.
- Ask or require researchers to share their findings with the LHTF management committee and/or the public through a copy of a written publication, a walk, a talk etc.
- Maintain a list of research projects that have been completed at the LHTF.

Objective: The LHTF will be used as a community education and outreach site for educational demonstrations and tours.

Actions

- Designate a contact on the LHTF management committee to act as a liaison between County Foresters, Fish and Wildlife Department Biologists and others who would be likely to want to use the LHTF for education and demonstration purposes.

Objective: Community uses will promote awareness of the ecological values of the LHTF.

Actions

- Develop a flyer that summarizes the vision and goals for the LHTF along with guidelines for public uses (events and recreation) that can be downloaded from the Town website and available at the kiosk at the LHTF.

FORESTS AND WILDLIFE

All management for forest products and/or wildlife habitat at the LaPlatte Headwaters Town Forest (LHTF) shall be overseen by the Chittenden County Forester and – due to the presence of the endangered Indiana Bat in the Town Forest – Vermont Fish and Wildlife Department biologists. All management activities shall be directed by a specific project plan based on data from a recent forest inventory and approved by the LHTF Management Committee working in consultation with the County Forester and Vermont Fish and Wildlife biologists. The specific project plan should conform to the permitted and restricted uses outlined in the conservation easement and address the following goals, objectives, guidelines and actions within this plan.

Related Goals

- Allow natural processes to govern the LHTF's ecosystems and model any active management on these processes to the extent possible.
- Demonstrate sustainable forestry practices that protect and enhance ecosystem function and health.
- Monitor and respond to ecological changes.
- Protect and enhance habitat for the endangered Indiana Bat and a diversity of other native species.

Objectives

- Forest stands will maintain a diversity of vertical structures and degrees of crown closures through small-scale, patch-creating natural disturbance events, such as wind and ice storms, or through single tree and group selection, crop tree management, or small patch cutting silvicultural treatments intended to mimic these disturbances.
- Forest stands will likely be replaced on large spatial (>2 acres) and temporal scales (100+ years) by natural disturbances, such as hurricanes or micro-bursts, but not through management.
- Native tree-species composition will be maintained in each natural community, as appropriate within successional stages of development. Vermont natural community descriptions will be referenced from the publication *Wetland, Woodland, and Wildland* (Thompson and Sorenson, 2005) or any updated descriptions from the Vermont Nongame and Natural Heritage Program.
- The presence, structure, function and condition of significant natural communities will be maintained or enhanced.
- Active management of vegetation and animal habitats will provide opportunities for demonstration, use of experimental techniques and community involvement.
- Populations of rare, threatened or endangered plants and animals on the LHTF will be viable and healthy enough to be resilient to change and stress over time and to serve as sources for the colonization of nearby habitat patches.

- Wide-ranging wildlife species that require large areas of contiguous and/or connected forest will be present at the LHTF.
- Habitats for the full assemblage of organisms associated with the natural communities at the LHTF will be maintained and/or enhanced wherever possible.
- Wildlife will be able to move freely between the LHTF and the surrounding landscape.

Permitted Uses Related to Forests and Wildlife

Under the terms of the conservation easement the following uses are permitted to the extent they are consistent with the purposes of the easement:

Management Plan Activities: The Town may conduct activities that are reasonably necessary to carry out the Purposes of this Grant and are permitted in the Management Plan. These activities may include management of vegetation and wildlife.

Forest Management: The Town may harvest timber and conduct maple sugaring operations by tapping a minimal number of trees, but vegetation management to create a sugarbush is not permitted. The Town has the right to construct and maintain logging roads. All timber management must be in accordance with Forest and Wildlife Habitat Management Guidelines and a project plan.

Restricted Uses Related to Forests and Wildlife

Under the terms of the conservation easement the following uses are restricted:

General: The LHTF shall be used for habitat conservation, wetland and river restoration, education, non-motorized and non-commercial recreation, natural area, open space, agricultural and forestry purposes only. Unless specified in the easement no residential, commercial, industrial or mining activities are permitted. No building or structures may be constructed, created, erected or moved onto the property, unless specifically permitted in both the easement and this Management Plan.

Motor Vehicles: Motor vehicles may not be operated on the property except for uses specifically permitted under the easement such as wildlife and habitat management, trail grooming, maintenance, handicap access, safety or emergency purposes, and such agricultural and forestry uses as may be compatible with the primary Purposes of the easement.

Water Resources: The easement prohibits manipulation of natural water courses or other water bodies. No activities that would be detrimental to water purity, natural water level, or flow are permitted except as reasonably necessary to carry out the uses permitted in the easement and as may be more specifically permitted or limited under the LaPlatte River Corridor and Wetland Management Plan.

General Clause: No use may be made of the LHTF that is inconsistent with the purposes of the easement. Proposed uses not addressed in the easement, or changes in existing uses, may be approved by VLT if they are consistent with the purposes of the easement.

Easement Limitations Related to Woodland Special Treatment Areas (STAs)

These limitations are fully described in the Conservation Easement (Appendix B) and should be considered when any management is being planned in the Woodland STAs (Main Map).

