



Division of Lands and Forests

**Bare Hill Unit
Management Plan**

March 2002

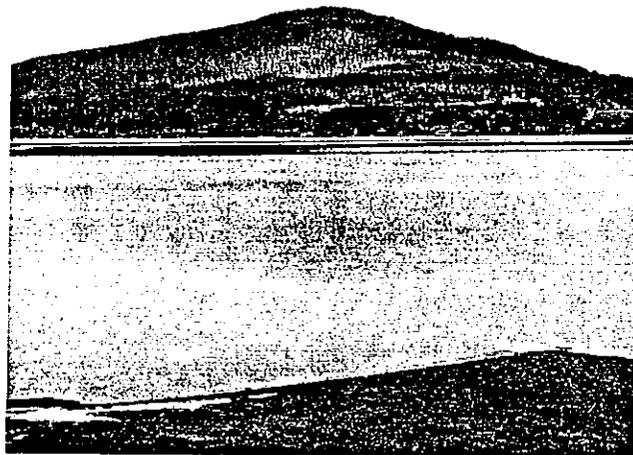
New York State Department of Environmental Conservation

George E. Pataki, Governor

Erin M. Crotty, Commissioner

Bare Hill Unit Management Plan

December, 2001



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STATE OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
ALBANY, NEW YORK, 12233-1010

MEMORANDUM

TO: The Record

SUBJECT: Bare Hill Unit Management Plan

DATE: December 21, 2001

The unit management plan for the Bare Hill Unique Area has been completed. The Plan is consistent with Department policy and procedure, involved public participation and is consistent with Environmental Conservation Law, and Department rules and regulations. The plan includes management objectives for a twenty year period and is hereby approved and adopted.


Erin M. Crotty, Commissioner

PREFACE

It is the policy of the New York State Department of Environmental Conservation to manage state lands for multiple benefits to serve the people of New York State. This Unit Management Plan is the first step in carrying out that policy. The plan has been developed to address management activities on this unit for the next 10 year period, with a review due in 5 years. Some management recommendations may extend beyond the 10 year period.

Factors such as budget constraints, wood product markets, and forest health problems may necessitate deviations from the scheduled management activities.

The acquisition of Bare Hill as a Unique area was partially based on local legends of the Seneca Nation of Native Americans, and the comments of the Seneca Nation were sought while developing this plan.

THE UNIT MANAGEMENT PLANNING PROCESS

New York State's management policy for public lands follow a multiple use concept established by New York's Environmental Conservation Law. This allows for diverse enjoyment of state lands by the people of the state. Multiple use management addresses all of the demands placed on these lands: watershed management, timber management, wildlife management, rare plant and community protection, recreational use, and aesthetic appreciation.

In this plan, an initial resource inventory and other information is provided, followed by an assessment of existing and anticipated uses and demands. This information is used to set goals and management objectives. Management actions tables provide an estimated cost and timetable for accomplishing these objectives.

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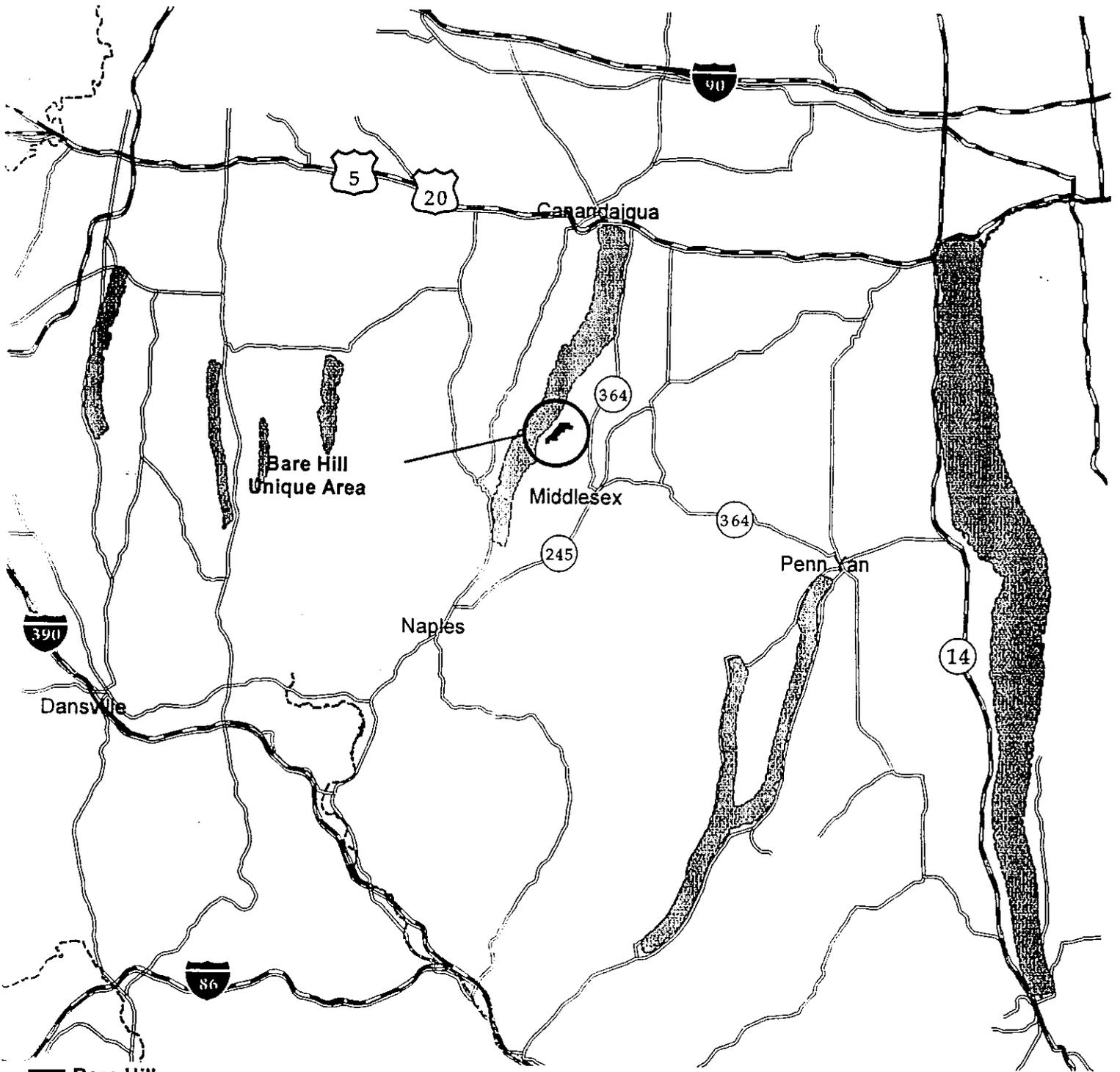
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BARE HILL UNIT LOCATION MAP



- Bare Hill
- Water
- River
- Major Road
- Roads



See Appendix F for a close up map.

