



**JONES MOUNTAIN OPEN SPACE
NEW HARTFORD, CONNECTICUT**

**KING'S MARK
ENVIRONMENTAL REVIEW TEAM REPORT**

**KING'S MARK RESOURCE CONSERVATION AND DEVELOPMENT AREA,
INC.**

**Jones Mountain Open Space
New Hartford, Connecticut**

Environmental Review Team Report

**Prepared by the
King's Mark Environmental Review Team
of the King's Mark
Resource Conservation and Development Area, Inc.**

For the

**Open Space Preservation Commission
New Hartford, Connecticut**

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Report #327

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This report is an outgrowth of a request from the New Hartford Open Space Preservation Commission (OSPC) to the Northwestern Conservation District (ECCD) and the King's Mark Resource Conservation and Development Area (RC&D). The NWCD referred this request to the ERT Subcommittee for their consideration and approval. The request was approved and the measure reviewed by the King's Mark Environmental Review Team (ERT).

The King's Mark Environmental Review Team Coordinator, Elaine Sych, would like to thank and gratefully acknowledge the following Team members whose professionalism and expertise were invaluable to the completion of this report.

The field review took place on Tuesday, August 24, 2004.

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I would also like to thank Jeanne Jones, landowner, Caren Ross, New Hartford Open Space Commission, Jean Cronauer, Northwest Conservation District, and Clem Clay and Patty Tipson, The Trust for Public Land, for their cooperation and assistance during this environmental review.

Prior to the review day, each Team member received a summary of the proposed project with location and soils maps. During the field review Team members were given additional information. Following the review, reports from each Team member were submitted to the ERT coordinator for compilation and editing into this final report.

This report represents the Team's findings. It is not meant to compete with private consultants by providing site plans or detailed solutions to development problems. The Team does not recommend what final action should be taken on a proposed project - all final decisions rest with the town and landowner. This report identifies the existing resource base and evaluates its significance to potential and existing development, and also suggests considerations that should be of concern to the town and landowner. The results of this Team action are oriented toward the development of better environmental quality and the long term economics of land use.

The Eastern Connecticut RC&D Executive Council hopes you will find this report of value and assistance in the reviewing this proposed open space easement.

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SUMMARY

- The 167 acre Jones Mountain Property offers sweeping views of downtown New Hartford and the surrounding valley from the overlook on the carriage road/trail. The wooded site has a hand built road up to the summit with stone bridges and culverts. Also on site are foundations from early industrial development.
- The New Hartford Open Space Preservation Commission identified this parcel as a high priority property for open space preservation. The landowners and the New Hartford Open Space Preservation Commission are committed to the preservation of this property for open space. A conservation easement would be placed on the property.
- At the time of the field review the landowners wanted to retain four building lots that were shown along Steele road in the southwestern portion of the property. Later the lot locations were changed to near the summit on the backside of the carriage road.
- The topography is rugged with elevation ranging from 980-1120 ft. Bedrock is close to the surface or crops out.
- Conditions of acquisition and a long term management plan will have to be decided. Preservation, conservation, or a combination could be considered for the open space management. Preservation would indicate that little be done with the property and conservation could allow timber harvesting, wildlife management, etc.
- The soil types found on this property are classified by the USDA as highly erodible or potentially erodible because of steep slopes and thick till. There was no soil erosion identified on site during two site visits. The streams and wetlands on site appear to be high quality, and in excellent overall health.
- If timber harvesting is considered for long term management the area south of the power line R-O-W appear to be the most favorable area. The northern portion should not be considered because of steep slopes, permanent alteration of the carriage road for logging, and the potential to damage headwater streams and wetlands.
- Illegal access to the property by motorized vehicles (ATV's, etc.) needs to be addressed early in planning processes as well as keeping foot traffic on established trails and roads.
- If the landowners want to use the carriage road as access to their building lots it is not recommended that the New Hartford Open Space

- Preservation Commission purchase the conservation easement for the property.
- It is recommended that a detailed set of maps be created to assist in the development of a long term management plan.
 - A limited botanical review was conducted with the “ravine” area north of the carriage road being surveyed. The parcel is an unfragmented, closed canopy forest with few non-native invasives and with a potential for special plant communities, including state listed plants. An early detection and removal plan for non-native invasives should be part of any management plan, as well as prevention measures such as public awareness and education.
 - The locations of any building lots should be established after completion of field work to identify ecologically significant areas.
 - Forest cover can be broken down into two broad forest types, 72% mixed hardwood and 28% softwood/hardwood.
 - The hemlock trees on site are infested with elongated hemlock scale, an exotic sap-sucking insect. There are no practical means of control in a forest setting. Heavy infestations will reduce the vigor and predispose them to mortality from other agents.
 - Tree crowns have been damaged by an ice storm in November 2002. The damage has increased the potential for decay organisms to become established.
 - It is recommended that property boundaries being located and marked and that signage is developed that lists allowed uses of the property.
 - The 75 acre portion of the site to the southwest of the power line is best suited for forest management because it contains the better growth of commercially valuable tree species and has good access and operability. Active forest management should be done under the direction of a state certified private consulting forester.
 - Large, unbroken tracts of forest, such as this, are very valuable to wildlife, especially many bird species. Because this site also contains wetlands, streams, and is adjacent to meadows and a reservoir the open space preservation of this parcel is an excellent opportunity to help conserve many wildlife species and their habitat.
 - The Jones Mountain parcel represents a microcosm of the town’s history. The area provided water power for early industrial mills, areas for farming and pasturing and the potential for Native American campsites. The parcel has potential for educational and scientific opportunities for the school system and general public to learn about the towns past.

- The Office of State Archaeology and the State Historic Preservation Office both note that the area possesses high sensitivity for prehistoric archaeological resources. Should there be any landscaping or development on the property they strongly recommend an archaeological survey prior to any land use operations.
- The Town should see preservation of the parcel as an opportunity to preserve for its citizens significant cultural and natural resources within the purchase of a single property. Protection of the property through a conservation easement is consistent with town, regional, and state land use plans.
- Sightlines at the proposed access point on Steele Road appear to be adequate and there seems to be room for a small parking lot also. Signage needs to be considered for the parking area and trail head. The conservation easement should also clarify allowable uses and maintenance responsibilities.
- In the future, if more land on Jones Mountain becomes available, the town should protect it by acquisition, gift or subdivision open space dedication. Areas to consider include the northern promontory of the mountain, Pine meadow, and Kingdom Game Club.
- The small New Hartford Water Co. parcel on Steele Road may warrant town attention if it is no longer used for water supply because it could become an attractive nuisance in terms of partying and dam maintenance / flood hazard considerations.

INTRODUCTION

INTRODUCTION

The New Hartford open Space Commission Preservation Commission has requested assistance from the King's Mark Environmental Review Team in conducting a review of a property proposed for purchase of an open space easement.

The 167 acre Jones Mountain Property is located on Steele Road. The property offers sweeping views of downtown New Hartford and the surrounding countryside. The site contains part of a beautiful carriage road with stone bridges that winds up to the summit. Also on the parcel is old forest, meadow, streams and rock foundations from early industrial development.

The Town of New Hartford adopted an Open Space Plan in 2002, which resulted in the ordinance creating the Open Space Preservation Commission (OSPC) and Land Preservation Fund. This property was ranked very high in their study of parcels for open space acquisition. The landowners are committed to preservation also and are working cooperatively with the Commission on purchase of an open space easement.

At the time of the ERT field review in August 2004 the landowners were interested in retaining four building lots on the property that would not be part of the easement. These lots were identified to be along Steele Road as indicated on Figure 2. Since the date of the field review the Team coordinator has been told that the location of the "family lots" has been moved to the top of Jones Mountain on the backside of the carriage road loop. Team members did not have a map indicating these lot locations to complete their reviews.

OBJECTIVES OF THE ERT STUDY

The Town of New Hartford has been identified as the fastest growing town in the Northwest corner of the state and is facing significant residential development pressure. There is a widespread consensus in town in favor of preserving open space as a means of maintaining the scenic beauty and rural character of New Hartford. In a recent community survey, and at a town-wide planning meeting, the overwhelming majority of residents ranked open preservation as a top priority.

