



# Dry Hill Management Plan

## 2005



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In accordance with The Trustees of Reservation's management planning process, this plan has been reviewed and accepted by the following staff and/or committees on the dates noted:

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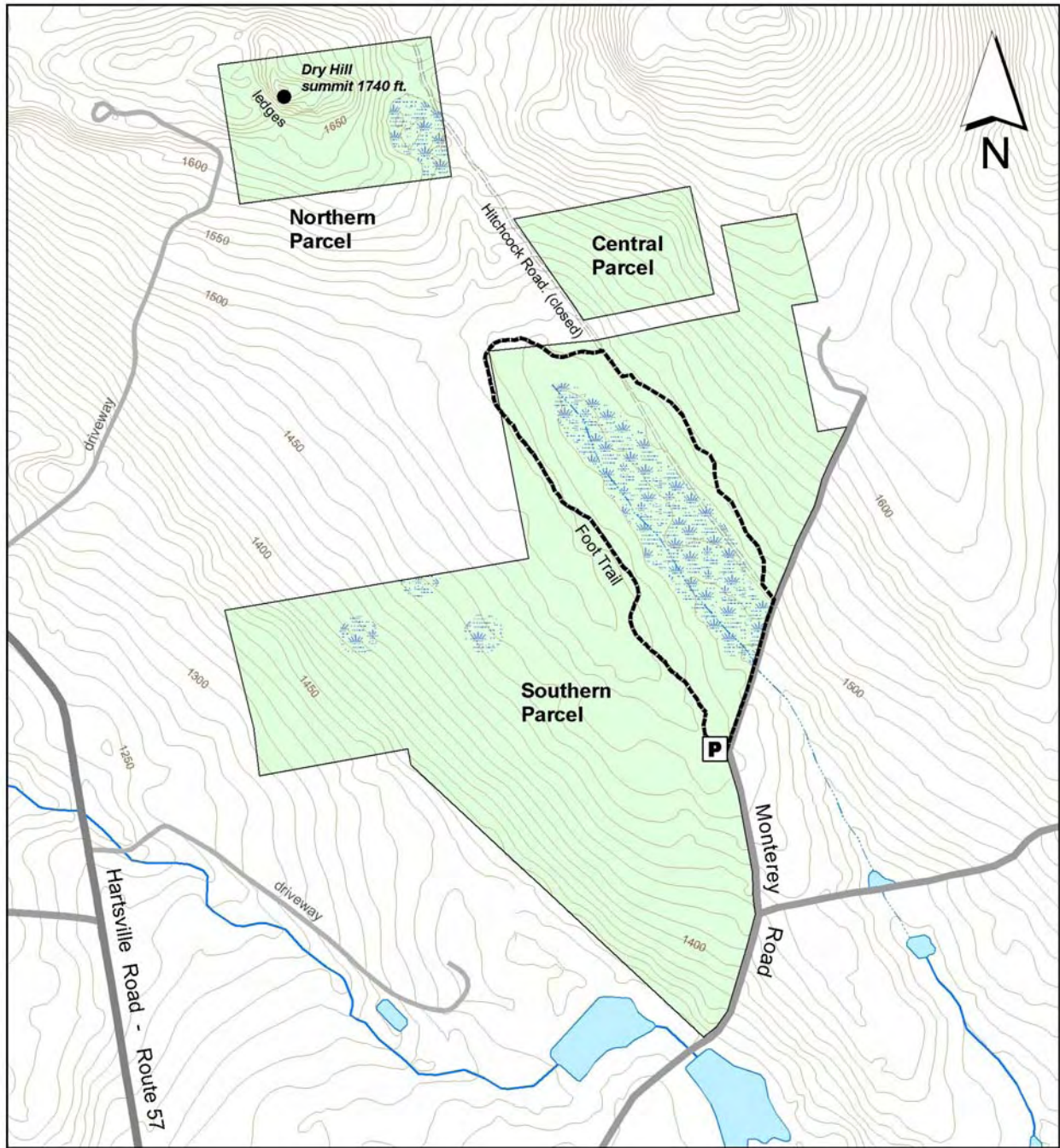
# Dry Hill Reservation Plan

Reservation	Dry Hill  Opened to the public June 2001	Completed by:	Jose Garcia – Western Regional Ecologist Gordon Clark – Superintendent, Stockbridge Management Unit
Location	New Marlborough	Date:	November 10, 2005
Acreage	236 acres	Area considered for management:	236 acres
Supporting reports and materials	<ul style="list-style-type: none"> <li>• 2003 - Field Notes from 4/14/03 through 8/20/03 (Jose Garcia)</li> <li>• 2003 – (Snakes at Dry Hill, internal memo, 3/26/03, Jose Garcia)</li> <li>• 2001 - Report on Timber Rattlesnake (Don Reid, Tom Tynning. On file at Western Regional Office).</li> </ul>		

## **Introduction:**

Since 1891, The Trustees of Reservations has worked to protect special places in Massachusetts and maintain them to the highest standards. To ensure these standards are met, a program of careful planning and sound management is essential. The following management plan for Dry Hill identifies the outstanding characteristics of the property and recommends a management program that will ensure the continued preservation of these special qualities.

# Dry Hill - Map 1, Base Map



- |   |                   |   |                          |
|---|-------------------|---|--------------------------|
|  | Trustees property |  | 10 ft. elevation contour |
|  | Trail             |  | Roads                    |
|  | Parking area      |  | Wetlands (on property)   |



Map produced by The Trustees of Reservations, Dec. 2005.

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## **Step 1. Describe the Reservation's Ecological, Historic, and Scenic Resources**

### **ECOLOGICAL RESOURCES:<sup>1</sup>**

#### **INTRODUCTION (see Map 1)**

Dry Hill Reservation is located within an upland ridge which includes a complex of rocky summits, ridgelines, swales, and small drainages. One of these acidic rocky summits – identified as Dry Hill in the USGS topographic map – is within the reservation, in the northernmost of three disjoint parcels (called Northern, Central, and Southern in this document) which make up the reservation. The Northern and Central parcels (26, 15 acres) are much smaller than the Southern parcel (195 acres). The current loop trail is entirely within the Southern parcel.

