

**Town of Hartford  
Hurricane Town Forest  
Recreation Management Plan**

Adopted by the  
Hartford Selectboard  
July 16, 2002



## ACKNOWLEDGEMENTS

In developing the Recreation Plan for the Town Forest, the Conservation Commission has worked closely with the Hartford Parks and Recreation Department staff and a representative from the Hartford Parks and Recreation Commission participated on the Hurricane Town Forest Steering Committee.

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Hartford Conservation Commission:

Karen Douville, Chair  
Celia Chen  
Pat Doran  
Mike McCrory  
Jim Peters  
Skip Spaulding  
Chuck Wooster

**TOWN OF HARTFORD  
HURRICANE TOWN FOREST RECREATION MANAGEMENT PLAN  
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## I. INTRODUCTION

- a. **Purpose:** The Hurricane Town Forest has been unmanaged for recreational uses in the past and no rules have ever been established. As more people have discovered the Town Forest, recreational use has increased. This plan attempts to balance the needs of different user groups, adjacent residents and protect the natural resources of the Town Forest by establishing rules for recreational use.
- b. **Public Process:** According to Vermont Statutes, Title 24, Chapter 118, Section 7, the Conservation Commission is authorized to manage lands of a municipality. In 1997, the Conservation Commission began managing the Town Forest after a long period without active management. In 1999, an update of the Forest Management Plan was prepared. In 2001, it became clear that a recreation management plan was needed. The Conservation Commission wanted to ensure that there were numerous opportunities for public involvement. In addition to sponsoring public meetings, it was decided to form a steering committee (that represented the different user groups and adjacent property owners/ neighborhoods) that would be directly involved in writing of the Plan.

In the spring of 2001, the Hurricane Town Forest Steering Committee was formed. There were several Steering Committee meetings held in the summer and fall of 2001. In November 2001, a public forum was held to solicit public input prior to the formulation of the Plan. Approximately fifty people attended. The Steering Committee met in January 2002 to finalize recommendations and then began to work on preparing a draft of the Plan. Two additional meetings were held in February and March, and the Steering Committee held a second public forum in May 2002 to present the draft Plan and solicit public input. Approximately thirty people attended. At their June 3<sup>rd</sup>, 2002 meeting, the Conservation Commission voted to accept the draft and present it to the Selectboard to consider adoption. The Selectboard held a public meeting on July 16, 2002 and adopted the plan.

The Conservation Commission recognizes that the Plan is not an end in itself, but to be effective, the Plan must be implemented. It also will require constant monitoring and regular updating of the Plan to ensure that the Town Forest is properly managed and that there are opportunities for input from adjacent property owners and user groups.

- c. **Guidelines:** The Hurricane Town Forest Steering Committee adopted the following guidelines to be used in establishing rules for the Town Forest:
1. Recreational use will respect the tread lightly philosophy.
  2. Recreation Plan will consider safety as a priority.
  3. Recreation Plan will be designed to respect the ecological, historical and cultural values of the property.
  4. In order to respect the privacy of adjacent property owners, the Recreational Plan will clearly delineate the boundaries of the Town Forest.
  5. Recreation Plan will limit the impact on the neighborhood, including noise, litter, traffic and parking.

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d. **General Description**: Owned by the Town of Hartford, the Hurricane Town Forest is a 423 acre parcel located adjacent to Reservoir Road and the Hurricane Forest Wildlife Refuge Park. The main access to the Town Forest is from Reservoir Road via Kings Highway and Center of Town Road. The Town Forest also can be accessed from Neal Road (south end of Reservoir Road) and by trail through the Hurricane Forest Wildlife Refuge Park. The property is located on a ridge above the Connecticut River Valley. There are several large forested parcels abutting the southern half of the Town Forest to the west, south and east. Several residential lots abut the northern half of the Town Forest to the north on Kings Highway and to the west on Reservoir Road.

e. **Historical Overview**: The following is a brief history of the Town Forest.

1869 Two homesteads identified on the property by the Beers Atlas.

1890's Hartford Water Company begins acquiring land for reservoirs to serve as the Town's domestic water supply.

1900c. The Lower and Upper Hurricane Reservoirs constructed in addition to the Wright Reservoir and Simonds Reservoir.

1938 Famous Hurricane inflicts extensive damage to the Town Forest.

1950 Wilder Well developed as an alternative water supply to the Town reservoirs.

1959 The first Town Plan recommends the lands surrounding the four Town reservoirs to be used for public recreation.

1975 Use of the Town reservoirs for domestic water phased out.

1982 Survey of the Hurricane Town Forest and Hurricane Forest Wildlife Refuge Park prepared.

1984 *Forest Resource Management Plan* prepared for the Town Forest and the Hurricane Forest Wildlife Refuge Park.

1980's Commercial Logging takes place. Recreation trails evolve from numerous logging skid roads.

1990's Recreational use increases. Concern develops regarding the impact of recreational use on adjacent property owners. Conflicts between different user groups emerge.

1997 Hartford Conservation Commission recognizes a need to manage the Town Forest. The first step is to update the *Forest Resource Management Plan*.

1998 Town applies for and receives a grant to update the *Forest Resource Management Plan* for the Town Forest and the Wildlife Refuge Park.

1999 *Forest Resource Management Plan* adopted by the Conservation Commission and Selectboard. The Natural Resources class from the Hartford Area Career & Technology Center and the Hartford Conservation Commission begin work to implement the *Plan*.

2000 Town applies for and receives a trails grant to construct two trails; one connecting the Town Forest with the Wildlife Refuge Park and the other around the Lower Hurricane Reservoir connecting the north half of the Town Forest to the southern half. The grant also includes trail signs, a trailhead sign and parking improvements. The trails work is completed by the Vermont Youth Conservation Corps and the Hartford Conservation Commission. The other improvements are scheduled for 2002.