INTRODUCTION

HISTORY OF UNIQUE AREAS

The Park and Recreation Land Acquisition Act of 1960 and the Environmental Quality Bond Acts of 1972 and 1986 contained provisions for the acquisition of State Forest lands, Unique properties, and areas which provide open space or special recreational opportunities. These lands would serve multiple purposes involving the conservation and development of natural resources, including the preservation of scenic areas, watershed protection, forestry, and recreation. Bare Hill Unique Area was purchased under the 1986 Bond Act because of its scenic beauty and its legendary ties to the Seneca Indian Nation.

Today there are nearly 700,000 acres of State Forests and Unique Areas throughout the state. The use of these lands is important to the economy and to the health and well-being of the people of the state.

HISTORY OF BARE HILL UNIT MANAGEMENT AREA

PRE-EUROPEAN HISTORY

By G. Peter Jemison

Today the Seneca Nation and Bare Hill are linked together by a story of mythological proportions. Dr. Arthur C. Parker in 1948 sought to discover the early record of this link and the origin of the great serpent legend. Briefly, he traced the story to the third edition of the biography The Life of Mrs. Mary Jemison written by James Seaver.

The earliest written account describing the origin of the Seneca people appears in a history written by David Cusick, Tuscarora, titled "Ancient History of the Six Nations". What appeared in the third edition of the Mary Jemison book was not something that Mary herself related but it was something added by a later informant. Dr. Parker was himself part Seneca, he directed the institution that became the Rochester Museum and Science Center and earlier the New York State Museum. His careful analysis of the artifacts from Bare Hill and South Hill both located on Lake Canandaigua led him to conclude that South Hill was more closely linked to the Seneca Nation. Bare Hill known in Seneca as Genundewah produced artifacts from a cultural group Parker describes as Algonkin. South Hill known in Seneca as Nundawao and located at the head of Lake Canandaigua produced Seneca artifacts.

Dr. Parker was further persuaded that Nundawao the earliest Seneca town existed just south of South Hill in a bowl of land not far from Naples, New York. By his account the descriptions of the Seneca Nation's hill of origin all pointed to South Hill. In the Seneca language we call ourselves Onundowahgah or people of the great hill. Therefore, the great hill associated with the Seneca Nation Dr. Parker concluded must be South Hill.

However, the legend of Bare Hill persists today and in many ways Parker's work in the 1950's added to its life. Arthur C. Parker wrote a number of pageants that were performed by the Nundawaga Society they drew attention to both Bare Hill and South Hill. He began lighting a huge bonfire on top of Bare Hill to commemorate the Harvest season and draw to a close summer along Canandaigua Lake. A similar fire was also lit on Keuka Lake, interestingly both on Bare Hill and on Keuka Lake the tradition

continues the Saturday evening before Labor Day.

The Seneca people believe we originate as a people on Turtle Island or North America. We don't believe the Bering Strait land bridge provided our access to this continent from Asia. Our earliest stories after our emergence from the earth describe great beasts of the type that roamed North America after the last ice age. The Seneca people do have a story about enormous snakes that inhabit the lakes. Arthur Parker collected a newspaper account of a sixty-foot snake that was seen by people aboard a cruise boat on one of the Great Lakes in the 1950's.

The Seneca Nation is part of the confederacy of Six Nations known as the Haudenosaunee called by others the Iroquois confederacy. The Seneca Nation is the Keeper of the Western Door and one of the Elder Brothers of the confederacy. The other members include the Cayuga Nation, Onondaga Nation, Oneida Nation, Mohawk Nation and the last to join, the Tuscarora Nation. This confederacy of Indian Nations was founded on the message of Peace, Power and Righteousness about a thousand years ago.

Where then does this leave our beloved Bare Hill? It is situated squarely within original Seneca territory that was bounded on the east by the ridge running between Cayuga and Seneca Lake. Bounded on the north by Lake Ontario and bounded on the west by the Genesee River its southern boundary ran south of the western Finger Lakes approximating the contemporary Pennsylvania border. That territory existed until the 1654-57 period when the Seneca Nation defeated the Neutral and Erie Nations and extended their western border out to the Ohio River.

I myself have taken a number of Seneca Elders to Bare Hill in the past and could not find among them any that knew of the legend

connecting the great serpent to the Seneca Nation's origin. I was told by Chief Corbet Sundown from the Tonawanda Band of Seneca "that's a white man's story." In the end Dr. Parker concluded that the story was an allegory for a war that took place between the Seneca and the Snakes, the Susquehannoks, a Native American nation the Seneca ultimately defeated.

My Seneca Elders caution me not to make up stories to fit people's preconceived notions about Bare Hill. They see no harm in continuing the Seneca Heritage Day begun by the Middlesex Historical Society nor is the Ring of Fire harmful. I don't see any harm associated with the great boulder moved to the hill's crest. It becomes a destination for hikers. However, I don't believe we can describe it as significant to the Seneca Nation.

In conclusion I support the effort to protect Bare Hill and its fragile environment and I anticipate a plan that will allow for the use of the hill by many diverse people. Safety and respect are the key words I'd emphasize when designing its use by the public.

POST EUROPEAN HISTORY

Bare Hill has gone through many changes since the coming of the white settlers. At the time of the Revolutionary War the Seneca Nation had been living peacefully on land that was their birthplace.