This area is appropriately called Dry Hill, given the prevalence of Oak – White Pine Forest (a dry, acidic forest) over much of the mid to upper slopes and ridge tops. Dense thickets of mountain laurel alternate with more open, park-like areas that have a species mix typical of acidic woods, including low-bush blueberry, sheep laurel, starflower, bellwort, and Canada mayflower. The mid to lower slopes have stands of Oak – Northern Hardwoods – Hemlock Forest (a transitional forest between Central and Northern hardwoods, with deciduous and mixed canopies of oaks, hickories, Black Birch, Sugar Maple, Yellow Birch, Beech, White Pine, and Hemlock). The loop trail encircles a shallow stream drainage which contains several productive vernal pools and a somewhat rich Red Maple Swamp with a diverse mix of herbs and ferns, including Trout Lily, Dwarf Ginseng, Miterwort, Foamflower, and Wood Horsetail. Red Maple Swamp also occurs elsewhere in several small patches as a result of hillside seepage.

Dry Hill is part of a larger landscape of contiguous habitat which is important for larger, wide-ranging mammals, many species of forest interior birds such as the Black-throated Blue Warbler, and a variety of other animals, including two rare species.

#### **REGIONAL / OPEN SPACE CONTEXT (See Maps 2 & 3)**

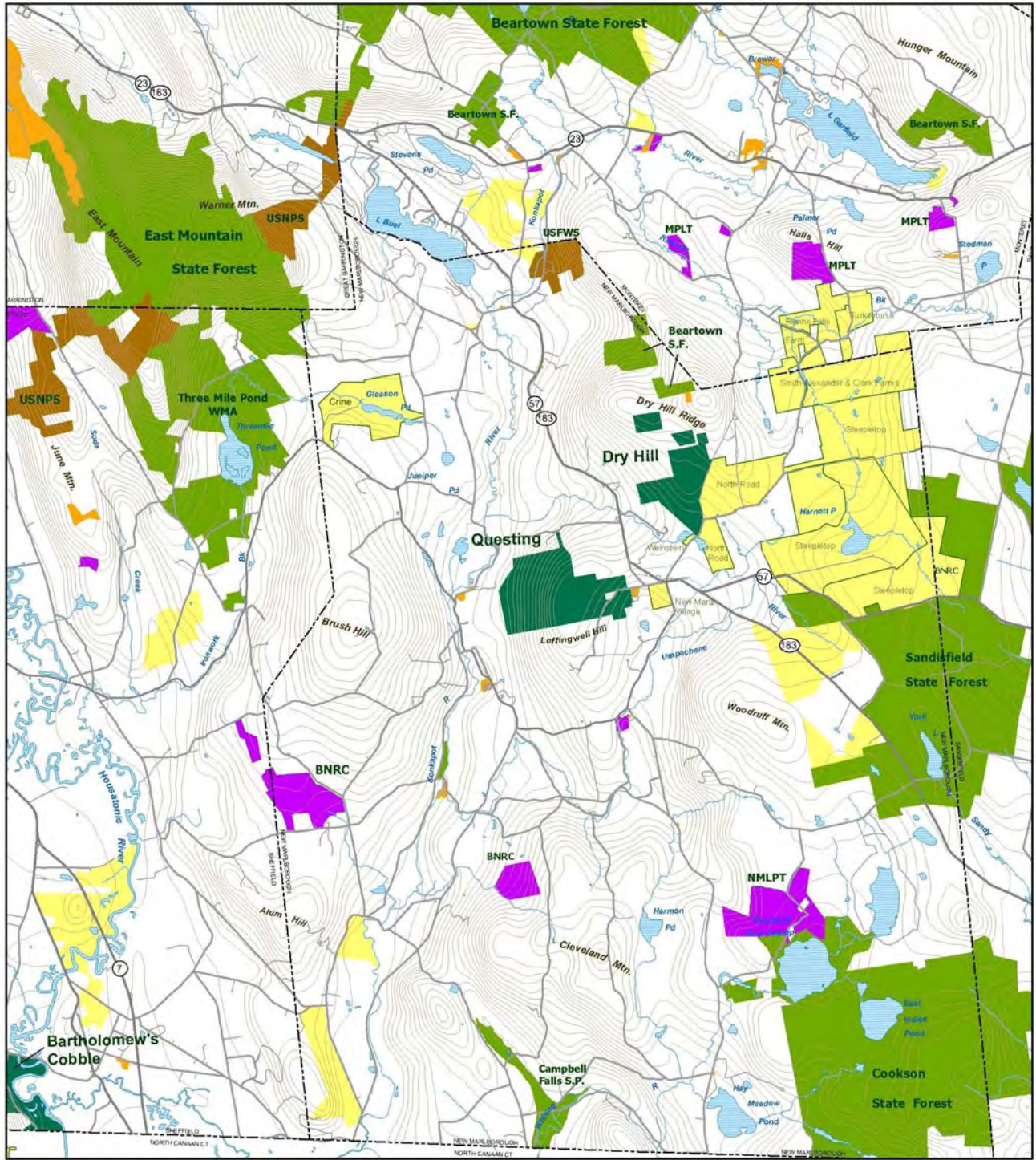
The Dry Hill ridge is a diamond-shaped upland extending 4 miles roughly N-S, and 2.5 miles W-E at its widest section. The ridge is roughly bounded on the East, starting at Route 23, from N to S, by: Gould Road, Monterey-New Marlborough Road, ending at Route 57 in New Marlborough center. On the West, the ridge is bounded by: Route 23, Hatchery/River Road, and Route 57 down to New Marlborough center.

Within this upland ridge complex of rocky summits, ridgelines, swales, and small drainages there are several very prominent rocky summits, with steep cliffs and talus slopes that have

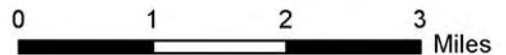
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<sup>1</sup> Note: Much of the information contained here has been excerpted from the Ecological Briefing document for Dry Hill. This briefing document contains detailed field notes and maps associated with plant community descriptions and other ecological features; this report is on file with the Western Regional Ecologist.