- 2000 Meeting with Reservoir Road neighbors and Town Officials regarding use of the Town Forest and impacts to their neighborhood. At conclusion of the meeting, it is agreed that a recreation management plan for the property is needed.
- 2001 The Hartford Middle School receives a Community Mapping grant. They prepare a trails map of the Town Forest and the Wildlife Refuge Park.
- 2001 The Conservation Commission works on process to establish a recreational management plan for the Town Forest. A steering committee is formed representing adjacent landowners and representatives from different user groups. The Conservation Commission receives approval from the Selectboard to begin work on the plan.
- 2002 The Plan is adopted by the Selectboard. Implementation of the Plan begins.

## II. PHYSICAL & BIOLOGICAL CHARACTERISTICS

- a. **Topography:** The Hurricane Town Forest is located along a ridge between Route 5 and Route 4. The property ranges in elevation from approximately 960' just below the junction of the streams flowing from the Upper and Lower Hurricane Reservoirs at the east property line to a high point of 1312' on Neals Hill. The Upper Hurricane Reservoir is located at an elevation of 1120' and the Lower Hurricane Reservoir is located at an elevation of 1047'. Throughout the Town Forest, the terrain is generally hilly with a majority of the site comprised of slopes in the 8-25% range. There is one small area north of the Lower Hurricane Reservoir that has slopes in the 0-8% range and three areas of slopes exceeding 25% east of the Lower Hurricane Reservoir, the southwest corner of the property, and the north side of Neals Hill.
- b. **Geology:** The rock that underlies the Town Forest is a schist of the Waits River formation, created roughly 330 million years ago during the most recent collision of North America with Africa. As the continents came together, fine-grained sand and mud from the ocean floor were trapped, pressurized, and cooked into stone by the collision. Geologists know that these particular sands and muds were sitting on the outer edge of the underwater continental shelf, where the shallow shelf ends and starts to plunge into the deepest ocean depths, because underwater landslides pulled calcium-rich material from the shallow shelf and deposited it amidst the calcium-poor sediments of the deeper ocean. This has led to the great range of soil types found among Waits River schists today – where the calcium-rich material was turned into stone, the soils today are prime farmlands; where the calcium-poor material was turned into stone, the soils today are relatively infertile and not suitable for agriculture.
- c. **Hydrology:** The Town Forest sits astride the intersection of three watersheds. Rain that falls on the very northern edge of the property flows into the White River, rain that falls on the southwestern corner of the property flows into the Ottauquechee River, and rain that falls over the rest (and majority of) the property flows into the Connecticut River. The reservoirs were constructed around 1900 to serve as part of the four-reservoir system that served as the principal municipal water supply until the 1950's. The Hurricane Reservoirs were phased out for use as domestic water in 1975. The two reservoirs, and the streams that flow out of them, are the only year-round surface waters in the Town Forest. The Town Forest also contains

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several wetlands and vernal pools. A hemlock swamp and vernal pool exist near southern end of the property. A forested seep and spring run exist along the northwest corner of the Town Forest. This area is bisected by a trail. In addition, a vernal pool exists in the trail to the Lower Hurricane Reservoir. Both trails should be relocated in order to protect these areas.

- d. **Soils:** According to the Natural Resources Conservation Service, soils in the Town Forest consist of five different soil types; two specific soils and three complexes. They include:

- \* Buckland Fine Sandy Loam
- \* Cabot Loam
- \* Vershire/Dummerston Complex
- \* Glover/Vershire Complex
- \* Vershire/Buckland Complex

Two of the soils are classified as prime agricultural soils of statewide importance. They include the Vershire Buckland Complex (8-15% slope) and the Vershire Dummerston Complex (8-15% slope). These soils are located in two small areas: one that wraps around the Lower Hurricane Reservoir and along Reservoir Road and the other on the south side of the Upper Hurricane Reservoir. Although the property most likely was used for agricultural purposes in the 1800's, the area is now heavily forested. The Town Forest soils are ideal for the production of timber. According to the Forest Management Plan, "all represent good soils for growing timber species located on the property."

- e. **Vegetation:** The Hurricane Town Forest is presently nearly 100% forested by a combination of Northern Hardwood and Oak-Hickory forest types, with interspersed stands of white pine where historical conditions created larger openings. The relatively high level of soil fertility has led to a preponderance of rich-site indicator species like sugar maple, white ash, and red oak. Beyond the tree inventory conducted as part of the *Forest Resource Management Plan*, no thorough inventory of vegetation has been conducted in the Town Forest to date. Such an inventory is likely to reveal populations of unusual and interesting plants.

### III. SITE MANAGEMENT

- a. **Forest Management:** The following is a brief summary of the *Forest Resource Management Plan for the Hurricane Watershed*, which includes the Hurricane Town Forest and the Hurricane Forest Wildlife Refuge Park and assumes they are being managed as one.

#### Key terms:

- **Even-aged Management.** Better known as clearcutting. All trees are cut at the same time, and all new trees in the ensuing forest will all be the same age.
- **Uneven-aged Management.** Commonly called selective cutting. Certain trees are cut and the rest are left behind. (The difference between even and uneven-aged management is only a question of scale – cutting two trees next to each other is a tiny clearcut, while a 1,000-acre forest under uneven-aged management may have "patch cuts" of 20 acres or more.)
- **Commercial Cutting.** The loggers and foresters pay the town. (Chainsaws and heavy equipment may be utilized.)

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- Pre-Commercial Cutting. The town pays the loggers and the foresters or has volunteers perform the labor. (Chainsaws and heavy equipment may be utilized.)

In general, the *Plan* notes that the Hurricane watershed has been under even-aged management for the past two centuries – first by settlers who cleared and later abandoned the land, then by the Hurricane of 1938 that blew down most of the trees, and then by commercial logging during the late 1970s and early 1980s that emphasized clearcutting.

The *Plan* notes that even-aged management may not be appropriate in a Town Forest because the aesthetic impacts are high during harvesting, clearcutting is not easily compatible with recreational trails and uses, and long periods pass between harvests in which the Town receives no income and/or loses the motivation to manage the land.