During the war they sided with the British and after the war General Washington sent Major Sullivan on a march through the area and all the villages and crops were burned, forcing the Senecas to move to other locations.

In 1788 a group of investors represented by Oliver Phelps and Nathaniel Gorham made a deal with the Native Americans to pay

\$5,500 annually forever. However because of financial problems this contract did not hold for long. In 1789 the land was granted by quick-claim deed to Arnold Potter. After this Potter offered the land to settlers at very low prices. One of the first settlers to the area was Capt. John Smith.

The hill was bare when the white settlers took possession. When Arnold Potter owned the land he raised wheat. After Perry and John Collins purchased it they sowed grass seed and the land was used for pasture. For several years it was used for this purpose. Farmers who owned the land would drive their sheep to pasture for the summer and take them back to their farms for the winter. There was a saying in Middlesex that "You should go over a hill as though there was a flock of sheep on the other side." This word of caution was necessary as they were driven on the main roads. As small farms and sheep flocks disappeared from the area the land began to be overgrown with brush and trees. Now, on a walk, it is almost impossible to see

the lake.

In 1920 the Town of Middlesex Highway Dept. used the stones which were thought to be part of an "Indian Fort" for road fill. All that is left of the fort is a three foot deep hole in the ground about 45 feet wide and 75 feet long.

In 1986 Allen Loomis announced a plan to create a subdivision for 33 homes on land that he owned on Bare Hill. Local residents and Seneca natives objected. In June 1988 he sold 106 acres to the Trust for Public Land for \$172,500.00 and another 50 acres that he owned jointly with Robert VanEpps for \$52,000.00. The Trust also acquired a 50 acre parcel that the East Shore Cottagers had previously bought from Albert Bates. Afterwards the Trust bought another 90 acres from Ann Arnold. The Trust sold all the land to New York State Department of Environmental Conservation in 1989. This is now the site for the bonfire that signals the "Ring of Fire" on Canandaigua Lake.

INFORMATION ON THE UNIT

IDENTIFICATION

Bare Hill Unit Management Plan includes the following:

Table 1 ACREAGE OF STATE LAND

YATES COUNTY	
NAME	ACREAGE
Bare Hill State Forest	298

GEOGRAPHY

Bare Hill Unit lies at the extreme northern edge of the Allegheny Plateau with elevations ranging from 950 feet to 1540 feet.

The Bare Hill Unique Area is located in the town of Middlesex, Yates County. Bare Hill overlooks Canandaigua Lake, a 16 ½ square mile Finger Lake. The city of Canandaigua and the village of Naples, lie within 20 miles of the area. The city of Rochester, the regions' largest population center, is about 50 miles northwest. Ontario County and the City of Canandaigua manage local recreation facilities located on Canandaigua Lake. Hi Tor Wildlife Management Area is located five miles south at the inlet of Canandaigua Lake.

CLIMATE

The average winter temperature is 26° Fahrenheit and the absolute minimum temperature recorded in the county was -25°F. In summer, the average temperature is 69°F, and the absolute maximum 106°F. Plateau summits are markedly cooler than the lowland farming areas.

Annual precipitation averages 29.8 inches. Precipitation is well distributed throughout the year and is usually adequate for all crops. Fifty-eight percent (17.5") usually falls during the months of April through September. Higher elevations, such as Bare Hill routinely receive more precipitation than at the weather recording station in Penn Yan.

Average seasonal snowfall is 64 inches. In winter, snow occurs frequently and covers the ground much of the time. Snow depths vary greatly with elevation, but on the average, there are 45 days that have at least one inch of accumulated snow. The number of such days varies greatly from year to year.

The average relative humidity in mid-afternoon is about 60%. Humidity is higher at night, and the average at dawn is about 83%.

Sunshine occurs for 65% of daylight hours in the summer and 30% in the winter.

The prevailing wind is from the west to southwest. Average wind speeds are much higher on top of Bare Hill than at weather recording stations. Site specific estimates would be an average of 18 miles per hour.

Climatic data is supplied by the United States Department of Agriculture(USDA) Soil

Conservation Service.

ADJACENT LAND - EXISTING USES

The information contained in this section was obtained from land use / land cover data of the US Geological Survey and the records of the Yates County Real Property Tax Service.

On the east, primary land uses and cover types are crop land and pasture, with a small area of vineyard. On the south, primary cover type is mixed forests, with recreational / residential land uses predominating. On the west and north, primary cover type is mixed forests, with recreational / residential land uses predominating.

Density of housing units (either seasonal or year - round) is significantly higher along the west and north exposures than the eastern and southern exposures. This is due primarily to the presence of Canandaigua Lake and it's associated recreational development.

GEOLOGY

The Wisconsin Ice Sheet retreated from the area 10,000 years ago creating the Finger Lakes. Glaciation remains the dominant geological effect. The soils are glacial till in origin. The underlying parent materials are sedimentary deposits of shale.

Most of the soils on Bare Hill Unique area are of the Aurora-Lansing and the Lordstown-Manlius associations. These soils are shallow to bedrock and are likely to lack moisture in summer. The major soil limitation affecting management is the depth of the soil to bedrock. The Aurora soils are located on top of the hill and Lordstown soils are found on

the slopes facing Canandaigua Lake. There is a small area of Ontario and Honeoye soils along Bare Hill Rd. These soils are located on steep slopes of 20% to 60% and are moderately to severely eroded due to past agriculture.

Specific soil series occurring on the Bare Hill Unit are described and mapped in the USDA publication, *Soil Survey of Ontario and Yates Counties, NY*.

VEGETATIVE TYPES AND STAGES

There are six plant communities present in the Bare Hill Unit Management Area, according to Reschke's Ecological Communities of New York State.

These are:

Successional Old Fields are open lands as the result of the abandonment of agricultural fields. This plant community is dominated by five species of goldenrods, timothy and cool season grasses, asters and daisy fleabane, yarrow and Queen-Anne's lace. Shrubs present are gray dogwood and tartarian honeysuckle. Trees and tree seedlings are eastern red cedar, white ash, and scot's pine. In the absence of periodic mowing the shrubs will rapidly take over this community, and turn it into a **Successional Shrubland Community**, examples of which can be seen on Bare Hill, along with **Successional Red Cedar Woodland**.