# Dry Hill - Map 2, Open Space Context



- Federal Conservation Lands
  - State Conservation Lands
  - Municipal Lands
  - The Trustees of Reservations
  - Other Conservation Organizations
  - CRs held by The Trustees
  - Others CRs / APRs (private)
- BNRC = Berkshire Natural Resources Council  
 NMLPT = New Marlborough Land Preservation Trust  
 MPLT = Monterey Preservation Land Trust



Open Space and basemap data from MassGIS.  
 Map produced by TTOR, November 2005.

various Southern exposures. There are three rocky summits along the widest E-W axis (of these, only the center summit is within the reservation boundary): the Western summit is known locally as the Pinnacle, and affords dramatic views to the lowlands to the W, and to Southern Berkshire ridges beyond; the Central summit is in the reservation, and affords nice views to the West and South; the Eastern summit is about 3000' further East. About 1.5 miles to the North, there is another summit with a series of rocky cliffs and talus slopes, close to the fish hatchery in Hartsville.

The Dry Hill Ridge is within the drainage of the Konkapot River, which flows in a southerly direction to the W of the ridge, and eventually joins the Housatonic River in Ashley Falls, directly across Bartholomew's Cobble. The E drainages of the ridge seem to flow entirely into North-flowing tributaries of the Konkapot.

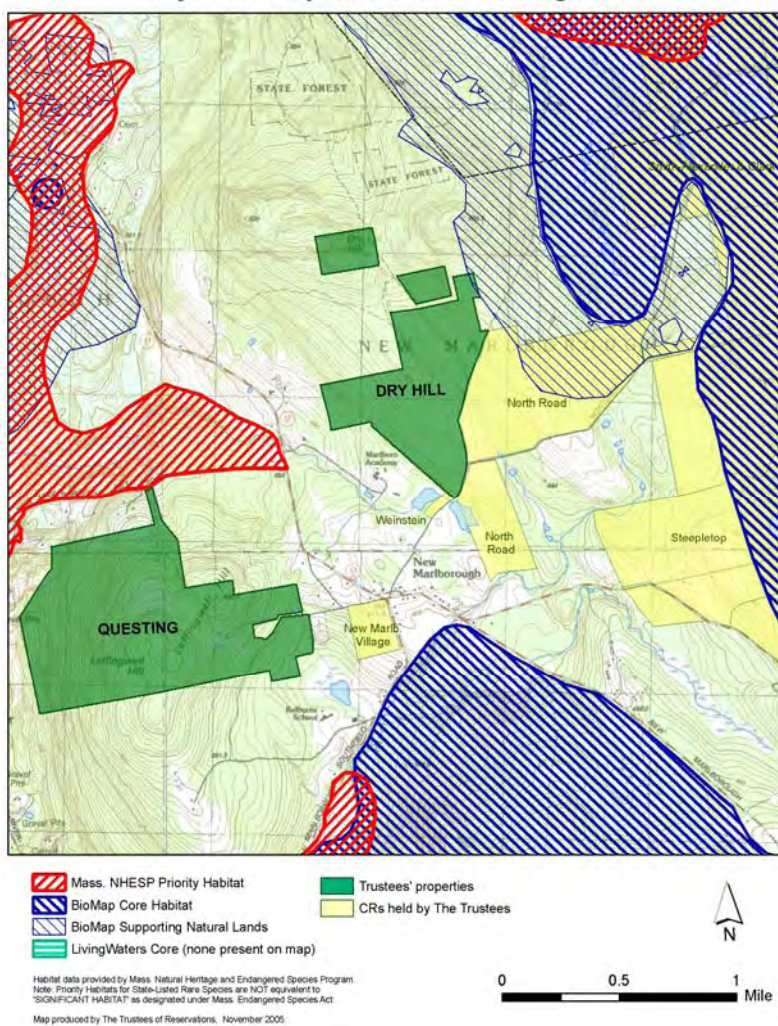
Dry Hill is in the Lower Berkshire Hills ecoregion, which is characterized by large tracts of forest, but relatively few kinds of natural communities (15) and number of rare species (14 animals, 15 plants). However, Dry Hill is close to the Eastern boundary (within 3/5 of a mile) of the Western New England Marble Valleys ecoregion, and this proximity might have some influence on its soils. This is certainly true at Questing, another TTOR Reservation which is about 3/5 of a mile to the SW of Dry Hill, on Leffingwell Hill. Some of the species found in the basin Red Maple Swamp at Dry Hill suggest somewhat rich soils (Foamflower, Dwarf Ginseng, Oak Fern, and Wood Horsetail). Therefore, a more thorough botanical inventory, particularly in the more mesic or wetter areas, might result in the discovery of some rare plant species.

Dry Hill is part of a large area of largely unfragmented forest in the region. The protected open space in the vicinity of Dry Hill shows a patchy, significantly disconnected pattern of open space parcels, with large areas of unprotected forest. Furthermore, most of the open space parcels have relatively weak levels of protection (e.g. Chapter 61 lands, or private, non-Chapter 61).

The ecological value of the surrounding area is reflected in three principle ways:

- There are nearby rare species priority habitat areas and Biomap Core and Supporting Natural Landscape (SNL) areas (Map 3) associated with the Konkapot River to the West, and with two of its tributaries to the East (Rawson Brook and Harmon Brook).
- The anecdotal records of Timber Rattlesnake from the Dry Hill ridge around Hartsville highlight the potential ecological value of rocky summits in this ridge.
- The mostly common forest communities in this area are of significant ecological value because of their relatively unfragmented status. This provides habitat for certain forest interior bird species and larger mammal species but this needs to be documented in the field.

### Dry Hill - Map 3, Natural Heritage Data



These three kinds of values suggest that further TTOR land protection strategies (together with potential partners) should focus on:

- Providing connections to the surrounding Priority Habitat and Biomap areas .
- Protecting rocky summits and ridge tops in the area, beginning with the two near our summit and possibly others in the Dry Hill ridge complex, such as the summit in Hartsville.
- Providing corridors connecting forested areas to existing open space parcels with the highest levels of protection.

Actual conservation priorities will vary widely, depending on how many of these criteria are met (and to what extent) by a given parcel. Map 4 identifies the ownership of some parcels surrounding Dry Hill.



## PLANT COMMUNITIES AND SPECIES (Map 5)

Plants usually, but not always, occur in associations which are recognizable. These associations, or **communities**, occur in response to a variety of environmental factors, such as: underlying bedrock and surficial geology; topography, e.g. slope gradient and orientation, or drainage patterns; altitude; latitude; light; temperature; and the overall effect of any such factors on soil structure, moisture, and richness. Disturbance patterns, including land use history, and chance (what seed source is available at a given time) are also important factors.