Therefore, the *Plan* recommends changing to uneven-aged management on the Hurricane lands. What the *Plan* only indirectly notes is that such a conversion takes money (or volunteer time) to carry out. Clearcutting as a strategy is simple and economical – for long periods of time you spend nothing. Then one day you sell everything and make money.

Uneven-aged management, on the other hand, requires regular amounts of weeding and tinkering during which the wood that is cut has low value and is difficult to sell. This costs money all along the way. Eventually there will be a steady supply of high value timber to sell on an ongoing basis, and this timber in aggregate is far more valuable than that which grows under even-aged management, but it takes time to get there.

In order to convert the existing forest from an even to uneven age management approach, the *Plan* advocates five different activities for various parts of the forest between 1999 and 2012:

1. Do Nothing. This applies to all areas that are wet or serve as buffers around surface water, all areas with cultural and historical significance, all areas where the land cannot support the equipment required for timber harvesting, all areas with rare or endangered species, and any areas where the current trees are very young and already growing quickly.
2. Patch Clearcuts/Wildlife Openings. In areas where wildlife could benefit from habitat diversity and where the current trees are not on the way to having high timber value, cut openings up to two acres in size. Special attention should be paid to apple trees and other trees that are exceptional sources of food for wildlife. Consideration also should be given to possibly planting native species that benefit wildlife.
3. Timber Stand Improvement. In the areas that were cut heavily twenty years ago, they should be thinned out to favor the trees that are likely to have great wildlife and/or dollar value in the future.
4. Crop Tree Release. In areas where the trees are middle aged, the very best trees should be selected with the competing trees cleared out around them to encourage the growth of remaining trees into very high value timber.
5. Single Tree Selection. In the mature areas of the forest, the best trees should be cut for timber while keeping an eye on the developing group of high value trees.

Please note that of the five activities outlined above, only number 5 is likely to result in net income for the town (ie: commercial activity). Numbers 2 - 4 may earn money or cost money, depending on the size, location and accessibility of the job and the market for firewood and low-grade wood at the time.

TIMELINE, 1999 - 2010

1999	Blaze boundaries (completed)
1999-2002	Release apple trees (largely completed)
2000-2005	Create wildlife openings and plant beneficial vegetation (partially completed)
2000-2002	Establish 12-20 patch clearcuts up to 2 acres in size
2002-2005	Single tree selection in Stand 6 (mostly the hardwoods in southern part of forest)
2000-2010	Timber Stand Improvement, Crop Tree Release, and build recreational trails throughout the forest.

- b. **Wildlife Habitat Management:** All wildlife requires cover, food, and water. Providing these basic elements alone does not provide good habitat for all species. Every species requires a specific type and arrangement of cover, food, and shelter. Providing good wildlife habitat, therefore, requires a diversity of plants, landscapes, foods, and wetlands. The *Forest Resource Management Plan* defines the key elements and identifies habitat components found within the Town Forest:

Cover provides the physical structure of a wildlife habitat. It is the protective element and plays an important role in a number of the animal's functions including hiding, traveling, resting, breeding and rearing young. Cover in the Town Forest is provided primarily by vegetation but also includes ledges, rock outcroppings, caves, burrows, snags, and den trees.

An adequate and nutritious food supply is vital for maintaining the animal's health, growth, and reproduction. All species have preferred foods, which vary with the seasons and the particular needs of the animal. Examples of seasonal foods found in the Town Forest include insects, hemlock and hophornbeam seeds, acorns, beechnuts, hazelnuts, apples and berries.

Water is an essential requirement for wildlife. Sources of water in the Town Forest include two reservoirs, several streams, wetlands, and vernal pools.

To date, no thorough inventory of wildlife has been conducted in the Town Forest. Such an inventory would be very beneficial to the management of the property and is recommended.

- c. **Reservoirs:** It has been more than twenty-five years since the Upper and Lower Hurricane Reservoirs were used for domestic water purposes. Today, these reservoirs serve as a back-up for fire protection purposes. The following are excerpts from an informal report prepared for the Steering Committee by Steering Committee member and civil engineer Tim Schaal.

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- Reports/Letters were written to the Town Manager in 1988, 1993, and 1995 from the Vermont Dam Safety Engineer warning that the dams of the Upper and Lower Hurricane Reservoirs are in poor/very poor condition.
- In 1995, Corps of Engineers (COE) did a Dam Break Flood Analysis of the Lower Hurricane Reservoir. The State and COE are concerned with the poor conditions of the structures and recommended keeping them drained until they are repaired or breached. The reports noted boils and seepage (indicators of piping or internal erosion) that could “lead to rapid failure of the dam” on the Upper Hurricane Reservoir. This does not appear to have been completed.
- The Dam Break Flood Analysis of the Lower Reservoir indicates that the dam has a “significant hazard” classification:
  1. Route 5 could be washed out. This could result in the possible loss of life due to a vehicle accident. This happened in Alton, NH in 1994.
  2. Two homes and the propane storage yard located east of Route 5 could be inundated. This could result in the possible loss of life if basements are used for living space.

Conversations with Town Officials: Phone Conversations with Hartford Public Works Director Mike Lavalla and Department of Parks and Recreation Director Tad Nunez were made to gather the following information.

- The only current use by the Town for the reservoirs is emergency fire protection water supply.
- There is no current maintenance plan for the reservoirs.
- The reason the valve for the outlet on the Lower Hurricane Reservoir doesn’t work is unclear. It would likely require excavation of the valve (which is located at the toe of the dam) to repair it.
- The Town has responded to the State’s letters, and has emphasized the Town’s desire to keep the reservoirs intact.

Alternatives: The following is a list of potential alternatives that the Town has regarding management of the reservoirs, along with Tim Schaal’s professional opinion of their advantages and disadvantages:

A. Do Nothing:

- There is no cost.
- There is a high risk and liability to the Town.
- The Lower Hurricane Reservoir has little recreational or wildlife habitat value.
- The Upper Hurricane Reservoir has only intermittent recreational value. Wildlife habitat does not appear to be affected (enough water to maintain aquatic life).