Management Goals: Any activities planned and conducted in the Woodland STAs will focus on (1) conserving and improving maternal roosting habitat for the Indiana Bat and (2) protecting the integrity and natural species composition of the natural communities in the areas.

Machinery: No machinery will be operated within the Woodland STAs, with the exception of existing or subsequently approved roads and landings, where relocation is not feasible, or where negative impacts would be increased by relocating such roads and landings.

Forest Management: Forest management activities not required for improving maternal roosting habitat for the Indiana Bat or for control of exotic species are prohibited in the Woodland STAs.

Agricultural Activity: No agricultural activity shall be conducted within the Woodland STAs.

Management Guidelines

General

- Until more specific guides are available for Vermont, consult the following publications for more detailed guidelines on protecting and enhancing forest health, function and biodiversity by mimicking natural processes:

Natural Stand Dynamics Silviculture: A Discussion of Natural Community-Based Forestry Practices published by the Nature Conservancy (2000).

Natural Disturbance and Stand Development Principles for Ecological Forestry by Jerry F. Franklin, Robert J. Mitchell, and Brian J. Palik, Department of Agriculture Forest Service Northern Research Station General Technical Report NRS-19 (2007)

Biodiversity in the Forests of Maine by Gro Flatebo et al. (1999)

Wildlife Habitat

- Follow the Vermont Fish and Wildlife Department's *Indiana Bat Forest Management Guidelines for Indiana Bat Habitat* for "Lands within Known Indiana Bat Maternity Colony Habitat" for all forests at the LHTF. If conflicts arise between guidelines for

management of Indiana Bat habitat and other guidelines in this plan, consult with Vermont Fish and Wildlife Department biologists and the Chittenden County Forester.

- Avoid disturbing roosting and cavity trees, snags, and upturned tree roots from April 1 to November 1 to so as not to disrupt Indiana Bats, nesting birds and denning animals.
- Avoid forest management activities during breeding forest bird and Indiana Bat roosting seasons (April - October).
- Consider all management activities within the surrounding landscape context (3000 acres). Work to create and/or maintain a forested landscape capable of supporting viable populations of species associated with a variety of forest types, successional stages, and patch sizes (horizontal diversity). Pay special attention to ensuring habitat for species whose life-history requirements include large areas of contiguous forest.
- Enhance vertical structure of forest stands where it is lacking to ensure nesting and foraging habitat for a diversity of breeding forest birds and other wildlife.
- Soften edges along fields to minimize edge effects, such as predation and brood parasitism by cow birds, on breeding birds and other wildlife. Seek advice from Audubon Vermont on how to do this.
- Protect and enhance long-term hard and soft mast production in hardwood stands with significant beech, oak, hickory, cherry and/or apple densities.
- Maintain and regenerate inclusions of softwood cover in predominantly hardwood stands and inclusions of hardwood cover in predominantly softwood stands.
- Manage existing and potential deer wintering areas according to the Vermont Fish and Wildlife Department Guidelines for managing deer wintering areas.
- Retain a high percentage of trees >24" dbh (diameter at breast height) and at least 1 snag/acre >18" dbh where present. Plan for the recruitment of these sizes, types, and densities of trees into the future.
- Manage for coarse woody debris by retaining material that currently exists and allowing its accumulation where it is currently missing.
- If any vernal pools are identified at the LHTF, document the location and condition of the pool, and follow VT Fish and Wildlife forest management guidelines for protecting vernal pools (currently being developed).
- Allow beavers and other native wetland species to recolonize and influence the areas along and around the LaPlatte. If beaver activity comes in conflict with other purposes of the conservation easement, town roads or culverts, or neighbors, consult with Vermont Fish and Wildlife biologists and the Chittenden County Forester.

- Create, retain and enhance a diversity of wildlife habitats, including riparian forest, wetland and grassland, within The River Parcel in the northern part of the LHTE, with particular focus habitat for the Indiana Bat. See the *LaPlatte River Corridor and Wetland Management Plan* (Appendix E) for more specific guidelines and prescribed management activities.

Silviculture

- Apply the principles of sustainable forestry to protect biodiversity, ecological health, water quality, and site productivity.
- The single-tree and small group (up to one acre) selection methods should be used for shade tolerant species and the deferred shelterwood with legacy tree retention method should be used for shade intolerant species. Large patch cuts (>2 acres) and clearcuts (>10 acres) should be avoided.
- Grow the largest trees and use the longest rotations possible within site and log quality limitations. (For example, for high quality red and sugar maple, yellow birch, beech, and white ash, the diameter objective should be 22 inches or greater.) Culmination of mean annual board foot growth for these species occurs at 100 to 120 years.
- When planting, use only local sources of native species to the maximum practical extent and attempt to match species composition to the known or suspected natural community type.
- When thinning or regenerating stands, favor native species over non-native ones.
- Use natural regeneration to the maximum practical extent.
- Biological legacies of the forest community -- including coarse dead wood, logs, and snags; trees that are large, living, and old; buried seeds; soil organic matter; invertebrates; sprouting plants; and mycorrhizal fungi -- should be retained to aid in post-harvest recovery and to keep the forest from becoming oversimplified.
- Promote the seed bearing capacities of poorly represented plant species of the stand.
- Tree felling should be avoided on slopes exceeding 50%.
- Leave on the site all woody materials that are less than 4 inches in diameter.
- Remove slash from all trails and lop it to 3 feet within 25 feet of trails. Retain large specimen trees and trees with unusual shape or interesting character along trails.
- Promote a vertical stand structure that includes differentiated overstory and midstory strata, as well as diverse shrub and herbaceous vegetation layers.