The Natural Forest Hardwood listed in the table are **Appalachian Oak-Hickory Forests** of various diameter classes. This community is dominated by northern red oak, white oak, shagbark hickory and white ash. Ironwood and maple-leafed vibernum are common in the understory, and black cohosh and sedges are

common. Garlic mustard and European barberry are invasive non-native plants that are also found in this type.

Conifer Plantations were started about 1963 and consist of scot's pine, red pine, white spruce and European larch. These stands tend to have little or no understory

plants. Black locust, an aggressive hardwood that is not native to the Finger Lakes is also found, and may have been planted here in **Hardwood Plantations**.

The following table (Table 2) lists vegetative types and stages for the Bare Hill Unit.

Table 2 VEGETATIVE TYPES AND STAGES

Vegetative Type	Acres by Size Class				% of Total
	0 -5 in	6 - 11 in	12+ in	other	
Natural Forest Hardwood	69	111			60.4%
Natural Forest Conifer	12				4.0%
Plantation	25	4			9.7%
Wetland					0.0%
Ponds				3	1.0%
Open/Brush				73	24.5%
Other (Roads, Parking lots, etc.)				1	0.3%
Total (Acres)	106	115	0	77	298

WETLANDS AND WATER RESOURCES

WETLANDS / PONDED WATERS

There are no regulatory freshwater wetlands within the confines of the Bare Hill Unit.

There are four small wetlands identified by the National Wetlands Inventory. All are under ½ acre, and all were created by either

excavation or impoundment. The genesis seems to be either farm ponds or gravel mining. Three are classed as permanently flooded, with one classed as semi-permanently flooded. These areas support emergent vegetation at the margins.

STREAMS

This management unit is close to the top of the watershed. Therefore, most streams are intermittent in nature, flowing only during spring run-off or during large summer rain events. Most of the surface water goes via intermittent streams to Canandaigua Lake. As noted in the wetlands section, there are several small ponds or waterholes.

AQUIFERS

The majority of the groundwater in this area is used for residential / commercial uses. The primary aquifer in this area is contained within bedrock. The bedrock has very low porosity, with nearly all groundwater occurring in fractures within the bedrock. Aquifer recharge is accomplished through percolation of surface water to the fractured bedrock. As the soils in this area consist of fine grained and largely unstratified glacial deposits, recharge is fairly slow.

This area is not within a major aquifer, as defined by the US Geological Survey. As the above discussion indicates, the entire area can be considered a recharge area for the existing minor aquifer. Wells can be expected to flow in the range of 1 - 5 gallons per minute.

SIGNIFICANT PLANTS AND EXEMPLARY PLANT COMMUNITIES

No significant plants or exemplary plant communities have been identified in the Bare Hill Unit according to the natural heritage program's definitions. There is an interesting park-like area of Appalachian-Oak-Hickory

forest in the southern portion of stand A-10 (see Appendix F). This area has not achieved crown closure and contains an impressive understory dominated by five foot high black cohosh (*cimicifuga racemosa*) plants and also contains grasses and sedges as well as garlic mustard, an invasive weed.

ROADS

The unit is accessed by state, county and town roads. Van Epps road is a town road that directly accesses the Bare Hill Unit. In winter it is maintained just beyond the last permanent occupied dwelling just east of the Bare Hill Unit.

The road system maintained by the state provides administrative access to the area. These roads are moderately built to provide limited access to the Bare Hill Unit. Public motor vehicle use is not allowed unless permitted by the regional forester. All administrative roads are gated and posted accordingly.

RECREATION

The Bare Hill Unit provides recreational opportunities about an hours drive from metropolitan Rochester, and less than a half-hour drive from the Villages of Penn Yan and Canandaigua. Consequently, recreational use can be seasonally concentrated and varied.

Every year on Labor Day there is a ceremonial lighting of a bonfire to start the "ring of fire" or "The Festival of Lights" in which landowners around the perimeter of Canandaigua Lake light fires in celebration of peace and bountiful harvests.

Recreational opportunities in the Bare Hill Unit include:

- Hunting
- Hiking
- Trapping
- Nature study
- Berry and apple-picking, mushrooming, etc.
- Cross-country skiing
- Camping
- Fishing
- Horseback riding
- Mountain biking
- Photography
- Bird watching
- Meditation

Overnight camping is allowed on state forests for groups less than 10 and for up to 3 days. Longer stays and/or larger groups are allowed to camp with a permit obtained from the NYS DEC Forest Rangers, at the Bath sub-office.

ATV use is not legal on the Bare Hill Unit.

Bare Hill is a small area compared to other state land within the area, but hunting is popular on the Bare Hill Unit. Small and big game hunting opportunities exist. White-tailed deer are the primary big game species. Archery, shotgun and muzzleloading seasons are open annually in the fall. Small game include wild turkey, ruffed grouse, pheasant, squirrel, cottontail rabbit and waterfowl. Trapping of furbearers is also encouraged. Winter seasons allow fox, and muskrat trapping, and to a lesser extent, coyote and mink.

WILDLIFE

Management for wildlife has been

passively focused on providing the greatest species diversity of endemic species. Grassland management for associated bird species has been an important component of the actions on Bare Hill Unique Area. Forest and grassland management techniques are the primary tools for providing the greatest diversity.

ADDITIONAL FACILITIES

Existing facilities on Bare Hill Unique Area are minimal. A kiosk just inside the administrative road gate provides a place to post information and maps. Van Epps Road ends in a vehicle turn around, with approximately six parking spaces in the designated parking area and additional parking available along Van Epps Road.

MINERAL RESOURCES

OIL AND GAS

All of Yates County has the potential for development of natural gas reserves. The DEC Division of Mineral Resources acts as the leasing agent for oil and gas resources on DEC lands, with the Division of Lands and Forests has oversight and inspection. Leases are competitively bid for DEC lands and agreements are processed in accordance with state Finance Law by the Office of General Services. A Generic Environmental Impact Statement on the Oil, Gas and Solution Mining Regulatory Program was published in July, 1992. Income from Gas Leases is directed to the General Fund Account for State Forests and Unique Areas, and to the Conservation Fund for Wildlife Management Areas.