B. **\*\*Partial Breach & Rehabilitation:** If the impoundments are less than 500,000 cubic feet; fix the valve on Lower Hurricane Reservoir; armor and use breaches for oversized spillways to ensure impoundments cannot increase over 500,000 cf. Clear the dams of trees

- There are significant costs.

- It greatly reduces the risk of failure.
- It increases the potential recreational value for both reservoirs by stabilizing the water level.
- Lower Hurricane Reservoir will be approx. 1/4 of its historic full size.
- Upper Hurricane Reservoir will be approx. 1/2 of its historic full size.
- Annual maintenance will be required.

C.\*\* Full Breach: No water will be impounded:

- There are significant costs, but less costs than Option B.
- There will be no risk of failure.
- There will be no annual maintenance.
- It will result in changes to wildlife habitat.
- It will result in changes to recreational opportunities.

D.\*\* Rehabilitation of one or both dams:

- This will be very expensive.
- It greatly reduces the risk of failure.
- It increases the potential recreational value for both reservoirs by stabilizing the water level at their historic normal sizes.
- It will result in increased potential for diverse wildlife and aquatic habitats
- Annual maintenance will be required.

\*\* Because both reservoirs are capable of impounding over 500,000 cubic feet of water, any action taken with the dams will be under the jurisdiction of the Vermont Dam Safety Section.

- d. **Reservoir Road:** Reservoir Road can be reached from two locations: Neal Road and Kings Highway. From Kings Highway, Reservoir Road is classified as a “class 3” road for .4 tenths of a mile, at which point the road is classified as a “class 4” road. Entering from Neal Road, Reservoir Road immediately becomes a class 4 road. Reservoir Road is governed by any and all local and state traffic regulations.

The class 4 portion of Reservoir Road runs through the majority of the Town Forest. The class 4 road is not maintained by the Town and the Town assumes no liability for damages incurred by persons using these roads (as outlined in the *Town of Hartford Highway Rules, Regulations and Specifications* – Section 9.2.05 on page 4). The class 4 portion of Reservoir Road is posted prohibiting travel from March 1<sup>st</sup> through June 1<sup>st</sup>.

- e. **Relationship to the Hurricane Forest Wildlife Refuge Park:** The Hurricane Town Forest and the Hurricane Forest Wildlife Refuge Park are owned by the Town of Hartford. The Hurricane Town Forest is managed by the Conservation Commission, while the Hurricane Forest Wildlife Refuge Park is managed by the Hartford Parks & Recreation Department. The Park is governed and maintained under a set of guidelines as prescribed in a warranty deed from Winsor and Bertha C. Brown dated March, 1974. Both properties are included in the over-all *Forest Resource Management Plan for the Hurricane Watershed*. Even though both properties are managed alike, the Park property does not allow people to travel through

the park with vehicle equipment (with three exceptions) snow machines are allowed on designated trails, a small portion of the Park property has a designated trail allowing for mountain bike travelers to connect to the Town Forest, and ATV's are allowed to use the access road to the beacon to connect to the Town Forest. The Park property is posted each year prohibiting hunting and trapping.

- f. **Relationship to Area Residents:** In the fall of 2000, a neighborhood meeting took place to discuss use of the Town Forest and the impacts on surrounding residents. Since there were no established rules for use of the Town Forest, residents expressed their concerns about safety issues and impacts on their quality of life. Residents strongly recommended that a recreation management plan be prepared and that they have a representative on the Steering Committee. The Steering Committee, which included abutting property owners, acknowledged the importance of being a good neighbor. It is therefore critical that the Town and the Conservation Commission keep an open communication line with neighbors to ensure that activities in the Town Forest do not negatively impact them.

Several trails lead from the Town Forest onto private property. The Conservation Commission will work with adjacent property owners to ensure protection of their property. This will include signs informing the public that the trail leaves the Town Forest. It also may include the establishment of physical barriers to prevent motorized vehicles from using the trails where their use is prohibited.

- g. **Hunting & Public Safety:** Historically, the Town Forest has been open to hunting. Hunting is an important part of the Vermont heritage and should continue in the Town Forest. It is important that the public is informed that hunting is allowed on the property. This should be identified on any brochure and trailhead sign.
- h. **Educational Activities:** The Town Forest is a valuable resource for environmental education and recreation for the schools of Hartford and the Upper Valley. The vast acreage with its network of trails, the rich variety of trees and other plants, the various terrestrial and aquatic habitat types, and the historical artifacts offer many opportunities for teachers and students engaging in environmental education.

In addition to providing benefits to the schools and school children, educational activities also can benefit the Town. In the last few years, three projects have illustrated this point.

- The Hartford Area Career & Technology Center Natural Resources Class has performed work to implement *the Hurricane Watershed Forest Resource Management Plan* by creating small wildlife openings. More work is scheduled for the future.
- The Hartford Area Career & Technology Center Carpentry Class has made trail signs for the Town Forest.
- The Hartford Middle School has worked on a community mapping project which used Geographic Information Systems (GIS) and Global Positioning Systems (GPS) technology. The project resulted in the development of a trails map for the Town Forest and the Wildlife Refuge Park.

Future educational projects are encouraged.

- i. **Hours of Use:** In order to avoid negative impacts on surrounding residents, the hours of operation shall be limited to sunrise to 10:00 p.m. with the following exceptions:
  - hunting in compliance with State Law to allow hunters to set up prior to sunrise
  - drive-through use of the designated VAST Trail only by snowmobiles
  - permitted camping
- j. **Traffic:** Vehicular access to the Town Forest utilizes Center of Town Road, Kings Highway and Reservoir Road. In the past, all terrain vehicles and dirt bikes have used the Class 3 section of Reservoir Road as a raceway. This has resulted in a safety hazard and a noise nuisance to area residents. It also is against the law. Residents also have complained about the speed of legally registered vehicles. The Conservation Commission will work with the Hartford Police Department to improve enforcement of traffic laws for area roads.
- k. **Trailhead Parking Area:** Historically, there has not been a designated trailhead parking area for the Town Forest. For the most part, users have parked at the area commonly referred to as “the landing” near the Upper Hurricane Reservoir. Some parking has occurred along Reservoir Road, which at times has resulted in problems for residences. After looking at alternative sites, it was decided that “the landing” will continue to serve as the best location for the trailhead parking area. Improvements to Reservoir Road and the trailhead parking improvements are scheduled for the fall of 2002. These improvements along with signage may eliminate some of the parking problems. In addition, a prohibition of parking on Reservoir Road should help improve the problem. The Conservation Commission and Police Department should regularly monitor the situation.