- Maintain a closed canopy (75-80%) and prohibit the use of machinery within at least 25 feet adjacent to streams and the wetland areas. Enforce strict water quality protection practices at all times.

Forestry Operations

- The use of pesticides – including insecticides, fungicides, and herbicides – should be extremely limited and only those pesticides accepted by the Northeast Organic Farming Association and herbicides recommended by The Nature Conservancy should be used.
- Residual stand damage – including basal wounds, broken and/or scraped tops, and exposed roots – should be confined to 10% or fewer of the dominant or codominant trees.
- All trees to be removed should be marked prior to the inception of harvest.
- Average annual harvest volumes should not exceed 75% of the average annual growth.
- Avoid spring harvests and/or rutting that extends beyond the A soil horizon.
- Minimize the number and extent of truck roads and skid trails -- particularly in or near sensitive areas such as stream crossings, protective strips, and steep slopes.
- All skid trails, truck roads, and log landings should be carefully designed and flagged or otherwise marked prior to the inception of harvest and should be carefully constructed should not exceed 10% of the land area of the harvest zone.
- Truck roads should be built at grades from 0% to 10% and skid trails from 0% to 15%.
- Skid trails, truck roads, and log landings -- located on easily compacted soils --should only be used when adequately dry or frozen.
- Truck roads and skid trails should be properly drained during and after use according to the Vermont AMP manual.
- Log landings should be located on nearly level, stable ground, be kept away from protective strips, have water diversions installed, and be graded to prevent erosion and sedimentation.
- Protective strips -- characterized by minimal soil disturbance, nearly-complete canopy closure, and many large mature trees -- should be maintained between the access network and surface waters according to Table 4 in the Vermont AMP manual.
- Areas of exposed soil that occur within the protective strip should be seeded and mulched according to Table 3 in the AMP manual.

- Stream buffer strips should be kept free of logging vehicles and have only little or no tree cutting.
- Check with Conservation Partners (Appendix A) for current buffer guidance when planning any management around streams.
- Stream crossings should be restored and non-permanent structures should be removed as soon as possible.
- Streams should be crossed with bridges or culverts that are properly sized according to Table 2 in the AMP manual and installed at right angles to streams.
- Sediment should be prevented from entering streams by using turn-ups or broad-based dips on truck roads and skid trails prior to all stream crossings.
- Drainage ditches should not feed directly into streams or other surface waters.
- Post-harvest use of the access network should be restricted in order to prevent erosion, compaction, and site disruption.

Actions

- Mark boundaries of Woodland STAs and post signs along trails to let the public know they are entering an STA and significant natural community.
- Request that the Chittenden County Forester inventory the forest and provide a written report of the inventory and recommendations for management, including an assessment of the feasibility of a sugaring operation.
- Conduct an inventory of wildlife and habitats, and create recommendations for protection and enhancement. Create a map of wildlife sightings and signs, and significant habitat features that can be added to and updated periodically.
- Set up monitoring programs including vegetation plots, and birds, bats, and other wildlife. Approach local schools and institutions (HCS, CVU, UVM) to get assistance with monitoring.

WATER AND WETLANDS

The primary purposes of the Grant of Development Rights, Conservation Restrictions, and Public Access Easement covering the property are to "...conserve, improve and extend maternal roosting and feeding habitat for the Indiana Bat..." and to "...conserve riparian areas and natural river processes and morphology, wetlands, water quality, and aquatic habitats..." Forestry management and recreation activities are secondary and must be compatible with the primary purposes of the easement (Appendix B) and approved by the LaPlatte Headwaters Town Forest (LHTF) Management Committee.

Wetland restoration activities will follow the *LaPlatte River Corridor and Wetland Management Plan* (Appendix E) and must comply with the conservation easement (Appendix B). Any management activity within the LHTF must meet with prior approval from the Army Corps of Engineers, Department of Environmental Conservation Wetlands Program and River Management Program (RMP) as necessary and required for permitting.

Related Goals

- Allow the LaPlatte River and its tributaries to recreate natural channels and floodplains over time.
- Protect the water quality of the LaPlatte River and its tributaries.
- Restore and conserve wetlands.

Objectives

- Restore and preserve the natural values of the Special Treatment Areas (STAs) and to maintain and improve the natural functions of the STAs.
- Allow stream channels to continue to adjust (migrate, erode, deposit sediment, etc.) in order to regain equilibrium conditions (slope, channel dimensions) over the long term through a passive restoration approach.
- Improve water quality by allowing streams to regain natural (equilibrium) form and thereby reduce sediment and phosphorus loading.
- Conserve and improve aquatic and wildlife habitats.
- Reduce erosion hazards by allowing streams to regain natural (equilibrium) form and thereby reduce water speeds during high flows.
- Maintain native riparian plant communities along streams and wetlands.