The town is requesting the ERT in order to obtain solid natural resource data about the Jones Mountain parcel and the suitability of this parcel for preservation. They are especially interested in any unique features or other factors that recommend this parcel, including recreational possibilities. The ERT will be used in the town's decision to allocate funding for the preservation of the property and may also be used in obtaining matching grants.

THE ERT PROCESS

Through the efforts of the open space preservation commission this environmental review and report was prepared for the Town of New Hartford.

This report provides an information base and a series of recommendations and guidelines which cover the topics requested by the commission. Team members were able to review maps, plans and supporting documentation provided by the town and landowner.

The review process consisted of four phases:

1. Inventory of the site's natural resources;
2. Assessment of these resources;
3. Identification of resource areas and review of proposed uses;
and
4. Presentation of education, management and land use
guidelines.

The data collection phase involved both literature and field research. The field review was conducted on Tuesday, August 24, 2004. The emphasis of the field review was on the exchange of ideas, concerns and recommendations. Some Team members made additional site visits. Being on site allowed Team members to verify information and to identify other resources.

Once Team members had assimilated an adequate data base, they were able to analyze and interpret their findings. Individual Team members then prepared and submitted their reports to the ERT coordinator for compilation into this final ERT report.



Jones Mountain New Hartford, CT

Figure 1

Jones Mountain Property



Map created by The Northwest Conservation District
 Cartographer: Shane Kramer
 Chairman: Curtis Read
 July 2004

Source: Connecticut Department of Environmental Protection,
 Environmental Geographic Information Center (EGIC)
 Jones Mountain parcel boundary is approximate.

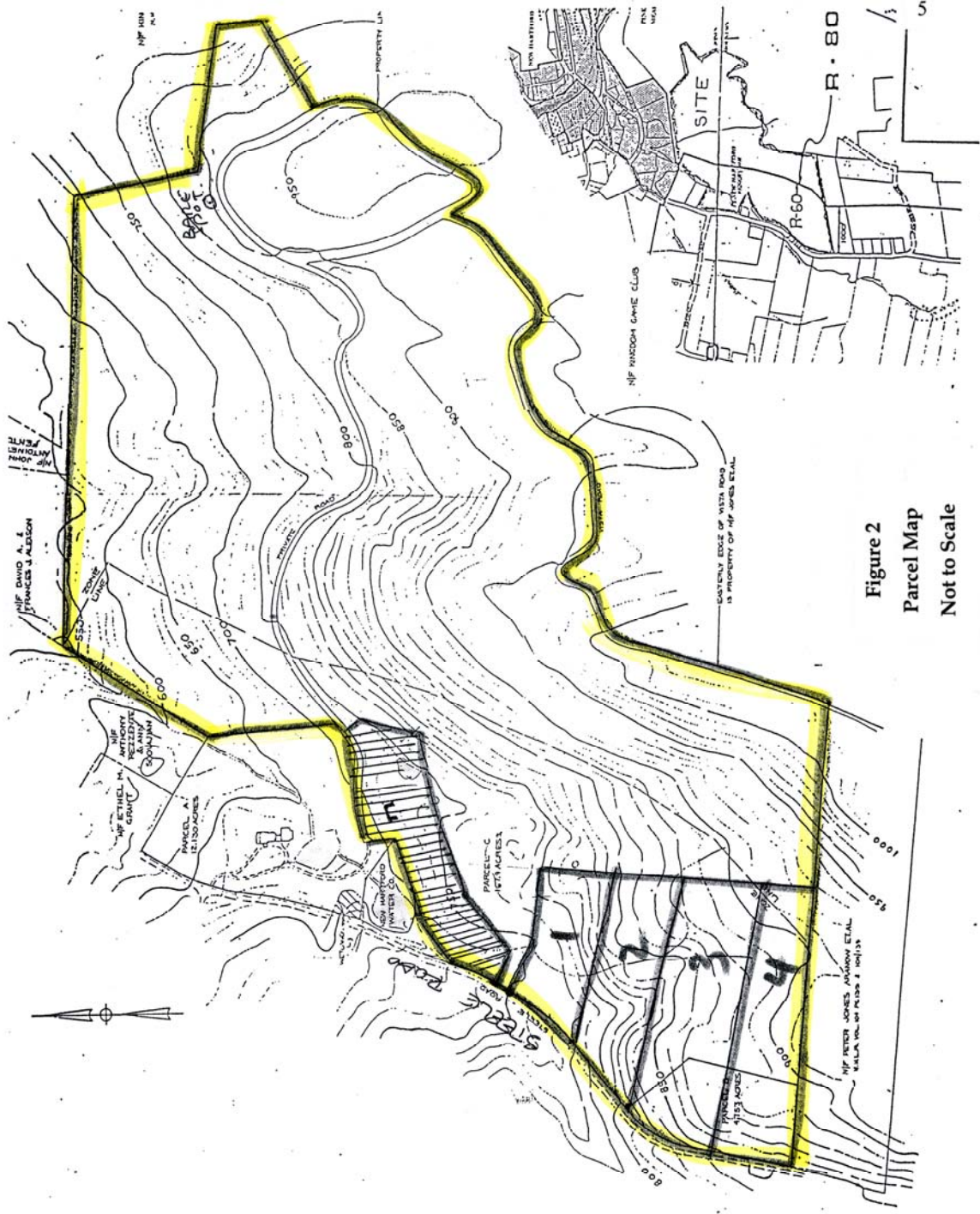


Figure 2
 Parcel Map
 Not to Scale

TOPOGRAPHY AND GEOLOGY

TOPOGRAPHY

A 167 acre parcel on the northwest flank of Jones Mountain is being considered for acquisition and preservation as open space by the town of New Hartford through a conservation easement.

Jones Mountain is part of a complex of rounded hilltops that forms a ridge-line with elevations between 980-1120 feet above sea level just southeast of the town. Jones Mountain itself has an elevation of just greater than 980'. The complex has rather steep slopes to the northwest overlooking New Hartford and the valley of the west branch of the Farmington River. A small clearing along the carriage road (currently private) provides a nice view of the valley. The mountain complex has steep slopes also on its northeast and southeastern flank with probable cliffs on adjacent properties. The topography generally may be characterized as rugged with relief of 600+ feet.

BEDROCK GEOLOGY

Rocks observed on the ERT field visit consist of brown weathering (slightly rusty looking) mica schist and gray weathering gneiss and amphibolite. The schist contains both biotite and muscovite mica, quartz and plagioclase feldspar. The rock foliation dips toward the northwest at a high to moderate angle. Other than foliation-parallel fractures, the schist is neither jointed nor well fractured. This characteristic of the bedrock made it relatively resistant to erosion by glacial ice

during the last Ice Age because pressure-melted ice (water) could not refreeze around fractured pieces of the schist to pull (erode) them into the glacial flow.

The brown weathering schist is referred to as the Rattlesnake Hill Formation of the Hartland Group by Stanley who finished mapping the area in 1961. Schnabel (1975) referred to the same rocks north of the Farmington River as the Morehouse Formation of middle Ordovician age. Rodgers (1985) referred to the rocks as the Ratlum Hill Formation.

The southeastern part of the Jones Mountain complex (adjacent property) is underlain by a non-rusty weathering assemblage of schist, gneiss, amphibolite, and granulite which also dips toward the northwest. Schnabel assigned an upper Ordovician age to these rocks and inferred that the boundary between the non-rusty schists and the rusty schists is a normal fault (the Barkhamsted Fault) that moved relatively down to the southeast.

SURFICIAL GEOLOGY

Most of the interesting surficial geologic features are located just off the proposed open space parcel. Because the parcel has moderate to steep slopes, little glacial till was deposited: bedrock either crops out or is close to the surface. Most New England upland soils are developed on glacial till and soils on the parcel are therefore thin. Just south and east of the parcel, however, at the higher elevations of the mountain complex and where slopes are less steep the till is thicker (Colton, 1970). The thick till is "compact basal till" deposited beneath the glacial ice sheet when it was active. In contrast, till on the steeper slopes is likely "melt-out till" which formed when sedimentary debris, initially frozen into the active ice, was left behind when the ice melted.