An important part of a trailhead parking area is a trailhead sign with information provided about rules of the Town Forest and management activities.

- l. **Trash Disposal:** The Town Forest is managed by the Hartford Conservation Commission. As such, they do not have staff to regularly maintain the property. Instead, they rely on volunteers. Therefore, trash receptacles will not be provided. Users are requested to use the carry in/carry out approach. The Conservation Commission will monitor the area and include the Town Forest in the annual Green-Up Day activities.
- m. **Enforcement:** Since the Town does not have the resources to actively patrol the Town Forest, enforcement will largely depend on self patrolling by Town Forest users and clubs that regularly use the trails. It will be the responsibility of the Conservation Commission to develop the rules and to inform the public through the development of a brochure/map and providing information at the trailhead parking area. The Conservation Commission will periodically assess enforcement and work closely with the Hartford Police Department to discuss the development of Town ordinances and enforcement. Once completed, the

Conservation Commission will request that the Hartford Police Department regularly patrol the trailhead parking area.

#### IV. RECREATIONAL USES

- a. **Trails:** As previously mentioned, most of the trails in the Town Forest have evolved from logging roads/skid roads of previous logging operations. They were not designed for recreational use. Trails designed and constructed specifically as trails typically have been laid out to be more sensitive to slope and drainage issues. Therefore, it is understandable that in some instances, there are sections of trails that are too steep and drainage problems have developed or low-lying sections collect water. Rehabilitation and re-routing of some segments may be necessary. Consequently, the Conservation Commission will have to closely monitor the condition of trails and the impact of certain uses and develop proper management practices. Particular attention should be given to the spring mud season when trails can be extremely wet and prone to damage. The Conservation Commission will inspect trails each spring and determine whether trails should be closed temporarily until they dry out.

Since the property is managed by the Conservation Commission with assistance from volunteer groups, it is imperative that the different user groups participate in trail maintenance activities. The Conservation Commission will reserve the right to deny trail access to a particular user group if that group's members are contributing significantly to trail damage without contributing significantly to trail upkeep.

- b. **Reservoir Road:** Reservoir Road is governed by any and all local and state traffic regulations, including recreational off-road motor vehicles. The class 4 section of Reservoir Road will be utilized as the designated area where motorized bikes, 4x4 trucks, and other recreational four-wheel vehicles can enter and pass through the Town Forest. Reservoir Road, as designed and maintained as a class 4 road, allows for emergency vehicle access to reach a wide spectrum of the Town Forest. As a class 4 road, the Town Forest is less disturbed by daily vehicle traffic enhancing a "back to nature" experience.
- c. **Unrestricted Uses:** The following uses will be allowed throughout the property without restrictions. This includes all areas on and off trails.

- I. **Hiking/Walking/Jogging:** Hiking/Walking/Jogging are popular activities in the Town Forest. All of the forest is open to hikers/walkers and joggers.

Recommendation: All of the forest is open to hiking, walking and jogging.

- II. **Wildlife Viewing/Birdwatching:** The Town Forest is a good place to view wildlife.

Recommendation: All of the forest is open to wildlife viewing and birdwatching.

- III. **Skiing/Snowshoeing:** Skiing and snowshoeing in the Town Forest is a popular activity. Skiing primarily occurs on the trails, while snowshoeing occurs on and off trails.

Recommendation: All of the forest is open to skiing and snowshoeing.

- IV. Ice Skating: Ice skating and hockey games on the Hurricane Reservoirs are fairly common winter activities.

Recommendation: Ice skating is a permitted activity. However, campfires are prohibited. (Please refer to Section e. VIII on page 15). Ice skaters need to be aware that the ice is not inspected for public safety purposes and that skating is at their own risk.

- V. Swimming: Occasionally, swimming by individuals and/or their pets occurs in the Hurricane Reservoirs.

Recommendation: Swimming is a permitted activity in the Town Forest. Swimmers need to be aware that swimming is at their own risk and that the water is not tested for public health purposes.

- VI. Boating: The Hurricane Reservoirs are small waterbodies. Boating is a rare activity.

Recommendation: Boating for small boats such as canoes, kayaks, rowboats, etc. is permitted. Since both reservoirs are small waterbodies, use of motor boats will be prohibited.

- VII. Walking Dogs: Many people take their dogs for walks in the Town Forest.

Recommendation: Walking dogs in the Town Forest is a permitted activity. Although leashes are not required, a Town Ordinance requires that dog owners keep their pets under control. In addition, dog owners should be informed that the Town Forest is open to hunting. Dog owners are requested to remove droppings left by their pets from the trails.

- d. **Uses Allowed on All Designated Trails**: The following uses have the potential of creating impacts and shall be restricted to designated trails.

- I. Mountain Biking: All of the trails in the Town Forest are used by mountain bikers. Typically, they stick to the trails.

Recommendation: Mountain biking is a permitted activity. However, to avoid creating impacts, mountain biking is restricted to designated trails.

- II. Horseback Riding: There are a number of horseback riders using the trails of the Town Forest. Typically, they stick to the trails.

Recommendation: Horseback riding is a permitted activity. However to avoid creating impacts, horseback riding is restricted to designated trails.

- e. **Uses Requiring Permission from the Town:** The following uses have the potential of creating impacts unless properly managed. Therefore, the following uses are allowed, but require permission from the Town prior to engaging in these activities.