### Notes on Terminology:

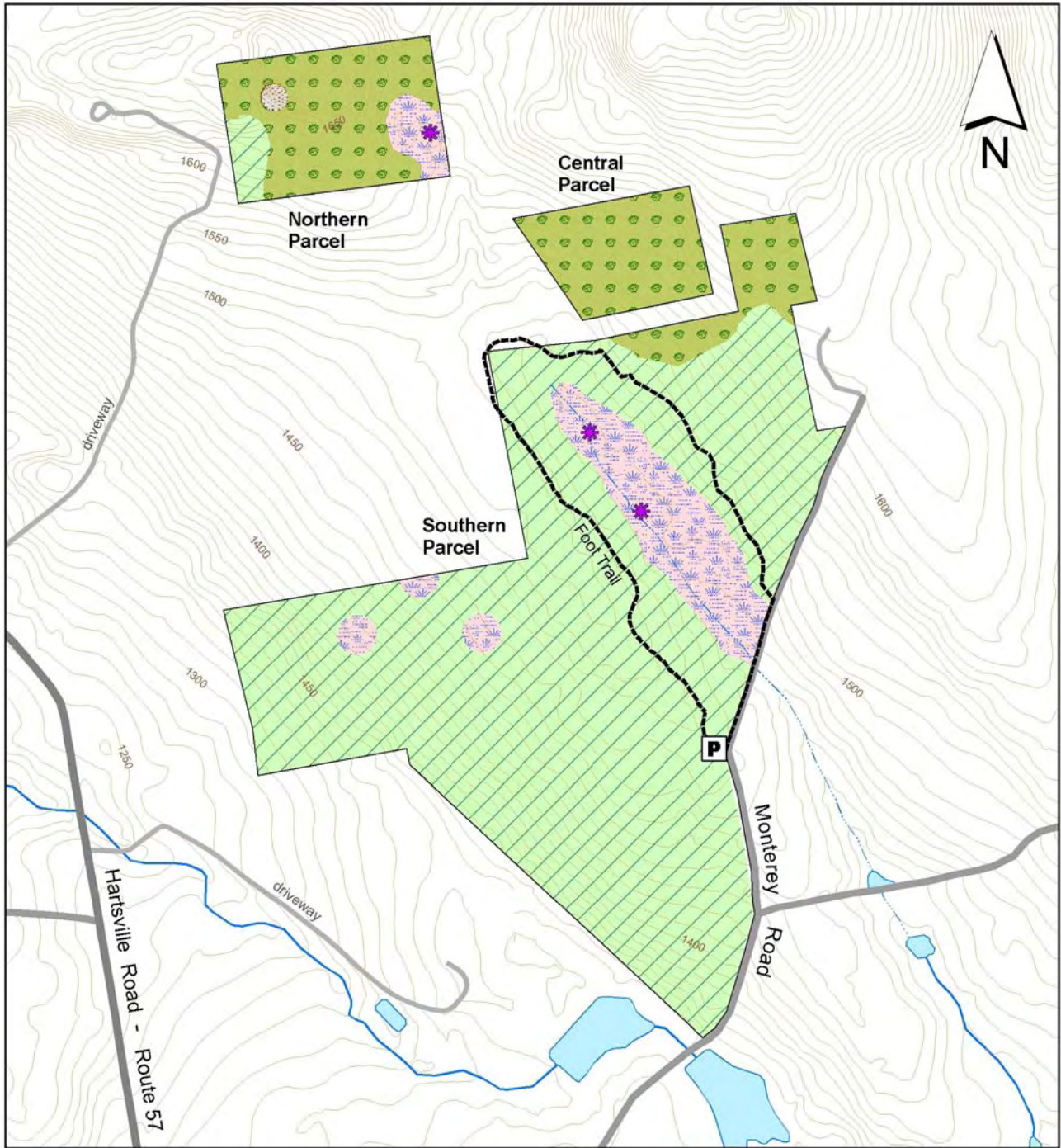
The plant community names used in this section are based on the names used in “Classification of the Natural Communities of Massachusetts” by MNHESP, with a few simplifications and approximations.

Plants are named only by their common name where that is unambiguous. Both common and scientific names (the latter in *italics*) are given for sedges, grasses, and rushes, and in a few other cases.

MNHESP uses a “state rank” (SRANK) to indicate the level of rarity and threat of plant communities. SRANK values range from S1 through S5. Communities with values of S1 through S3 are considered “priority” communities. The only priority community found so far at Dry Hill is Woodland Vernal Pool, with state rank of S3. The SRANK values are defined as follows:

- S1 = Typically 5 or fewer occurrences in the state. Especially vulnerable to extirpation.
- S2 = Typically 6-20 occurrences. Very vulnerable to extirpation.
- S3 = Typically 21-100 occurrences, or limited acreage or miles of stream. Vulnerable. Vernal pools are given this rank because of the limited acreage that they represent.
- S4 = Apparently secure in MA.
- S5 = Demonstrably secure in MA.

# Dry Hill - Map 5, Plant Communities



- Acidic Rocky Summit / Outcrop
- Oak - N. Hdwoods - Hemlock Forest
- Oak - White Pine Forest
- Red Maple Swamp
- Vernal Pools
- 10 ft. elevation contour
- Trail
- Parking area

Plant Communities delineated by Trustees' staff using MassGIS aerial photos, 2001, and field visits with GPS data collection, 2003-04.



Map produced by The Trustees of Reservations, Nov. 2005.

## ROCK SUBSTRATE COMMUNITIES

### Acidic Rock Outcrop / Rocky Summit Community

**MNHESP Name:** Acidic Rocky Summit / Rock Outcrop Community.

**SRANK:** S4

**Examples:** Within the reservation, this community is limited to the summit and ledges of the northernmost TTOR parcel . However, rock outcrop communities are scattered throughout the surrounding landscape comprising the Dry Hill area. The nearest of these to our summit are the West Summit (or “Pinnacle”), about 600m to the West, and the East Summit , about 700m to the East.