Restrictions

- Construction of permanent structures in the wetland restoration area or within stream buffer areas is prohibited. Permanent structures include but are not limited to: buildings, trailers, signs, bridges or culverts (except to accomplish goals of the easement), livestock facilities, etc. Trails, footbridges, and fences are allowed as long as they do not interfere with the stated goals above and are compatible with the easement.

- Filling, excavation, or removal of dirt, soil, rock, gravel, etc is not permitted except related to wetland restoration activities described above.
- Manipulation of rivers, streams, or wetlands (except as prescribed in the Wetland Restoration Plan) is not permitted. Manipulation includes but is not limited to: any activity that interferes or alters the natural course, movement, flow, or adjustment of any water body such as installation of levees or revetments, gravel removal, filling, encroachment, etc.
- Any activity that would be detrimental to water quality is not permitted.

Management Guidelines

General

- Consult the Vermont Department of Environmental Conservation River Management Program (RMP) website for more specific guidelines regarding stream buffers, passive restoration, and river corridor management at:
http://www.anr.state.vt.us/dec/waterq/rivers/htm/rv_EducationalResources.htm
- No agricultural activities will be allowed within the special treatment areas.

Restoration

- Follow the wetland restoration plan for the northern portion of the LHTF as detailed in the LaPlatte River Corridor and Wetland Management Plan.
- Allow the LaPlatte River and its tributary streams to migrate, create meander bends, erode banks, and complete any other adjustments without intervention, even if such adjustments result in erosion of ditch plugs, depressional areas, or plantings and require the relocation of trails and bridges.
- Woody debris shall remain in stream channels to allow for sediment deposition, pool formation, and habitat creation.

Riparian Buffers

Along the LaPlatte River, buffers are 100-foot wide planted and naturally regenerating areas along the river channel (see LaPlatte River Corridor and Wetland Management Plan Map, Appendix E). Buffer widths may vary along tributary streams depending on the site. Check with Conservation Partners (Appendix A) for current buffer guidance whenever planning management activities.

- Avoid disturbance of soil within the stream buffers so as not to contribute sediment or excessive runoff or erosion into the streams. Exception: unless done so under the conditions of the LaPlatte River Corridor and Wetland Management Plan for restoration purposes.

- Forest Management and other activities within riparian buffers must be compatible with the easement and reviewed by the LHTF Management Committee.
- Maintain natural vegetation (native plant species) within the riparian buffers to limit erosion and enhance wildlife habitat. Any non-native or invasive plants that are removed should be immediately replaced by native plant species. Native riparian vegetation may be removed for such purposes as treating pest infestations or accomplishing other activities compatible with the easement.
- Plant native vegetation and allow for natural growth within the stream buffers in areas where such vegetation is lacking.

Trails

River processes take precedence over trails as stated in the easement.

- Protect stream buffers from excessive pedestrian use and manage any trails within the stream buffers so as to minimize their impact on buffer vegetation and habitat.
- Trails will be designed and built in response to the changing stream profile and wetlands dimensions. Trails will be adapted as necessary when such changes happen so as not to impede stream or wetland processes.
- Trails occurring within buffers or the STAs will be designed and managed to maintain the integrity of the natural plant communities.

Stream Crossings

- Stream crossings will be minimized and improved so as not to impede stream function.
- Size crossing structures according to the VT DEC River Management Program guidelines and Guidelines for the Design of Stream/Road Crossings for the Passage of Aquatic Organisms in Vermont (VT DFW) and/or consult with the District Stream Alteration Engineer and District Fisheries Biologist for sizing, placement, and permitting requirements.

Aquatic Habitat

- Depressions and open water wetland areas will be created and maintained to provide habitat for waterfowl and amphibians.
- Cattails may be removed if they begin to take over open water areas.
- Woody debris will be allowed to accumulate in the open water habitats and will be allowed to accumulate in the river and streams to create and maintain varied habitat.

Invasive Species

- Invasive plant species such as reed canary grass, purple loosestrife, and phragmites may be removed from wetland areas and replaced with native vegetation.

- Best attempts will be made to monitor wetland sites for invasive plant species and remove them when found before they produce seeds.
- The LHTF Management Committee will consult state and other invasive species experts as needed for current guidance on invasive species management.

Monitoring and Science

- Evaluate the progress of the wetland restoration and make recommendations for future actions.
- Monitor the progress of the passive restoration of the LaPlatte and its tributaries.

Demonstration and Education

- Take advantage of opportunities to involve and educate the public about wetland and river processes and restoration and the importance of aquatic habitats.