- I. **Orienteering:** Orienteering, which is a very popular sport in Scandinavia, is catching on in the United States. The sport combines map reading skills with endurance running. If directed away from sensitive areas, the sport has relatively low impacts.

Recommendation: Orienteering is a permitted activity. Groups interested in using the Town Forest to set up an orienteering course must receive permission from the Conservation Commission.

- II. **School/Educational Activities:** As previously stated, the Town Forest has been used for educational purposes. Such projects have provided an educational benefit and also result in improvements to the Town Forest.

Recommendation: School groups and other organizations may use the Town Forest for educational activities as long as they are very careful to protect the natural resources of the property. Such groups also should be careful to stay within the boundaries of the public property and not travel onto adjacent private properties during educational activities without the property owner's consent. Groups that intend to conduct projects in the Town Forest must receive permission from the Hartford Conservation Commission and specify their proposed project. Educational activities that involve the killing of animals or the permanent removal of nests or plants, including wildflowers are prohibited. Activities such as the limited collection of tree leaves, fern fronds, fungi fruits, algae and lichen specimens are permitted. Any educational activity that involves the placement of stakes, ropes, wires, fencing, netting, flagging, signs, paint, branches, brush, vines or other such materials must be done so as not to endanger humans, pets or wildlife. All such materials must be considered temporary, must be clearly marked with the name and address of a contact person for the school group, and must be removed by members of the school group in a timely manner. Structures that significantly impound water or impede the flow of water in the Town Forest are prohibited. Any holes dug in the soil by school groups must be filled in with the original soil in a timely manner, and directed away from trails or roads.

- III. **Special Events:** Historically, the Town Forest has not been used for special events.

Recommendation: For those interested in using the Town Forest for a special event, an application for a Special Events Permit is required to be submitted to the Hartford Selectboard. Care must be taken so that if events do occur, their use does not negatively impact the character of the Town Forest.

- IV. **Trapping:** Historical information about trapping in the Town Forest is incomplete.

Recommendation: State law requires that written permission of the property owner is required in order to legally trap. Due to the potential risk to users and their pets in the Town Forest, trapping is not allowed. In the event that certain species becomes a nuisance and trapping may be the best available method to remove them, the Selectboard may authorize trapping in the Town Forest for that purpose.

- V. Camping: Authorized and unauthorized camping has occurred in the Town Forest. Unauthorized camping has resulted in negative impacts to the property. Authorized camping has been used by local scout troops. In addition, the Vermont Youth Conservation Corps camped in the Town Forest when they constructed the Moose Brook Trail in 2000. Camping in the same area can result in negative impacts.

Recommendation: Use of the Town Forest for camping is permitted for educational purposes and for work crews only. Camping for these organizations will be limited to areas designated by the Conservation Commission. Permission from the Conservation Commission is required. Furthermore, authorized camping shall follow the leave no trace philosophy to prevent negative impacts.

- VI. Campfires: Campfire rings have left scars in the Town Forest particularly around the Upper Hurricane Reservoir. Campfires also can result in damage by cutting of trees and limbs in the area of the campfire. Campfires increase the chances of a wildfire.

Recommendation: Campfires are prohibited in the Town Forest except when they are related to an educational activity such as scouting. Campfires require a permit from the Fire Department. During periods of high wildfire danger, campfires shall be prohibited altogether.

- VII. Commercial Activities: Use of the Town Forest for commercial recreational purposes has not occurred in the past.

Recommendation: Use of the Town Forest for commercial recreational purposes will be allowed on a case by case basis with permission from the Conservation Commission. Commercial uses of the Town Forest will be closely monitored in order to avoid overuse.

- f. Uses Requiring A State License/Registration: The following uses are allowed in the Town Forest provided that the user has a valid state license/registration for such activity.

- I. Fishing: Fishing in the Upper Hurricane Reservoir and Lower Hurricane Reservoir occurs occasionally although the reservoirs are not regularly stocked with fish.

Recommendation: Fishing is a permitted activity. Anyone fishing is required to possess a valid state fishing license.

- II. Hunting: Historically, the Town Forest has been open to hunting. Hunting is an important part of the Vermont heritage. In recent years, as more and more land has been

posted, there are fewer places available for hunters. Hunting is a popular activity in the Town Forest, particularly during the fall deer season.

Recommendation: Hunting in compliance with the Vermont Fish & Wildlife laws is a permitted activity in the Town Forest. A valid state hunting license is required. It is important that the public is informed that hunting is allowed on the property. This should be identified on any brochure and trailhead sign.

- III. Snowmobiles: Historically, the Vermont Association of Snow Travelers (VAST) has maintained a trail that passes through the Town Forest. Snowmobilers also have used other trails in the Town Forest.

Recommendation: Snowmobiling in the Town Forest is a permitted activity. However, in order to reduce the noise impact on area residents and to designate certain trails as non-motorized, snowmobiles will be limited to specifically designated trails in the Town Forest. Please refer to map on page 17. As required by State Law, snowmobiles must be registered with the State.

- IV. All Terrain Vehicles (ATV's): In the past, there have been two types of ATV use in the Town Forest; those who trailer their ATV's to the Town Forest and ride on the Town Forest trails and others who use the Town Forest trails as a pass through to access class 4 roads and other trails on adjacent private property. Typically, ATV riders stick to the trails. Occasionally, when the water levels in the reservoirs are down, ATV's have caused damage by driving through the mud. Wet sections of trails also have been impacted and other areas have experienced damage when vehicles have left the trail. Neighbors to the Town Forest have complained about the excessive noise created by motorized recreational vehicles as well as their racing down Reservoir Road. There also have been complaints that many of the vehicles pulling trailers with motorized recreational vehicles to the Town Forest have out-of-state license plates.

Recommendation: Access for pass through ATV use will be provided on specifically designated trails in the Town Forest (please refer to map on page 17). Although pass through use is allowed, the Town Forest will not serve as an ATV destination. Therefore, no loop trails will be accessible to ATV's and the Town Forest will not be promoted in brochures or signage as an area for ATV's. The loading and unloading of ATV's at the trailhead parking area are prohibited. In addition, a sign will be posted specifying that ATV's must adhere to all relevant local, state and federal regulations. State Law requires that ATV's must be registered.