**Discussion:** These outcrops are surrounded by dry, acidic Oak – White Pine forest, where the canopy edges around the outcrops are usually low, 15-20’ high, with Red Oak dominant. Trees and shrubs of the surrounding forest are found scattered within or on the edges of the outcrop community. The outcrops often have wide areas of horizontal or slightly sloping rock slabs, with vegetation growing in shallow soil pockets. There are patches of low shrubs, including Huckleberry, Chokeberry, and Blueberries. Among herbaceous species, Poverty grass (*Danthonia spicata*), Little Bluestem (*Schizachyrium scoparium*), Common hair grass (*Deschampia flexuosa*), and Pennsylvania sedge (*Carex pensylvanica*) are common. There are patches of lichens and mosses. There are no rare plants associated with these outcrops. However, they can provide suitable denning and/or basking habitats for snakes. See further discussion in the Rare Species section.

## FORESTS

### Oak - White Pine Forest

**MNHESP Name:** A locally-variable community, somewhere within the spectrum of dry, acidic, oak-dominated forests listed by MNHESP. At Dry Hill, it most closely matches White Pine – Oak Forest and Oak – Hemlock – White Pine Forest, and in the higher, drier, more exposed ridge tops, approaches Mixed Oak Forest.

**SRANK:** S5

**Examples:** This is the dominant plant community in the Northern and Central reservation parcels, and in the NE corner of the Southern parcel. It occurs on South-facing upper slopes and ridge tops

**Discussion:** The several oak communities classified by MNHESP are not easily mapped to actual examples in the field – probably because there are many overlapping variances in oak-dominated forests that are not easily captured in a few categories. Therefore, the name Oak – White Pine Forest is used in this section to describe the Red Oak-dominated dry forest stands that cover most of the South-facing upper slopes and ridge tops. At Dry Hill, a dense shrub layer of Mountain Laurel is a good indicator of this community.

At Dry Hill generally, these forests typically have a low to medium canopy height (35’-55’ high) and are dominated by Red Oak with a mix of White Oak, Black Birch, Red Maple, and rarely Chestnut Oak. The shrub layer is usually dense to patchy (20-40% cover), and dominated by Mountain Laurel. American Chestnut saplings are found scattered. Huckleberry, Sheep Laurel, Late Sweet Blueberry (*V. angustifolium*), Witch Hazel, Maple-leaf Viburnum, Shadbush (*Amelanchier sp.*), and Striped Maple are commonly found. In one area near the summit in the

Northern parcel, Mountain Azalea (*Rhododendron prinophyllum*) and Mountain Holly (*Nemopanthus mucronatus*) were found close together. The herb layer is very sparse, and typical of the acidic conditions: Canada Mayflower, Whorled White Aster, Wild Sarsaparilla, Bellwort, Teaberry, and Partridgeberry.

Within the larger matrix of this forest, which is mostly deciduous, White Pine occurs locally, and seems to be more common in younger forest.

Black-throated Blue Warbler and Rufous-sided Towhee are common bird species found in these dry forest areas.

### **Oak – Northern Hardwoods – Hemlock Transitional Forest**

**MNHESP Name:** Somewhere between Northern Hardwoods – Hemlock – White Pine Forest and Red Oak – Sugar Maple Transition Forest.

**SRANK:** S4S5.

**Examples:** Most of the Southern parcel of the reservation is of this type except for the NE corner, which is drier Oak – White Pine Forest, and for several patches of Red Maple Swamp.

**Discussion:** This community represents a blend between the Northern hardwood forest of Northern New England, and the drier oak forest of Southern New England (or, between Northern and Central Hardwoods). It is a variable and common community in Western MA. On Dry Hill, mature patches of this forest typically has a higher and denser canopy (70-90% cover, 70-90' high) than the drier Oak – White Pine forests. Red Oak, Sugar Maple, White Ash, Shagbark Hickory share the canopy in various proportions. Hemlock is widespread and variable in the canopy, together with Black, White, Yellow Birch, and Hop Hornbeam. Mountain Laurel, Witch Hazel, Striped Maple, and Maple-leaf Viburnum are the most common shrubs, and form a sometimes dense shrub layer (up to 70-80% cover). The herb layer varies from sparse to very sparse, and includes species of acidic soils such as Teaberry, Clubmosses, Marginal Fern, Christmas Fern, sedges, and grasses.

The forest in the Southern 1/3 of the Southern parcel (e.g. points 016, 017, 019, 020, is much younger than elsewhere, and here it characterized by canopies which are mostly White Ash and Sugar Maple, and White Pine in mixed areas. The shrub layer in these younger forests is often dominated by dense patches of Japanese Barberry.

## **WETLANDS**

### **Red Maple Swamp**

**MNHESP Name:** Red Maple Swamp, including two of its variants: hillside seepage swamp, and basin swamp.

**SRANK:** S5

**Examples:** There are two basin swamps (one containing two vernal pools; the other containing one vernal pool), and several small patches of hillside seepage swamp.

**Discussion:** The two areas of basin swamp occur along a shallow drainage which runs from the SE sector of the Northern parcel, in a SE direction to the dirt road which is the reservation's Eastern boundary, and beyond. These two areas are separated by an upland area where (apparently) the drainage flows below the surface. This upland area is roughly where the loop

trail connects with Hitchcock Road. The hillside seepage swamps are less-frequently encountered than basin swamps. It would be interesting to compare these two kinds of swamp at Dry Hill with respect to kinds and relative abundance of species. There is also the possibility of other yet undiscovered patches of hillside seepage swamp on the same hillside.

The canopy is dominated by Red Maple, Yellow Birch, and Hemlock. It is moderately dense (75-90% cover), high (60-70'), and mature (up to 18" DBH). The shrub layer is sparse, with Witch Hazel and saplings of canopy species. The herb layer contains: Marsh Marigold, False Hellebore, Goldthread, Tall Meadow Rue, Trout Lily, Cinnamon Fern, Crested Wood Fern. The ground has numerous areas of hummocks with sphagnum moss and separated by standing water. The larger pools along the stream drainage are functioning as vernal pools.

Of the two basin swamps, the more Southern one is the larger of the two. It extends SE about 700m from the loop trail in the North to the dirt road along the Eastern boundary and beyond. This basin contains some American Fly Honeysuckle in the shrub layer. There are four abundant herb species which indicate that this is a somewhat richer variant of red maple swamp: Foamflower (*Tiarella cordifolia*), Dwarf Ginseng (*Panax trifolius*), Oak Fern (*Gymnocarpium disjunctum*), and Wood Horsetail (*Equisetum sylvaticum*).