There are no active gas leases on the Bare Hill Unit at this time.

Gas wells have been drilled in the northeast corner of the Town of Middlesex in the Rushville Field since the late 1800's. Gas was produced from depths of 800 to 1000 feet in the Devonian Hamilton Group and the Onondaga Limestone. A review of well files, however, indicates that no wells have been drilled in the Bare Hill Unique Area, although the possibility cannot be ruled out that old wells might exist in the area. Caretakers are advised to look for strange depressions in the ground, old pipe sticking out of the ground or a brine kill area. Contact Region 8 Minerals staff if you suspect an old well. Clean Water Bond money is available for plugging old wells on state land.

MINING

There are small reserves of sand and gravel on the east side of the property as evidenced by old borrow pits along Bare Hill Rd. SEQR review is required on all mining permits. There are no other known hard rock mineral deposits at Bare Hill.

ARCHAEOLOGICAL RESOURCES

The department has followed procedures established in concert with the New York State Office of Parks, Recreation and Historic Preservation (OPRHP) in determining the presence of cultural resources on the unit. Although no obvious structures exist, the department is aware that Native American and /or other resources may exist on the unit. These sites have been routinely written about in various documents over the past 30 years.

The department will attempt to locate and preserve any structure such as stone walls, fence lines, etc. and update OPRHP of new discoveries whenever necessary.

HISTORIC SITES

In this context the term "historical sites" is used to denote sites that were established during the period of recorded history, and **not** sites that have Native American connotation

The archaeological resources and the Indian legends and history surrounding this area really overshadow the historical resources, which are quite ordinary.

During the beginning of the "European settlement" era, this area was a portion of the Phelps & Gorham purchase. The primary use of the land was agricultural. It was used as a pasture, primarily for sheep grazing.

As far as we can tell, there are no building foundations contained within the Bare Hill Unit. There are remains of fences and stone walls, which are, presumably, tied to the sheep grazing era of the area's history. There is also a large steel well casing just inside the gate. This is a water well, and was used to water sheep. The ponds located on the property were dug to provide water for the sheep, probably in the 1950's or '60's.

There is also evidence of a small scale stone quarrying operation on the west side of the Bare Hill Unit. This was most likely operated for building stone (foundation rock) in the local neighborhood. We don't believe this was a commercial enterprise, just a local source of stone.

There also appears to be a borrow pit on the east side of the area, along Bare Hill Road.

This was probably operated for low quality gravel / glacial till for road work. Here again, we do not believe this was ever a commercial

enterprise. It probably appeared in relatively recent history.

NEEDS, ISSUES AND POLICY CONSTRAINTS

This plan strives to manage the diversity of the Bare Hill Units biological and social resources for multiple use to serve the needs of the people of New York State. In order to manage the Bare Hill Unit for multiple use, NYS DEC must manage the ecosystem in a holistic manner while reconciling the many and sometimes conflicting demands on the ecosystem. This must be done within the framework of the Environmental Conservation Law (ECL), rules and regulations, and department policies and procedures.

On the Bare Hill Unit, many issues including public needs form the basis for the objectives and management actions set forth in this plan. The NYS DEC recognizes that planning must be done today to ensure effective management in the future.

FUNDING

Currently NYS DEC's Bureau of Public Lands has a limited budget to manage all NYS DEC lands.

Funding is primarily derived from:

- Services in lieu of payment during commercial sales of forest products. (These services are limited to the specific location where the sale occurs and must be directly linked to the sale.)
- Capital construction account (State Legislature General Fund monies)
- Rehabilitation & Improvement account (State Legislature General Fund monies)
- Stewardship - Special Revenue Other (SRO) account. Note: The primary source of revenue for the SRO account is from commercial sales of forest products listed above.

- Environmental Protection Fund (EPF). This account is primarily funded from environmental fines and other appropriations by the legislature. This fund may be used for a wide variety of projects including habitat enhancement for plants and animals, recreational facilities and forestry improvements such as pre-commercial thinning, artificial regeneration, and control of invasive species.

Regional allocations from these accounts must be shared by all NYS DEC lands within the region. There is no specific budget established to manage an individual site. Funding is distributed based on priorities for all areas within the region. Tasks listed in the work schedule may not be met due to lack of funds or higher priority projects within the region.

Cooperative partnerships using the "Adopt A Natural Resource Program" with private conservation organizations or other interested parties can be used to complete projects on the Bare Hill Unit. These partnerships are a valuable supplemental source for providing needed services.

CURRENT KNOWN ILLEGAL USE

- ATV and dirt bike use
- Off road driving
- Dumping / littering
- Vandalism
- Construction of permanent blinds and/or tree stands
- Poaching
- Underage drinking

SUMMARY OF IDENTIFIED ISSUES

ACCESS

It is NYS DEC policy to provide appropriate public and administrative access on the Bare Hill Unit. Access is necessary for both public use and land management. However, appropriate restrictions on access may positively contribute to the natural character of state lands.

TIMBER MANAGEMENT

Plant communities are by nature dynamic and ever-changing. Young trees stands get older, and species composition changes with time. Disturbances from fire, wind, insects, disease, timber harvest, and other land-use practices have been an important part of the history of New York forests and have determined the composition and structure of today's forests. By applying different forest management or silvicultural practices, land managers can affect change in vegetative types and stages and associated use by wildlife.

PRESCRIBED FIRE

Currently, there is no plan for prescribed fire in Bare Hill Unique Area.

If prescribed fire is going to be used as part of the Unit Management Plan (UMP), a prescribed fire plan must be used. The plan must state objectives that assist in managing the plant community and achieve the UMP goals.