- g. Prohibited Uses: The following uses shall be prohibited from the Town Forest.

- I. Target Shooting/Random Shooting: The Town Forest has been used by non-hunters for recreational shooting primarily around the Landing and the Upper Hurricane Reservoir. The activity presents great danger to other users of the Town Forest who may unknowingly be exposed to flying or ricocheting bullets. The activity also has resulted in

a significant amount of waste material from shell casings, broken bottles and cans. Neighbors to the Town Forest have complained about the excessive noise created by recreational shooting as well as the potential danger of a stray bullet.

Recommendation: Target shooting and random shooting is prohibited in the Town Forest.

- II. Dirt bikes: All of the trails in the Town Forest have been used by dirt bikes in the past. Typically, they stick to the trails. Occasionally, when the water levels in the reservoirs are down, dirt bikes have caused damage by driving through the mud. Other areas have been impacted when dirt bikes have left the trail. Dirt bikes tend to generate more noise than ATV's. In addition, dirt bikes tend to do more damage to the trails than ATV's.

Recommendation: Dirt bikes are prohibited from using the trails of the Town Forest. However, dirt bikes are allowed on the Class 4 section of Reservoir Road. As required by State Law, dirt bikes must be registered with the State. The loading and unloading of dirt bikes at the trailhead parking area is prohibited.

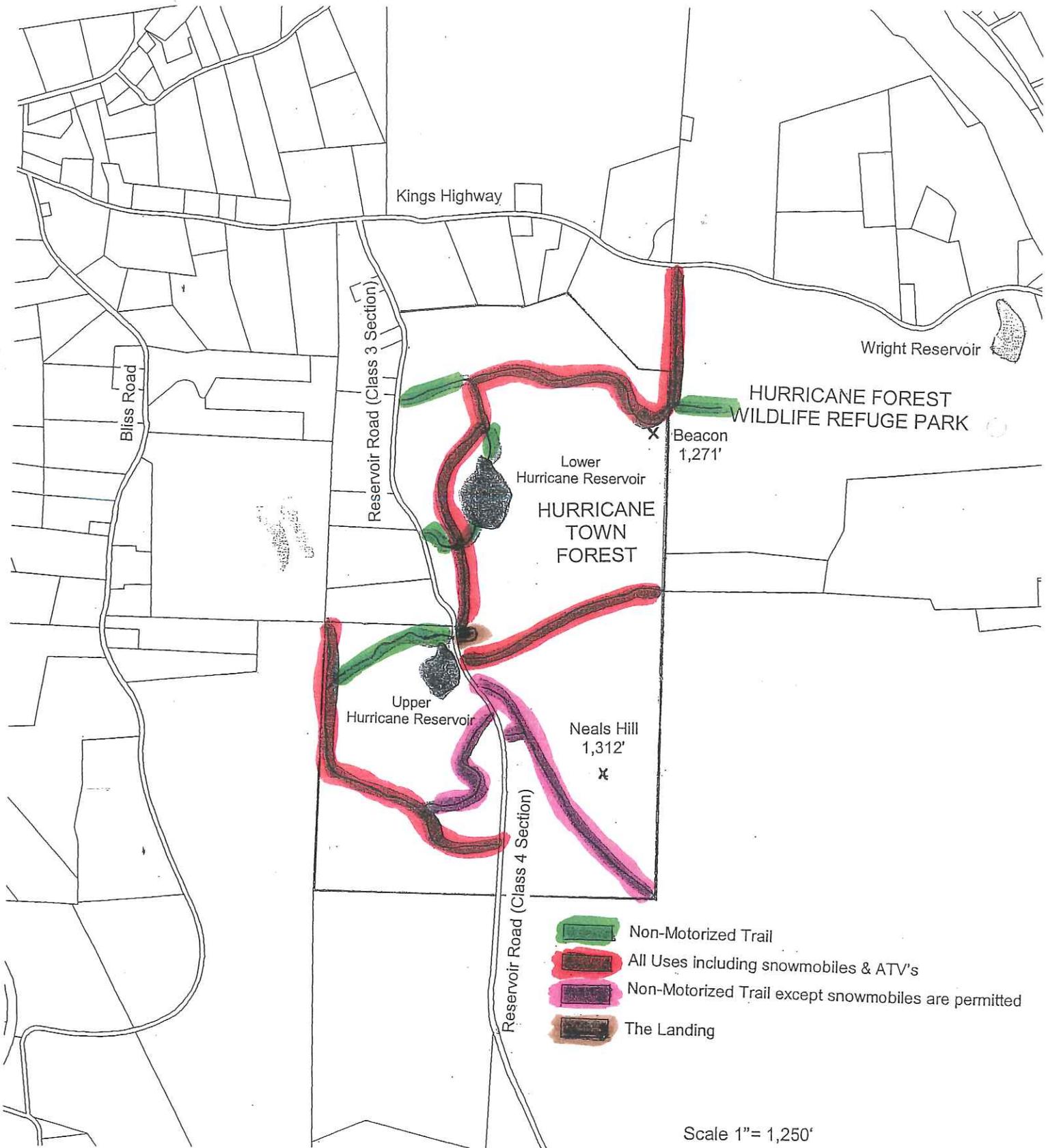
- III. Trucks: Since most of the trails in the Town Forest evolved from logging skid roads, it is understandable that many of the trails have been used by trucks in the past. Trucks have caused damage to the trails of the Town Forest and to adjacent properties. In addition, the sheer size of trucks is inappropriate for mixed-use trails.

Recommendation: Trucks are prohibited from using the trails of the Town Forest. However, trucks are allowed on the Class 4 section of Reservoir Road. As required by State Law, trucks must be registered with the State. Barriers preventing trucks from accessing trails will be installed.

- IV. Alcohol Consumption: Historically, there have been problems associated with the unauthorized consumption of alcohol in the Town Forest.