There is a possibility of finding Four-toed Salamander, a state-listed species, in the sphagnum hummocks in these swamps

### **Vernal Pool**

**MNHESP Name:** Woodland Vernal Pool.

**SRANK: S3**

**Examples:** Three vernal pools are found in the two basin swamps on the property.

### **Discussion:**

The surrounding plant community is the Red Maple swamp previously discussed. High-bush Blueberry and Buttonbush are common shrubs in the larger pools and form dense patches in places. These vernal pools were found to be very productive of Wood Frog and Spotted Salamander egg masses in the 2003 field visits. Don Reid and Tom Tynning reported 20+ Jefferson Salamander egg masses from one of these pools in May 2001. .

### **INVASIVES**

Most of the significant problem areas are limited to the younger successional forest in the Southern one-third of the Southern parcel and along trails and woods roads in places. By far the biggest problem is Japanese Barberry, which occurs in fairly large (up to 200' across), dense patches in the younger forests. Oriental Bittersweet is the next biggest problem in this part of the reservation. Multiflora Rose, Morrow Honeysuckle occur scattered in smaller patches. Garlic Mustard is getting established, particularly near the dirt road along the Eastern boundary. There are no known rare plant populations at Dry Hill that would be threatened. However, most of the more mature forest in the reservation is currently fairly pristine, and subject to degradation from the spread of invasives present in the younger forest.

## **WILDLIFE**

### **BIRDS**

Dry Hill is part of a large block of contiguous forest, and therefore it provides significant habitat for forest interior birds. A representative variety of woodland songbirds (e.g. Black-throated Green Warbler, American Redstart, Red-eyed Vireo) were observed or heard during the eight visits in 2003. Of these, the most significant species encountered is the Black-throated Blue Warbler, which is very susceptible to forest fragmentation. The songs of this species and of the Rufous-sided Towhee were constant and reassuring companions during the migration and breeding seasons – particularly in the drier forests, with thickets of Mt. Laurel, of upper slopes and ridge tops. A breeding bird survey at Dry Hill within the next few years would be desirable.

### **AMPHIBIANS AND REPTILES**

See discussion elsewhere in this section under Vernal Pools and Rare Species.

### **MAMMALS**

Given that Dry Hill is part of a much larger, relatively unfragmented forest block, it is undoubtedly part of a forest corridor used by larger, wide-ranging mammals. There is currently no specific data available for Dry Hill.

### **INVERTEBRATES**

There is currently no information on invertebrates for Dry Hill. There are no fields to provide foraging/breeding habitat for butterflies. Pond species of odonates can be seen patrolling the trails, and there might be suitable breeding habitat for stream species.

### **RARE SPECIES**

Timber Rattlesnakes have been reported from the general area and Dry Hill may serve as a dispersal site in the summer and as a potential birthing site (Tom Tynning, pers. Comm.), given the suitability of the habitat. There does not appear to be a suitable den site on Trustees' property.

Jefferson Salamander egg masses were reported in one of the vernal pools in 2001 (Don Reid, Tom Tynning). No rare plant species have been documented at this time.

### **PRIORITY COMMUNITIES**

The only Natural Heritage priority community found so far at Dry Hill is Woodland Vernal Pool. However, a thorough inventory of natural communities and flora has not been completed.

### **UNCOMMON OR DECREASING REGIONAL COMMUNITIES**

Acidic rock outcrops and associated cliffs and talus slopes in this area are potentially important rattlesnake denning sites. The connecting ridge tops and upper slopes are potential dispersal and birthing sites. Rattlesnake habitats are extremely sensitive to human disturbance.

### **HISTORIC RESOURCES:**

Contiguous to the parking lot are cellar holes and two hand-dug wells, probably associated with the Mepal Farm. The wells are a safety hazard and should remain covered for safety reasons. The cellar holes are in poor condition. They should be photographed, with no further recommended action plan for protection. Dispersed around the property are stone walls. Because of the small size and amount of stone contained in many of these walls it is apparent the land was tilled for farming purposes in the past. The property has been logged in the past, and one of two logging roads is currently being used as part of the trail system. Old Hitchcock Road (abandoned by the Town of New Marlborough) transects the property and is crossed by the loop trail.

### **LAND USE HISTORY:**

The land which is now the Dry Hill Reservation was once part of the Mepal Farm. Rocky outcrops were quarried for marble. Much of this stone was used locally for building foundations.

A property map of the area around Dry Hill still reflects the result of an earlier town practice of partitioning the land into woodlots: there are still a number of rectangular, land-locked parcels in the vicinity of the reservation. Originally, each wood lot consisted of up to 25 acres. (Ronnie Leonard, personal commentary.)

Prior to The Trustees' acquisition in 2000, the land which is now Dry Hill was part of a larger parcel of 388 acres owned by Sydney and Jeanne Weinstein of New Marlborough. They used this property to operate a private school, the New Marlborough Academy, a campus of the Kolburne school in the Southern part of town. While under the ownership of the Weinstein's the property was held in Chapter 61a. A Forest Stewardship plan was written (dated 9/22/96), but the plan was never implemented.

When the Weinstein's decided to sell the property in 2000, one potential buyer – Brad Wagstaff, who owned the Inn on the Green and Gedney Farm in the village – wished to purchase half of the property and convert the buildings to inn and function use. The back land, mostly forest and former pasture, was planned for development. A group of abutters and individuals from the village who were supportive of land conservation, raised \$800,000 in a three-month period to purchase the remaining 195 acres. The Weinstein's then donated two parcels (the Northern and Central parcels, of 25 and 16 acres, respectively) to complete the property acquisition. Lands not received by The Trustees included lands contiguous to Marlborough Academy and these were sold to Brad Wagstaff.

### **SCENIC RESOURCES:**

There is a scenic vista from the rocky summit of Dry Hill to the south and southwest. However, this view is no longer available to the general public, since it is in the Northern parcel – which

may be habitat for the Timber Rattlesnake.. The basin Red Maple Swamp and associated vernal pools which are encircled by the loop trail are beautiful, quiet places to visit, within sight and a short walk from the trail. Mountain Laurel in bloom (in June) is a beautiful sight.