At the end of the Ice Age, when large volumes of ice melted, meltwater streams and rivers flowed on top of the ice in channels they actively eroded (partly by melting). The streams, like modern streams, carried an abundance of sedimentary particles; sand and gravel particles rolled and bounced along the bottom and mud was carried suspended in the water current. Broad deposits of sand and gravel, known as stratified drift, were left behind in many places after the ice completely melted. Some streams found their way into cracks and crevasses which drained through the ice. The streams then flowed in tunnels beneath the ice. The tunnels behave like pipes and hydraulic pressure forced the water flow uphill in some places. The upper portion of the northward flowing East Mountain Brook runs over a deposit of stratified sand and gravel that, according to Colton (1970), was deposited by an “uphill flowing” current of water. The meltwater stream, likely confined in an ice tunnel, flowed southward through a water gap just east of Town Hill.

An interesting field observation made during the ERT visit relates to the direction of meltwater-stream flow. Quartzite cobbles and pebbles are found on the surface on and adjacent to the drift deposit (east of dotted line on Figure 3) but not in the till observed on top of Jones Mountain. There are no quartzite outcrops within the drainage basin (watershed) of the northward flowing East Mountain Brook. Quartzite, however, crops out north and east of the area (Rodgers, 1985) between the towns of East Hartland and Barkhamsted. Pebbles and cobbles of Quartzite were brought to the immediate area by south-flowing meltwater streams.

REFERENCES

Colton, R.B., 1970, Surficial Geologic Map of the Collinsville Quadrangle, Litchfield and Hartford Counties, Connecticut. U.S. Geol. Surv. Open File Map.

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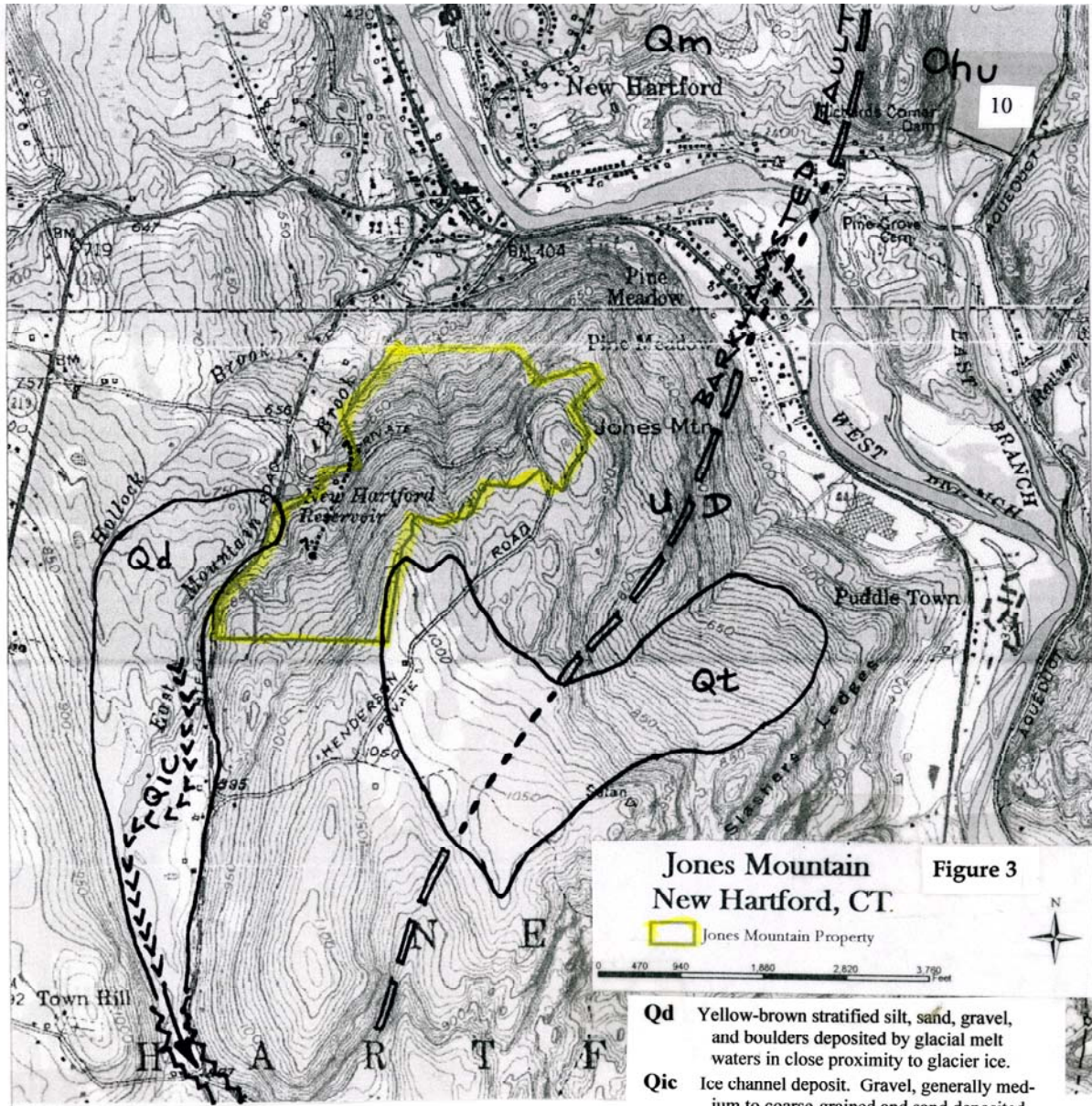


Figure 3

- Ohu** Hartland Formation, upper member, of Schnabel (1975); Middle to Upper Ordovician. Heterogeneous assemblage of non-rusty weathering medium-grained schists and gneisses, including amphibolite, and granulite.
- Om** Moretown Formation of Schnabel, 1975. Middle Ordovician. Fine- to medium-grained rusty-weathering quartz-plagioclase-biotite schist containing thin beds of fine-grained light green and black hornblend-epidote-plagioclase amphibolite.
- Normal fault showing relative movement.

- Qd** Yellow-brown stratified silt, sand, gravel, and boulders deposited by glacial melt waters in close proximity to glacier ice.
- Qic** Ice channel deposit. Gravel, generally medium to coarse-grained and sand deposited by glacial meltwater in ice walled channels or beneath the ice. Points of chevrons indicate inferred direction of flow of meltwater.
- Qt** Glacial till. Loose sandy unsorted to poorly sorted non-stratified mixture of clay, silt and sand with 10% pebbles and larger. May contain pods of contorted and faulted sand and gravel. Only thick deposits of till shown on map.
- Large abandoned meltwater channel. Arrow indicates inferred flow-direction.
- West of this line pebbles and cobbles of quartzite are found in the surface deposits. East of the line, quartzite is absent.

SOIL AND WETLANDS RESOURCE

REVIEW AND RECOMMENDATIONS

In the request for ERT the New Hartford Open Space Preservation Committee (NHOSPC) stated it wanted to “obtain solid natural resource data about the site and the suitability of this parcel for preservation.” This section will contain not only information about the natural resources on site, but also information on how best to manage them. The NHOSPC should consider two management styles when deciding the “conditions of acquisition.” If the land is acquired strictly for preservation, this would indicate that very little would be done with the property. Maintaining the historically significant trail and road system and providing for limited public access would preserve this property as it is. If the land were purchased for conservation activities, it would have greater environmental impacts (i.e. timber harvesting, wildlife habitat management). Given the size of the property (167 acres) it will most likely benefit from some combination of these types of open space management styles. Consider the following site specific resource issues when reviewing the comments and recommendation contained in this chapter. It is hoped that the NHOSPC will use the site data as well as the comments and recommendations to develop the conditions-of-acquisition and to create a long-term property management plan.

SOIL RESOURCES AND EROSION

The soils of this property and their percent coverage is illustrated on the Jones Mountain Soils Figure 4 (soil map). This soil map was created using digital soil data compiled by the USDA - Natural Resource Conservation Service. This soil data has not yet been published and is in “advanced release” form. However, observations in the field indicated that the map is accurate and would be extremely valuable in making property management decisions. Almost every soil type found on site is classified as highly erodible or potentially highly erodible land by the USDA (USDA, 1970 revised 2000). The reason the soils of this property are extremely erodible is the combination of steep slopes and thick glacial till. Steep slopes enable stormwater runoff to gather energy and carry large amounts of soil if exposed. The thick till just beneath the surface (usually 1 to 3 feet) is extremely poor at transmitting water. These two soil characteristics combined with the removal of the surface layer (vegetation and decomposing organic matter) and a large rain event will certainly cause large amount of soil to plug the pristine streams and wetlands on site as well as gully and mar the soils surface.