Issues that should be considered in preparing a prescribed fire plan are:

- Protecting **adjoining** landowners

- properties
- Public perception on "controlled burns" escaping prescription
- Smoke management
- Publicity from prescribed fire operations
- Visibility of the Bare Hill Unique Area from surrounding towns and major highways and potential for 911 phone calls during burns
- Public forum/meetings to provide an opportunity to voice concerns and provide a setting for input and education about prescribed fire
- Goals to be achieved by using prescribed fire such as: re-establishing native grasses, controlling invasive non-native plant species, establishing a "nursery" for native grasses and establishing a "heritage" seed program for other properties

WILDLIFE AND WILDLIFE HABITAT

Wildlife is an important component of the Bare Hill Unit. Both game species and non-game species are an important part of the ecosystem. There is continued support for management for a diversity of species, but it is a small area which limits the management options available.

PUBLIC RECREATION AND USE

The Bare Hill Unit is heavily used for recreation, both by the local population and from farther away. There is continued support for the annual lighting of a bonfire on Saturday evening of Labor Day weekend to signal the

“ring of fire” in which fires are lit around the perimeter of the lake.

Problems that were reported include wanting better clean up of trash, continued and better exclusion of vehicles, including ATV's and dirt bikes.

COOPERATIVE AGREEMENTS

Required funds to maintain the 298 acre Bare Hill Unit are beyond current budgets. Public comments suggest that present conditions may be acceptable, although there is some support for parking lot improvements, and adding outhouses, for example. There is a need to identify additional funding and actively search out cooperative agreements and partnerships to maintain roads and trails and other facilities in the Bare Hill Unit.

NYS DEC's formal cooperative program, called the Adopt-a-Natural-Resource Stewardship Program, encourages individuals and groups to undertake activities that meet management needs of state-owned natural resources. Multiple benefits of such partnerships have been identified; serving as a means to complete work that helps preserve, maintain and enhance natural resources at minimal cost to the New York State. It is also an opportunity for organizations, groups and individuals to show willing support for conservation efforts, large and small. Such efforts may involve the clean up of vandalism, litter pick up, establishment or maintenance of nature trails, providing interpretive services for school groups and other citizens, management of fish and wildlife habitats and other positive benefits to the site and natural resources.

OPEN SPACE

CONSERVATION

New York State has been a leader in recognizing the value of open, undeveloped land. In 1998 Governor George Pataki issued a plan prepared by NYS DEC and the NYS Office of Parks Recreation and Historical Preservation, entitled, "**Conserving Open Space in New York State**".

The Open Space Plan of 1998 characterizes the need for perpetuation, in a grand sense, of open space and natural landscapes as, "The quality and character of the lives of the people of New York depend upon the quality and character of the land on which we live. These lands shape the way we spend our leisure time, affect the long term strength of our economy, determine whether we have clean air and water, support the web of living things of which we are a part, and affect how we think about ourselves and relate to other New Yorkers." The Open Space Plan outlines what open space should be saved and includes priorities and guidelines for public land acquisition. This plan will be followed on the Bare Hill Unit.

AESTHETICS

In addition to providing open space and a place to experience wild land, public lands should be also be pleasing to the eye and soul. Scenic vistas, the use of natural materials for construction, and the attention to quality in design and maintenance are important components of effectively managing the Bare Hill Unit. Structures such as cell phone towers, gas wells, etc., are not compatible with this concept and therefore will be prohibited on the area. The challenge is to attract users to the site without destroying what has drawn them there in the first place.

CULTURAL RESOURCES AND HISTORIC PRESERVATION

Public comments supported the protection and enhancement of historic and cultural resources, readily identifiable as valued segments of the common heritage of New York's citizens.

Comments specifically suggested identification and protection of archaeological sites. This may become critical as grassland

restoration efforts proceed.

Comments also suggested providing more historical information about the area, particularly this area's early history.

Oil and gas leasing and other mineral exploration and development could have significant impacts on cultural resources, particularly when knowledge of cultural resources is limited. As discussed in the minerals section, this area appears to be unsuitable for minerals activity involving surface disturbance.

POLICY CONSTRAINTS

The laws, regulations, and policies listed below provide broad guidelines within which this plan is prepared. The Environmental Conservation Law of the State of New York is available to the public at local libraries, NYS DEC offices, from private vendors, and at www.dec.state.ny.us/website/regs/index.htm/ on the internet. Other rules, regulations and policies can be accessed by contacting any NYS DEC committee members.

ENVIRONMENTAL CONSERVATION LAW (ECL)

- ECL Article 8 - Environmental Quality Review
- ECL Article 9 - Lands and Forests
- ECL Article 11 - Fish and Wildlife
- ECL Article 15 - Water Resources
- ECL Article 23 - Mineral Resources
- ECL Article 24 - Freshwater Wetlands
- ECL Article 33 - Pesticides
- ECL Article 51 - Implementation of Environmental Quality Bond Act of 1972
- ECL Article 71 - Enforcement

NEW YORK CODE RULES AND REGULATIONS (6NYCRR)

Title 6

- Chapter I - Fish and Wildlife
- Chapter II - Lands and Forests
- Chapter III - Air Resources
- Chapter IV - Quality Services
- Chapter V - Resource Management Services
- Chapter VI - State Environmental Quality Review
- Chapter VII - Subchapter A
- Chapter VII - Implementation of EQBA of 1972
- Chapter X - Division of Water Resources

DEPARTMENT POLICIES

- Public Use
- Temporary Revocable Permits
- Motor Vehicle Use
- Timber Management
- Unit Management Planning
- Pesticides
- Prescribed Fire
- State Forest Master Plan
- Inventory (facility, forest, and wildlife)
- Acquisition
- Road Construction
- Motor Vehicle Access for People with Disabilities Policy
- Best Management Practices for water quality (BMP's)

GOALS AND OBJECTIVES

VISION

The vision of this plan is to ensure the protection and interpretation the cultural significance of this site and the biological integrity, improvement and protection of the Bare Hill Unit. This shall be done within the multiple use concept of management, which strives to serve the needs of the people of New York State by providing a broad based, biologically diverse ecosystem. Management will be considered over a broad geographical area, not only to ensure the biological diversity and protection of the ecosystem, but also to optimize the many benefits to the public that these lands provide.

NYS DEC lands within Bare Hill Unit are unique compared with most private properties in the surrounding landscape. Private landowners have differing management objectives and property size is generally smaller. State lands provide large expanses open to public recreation. State land management horizons extend over a very long time frame. This allows for a commitment to enhance and manage unique vegetative types.