Actions

- Implement the *LaPlatte River Corridor and Wetland Management Plan* (Appendix E):
 - Plant a 100-foot wide naturally vegetated buffer along the LaPlatte River of riverine floodplain forest species.
 - Install ditch plugs and excavate depressions in the open meadow areas to recreate areas of open water.
 - Plant wetland marsh and meadow species in open meadow areas.
 - Allow previously ditched tributaries to regain natural channel form and plant buffers with shrub and floodplain forest species.
 - Plant the small area of upland soils with valley clay plain forest species.
 - Remove reed canary grass and establish a grassland community to enhance wildlife habitat.
 - Establish an area of early successional scrubland to enhance wildlife habitat.
 - Enhance existing intact wetlands through removal of invasive plant species and planting of native vegetation where applicable.
- Replace the stream crossing structure (culvert/tank) associated with a Right Of Way for an adjacent property along Gilman Rd with a bridge of appropriate size that spans the stream and does not impede water or sediment flow or fish passage. Size the crossing structure according to RMP guidelines and Guidelines for the Design of Stream/Road Crossings for the Passage of Aquatic Organisms in Vermont (VT DFW) and/or consult with the District Stream Alteration Engineer and District Fisheries Biologist for sizing, placement, and permitting requirements.
- Plan for a stream crossing or trail relocation where the gully is eroding the main access trail at the intersection of the trail loop at Owl's Knoll. Monitor this site and relocate the trail or install a structure (bridge) that does not interfere with the natural erosion process, as necessary.

- Remove tires from the gully where it is eroding the main access trail at the intersection of the trail loop at Owl's Knoll. These were placed in the gully under old government recommendations for erosion control. Removal will likely result in increased erosion, but the tires are ineffective and leach pollutants into the stream.
- Monitor the wetland restoration areas following NRCS protocols for the first 15 years. The site will be monitored for proper functioning of ditch plugs and depressions, condition of plantings, control of invasive and nuisance plants, and the progress of the restoration. Any further monitoring will be identified in future revisions of the management plan as recommended by initial monitoring results.
- Conduct a habitat assessment for all streams using updated RMP habitat assessment protocols.
- Set up permanent monitoring sites along stream and river channels for cross sections, pebble counts, and photographs and define a monitoring schedule (every 5-10 years) to track channel adjustments. Possibly coordinate with UVM to combine this with education as a student project.

RECREATION

Future recreational activities and management of the LaPlatte Headwaters Town Forest (LHTF) for recreation should be undertaken only with the specific approval of the LHTF Management Committee. Recreation and recreation management must be guided by the permitted and restricted uses set forth in the conservation easement (Appendix B) and also should adhere to several other guiding principles.

Goal: Promote and manage recreational uses that are compatible with other management goals for the LHTF.

Permitted Uses Related to Recreation

Under the terms of the conservation easement the following uses are permitted to the extent they are consistent with the purposes of the easement:

Recreation: The property may be used for all types of non-motorized, non-commercial recreation including bird watching, cross-country skiing, fishing, hiking, hunting, snowshoeing, trapping, walking, and wildlife observation. Snowmobiling, and non-motorized, mechanized recreation (such as mountain biking), and horseback riding may be permitted if such activities are regulated in the Management Plan. Recreational uses may be more restricted within the Riparian Corridor Special Treatment Area than on the rest of the property.

Fields: The fields and pastures may be used for agricultural and/or horticultural purposes, recreational, scenic or open space purposes and/or for the purpose of maintaining or enhancing wildlife habitat, unless such use conflicts with management for Indiana Bats.

Trails: Existing trails may be used for non-motorized, non-commercial recreational activities. New trails may be cleared and constructed as described in this Management Plan.

Public Events: The Town may conduct periodic, temporary, non-commercial, community, and public gatherings and events on the unforested portion of the LHTF depicted as “Public Events Area” on the Bissonette Parcels 1 and 3 in the Baseline Documentation Report (Appendix C). Such Events Area must be provided for in this management plan.

Parking Areas: The Town may construct, maintain, and replace a permeable surfaced parking area, not to exceed 0.3 acres, at the location depicted as “Parking Area” on the Bissonette Parcels 1 and 3 in the Baseline Documentation Report (Appendix C). This parking area shall be used for such uses as are permitted in the easement. Prior written approval from VLT is required for the construction of the access drive and parking area.

Prohibited Uses Related to Recreation

Under the terms of the conservation easement the following uses are prohibited:

General: No building or structures may be constructed, created, erected or moved onto the property, unless specifically permitted in both the easement and this Management Plan.

Motor Vehicles: Motor vehicles may not be operated on the property except for uses specifically permitted under the easement such as wildlife and habitat management, trail grooming, maintenance, handicap access, safety, or emergency purposes.

Water Resources: The easement prohibits manipulation of natural water courses or other water bodies. No activities that would be detrimental to water purity, natural water level, or flow are permitted except as reasonably necessary to carry out the uses permitted in the easement and as may be more specifically permitted or limited under the LaPlatte River Corridor and Wetland Management Plan.

Other Guiding Principles

As a result of its on-site investigations, discussion with experts, and public input the LHTF Management Committee developed the following additional principles to guide the management of recreation within the LHTF.