No erosion of soil was identified during site two visits. The mature vegetation, limited public access, well designed roads and trails and extremely stony soils (see Jones Mountain Soils legend) are all minimizing soil movement. The streams and wetlands on site had no buildup of sediment and had well-developed layers of organic debris. For these reasons the streams on site would most likely rank very high if assessed for their overall health.

TIMBER HARVESTING ISSUES

If this parcel is purchased for conservation open space, limited logging may be a part of a long-term management plan for the property. Logging would be the management activity that is most likely to cause soil erosion. If logging is to be a part of how this parcel is managed consider the following. The southern portion of the site (South of the Power Right-Of-Way) appears to have slopes that are more gradual. The area south of the ROW with the soil types PdB, SxC and CrC are much less prone to erosion and better suited for careful timber stand management.

Forest product harvesting should not be considered as a management option for the northern portion of the property for the following reasons:

- Most of the slopes are steep and have a greater potential of eroding.
- The presence of delicate roads, trails and bridges which would certainly be permanently altered by forest product harvesting techniques.
- The presence of pristine sediment free headwater streams and wetlands which would be permanently altered by subsequent erosion from forest product harvesting.

The Northern section of the property with the created road/trail network would best be managed as a preserve. Logging and clearing of this area would most likely destroy the unique enchanting character of this part of the property. The hand-made trails roads and bridges, moss covered soils and rocks, silt and

sediment free clear running streams and the open understory feel of a mature timber stands would most certainly be compromised.

It is understood by this Team member that timber harvesting may have to be considered as a preemptive measure to salvage the Hemlock (*Tsuga canadensis*) before a potential woolly adelgid infestation. If a salvage cutting is considered it should be accomplished when the ground is completely frozen to minimize erosion. In addition, a vigilant non-native invasive plant inspection / eradication program would need to be established because many opportunistic species will jump in where Hemlocks once dominated.

ATV ACCESS

ATV use is increasingly becoming a major headache for open space land managers. Combining public ownership with a close proximity to the most populated section of New Hartford could put motorized vehicle pressure on this property. In advance of this parcel becoming open space the NHOSPC should begin thinking about how to exclude ATV access to the property. If ATVs are allowed to use this property it will most certainly become a major erosion problem for all the reasons mentioned above.

WETLAND RESOURCES AND WATER QUALITY

Even though no wetland soil types appear in the Jones Mountain Soils figure, there are a few notable wetland features on the property. The USDA soil maps do not show wetland soils areas when they are less than two contiguous acres.

Open water and streams are the only wetland resources that appear on publicly available maps. There are only a few headwater wetlands that were noted during the site visit. These include intermittent and perennial streams and their associated wetland soils. Other than some historic activities including bridge and dam building, the wetland resources are relatively undisturbed. Because many of the slopes on site are northwest facing an abundance of moss and lichens have developed dense layers on the rocks in the streams and wetlands. In addition, some of the densely shaded hemlock groves have also created favorable conditions for moss and lichens to develop on rocks and soils. It is obvious that very little foot traffic had been allowed into these areas because one or two footsteps on some of these mosses would destroy decades of the plant's development. Containing foot traffic on established road and trails is an additional management consideration when deciding how to preserve the property.

Over half of the property drains into a section of East Mountain Brook that carries an "AA" water quality rating. This classification is given to a surface water feature by the Connecticut Department of Environmental Protection. The water quality standard AA means the CT DEP is potentially considering (or proposing) it to serve as a drinking water supply and/or, that it is a tributary to a drinking water supply as outlined in the Long Range Plan for the Management of Water Resources pursuant to Section 25-5b of the CT Statutes. No land use activities may take place in the watershed of "AA" rated streams that would potentially lower the water quality rating. Surface water runoff that passes through the thick mosses and vegetation in the streams and wetlands, filter the water that eventually enters East Mountain Brook. The pristine nature of the streams that run off the property are certainly responsible for preserving the high

water quality ratings. "AA" stream water quality ratings are given to only the cleanest of streams in CT.

The wetland/upland boundary should be delineated in the field and surveyed onto a property map to document where the wetland soils are to plan for their protection when any on site activities are proposed.

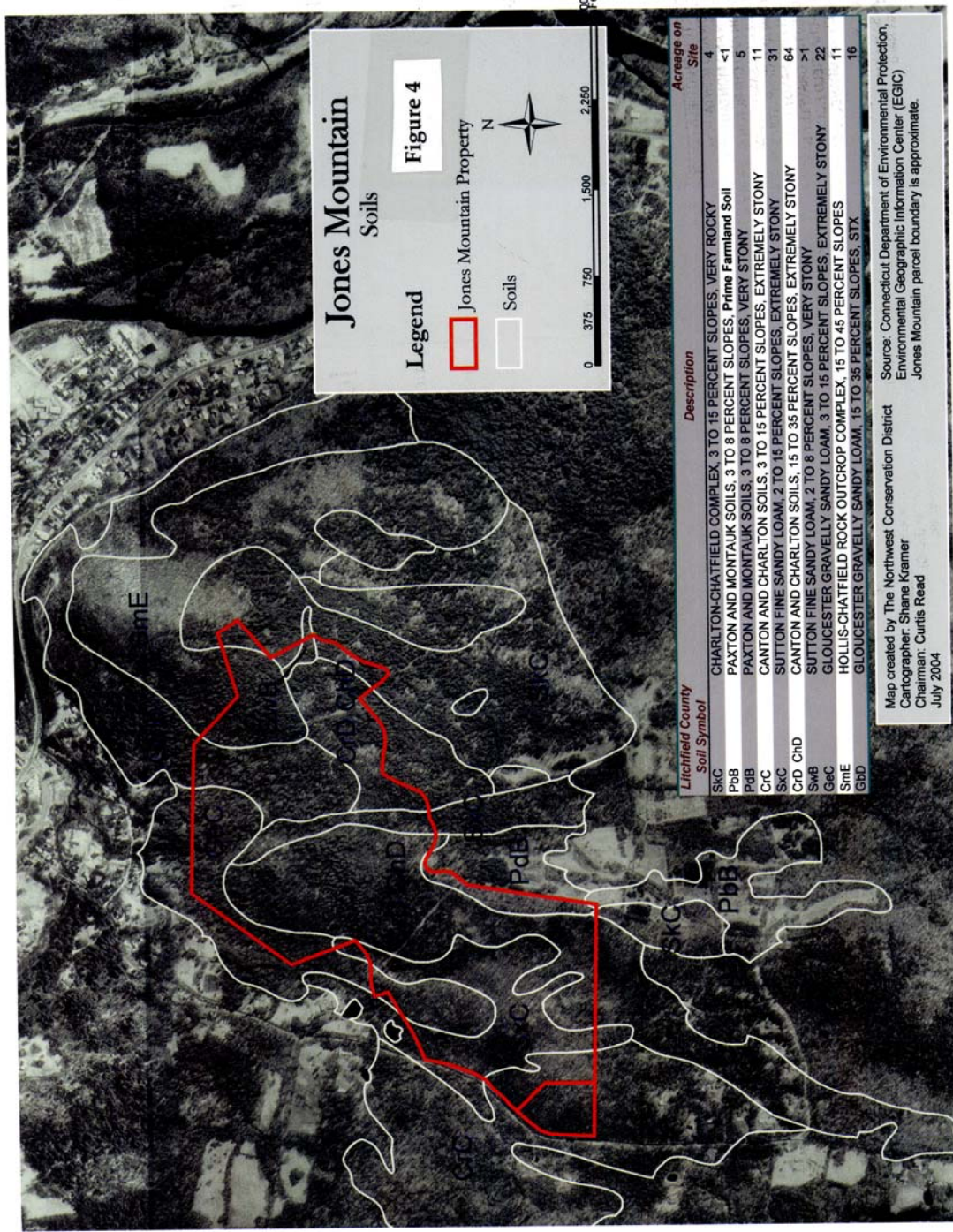
CONCLUSION

In the request for an ERT the NHOSPC stated it wanted to "obtain solid natural resource data about the site and the suitability of this parcel for preservation". After visiting the site, assessing some management issues and adding up all the unique and valuable natural and historical resources, it is believed that this site is well worth preserving, especially since this property is visible to everyone who drives through the center of town. However, consider the following when drafting the conditions-of-acquisition.