**BUILDINGS AND STRUCTURES:**

N/A

**Step 2: What poses a threat (real or potential) to the reservation’s scenic, historic, and ecological resources?**

For each of the following types of threats, note which type of resource is at risk and provide a specific description of the threat:

E = ecological, H = historic, S = scenic, B = buildings & structures

<u>Type of threat</u>	<u>Resource Category</u>	<u>Specific Description</u>
Fragmentation	E	Future additions of land to the reservation should be dependent on a better understanding of the presence of a rattlesnake population. Current protected land is insufficient to sustain a rattlesnake population.
Pollution		
Invasive/non-native species	E	Invasives currently present in the younger forest in the Southern part of the reservation could spread to more pristine areas.
Disease/infestation	E	Presence of hemlock woolly adelgid should be monitored once every year or two. Hemlocks currently provide a significant percentage of shading for vernal pools along the stream drainage
Cutting	E,S	Active forest management should be done only to support any specific ecological goals, if such goals are identified in the future.
Recreational use	E	Visitation levels should be monitored at this property. The Northern parcel should be kept off the property and trail maps until more is known about rattlesnake distribution. The current trail system is relatively flat and avoids wet areas, so erosion from foot traffic should not be a problem. However, horseback riding has been observed and should be monitored and discouraged. ATV use has not been observed, but it is always a potential problem. Trails can also provide a conduit for invasive species, and should be monitored. Cliff climbing has been a historical use of rocky summits in this area, but it is probably rare now.
Vandalism/collecting /theft	E	Mention of specific information on timber rattlesnakes should be avoided to prevent attracting rattlesnake collectors.
Abutting Lands	E, S	Potential development of surrounding parcels.

Encroachment	E, S	Potential development of surrounding parcels.
Storm damage		
Past neglect	E	
Fire	E	Possibly a regional safety concern during times of extreme drought, given the dry nature of the forests.
Environmental conditions (humidity, temp, light)		

### Step 3. Describe Visitor Use

- **Has a visitor survey been completed?**

No.

#### Visitor Use Patterns:

- **When does most visitation occur?**

(From informal observations) - **Season:** Spring summer, fall. **Time of day:** Morning to late afternoon. The property has been used for many years as a hiking and hunting area by town residents.

- **What are the common visitor activities?**

Hiking, nature study, hunting.

- **Which is the primary activity?**

Hiking, primarily by nearby residents.

#### The Quality of the Visitor Experience

- **What types of experience are visitors seeking?**

Probably an opportunity to pursue their interests in a quiet setting.

- **Do visitors have the opportunity to find solitude/tranquility?**

Yes. The site is “off the beaten path”, and visitation will probably remain low.

#### Visitor Services

- **How do we welcome visitors to the property?**

Information bulletin board.

- Are they able to find, access, and navigate the property?

Yes.

<b>Essentials:</b>	<b>Does it Exist?</b>	<b>Specific Description: age, condition, actively updated?</b>
Entrance sign	Yes	Good (2002)
Information bulletin board	Yes	Good (2002)
Property description sign	Yes	Good (2002)
Trail map	Yes	Good (2002)
"Rules and Regulations" sign	Yes	Good (2002)
Brochure dispenser	Yes	Good (2002)
<b>Other:</b>		
Trail markers or other helpful signs	Yes	Good (2002)
Suggestion box	No	
Donation tube/cylinder	Yes	Good (2002)
Roadside directional signs	Yes	Good (2002)

- What kind of interpretive material or programming is provided?

<b>Type of interpretation:</b>	<b>Does it exist?</b>	<b>Specific description</b>
Trailside/wayside displays	No	
Interpretive brochures	No	
Guided programs	No	
Self-guided tour	No	
School-based educational programs	No	
Web site	Yes	The property is included on The Trustees website, and links
Seminars	No	
Other:	None	

- What visitor facilities are provided?

<b>Facility:</b>	<b>Does it exist?</b>	<b>Specific description</b>
Restrooms	No	
Parking area(s)	Yes	Gravel and fenced parking for 6 vehicles
Food services	No	
Drinking water	No	
Visitor center	No	
Telephone	No	
Picnic area	No	
Ranger station	No	

- **Trails: what are their conditions and how many miles?**

Map 1 shows the present trail configuration. This loop trail is approximately 1 mile long. The trail, which generally takes advantage of existing cart paths and woods roads, is generally in excellent condition. No erosion problems should be anticipated from foot traffic. However, some horseback riding has been observed, and increased levels of this use would result in erosion and compaction. ATV's have not been an issue yet. Snowmobiles use Hitchcock Road, and so far there is no evidence of them along the loop trail.

Originally, the trail extended to the locally popular summit on the northern parcel via an easement across private property. In 2003, The Trustees closed this northern loop trail down after hearing anecdotal reports that rattlesnakes were using this area. Further research into snake-use of this region and Dry Hill in particular is needed to inform any future changes to the trail system.

Map 1 also indicates that the trail leaves The Trustees' property in the northwest section of the Southern parcel. The abutter to the west, Enid Michelman, has granted a trail easement that allows visitors to cross onto this parcel. While The Trustees has not received a trail easement on the remaining section of trail that lies just to the north, the owner has granted verbal permission and currently does not want to formalize this arrangement in a trail easement.

**Step 4: Are there factors (real or potential) that diminish the quality of the visitor experience?**

<b>Factor</b>	<b>Specific description</b>
Inadequate facilities	There are no facilities
Inadequate information	
Visitor conflicts	Because visitor use is low, there does not appear to be any significant conflicts. Potential exists for problems with unleashed dogs and illegal use by ATVs.
Congestion	
Damaged resources	
Illegal activities	Potential for rattlesnake disturbance has been addressed and minimized
Off-site activities	Logging, and potential home building, particularly along ridge tops
Trail conditions	Wetness issue on Hitchcock Road has been addressed

**Step 5: Are there other things to consider when developing the management program?**

**Donor's Wishes:**

None

### **Economic Considerations:**

None

### **Adjacent Management:**

The Northern portion of the loop trail skirts the reservation boundary. The visitor experience (at the very least) is therefore vulnerable to undesirable changes in the adjacent parcels.

### **Anything else?**

A more thorough ecological inventory should be done before attempting any significant changes to trail layout, or other active management practices. More specifically, an inventory should cover the following areas:

- As a minimum, complete a natural community / species inventory, paying attention to wetlands.
- If contemplating management changes, evaluate the need to do a study of rattlesnake status; new trails will require such a study.
- A breeding bird survey, and some assessment of use of the reservation by larger mammals would be desirable.