- Encourage recreational use that
 - Is consistent with protection and enhancement of natural systems;
 - Adheres to the terms of the conservation easement;
 - Minimizes conflict between recreational uses;
 - Respects the rights and privacy of adjoining landowners.
- Temporarily restrict or curtail recreational activities when needed to allow for other management activities provided for by this plan (e.g. timber management) or when conditions are not suitable.
- Update recreation recommendations as needed to reflect changes in recreational demand and changes in natural systems within the LHTF.
- Recognize and take advantage of the educational opportunities created by recreational use of the LHTF.
- Concentrate recreational use on existing trails and prohibit the creation of new trails *except to replace unsuitable trails or to complete trail loops.*
- Adhere to relevant trail and recreational standards and the best available professional judgment to protect soils, water quality, and other LHTF resources.

Objectives and Guidelines

Objective: Establish and maintain a multi-use trail system.

Because most recreation on undeveloped, natural sites is trail-based the key to encouraging recreation is a trail system that is appropriate for a variety of uses, is well marked, and has convenient access.

Management Guidelines

- Maintain a permanent gate to block unauthorized motorized vehicle access to the woods road on Owl's Knoll.
- Encourage multi-use trails.
- Develop and maintain the main trail loop for the most intensive allowed uses – biking and horseback riding – thereby assuring it can accommodate other less intensive uses such as walking and skiing.
- Prohibit the creation of new trails except as needed to 1) bypass wet, steep, or otherwise unsuitable stretches of existing trails, 2) connect the northern and southern portions of the Forest, and 3) complete the loop around the west knoll when and if the Mead Farm Road Association (MFRA) allows.
- Because radiating trails lead onto adjacent properties and are narrow and wet in places, restrict use to walking, skiing, and snowshoeing where access is permitted until such times as issues of access and erosion can be adequately addressed.
- Unless public trail access is secured on the adjacent private properties discourage trespass by the placement of signs and/or other appropriate means.
- Mark the trails in a manner consistent with the town-wide trail system.
- Collaborate with the Hinesburg Trails Committee to maintain the trail system.
- Coordinate the use and maintenance of the woods road that leads into the “Hidden Meadow” with the Vermont Department of Fish and Wildlife.
- Install signs to designate the allowed uses of each trail, to encourage trail safety and etiquette, and to minimize conflicts between recreational uses.
- Install bridges, culverts, and other trail amenities as needed to minimize impacts on soil, water, and other resources.
- Allow snowmobiling only on the designated VAST trail. For reasons of safety, no other uses of this trail should be allowed except for foot traffic to gain access to the Bissonette Meadow and any future trail exiting this meadow.
- To facilitate access, provide and maintain (including snow plowing) two parking areas on Gilman Rd. (Snowplowing and parking in the northern area must not

interfere with grooming or use of the snowmobile trail or the use of the private right-of-way.)

- Post signs at both parking areas and at other access points to the LHTF that indicate allowed and prohibited uses of the trails and the Forest in general.
- Publicize the trails, and the Forest in general, via the Town website, downloadable maps, and Town reports. Maintain barriers to motorized vehicle access to trails and woods roads (i.e. permanent gate, stones, trail design).
- Close trails to certain uses when conditions warrant.
- Adhere to the trail standards set out in the VT Trails and Greenways Manual (2007) and other appropriate trail standards established by recognized recreational groups.

Objective: Minimize the impact of dispersed (non-trail) recreation on the LHTF resources.

Management Guidelines

- Allow overnight use and camping only in conjunction with on-site research activities or educational programs, and only after written permission has been obtained from the LHTF Management Committee.
- Designate areas where campfires may occur and allow campfires only when a permit has been issued by the fire warden.
- Allow dogs under the physical or verbal control of their owners/handlers and in accordance with the Town dog ordinance. Dog owners/handlers must remove their dogs' droppings from the LHTF.
- Dispersed activities must cause no harm to LHTF resources and must follow Leave No Trace guidelines.
- Flora, fauna, and mineral materials may not be disturbed, picked, collected, or removed from the LHTF except as needed to further the purposes of the conservation easement and objectives of this management plan, the collection of mushrooms or berries and other edible items for non-commercial purposes, legal hunting, educational, or research purposes.

Objective: Allow hunting and fishing in the LHTF in accordance with all state and federal regulations.

Management Guidelines

- To promote safety and to minimize conflicts between hunters and other users of the LHTF, post permanent signs at parking areas and trail heads indicating that hunting for deer, bear, turkeys, grouse, and other legal game is permitted within the LHTF.

- Trapping is prohibited.

Objective: Encourage appropriate public events and group use.

Management Guideline

- Allow periodic, temporary, non-commercial events in the designated “Public Events Area” (Bissonette Meadow), assuring that there is adequate provision for parking and septic disposal, and that there will be no lasting harm to natural systems. Such events require advance written permission from the Management Committee.

Objective: Adapt recreation management recommendations to reflect changes in resource conditions and changes in the types of intensities of human uses.

Management Guideline

- Annually monitor the forest, particularly the trails, for evidence of abuse or damage to natural systems due to recreational activities and modify management recommendations and actions appropriately.