It is understood that the current owners are considering keeping a few building lots on the northeast part of the property (on the backside of the summit) and the remaining north facing slope and southeastern portion of the property would be permanently preserved for open space. If the current owners want the driveway right-of-way to trace the existing hand built carriage road this Team member would not recommend that the NHOSPC purchase the remaining portion of the Jones Mountain Parcel. The driveway would bisect the very area that has brought this property to consideration by the NHOSPC. The driveway would also impact the most delicate area on the property as described above. If the

driveway right-of-way were proposed to come in from the southern part of the property it would not impair the most pristine and enchanting portion of the parcel. A southern driveway approach would minimize grade angles which would substantially reduce the potential of damage from erosion. It would also be protective of the highly visible portion of the site.

The entire Jones Mountain ERT Report will provide a wealth of natural resource data. However, the NHOSPC should consider creating a set of detailed maps that illustrate the size and extent of all the natural resources identified on the property (ex. wetland areas). A good set of maps can then be used to draft a property management plan, which will be invaluable when creating open space public.



BOTANICAL REVIEW

Jones Mountain was visited twice by the ERT botanist. A general botanical survey was conducted during the field meeting on 24 August, 2004 and again on 16 September, 2004 when the property was visited for the second time.

During the first visit, which was an introductory meeting to acquaint the Team with the property, a general botanical survey was conducted along the trail as members hiked to view the highlights of the property. The goal of the second visit was to locate and survey areas with potential ecological significance. The ravine appeared to be the most unique ecological feature of the parcel. However, due to time constraints only the lower portion of the ravine located north of, or “below”, the trail was surveyed.

OBSERVATIONS

One of the most important and readily apparent botanical features of Jones Mountain is that it appears to be largely free of non-native invasive plants. During the course of the two site visits, invasives were noted only along the short trail to the old building site and in the open area where the ruins stand. Invasives were expected to be also present along the other trail edges but surprisingly, they were not observed. Consequently, the surveyed portion of the ravine as well as part of the forest adjacent to the ravine were also free of invasive plants. That invasives were not observed in certain areas, however,

should not preclude their presence on other parts of the property (such as the power-line right-of-way) as the parcel was not surveyed in its entirety.

The brief reconnaissance of the ravine (located at the northern slope of the parcel and bisecting the path) found some indicator species such as hobblebush (*Viburnum alnifolium*), American fly-honeysuckle (*Lonicera canadensis*) and beech fern (*Phegopteris connectilis*), suggesting that the ravine supports a northern-affinity community. A more precise, and hence reasonable, botanical assessment, however, was not possible due to the inadequate amount of time permitted for the necessary field work. Also, it was too late in the growing season to accurately identify remaining plants and by this time, most herbaceous species had already died back.

CONCLUSION

The 167 acre Jones Mountain parcel is an unfragmented, closed-canopy forest with few non-native invasives and with a potential for special plant communities, including state-listed plants, making it a good candidate for open space preservation. However, the apparent limited presence and distribution of invasives is perhaps the most important factor that will, so to speak, either “make or break” preservation efforts. If left unchecked, invasives will eventually out-compete native plant communities and hamper ecological processes.

RECOMMENDATIONS

1. At the time of the inventory, locations of house lots had not yet been established; it was only *after* completion of the field work that they had been sited. Therefore, in order to make a well-informed decision regarding the desired, ecologically sensitive placement of these lots (i.e., whether these lots are well-enough away from ecologically sensitive areas and whether their development will negatively impact special plant communities) a thorough botanical survey of the lots and areas adjacent to the parcels, vis-à-vis potential impacts, is warranted. If the lots are found to have state-listed plants or plant communities of special biodiversity significance, or if their development will impact other ecologically important areas, the lots should be reconfigured or moved to a different location. Ultimately, the best approach in determining site-suitability for lots (also applicable for selecting areas for preservation) is to first survey the entire property for ecologically significant features; selecting the lots first and then later determining site-suitability is analogous to putting the proverbial cart before the horse.

2. It is important to note that the nature of impacts may not necessarily be in the form of direct, out-right destruction of botanical features located at the construction site - plant communities near development can be impacted just as readily. Activities such as lot clearing and road widening for lot access will not only increase sunlight penetration to the adjacent forest but can consequently alter the microclimate (e.g. temperature, air circulation, etc.) so critical in sustaining habitats, especially those with narrow ecological amplitude such as northern-affinity plant communities. Erosion and subsequent run-off from

construction sites into sensitive areas, regardless of distance, can also be destructive. Sediment deposition can smother vegetation and flash flooding can wash away plants. Natural drainage patterns (i.e., water source) can shift away from dependent plant communities. Additionally, certain non-native invasive plants, particularly those with small, light-weight seeds can be easily transported by water into invasive-free areas should they inadvertently be imported on construction equipment.

3. It cannot be over-emphasized that before recommending area(s) to preserve, the entire property should be surveyed. Again, knowing “what is out there” is an essential first step in deciding which area(s) to target and/or prioritize for conservation and which are suitable for development. According to consulting field botanist and rare plant expert Bill Moorhead, natural communities of special biodiversity significance and occurrences of state-listed plants are present in the general area (personal communication, 2005). This reinforces the importance of conducting thorough botanical surveys to determine whether similar features are present on the Jones Mountain property.

4. Since the property apparently has few invasives, it would be prudent to implement an early detection and removal plan, especially if the town assumes ownership of protected areas. It is much more cost effective and easier to remove invasives while plants are few and their distribution is limited. Invasives that are already present should be eradicated before they become unmanageable and costly to remove, and before they threaten the viability of native plant communities and impair ecological functioning.

5. Opening the property to public access, as was suggested, will increase the opportunity for new invasive plant introductions. One simple, preventative measure that can be easily implemented is to ask hikers, before they enter the property, to knock off any dirt that might be stuck in the lugs of their soles. Invasives can also be inadvertently introduced by construction machinery. While it may not be feasible to clean large equipment prior to entering the property, early detection and removal of imported plants could be implemented at construction sites.