To achieve the vision, this plan will provide specific management goals with measurable planning objectives. The objectives will be augmented and supported by a plan of action and a timetable.

PRIORITY

All actions will be listed in a table and given a priority code and frequency of action. The following codes have been used to describe the priority of actions.

C = Critical, necessary to ensure public health and safety; To stabilize structures so as to not lose the money and time invested in them; Mandated by legislation.

H = High, Necessary for public use, and/or to improve habitat or other natural resources. Often this will be for new projects.

L = Low, Important for the enhancement of public use, habitats or other natural resources.

ACCESS

The existing network of roads and parking lots is sufficient for intended uses. There are several old lanes that should be closed and work done to stop any further erosion from occurring. Two main access roads will be improved for administrative access, one along the ridge to the bonfire area, the other along the lower, western edge of the property.

Gating and posting to restrict access to administrative roads will continue. Access restrictions are needed to maintain and protect the "unique" character of the land. In addition, the costs to upgrade administrative roads to public access roads is prohibitive.

MANAGEMENT OBJECTIVES AND ACTIONS FOR ACCESS

Management Objectives	Mgt. Action	Priority	Management Actions	Frequency of Action
1. Control access.	1.0	L	Identify the need for gates and signs.	On-Going
	1.1	L	Construct gates and post signs	On-Going
	1.2	C	Maintain gates and signs.	Annually
	1.3	C	Enforce NYS DEC Policies	On-Going
2. Upgrade two access roads.	2.0	C	Identify problem areas	On-Going
	2.1	C	Correct identified problems	On-Going
3. Close all other roads.	3.0	H	Grade and install erosion control devices, and seed according to NYS Best Management Practices	One-Time
4. Maintain roads and parking area.	4.0	H	Litter removal.	As Needed
	4.1	H	Inspect culverts	Annually
	4.2	H	Replace inoperable culverts	As Needed
	4.3	H	Administrative access roads - Grade and Maintain surface.	Every 5 yrs
	4.4	H	Mow road right of way.	Annually
	4.5	L	Establish status of town roads	As Needed
	4.6	H	Maintain curbing	Annually
5. Identify and maintain state property boundary lines	5.0	H	Survey, paint, blaze, and post boundary lines.	Every 5 yrs
	5.1	H	Repair and replace area signs.	On-Going
6. Identify need for additional access and/or parking.	6.0	L	Survey site(s)	As Needed
	6.1	L	Receive public comments	On-Going
	6.2	L	Solicit public comments	Every 10 yrs
7. Construct identified additional facilities	7.0	L	Construct additional facilities	As Needed

VEGETATION MANAGEMENT

For the Bare Hill Unit, vegetative management considerations will be subordinate to our primary mission to protect and interpret the cultural significance of this site.

Tree species composition of all stands at Bare Hill

dictate even age management must be used in all forested areas. Long rotations of 150 years will be employed when stands are regenerated. Stands may be regenerated sooner if the stand is negatively impacted by insects and disease and other environmental stresses. (See discussion below)

From a biological perspective, a variety of vegetative types and stages is desirable. Aesthetic considerations may also mean that it is preferable to regenerate small acreages, rather than to have the entire forest regenerated naturally by a single catastrophic event.

An inventory of vegetative conditions is recommended every 10 years. Given the nature of this area, a standard timber inventory used on state forest lands should be supplemented by a more integrated look at all the vegetative communities. This should be done by a multi-disciplinary team.

The Gypsy Moth population needs to be carefully monitored in these stands. These forested areas were heavily defoliated in 1984, 1985, 1999 and partially defoliated in 2000. This repeated defoliation combined with other environmental factors, such as drought, place great stress on trees. It is likely that there will be mortality of some trees in these stands. However, it is not possible to project which trees will not survive or the extent of mortality. Annual inspections of these areas will be conducted to monitor the health of these trees. Should significant mortality be observed, salvage harvest may be conducted to capture the value of these trees before decay reduces their financial value.

Four natural hardwood forest stand would benefit from a commercial thinning to make the remaining trees healthier and more vigorous. The Gypsy Moth population needs to be carefully monitored in these stands, and any actions timed to coincide with a "low point" in the Gypsy Moth population cycle:

Portions of one of the Black Locust stands need to be cut to help preserve the view of Canandaigua Lake from the top of the hill.

The softwood species on this area are "off site", and will, most likely, not reproduce themselves. Four plantations are blocking scenic views, and should be converted to grassland, if funds become

available.

OPEN AREAS

Stand A-20, comprised of 73 acres, is a grass/herbaceous opening dominated by grey dogwood, goldenrod and timothy. The ultimate goal is to restore an oak opening plant community to pre-European settlement conditions and allow natural processes to maintain this community. (see appendix G and F) There are practical limitations to this ultimate condition. Removing stone walls and hedgerows would be expensive and potentially disturb desirable plant species. Fires must be carefully controlled to avoid damage to adjoining properties. This necessitates construction and maintenance of fire breaks. Invasive exotic species are now present which may require special control measures. Since little historical data exists, it is unknown what the appearance was of this area. Since most ecological communities are dynamic, the area may have changed over time. With these constraints, it may be best to measure achievement of goals and objectives by the increase of plant and animals species known to be components of these ecological communities.

On-site restoration activities can be grouped into three categorical features: structural, functional, and compositional. Structural features generally consist of the removal/reduction of invasive species, both native and non-native, as well as contemporary human artifacts (e.g., fences, junk piles, abandoned buildings, etc.). Structural features also include the incorporation of trails, roads, visual buffers, and signage. Functional features on a local scale include the restoration of ecosystem functions such as hydrology and prescribed fire. Compositional features include the reintroduction of native species (flora and fauna). Off-site factors to consider include: increased visitation, native seed source, invasive seed sources, ambient watershed development, and adjacent landowners who might be concerned. Although the recognition and consideration of all these factors are important, the

emphasis of this plan is on the restoration of functional and compositional features at Bare Hill.