Actions

- Mark property boundaries to facilitate 1) the placement of trail signs, and 2) discussion with adjoining property owners about trail access and development.
- Create and maintain the two parking areas, including appropriate signs.
- Engineer a solution (bridge, etc.) to maintain access to the main trail loop and Hidden Meadow despite the ongoing erosion that threatens the integrity of the existing farm road.
- Approach the Hinesburg Trails Committee about taking leadership to work toward the long-term objectives of (1) creating a public trail connection between the northern and southern portions of the LHTF that is acceptable to affected landowners and (2) working with the Mead Farm Road Association to complete the trail loop around the western knoll on Owl’s Knoll.
- Relocate the trail in the ravine or install trail structures to eliminate the current muddy, eroded conditions.
- Reroute walking trail through the hay field from the parking area to the woods road on Owl’s Knoll around the perimeter of the field and through the woods (see “Proposed Trail” on Main Map).

AGRICULTURE

Most of the LaPlatte Headwaters Town Forest (LHTF) has been used for agricultural production for many years, which has shaped the current condition of the property. Agricultural uses will continue to be allowed in appropriate areas of the LHTF in order to maintain a connection to historical uses of property, to maintain a diversity of wildlife habitats, to enhance scenic values, and to provide recreational opportunities and a community gathering area.

The conservation easement (Appendix B) recognizes the agricultural values of the LHTF and identifies 55 acres of prime and statewide agricultural soils on the property. However, agricultural values are secondary to the primary purposes of protecting water quality and Indiana Bat habitat. The easement permits agricultural use in areas not designated as Special Treatment Areas.

Goal: Allow agricultural uses that are compatible with other management goals in designated areas of the LHTF.

Objectives

- Keep the highly productive, eight-acre field located on the River Parcel of the LHTF (known as The Bissonette Meadow - Main Map) open through agricultural use.
- Utilize the 48-acre field shown on the Agricultural Fields Map for hay production in a manner that enhances grassland habitat on the abutting property until maintaining productivity of the field requires practices that conflict with the primary purposes of the easement.
- Maintain the option of using the Bissonette Meadow as a community gathering area by keeping it open through appropriate agricultural use.

Management Guidelines

- Consult with NRCS to determine current Best Management Practices related to soil cultivation and crop production that is consistent with conservation restrictions.
- Conduct agricultural practices in a manner that recognizes the primary purpose of protecting water quality.
- Agricultural use should be at no or little cost to the Town.
- Allow agricultural use on portions of the property until maintaining productivity requires practices that conflict with the primary purpose of the easement.
- Consult with Conservation Partners (Appendix A) to ensure agricultural practices are consistent with the primary purposes of easement.

- Mowing of areas identified as significant breeding habitat for grassland birds should occur only between July 15th and September 1st.

Actions

- Develop a 10-year contract between the Town and a local farmer that ensures management of designated agricultural fields that is consistent with the purposes of the easement and maintains soil productivity.

SECTION III: SUMMARY OF ACTIONS

Completed

- Create ditch plugs on the River Parcel in areas designated by the *LaPlatte River Corridor and Wetland Management Plan* (Appendix E) in order to facilitate flooding (September 2009).
- Plant native tree species on the River Parcel in areas designated by the *LaPlatte River Corridor and Wetland Management Plan* (Appendix E) to facilitate the revegetation of riparian buffers (partially completed during 2009 growing season – rest to be completed in 2010).
- Develop a 10-year contract between the Town and a local farmer that ensures management of designated agricultural fields that is consistent with the purposes of the easement and maintains soil productivity (September 2009).
- Make *A Local Educator's Field Guide to Owl's Knoll on the Bissonette Farm* available to any educators who might want to use the LHTF as an outdoor classroom (available on the web and in the HCS library).

Highest Priority

Recommended to be completed in 2010

- Create a permanent management committee. Since Hinesburg has two Town Forests and an existing Town Forest Committee that oversees the management of the older Hinesburg Town Forest, the LHTF Management Planning Committee recommends that the existing Town Forest Committee also be responsible for the management of the LHTF into the future.
- Mark property boundaries.
- Request that the Chittenden County Forester inventory the forest and provide a written report of the inventory and recommendations for management, including an assessment of the feasibility of a sugaring operation.
- Write a letter to the Planning Commission to clarify as to whether forestry uses are compatible with and considered important in the Agricultural District. The LHTF is within the Agricultural Zoning District. As currently written it appears that forestry is not as highly valued in the Agricultural District (See section 3.4.4 of the Hinesburg Town Plan).
- Designate a contact person on the LHTF management committee to act as a liaison with scientists who are using or may want to use the LHTF as a study site. List contact information on Town website and in all relevant documents.