Recommendation: Consistent with Town Ordinance, the consumption of alcoholic beverages on Town property is prohibited.

# Hurricane Town Forest Trails Map



-  Non-Motorized Trail
-  All Uses including snowmobiles & ATV's
-  Non-Motorized Trail except snowmobiles are permitted
-  The Landing

Scale 1" = 1,250'

**V. GOALS & ACTIONS**

a. Forest Management:

Goal: Create a healthy and diverse forest.

Actions: 1. Work with a certified forester to continue implementation of the *Forest Resource Management Plan*.

b. Wildlife Habitat Management:

Goal: Enhance wildlife habitat.

Actions: 1. Work with a wildlife biologist to conduct wildlife and wildlife habitat inventories, and to identify wildlife corridors linking the Town Forest to other core habitats.  
2. Work with a wildlife biologist to identify wildlife clearings recommended in the *Forest Resource Management Plan*.  
3. Restore the dam structures to ensure the future of the reservoirs.  
4. Establish some sections of the Town Forest as non-motorized.

c. Reservoir Management:

Goal: Provide maintenance and ensure safety.

Actions: 1. Work with the Selectboard to select an alternative that ensures the future of the Hurricane Reservoirs.  
2. Work with the Department of Planning and Development Services and the Department of Public Works to initiate work in seeking state and federal funding for assistance in the rehabilitation of the Hurricane Reservoir dams.

d. Relationship to Area Residents:

Goal: Be a good neighbor to area residents.

Actions: 1. Keep an open line of communication with area residents.  
2. Periodically review activities and their impact on area residents.  
3. Work with the Police Department to ensure enforcement of Town Ordinances.  
4. Where a trail leaves the Town Forest onto private property, erect a sign stating that you are now leaving the Town Forest.

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### e. Public Safety:

Goal: Ensure that the public has a safe environment to recreate.

- Actions:
1. Develop a Town Ordinance prohibiting target shooting and random shooting in the Town Forest.
  2. Inform the public that hunting is allowed in the Town Forest.
  3. Regularly inspect the trails to identify any significant hazards.
  4. Keep the reservoirs drained until repairs are made and the State of Vermont Dam Safety Engineer has approved the plan for refilling them.

### f. Educational Activities:

Goal: Encourage the use of the Town Forest for educational activities.

- Actions:
1. Work with the School District, the Boy Scouts of America, the Girl Scouts of America and other community based organizations to generate ideas for future projects.
  2. Encourage the use of the Town Forest to conduct educational training.

### g. Vehicular Traffic:

Goal: Ensure that traffic to the Town Forest does not unnecessarily impact area residents.

- Actions:
1. Install a speed limit sign on Reservoir Road.
  2. Work with the Police Department to ensure enforcement of Town Ordinances.
  3. Work with the Police Department to develop parking restrictions on Reservoir Road.

### h. Trailhead Parking:

Goal: Provide the public with safe, year-round vehicular access to a trailhead parking area.

- Actions:
1. Complete the access and parking improvements planned for Reservoir Road and the Landing.
  2. Work with the Department of Public Works to provide snow plowing of the trailhead parking area for winter use.

### i. Trash:

Goal: Keep the Town Forest free of trash.

- Actions:
1. Include the Town Forest as a regular clean-up site as part of the annual Green-Up Day Program.

2. Inform the public that there is a carry in/carry out policy regarding trash disposal.
3. Encourage self-policing of the carry in/carry out policy.
4. Monitor the Town Forest to keep it free of trash.

j. Enforcement:

Goal: Ensure the enforcement of rules of the Town Forest and Town Ordinances.

- Actions:
1. Work with the Police Department to ensure the enforcement of existing Town Ordinances.
  2. Work with the Police Department to consider the development of additional Town Ordinances to ensure enforcement of Town Forest rules.
  3. Work with the neighbors, users of the Town Forest and organized clubs to monitor use of the Town Forest.

k. Trails:

Goal: New trails and alterations to existing trails will be carefully designed to minimize environmental impacts.

- Actions:
1. Before laying out new trails, the Conservation Commission will consult with the Parks and Recreation Commission, a forester and wildlife biologist.
  2. Continue to work with organizations such as the Vermont Youth Conservation Corps in the design and construction of new trails.

Goal: Allow for pass through access of ATV's through the Town Forest to connect to class 4 roads and other ATV trails on adjacent property, but discourage the use of the Town Forest as an ATV destination.

- Actions:
1. Convert the Moose Brook Trail from a non-motorized trail to a motorized trail.
  2. No loop trails will be provided for ATV's in the Town Forest.
  3. The Town Forest will not be promoted in brochures and or on signage as an area for ATV's.
  4. Prohibit the loading and unloading of ATV's at the trailhead parking area.
  5. Post a sign specifying that ATV's must adhere to all relevant local, state and federal regulations.

l. Trail Maintenance:

Goal: Existing Trails: Provide regular trail maintenance.

- Actions:
1. The Conservation Commission will continue to be responsible for general trail maintenance.

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2. Regularly inspect the trails and have the option of closing trails on a trail by trail basis at critical times during the year.
3. Relocate trails around wetlands and vernal pools as identified by the State Wetlands Biologist.
4. Work with user groups/clubs and other volunteers to maintain the trails.
5. Use water bars, mulch, elevated trails, drainage improvements or other accepted trail conservation practices where appropriate.

m. Information:

Goal: Inform the public about the rules and management activities of the Town Forest.

- Actions:
1. Construct a kiosk/signboard for the trailhead parking area that provides information about the rules and management activities.
  2. Develop a brochure/trails map of the property.
  3. Provide trail signs that show permitted activities.

n. Plan Update:

Goal: The Hurricane Town Forest Recreation Plan shall be updated on a regular basis and the process shall continue to include input from adjacent property owners and user groups.

- Actions:
1. The Conservation Commission shall include the update of the Recreation Plan in their work program.
  2. The process to update the Recreation Plan shall include the formation of a Steering Committee comprised of adjacent property owners and user groups and include well-advertised public forums.