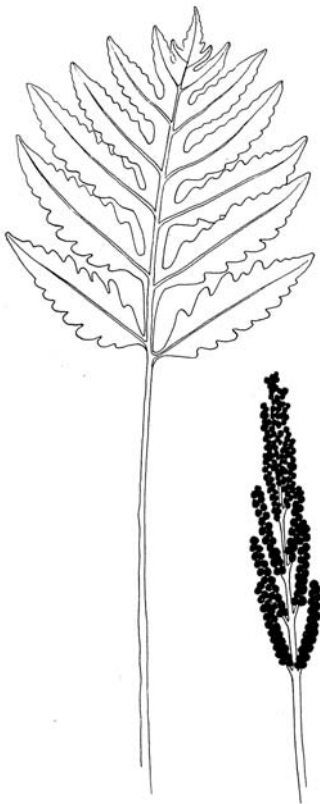


Figure 2 Sensitive Fern



Figure 1 Red Maple

PARTIAL PLANT LIST FOR JONES MOUNTAIN

NATIVE PLANTS

Latin Name	Common Name
<i>Acer pensylvanicum</i> L.	Striped maple
<i>Acer rubrum</i> L.	Red maple
<i>Acer saccharum</i> Marshall	Sugar maple
<i>Adiantum pedatum</i> L.	Maidenhair fern
<i>Amphicarpaea bracteata</i> (L.) Fernald	Hog peanut
<i>Anemonella thalictroides</i> (L.) Spach.	Rue anemone
<i>Aralia nudicaulus</i> L.	Wild sarsaparilla
<i>Aster acuminatus</i> Michx.	Whorled aster
<i>Aster divaricatus</i> L.	White wood aster
<i>Betula alleghaniensis</i> Britton.	Yellow birch
<i>Betula lenta</i> L.	Black birch
<i>Carya ovata</i> (Miller) Sweet	Shagbark hickory
<i>Dennstaedtia punctilobula</i> (Michx.) Moore	Hay-scented fern
<i>Dryopteris carthusiana</i> (Villars) H. P. Fuchs	Toothed wood fern
<i>Dryopteris marginalis</i> (L.) A. Gray	Marginal shield fern
<i>Fagus grandiflora</i> Ehrh.	American beech
<i>Fragaria</i> sp.	Wild strawberry
<i>Goodyera pubescens</i> (Willd.) R. Br.	Downy rattlesnake plantain
<i>Goodyera pubescens</i> (Willd.) R. Br.	Rattlesnake plantain
<i>Hamamelis virginiana</i> L.	Witch hazel
<i>Hieracium paniculatum</i> L.	Panicled hawkweed
<i>Impatiens capensis</i> Meerb.	Orange touch-me-not
<i>Kalmia latifolia</i> L.	Mountain laurel
<i>Liriodendron tulipifera</i> L.	Tulip Tree
<i>Lonicera canadensis</i> Marshall	Fly-honeysuckle
<i>Lycopodium obscurum</i> L.	Princess-pine
<i>Maianthemum canadense</i> Desf.	Canada mayflower
<i>Medeola virginiana</i> L.	Indian cucumber root
<i>Mitchella repens</i> L.	Partridgeberry
<i>Onoclea sensibilis</i> L.	Sensitive fern
<i>Osmunda cinnamomea</i> L.	Cinnamon fern
<i>Osmunda claytoniana</i> L.	Interrupted fern
<i>Panicum clandestinum</i> L.	Deer tongue grass
<i>Parthenocissus quinquefolia</i> (L.) Planchon	Virginia creeper
<i>Phegopteris connectilis</i> (Michx.) Watt	Long beech fern
<i>Pinus strobus</i> L.	White pine
<i>Polygonatum pubescens</i> (Willd.) Pursch.	Solomon's seal
<i>Polystichum acrostichoides</i> (Michx.) Schott	Christmas fern
<i>Prenanthes alba</i> L.	Rattlesnake root
<i>Pteridium aquilinum</i> (L.) Kuhn.	Bracken fern
<i>Quercus prinus</i> L.	Chestnut oak
<i>Rhododendron periclymenoides</i> (Michx.) Shinn	Pinkster flower

<i>Solidago bicolor</i> L.	Silver-rod
<i>Solidago flexicaulis</i> L.	Zigzag goldenrod
<i>Thelypteris noveboracensis</i> (L.) Nieuwl.	New York fern
<i>Trientalis borealis</i> Raf.	Starflower
<i>Trillium erectum</i> L.	Red trillium
<i>Tsuga canadensis</i> (L.) Carrière	Eastern hemlock
	Common lowbush
<i>Vaccinium angustifolium</i> Aiton.	blueberry
<i>Viburnum alnifolium</i> Marshall	Hobble bush
<i>Viola</i> sp.	Violet

NON-NATIVE INVASIVES

<i>Berberis thunbergii</i> DC.	Japanese barberry
<i>Cardamine impatiens</i> L.	No common name
<i>Celastrus orbiculatus</i> Thunb.	Asiatic bittersweet
<i>Polygonum caespitosum</i> Blume.	No common name
<i>Rosa multiflora</i> Thunb.	Multiflora roase

THE NATURAL DIVERSITY

DATA BASE

The Natural Diversity Data Base maps and files regarding the project area have been reviewed. According to our information, there are no known extant populations of Federal or State Endangered Threatened or Special Concern Species that occur at the site in question.

Natural Diversity Data Base information includes all information regarding critical biologic resources available to us at the time of the request. This information is a compilation of data collected over the years by the Environmental & Geographic Information Center's Geologic and Natural History Survey and cooperating units of DEP, private conservation groups and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Consultations with the Data Base should not be substituted for on-site surveys required for environmental assessments. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as, enhance existing data. Such new information is incorporated into the Data Base as it becomes available.

FOREST VEGETATION REVIEW

The study area is comprised of 167-forested acres. The aspect of the property is northerly and northwesterly. The property's topography contains slopes that range from 10 percent in the southwest to 30+ percent in the northeast. Elevations on the property range from 550 feet in the north to 1,000 feet in the south. Public access to the property would be from Steele Road, a paved town road, in the west. The forest cover can be broken down into two broad forest types, mixed hardwood, and softwood/hardwood.

FOREST COVER TYPE DESCRIPTION

Mixed Hardwood (A): This is the predominant cover type, occupying 120 acres, or 72 percent of the property. The main canopy is occupied by sawtimber-sized trees of aspen, white ash, beech, black birch, white birch, yellow birch, hickory, red maple, sugar maple, black oak, chestnut oak, red oak, white oak, yellow poplar, hemlock and white pine. The oaks, black birch, and red maple are the dominant trees. The mid-canopy layer contains pole-sized trees and saplings of American chestnut, beech, yellow birch, red maple, striped maple, sugar maple, hemlock, and white pine. Shrub species present are mountain laurel and witch hazel. The ground layer is made up of ferns, huckleberry, maple-leafed viburnum, mountain laurel, and seedlings of striped maple, oak, hemlock, and white pine.

Softwood/Hardwood (B): This type occupies 47 acres or 28 percent of the property. The predominant sawtimber-sized trees in the main canopy are hemlock, white pine, black birch, yellow birch, red maple, chestnut oak, black oak, and red oak. The mid canopy layer is made up of pole-sized trees and saplings of hemlock, white pine, beech, sugar maple, and yellow birch. Shrub species present is mountain laurel.

FOREST HEALTH ISSUES

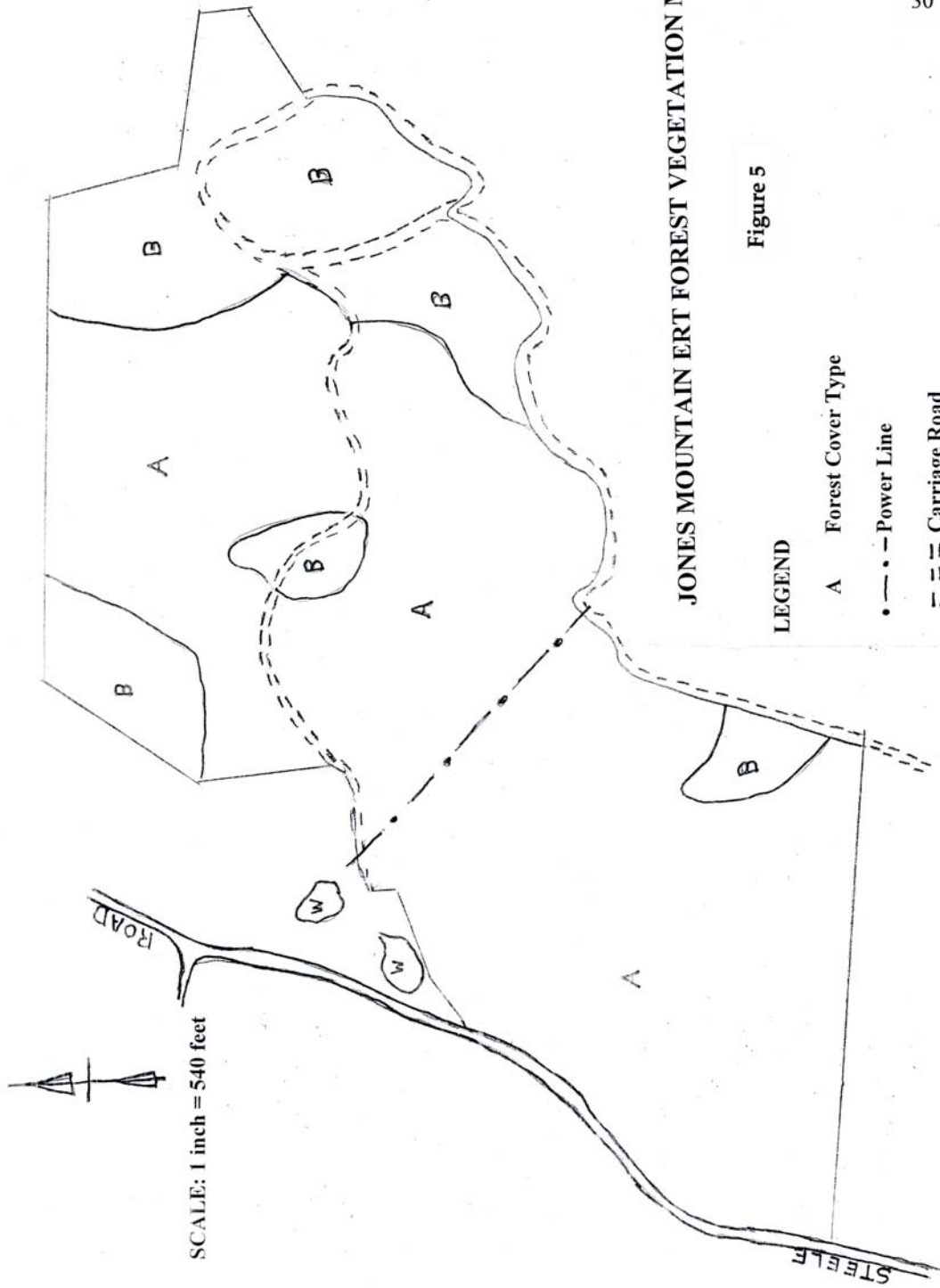
The foliage of the hemlock trees are infested with an exotic sap-sucking insect, the elongated hemlock scale (*Fiorinia externa*). There are no practical means of controlling this pest in a forest setting. Heavy infestations will reduce the vigor of hemlocks and predispose them to mortality by other agents.