- Designate a contact on the LHTF management committee to act as a liaison between County Foresters, Fish and Wildlife Department Biologists, and others who would be likely to want to use the LHTF for education and demonstration purposes.
- Develop a flyer that summarizes the vision and goals for the LHTF along with guidelines for public uses (events and recreation) that can be downloaded from the Town website and available at the kiosk at the LHTF.
- Create and maintain the two parking areas, including appropriate signs.
- Engineer a solution (bridge, etc.) to maintain access to the main trail loop and Hidden Meadow despite the ongoing erosion that threatens the integrity of the existing farm road.
- Initiate a conversation with the Vermont Fish and Wildlife Department and farmers about how to maintain access to the Hidden Meadow for mowing, given the deteriorating condition of the current access through Owl's Knoll.
- Approach the Hinesburg Trails Committee about taking leadership to work toward the long-term objectives of (1) creating a public trail connection between the northern and southern portions of the LHTF that is acceptable to affected landowners and (2) working with the Mead Farm Road Association to complete the trail loop around the western knoll on Owl's Knoll.

High Priority

Recommended to be completed in 2010-2011

- Develop a list of potential service-learning projects that the LHTF Management Committee could partner on with teachers and their students at the LHTF (i.e. development of interpretive/informational material at a kiosk or creating and maintaining trail markers).
- Mark boundaries of Woodland STAs and post signs along trails to let the public know they are entering an STA and significant natural community.
- Remove tires from the gully where it is eroding the main access trail at the intersection of the trail loop at Owl's Knoll. These were placed in the gully under old government recommendations for erosion control. Removal will likely result in increased erosion, but the tires are ineffective and leach pollutants into the stream.
- Reroute walking trail through the hay field from the parking area to the woods road on Owl's Knoll around the perimeter of the field and through the woods (see "Proposed Trail" on Main Map).

Medium Priority

Recommended to be completed in 2010-2015

- Approach adjacent landowners about evaluating and planning for potential beaver conflicts before they happen.

- Find a way to make Port-a-lets available in the parking areas during the times when teachers are likely to bring their students to the LHTF (fall and spring).

Ongoing and Long-term (5+ years)

- Meet and coordinate with local town committees such as: Conservation Commission, Planning Commission, Hinesburg Land Trust, and Trails Committee.
- Communicate with regional conservation organizations such as the Lewis Creek Association, the LaPlatte Watershed Partnership, the Nature Conservancy, and Audubon Vermont.
- Coordinate management of the LHTF with other properties in the area between Sliver Street, Gilman Road, Lewis Creek Road, and the Village through the creation of a neighborhood management plan.
- LHTF management committee participates in town plan and zoning regulation updates, and revisions.
- Offer opportunities for teachers to learn about the LHTF at the LHTF.
- Maintain a list of research projects that have been completed at the LHTF.
- Implement the *LaPlatte River Corridor and Wetland Mangement Plan* (Appendix E):
- Plan for a stream crossing or trail relocation where the gully is eroding the main access trail at the intersection of the trail loop at Owl's Knoll. Monitor this site and relocate the trail or install a structure (bridge) that does not interfere with the natural erosion process, as necessary.
- Monitor the wetland restoration areas following NRCS protocols for the first 15 years. The site will be monitored for proper functioning of ditch plugs and depressions, condition of plantings, control of invasive and nuisance plants, and the progress of the restoration. Any further monitoring will be identified in future revisions of the management plan as recommended by initial monitoring results.
- Relocate the trail in the ravine or install trail structures to eliminate the current muddy, eroded condition (after access to connecting trails on abutting private property is obtained).

Wish List

To be completed as resources and opportunities allow. These projects may be particularly well-suited for academic research/projects so this list should be made available to local schools and academic institutions.

- Develop an understanding of the habitats found on adjacent lands and identify how plants and animals move between these habitats and habitats on the LHTF.

- Monitor wildlife use of travel corridors.
- With the help of neighboring landowners, field visits and orthophotos, map the spatial layout of forest ages and types in the roughly 1000 acres surrounding the LHTF.
- Seek funds to offer small incentive grants to cover fieldtrip costs for teachers to bring their classes to the LHTF.
- Expand *A Local Educator's Field Guide to Owl's Knoll on the Bissonette Farm* to include information on the northern parcel.
- Seek input from local teachers on what resources would be helpful for bringing their students to the LHTF.
- Coordinate with academic and state scientists to accomplish monitoring goals.
- Conduct an inventory of wildlife and habitats, and create recommendations for protection and enhancement. Create a map of wildlife sightings and signs, and significant habitat features that can be added to and updated periodically.
- Set up monitoring programs including vegetation plots, and birds, bats, and other wildlife. Approach local schools and institutions (HCS, CVU, UVM) to get assistance with monitoring.
- Replace the stream crossing structure (culvert/tank) associated with a Right Of Way for an adjacent property along Gilman Rd with a bridge of appropriate size that spans the stream and does not impede water or sediment flow or fish passage. Size the crossing structure according to RMP guidelines and Guidelines for the Design of Stream/Road Crossings for the Passage of Aquatic Organisms in Vermont (VT DFW) and/or consult with the District Stream Alteration Engineer and District Fisheries Biologist for sizing, placement, and permitting requirements.
- Conduct a habitat assessment for all streams using updated RMP habitat assessment protocols.
- Set up permanent monitoring sites along stream and river channels for cross sections, pebble counts, and photographs and define a monitoring schedule (every 5-10 years) to track channel adjustments. Possibly coordinate with UVM to combine this with education as a student project.