### **Step 6: Based on the information in Steps 1-5, describe the reservation's most significant features in terms of resources and visitor experience.**

1. It is part of a large block of contiguous forest.
2. It provides rare species habitat (some confirmed, some possible).
3. A quiet place for walking, sitting, reflecting, snowshoeing, natural history study, nature photography, etc.

### **Step 7: What are the management goals and objectives based on the above?**

#### **Goal 1. Provide High Quality Visitor Experience**

Objective: Monitor, maintain trail in good condition.

Objective: Provide interpretation.

#### **Goal 2. Preserve Dry Hill's Ecological Resources**

Objective: Better understand, protect rattlesnake status.

Objective: Complete ecological inventory of natural communities, and species.

Objective: Prioritize and control invasive species.

In the preceding sections, we identify the baseline needs of the property and recommend actions for protecting its resources and providing visitors with a high quality experience. Table 1 prescribes a routine maintenance program that addresses the baseline needs of Dry Hill; Table 2

outlines an implementation schedule for recommended actions. Financial and human resources permitting, these actions will be implemented over a nine year period, broken into three 3-year phases. It is important to note that little-to-no additional out-of-pocket expenses will be incurred as a result of this plan and that most actions require either staff and/or volunteer labor.

This management plan will be reviewed annually as part of staff work planning.

Key for the Following Tables:

<b>Category</b>	<b>Abbreviation</b>	<b>Definition</b>
Type	NRM	Natural Resource Management
	CRM	Cultural Resource Management
	LC	Land Conservation
	V	Visitor Management
	E/I	Education and Interpretation
Rank	C	Critical
	N	Needed
	Desired	
Staff	S	Superintendent
	HR	Historic Resources Manager
	LC	Land Conservation Staff
	RE	Regional Ecologist
Status	C	Complete
	IP	In progress
	NS	Not started
	A	Abandoned

Table 1:  
Routine Maintenance at Dry Hill

					Season and Frequency				Can/should this be accomplished with the existing	Annual Cost and Targeted Source
Type	Routine Maintenance Activity	Rank	Staff	Vol Opp?	S	S	F	W	operating budget, staffing and/or volunteers?	Operating
V	Patrol and maintain the trails 2 days/month; monitor any changes in visitor use, especially non- authorized uses such as ATVs	N	S	Yes	M	M	M		Yes	\$0
V	Inspect and update the bulletin board to make sure that it remains in good condition with current information about the organization and regional programs	C	S	Yes	M	M	M		Yes	\$0
V	Inspect and repair or replace signs.	C	S	No	A				Yes	\$100
									<b>TOTAL</b>	<b>\$100</b>

TABLE 2:  
Recommended Actions for Dry Hill

Rec#	Type	Resource Protection Action	Description / Rationale	Phase	Rank	1° staff	2° staff	Phase 1 staff hours	Phase 2 staff hours	Phase 3 staff hours	Total staff hours	Total vol hours	Notes
1	NRM	Expand and refine the plant community description.	Presently, there is a good fundamental description of the site's natural communities, but we should update and refine this within the life of this plan.	3	D	RE				60	60		This action will require regular field visits between April and October over a one-year period.
2	NRM	Conduct a breeding bird survey and report findings.	Information about breeding birds serves as a good indicator for the ecological workings of a property.	3	D	RE			32		32	32	This action requires one day for design and set-up, two half-days for the actual survey, and another 8 hours to report the findings. A qualified volunteer could do this job, under the supervision of the RE.
3	NRM	Conduct an invasive species assessment (per The Trustees' protocol) and outline strategies for invasives control at Dry Hill.	Invasives are not yet a significant problem at Dry Hill, and managing those species that have made in-roads will prevent degradation of the site's ecological values	1	N	RE		16			16	8	Hours are estimates. This project could be done in combination with other assessments.
4	NRM	Based on the invasive species assessment and strategy, initiate and continue control measures	Once the results are in from the invasive species assessment, we should begin to implement the recommended strategies. Invasives management will be ongoing.	2, 3	N	S	RE		48	48	96	192	The cost/labor numbers are gross estimates since we do not have the results from the assessment. As a placeholder, we have estimated that this work could require and average of 2 days/year for 1 staff and two 4-hour days/year for 4 volunteers.

TABLE 2:  
Recommended Actions for Dry Hill

Rec#	Type	Resource Protection Action	Description / Rationale	Phase	Rank	1° staff	2° staff	Phase 1 staff hours	Phase 2 staff hours	Phase 3 staff hours	Total staff hours	Total vol hours	Notes
5	NRM	Conduct occasional site visits May through early November to determine snake utilization of Dry Hill; record findings from each site visit and report any observations with MNESP		ongoing	C	RE		36	36	36	108		Estimated labor = 2 - 3 half day visits/year. We recommend that we hire a consultant for a detailed rattlesnake study if we contemplate any significant active management changes, e.g., to trail system, to address increased visitational levels, etc. The cost of this is unknown.
6	LC	Identify, map, and prioritize critical lands associated with Dry Hill and the greater landscape in which it sits.	The management plan highlights the significance of the large landscape in which Dry Hill sits. Strategic priorities of land conservation needs and opportunities will inform The Trustees' land conservation work.	1	N	LC	RE	16			16		
7	NRM	Work with the owner of the parcel of land that lies immediately north of the Southern Tract of Dry Hill to formalize the agreement for the trail to cross his/her land.	While we presently have a "hand-shake arrangement" for this trail to cross this private land, this agreement needs to be memorialized in some fashion.	1	N	LC	S	12			12		

TABLE 2:  
Recommended Actions for Dry Hill

Rec#	Type	Resource Protection Action	Description / Rationale	Phase	Rank	1° staff	2° staff	Phase 1 staff hours	Phase 2 staff hours	Phase 3 staff hours	Total staff hours	Total vol hours	Notes
8	CRM	Photograph and describe the remains of the cellar holes that are on site.	While the cellar holes that are on-site are not believed to be culturally significant, we should nevertheless record their existence through photographs.	2	D	HR				2	2	8	This is a good volunteer project under the supervision of the Western Region Historic Resources Specialist.
		<b>TOTAL</b>						80	116	146	342	240	