The tree crowns have been damaged by an ice storm that occurred in November of 2002. This damage has slowed the trees' growth by reducing the amount of foliage. The wounds from the loss of branches have increased the potential for decay organisms to become established in the trees.

MANAGEMENT CONSIDERATIONS

The first step in managing the property is to locate and mark the boundary lines. Refer to the attached publication "Knowing Your Boundaries" (see the Appendix). Once the property's boundaries have been suitably located and marked, then signage indicating the allowed uses of the property could be posted.

The 75-acre portion of the property southwest of the power line is best suited for active forest management. This area contains the better growth of commercially valuable tree species. The access and operability of the area is good. The established interior trails would not be impacted by timber harvesting operations. Any active forest management should be done under the direction of a state certified private consulting forester. A directory of certified foresters is available from the State of Connecticut DEP, Bureau of Natural Resources, Division of Forestry's website at <http://www.dep.state.ct.us/burnatr/forestry/forestcert/certific.htm> or call (860) 424-3630.



JONES MOUNTAIN ERT FOREST VEGETATION MAP

Figure 5

LEGEND

A Forest Cover Type

• - - - Power Line

== Carriage Road

W Water

30

Boundaries are approximated

Map sketch by: L. Rousseau
11/04/04

WILDLIFE RESOURCES

A site inspection was conducted evaluate existing wildlife habitat on the property. The property is approximately 167 acres of mixed deciduous and coniferous mature forest bounded by the Kingdom Game Club to the southeast, by route 44 to the east and by route 219 to the west. Elevation ranges from 500 - 1000 feet. The property under consideration occurs along a ridgeline. Abutting properties are privately held and contain mature deciduous/coniferous forest as well as meadows (game club). The forest is fairly even-aged. There are several intermittent streams and a small reservoir/pond abuts the property. The area is very rocky.

In Connecticut, large, unfragmented areas are increasingly rare and valuable to wildlife. Although much of the state is forested, the number of areas containing unbroken forested habitat has dwindled. Forested areas are valuable to wildlife, providing cover, food, nesting and roosting places and denning sites. Mast produced by oaks provides excellent forage for a wide variety of mammals and birds including white-tailed deer, gray squirrel, southern flying squirrel, eastern chipmunk, white-footed mouse, eastern wild turkey and blue jay. Trees, both living and dead, also serve as a home for a variety of insects, which, in turn, are eaten by many species of birds, including woodpeckers, warblers and nuthatches. Other wildlife found in this habitat type include scarlet tanager, ovenbird, white-breasted nuthatch, American redstart, barred owl, broad-winged hawk, redback salamander and northern ringneck snake.

Large, unbroken tracts of forest are particularly important to many species, including pileated woodpeckers, scarlet tanagers, cerulean warblers, wood thrushes and hermit thrushes. Forest and meadow/shrubby edge habitat is important for brown thrashers, a species of special concern in Connecticut. The small reservoir adjacent and intermittent streams increase this property's value for wildlife, as do the adjoining meadows on the game club's property. Because large forest tracts are increasingly being fragmented by development, the proposed preservation of this property presents a good opportunity to help conserve many wildlife species and their habitat.

ARCHAEOLOGICAL REVIEW

The Jones Mountain of New Hartford represents a microcosm of the town's history. Rugged terrain providing water power for early industrial mills, areas for pasturing and farming activities, and potential habitat for Native American campsites, represent the potential for educational and scientific opportunities for the school system and general public to learn about the town's past. In addition, a cleared lookout and a family cemetery can provide a picture of historic land use for the property.

The Office of State Archaeology and the State Historic Preservation Office both note that the project area possesses high sensitivity for prehistoric archaeological resources. Therefore, they strongly encourage the open space preservation of these cultural resources. Should future plans include any landscaping or development on the property, they strongly recommend an archaeological survey prior to any land use operations to determine if any significant archaeological and historic resources would be adversely affected by the undertaking. Their offices are available to further review any development plans for the town should they be proposed.

The newly created Connecticut Archaeological Center at the Museum of Natural History would be pleased to coordinate with the New Hartford Open Space Preservation Committee to explore the educational and scientific opportunities of this land. The town should see the preservation of Jones Mountain as an opportunity to preserve for its citizens significant cultural and natural resources within the purchase of a single property.

PLANNING CONSIDERATIONS

CONSISTENCY OF PROJECT WITH

REGIONAL AND STATE PLANS

Protection of the proposed property through a conservation easement is consistent with town, regional and state land use plans.

The community goals established in the 1994 New Hartford Plan of Development include the following: 1) Preserve, maintain, and promote the essential character and atmosphere of New Hartford as a small New England town; 2) Protect the town's natural, archaeological, cultural, historic, scenic, and other important resources and features; and 3) Provide for community facilities, a range of recreational opportunities, and open space to meet local needs. The Town Plan specifically recommends the preservation of the "steep slopes of Jones Mountain" since they are "major contributors to the rural character of New Hartford and the region." This recommendation is further emphasized in the Plan's "Conservation and Open Space Plan Map" which identifies the Jones Mountain area (and the subject site) as a "Proposed Preservation Area."

The Growth Policy Map of the Litchfield Hills Council of Elected Officials classifies the subject site as a "Rural Area." Forestland preservation, passive recreational use, and open space use are encouraged in these outlying areas to protect important natural features.

The Connecticut Conservation and Development Policies Plan, 1998 - 2003 classifies the subject site as predominantly a "Conservation Area." The State Strategy for "Conserving Areas" is to "Plan and manage, for the long-term benefit, the lands contributing to the state's need for food, fiber, water and other resources, open space, recreation, and environmental quality and ensure that changes in the use are compatible with the identified conservation value."

ACCESS AND LAND USE CONSIDERATIONS

The landowner of the Jones Mountain Property expressed interest the day of the field review in providing public access to the property off Steele Road south of the New Hartford Water Co. Reservoir. The sightlines at the proposed access point are satisfactory and there appears to be room for a small parking area at this location. Consideration should be given to linking the existing carriage path on the property to this parking area through construction of a short pathway. Consideration should also be given to posting a small sign at this parking lot indicating access to the property from this location.

It was reported at the ERT field review that the Trust for Public Lands would be developing the conservation easement for this property. It will be important to provide permission in the easement for the proposed parking area, connector trail, and sign. The conservation easement should also clarify allowable uses on the property (e.g. non-motorized use of the carriage trail by the general public) and maintenance responsibilities by the easement holder.

Land use surrounding the project site consists predominantly of steeply sloping forested land and residential development on large lots. A game club abuts the eastern border of the property. This surrounding land use is considered compatible with the proposed conservation use and enjoyment of the Jones Mountain Property. Property boundaries should be marked on the property.

To conclude, protection of the Jones Mountain Property through purchase of a conservation easement is consistent with local, regional, and state land use plans. The proposed easement will serve to maintain the rural character of the community by protecting a highly visible hillside as viewed from the Town Center. The easement will also serve to provide access to a beautiful carriage path with scenic vistas and exceptional opportunities for passive recreation, the proposed easement will also serve to enhance the quality of life in New Hartford.

RECREATION PLANNER REVIEW

SITE

The property is a 167 acre tract which is the remnant of a once much larger (+750 acres) holding on Jones Mountain, named for the family which owned it. It consists of healthy wooded, moderately to steeply sloping upland including the crest of Jones Mountain, offering a spectacular view of downtown New Hartford and the surrounding countryside. Past management has left the mixed forest in a healthy state, with access via a woods (carriage) road in generally good physical condition. Although the lower end of the road is no longer part of the property, a proposed access route off Steele Road has been flagged just upstream of the New Hartford Water Co. parcel.

OWNER INTENT

Family representatives have expressed their desire to see the property preserved and appear to favor town action to this end. Sale of a conservation easement rather than of Fee Title is favored, although limited public access (non-vehicular trail use, visiting the overlook, etc.) seems acceptable.

TOWN INTENT

Concerned with maintaining the rural character in the face of development pressure, town voters approved a referendum to spend up to \$1.5 million dollars to purchase open space. Sizable properties have been rated and the Jones Property received a high ranking.

REVIEWER COMMENTS

This reviewer agrees that town acquisition of a scenic easement would be a desirable action and should be pursued if available at a reasonable price. As its physical character indicates a low intensity use open space management, acquisition of a scenic easement/conservation restriction rather than Fee Title should be sufficient. However, the easement terms should include non-vehicular public trail access along the woods road to the overlook plus a right-of-way along the flagged routing from the woods road to Steele road. At Steele Road a small unpaved parking area should be provided. (See Figure 6) Similarly easement terms should reflect a mutually acceptable understanding regarding the degree or type of possible future silvicultural operations by the fee owner in order to protect the area's scenic character.

ADDITIONAL REVIEWER COMMENTS

1. If and as available, more of Jones Mountain should be protected by the town, via acquisition, gift, or subdivision open space dedication. Most specifically the

prominent northern promontory towering above both New Hartford Center and Pine Meadow is a critical scenic feature deserving protection. In addition the town may wish to negotiate first option to purchase the large adjoining Kingdom Game Club should current activity terminate.

2. The future of the small adjoining New Hartford Water Co. parcel on Steele Road, reportedly in private ownership, may warrant town attention at some point. No longer used for water supply purposes, it could become an attractive nuisance in terms of partying and of dam maintenance/resulting flood hazard considerations.

Joe HeKey

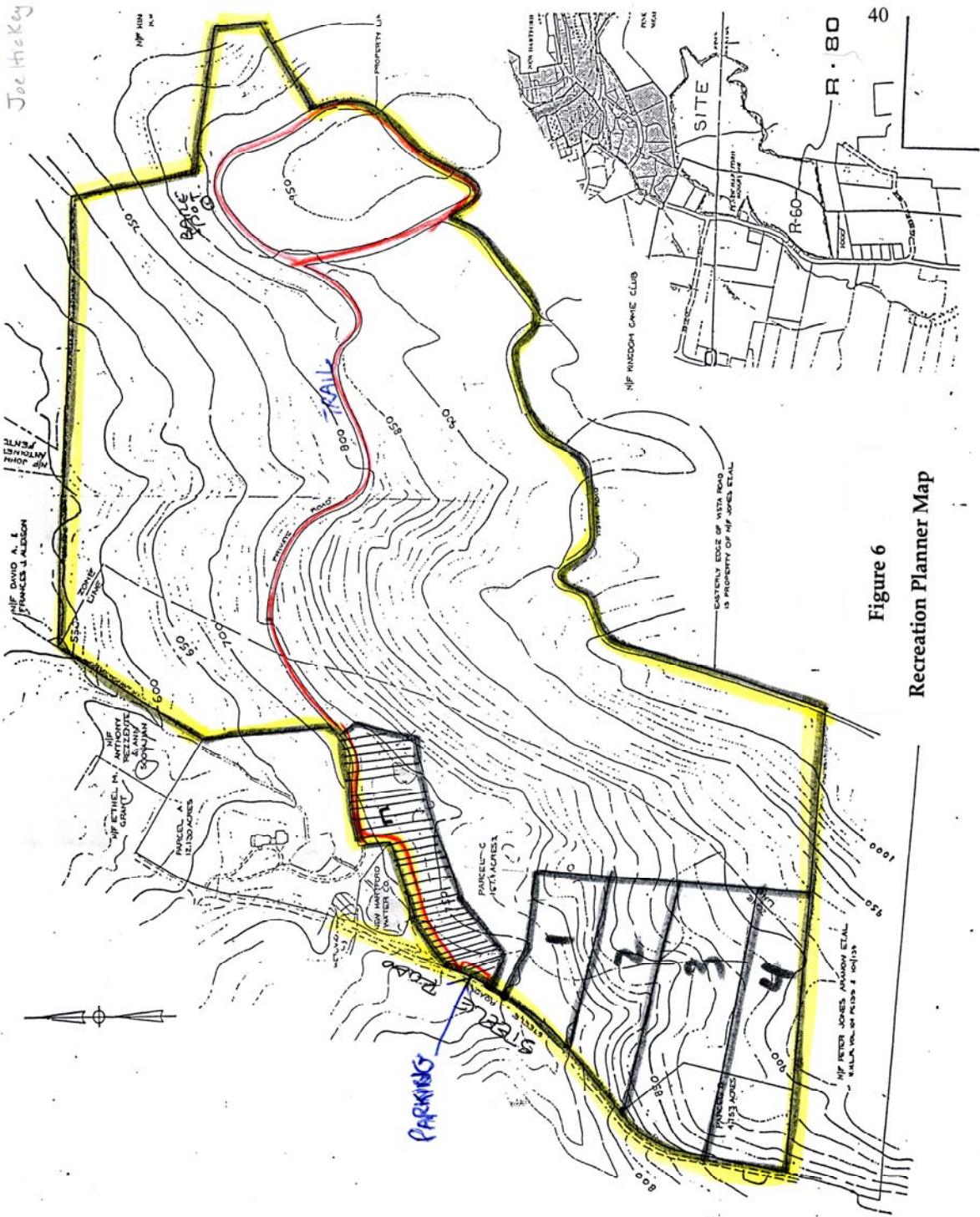


Figure 6
Recreation Planner Map

Appendix

Please contact the ERT Office at 860-345-3977 for Appendix
Information

About the Team

The King's Mark Environmental Review Team (ERT) is a group of environmental professionals drawn together from a variety of federal, state and regional agencies. Specialists on the Team include geologists, biologists, soil scientists, foresters, climatologists and landscape architects, recreational specialists, engineers and planners. The ERT operates with state funding under the aegis of the King's Mark Resource Conservation and Development (RC&D) Area - an 83 town area serving western Connecticut.

As a public service activity, the Team is available to serve towns within the King's Mark RC&D Area - *free of charge*.

Purpose of the Environmental Review Team

The Environmental Review Team is available to assist towns in the review of sites proposed for major land use activities or natural resource inventories for critical areas. For example, the ERT has been involved in the review of a wide range of significant land use activities including subdivisions, sanitary landfills, commercial and industrial developments and recreation/open space projects.

Reviews are conducted in the interest of providing information and analysis that will assist towns and developers in environmentally sound decision making. This is done through identifying the natural resource base of the site and highlighting opportunities and limitations for the proposed land use.

Requesting an Environmental Review

Environmental reviews may be requested by the chief elected official of a municipality or the chairman of an administrative agency such as planning and zoning, conservation or inland wetlands. Environmental Review Request Forms are available at your local Conservation District and through the King's Mark ERT Coordinator. This request form must include a summary of the proposed project, a location map of the project site, written permission from the landowner / developer allowing the Team to enter the property for the purposes of a review and a statement identifying the specific areas of concern the Team members should investigate. When this request is reviewed by the local Conservation District and approved by the King's Mark RC&D Executive Council, the Team will undertake the review. At present, the ERT can undertake approximately two reviews per month depending on scheduling and Team member availability.

For additional information regarding the Environmental Review Team, please contact the King's Mark ERT Coordinator, Connecticut Environmental Review Team, P.O. Box 70, Haddam, CT 06438. The telephone number is 860-345-3977.