Every site at which restoration is undertaken differs with respect to features that effect plant distribution and establishment. A short list of variables includes: past use, soil development, soil disturbance, existing plant community structure, dormant seeds in the seed bank, moisture characteristics, temperature distribution, snow cover, and susceptibility to fall and spring frost. It is impossible to measure or understand the effect of all these variables on plant distributions. Despite this, restoration ecologists can have excellent success with evaluating sites, prescribing treatments, and restoring native plant communities. This can be achieved because knowledge of ecological process, historical vegetation, and the willingness to adapt and refine prescriptions in response to observation (monitoring) is sufficient to restore a site. Fundamental to the success of each restoration project is a willingness to reassess land management practices in light of new data and preliminary results.

RESTORATION ACTIVITIES

The following sections describe restoration alternatives at Bare Hill. A variety of activities may be used in the habitat restoration at Bare Hill. These are discussed below without regard for any specific site. None of these alternatives are "stand alone" methods of restoration; a combination of these restoration activities is usually required.

DO NOTHING

Over time, old fields, openings, and woodlands, with their associated floras, will shade out due to the growth of woody shrubs and trees. Where woody shrubs and trees form a closed canopy in areas such as these, little herbaceous ground flora or oak reproduction will be evident. Doing nothing, by choice, indecision, or default is an approach to land

management that can have negative consequences whether intended or not. Doing nothing is not a safe or controlled approach at this site.

BRUSH AND TREE REMOVAL

Most shrubs will resprout if the roots are not completely removed, but digging out larger brush is labor intensive. Stems of shrubs and small trees can be physically removed by cutting with a tractor mounted with a brush hog. Many deciduous trees and shrubs will resprout if a herbicide is not applied after cutting. If herbicide is not applied, resprouts can be cut until the food supplies are depleted, but this may take numerous cuttings and many years. A gas-powered chainsaw is more efficient for larger stems (8–10 inches and up).

Some areas that have been intensely invaded and overgrown with dense brush are likely to need mechanical clearing using larger equipment (hydro-ax, brush-hog etc.). Follow-up herbicide treatments, and seeding of desired native species, and subsequent prescribed fires will be needed.

One of the best ways to control large woody plants is by girdling. Species that resprout, such as aspen, black locust, and willow can be controlled using this method if herbicides are used in conjunction with girdling. It is also effective on cherry, ash, and maple, without the need for herbicide. Girdling involves cutting the phloem (inner bark) but leaving the xylem (sapwood) intact. The roots busily nourish the top, but the tops send no nourishment down to the roots, which then die. Girdling can be done any time of the year, but it is the easiest and the most effective in late spring or early summer. Trees will take a year or two to die and will continue to provide habitat for a variety of animals until they fall.

MOWING

Mowing may be employed to maintain the open character of the site but will not aid in the re-establishment of native plant species. **Mowing will**

at least keep other management options viable until resources are available to employ other restoration activities.

EXOTIC SPECIES CONTROL

Many herbaceous plants such as dandelion (*Taraxacum officinale*) and Queen Anne's lace (*Daucus carota*) do not last long in a natural area where the natural processes are being restored. However, others such as sweet clovers (*Melilotus* sp.), garlic mustard (*Alliaria petiolata*), and swallowwort (*Vincetoxicum nigrum*), can become serious problems and can out compete and replace many native species. The appropriate control methods will depend on the condition of the site, characteristics of the problem species, and available resources.

Removal priority should be given to species whose inhabitancy pose the greatest threats: those that replace vital species, reduce native species diversity, significantly alter community structure or ecosystem function, or persist indefinitely as sizable, reproducing (sexually or clonally) spreading populations.

Vigilant monitoring of natural areas can result in early detection of new occurrences or increases in invasive species that then can be controlled more easily. Remove exotic species when they appear and have a contingency for implementing new control methods as they become available. Also, the removal of exotic species is critical at the beginning of a restoration project when everything that can enhance the conditions for the return of native plants should be undertaken. Opportunistic native and exotic species are poised to invade newly opened areas rapidly.

Chemical use may be justified when invasive species are pervasive and persistent in the natural community, and when effective nonchemical control methods are not known or do not adequately curb invasive species populations. Herbicides will be applied by certified pesticide applicators, following

label directions and all applicable laws.

Most annual or biennial broadleaf plants can be cut near ground level at or near the time of flowering but before seed or fruit develops. Cut stems must be removed from the site if flowers on the stem threaten to produce viable seeds. Unfortunately, rootstocks of many perennial species can respond by sending up new stems. Some weeds can be controlled by strategically timed burning or mowing, but during certain times of the growing season these techniques can be hard on some of the plant or animal species to be protected.

POTENTIAL PROBLEM SPECIES

Listed below are the major invasive species found at Bare Hill. Beyond the section on native shrubs, the balance of the species are all highly aggressive alien invaders.

NATIVE SHRUBS

It is unknown if native shrubs were an integral part of the original community. At Bare Hill native gray dogwood is among the most aggressive of the shrubs invading open areas. When historic evidence suggests that a particular savanna or prairie had fewer shrubs, most restorationists are comfortable reducing the extent of native shrub population.

COMMON BUCKTHORN (RHAMNUS CATHARTICA)

Common buckthorn is a tall shrub or small tree that can reach 20 feet in height and 10 inches in diameter. Introduced to North America as ornamentals, they were planted as hedgerows. Common buckthorn readily invades unburned prairies and savannas. It aggressively competes by shading out native herbs and shrubs.

Burning: Prescribed burns in early spring and

fall can kill seedlings (especially first year growth) and some larger stems. However, for complete control, annual burning may need to continue for 5 or 6 or more years depending on the extent of establishment and the seed bank. One or two burns stimulate resprouts. It is generally difficult to burn in dense buckthorn stands as the understory is typically well-shaded, allowing for little fuel build-up.

Chemical: Chemical control is best done in the fall when most native plants are dormant but buckthorn is still actively growing. This lessens the risk of affecting nontarget species. Buckthorn remains green and easily recognizable far into the fall and early winter. Fall is the best time to cut and treat stumps but winter application of chemicals has also been effective. Cut stems level close to the ground. Immediately apply Garlon 3A or Roundup (50% concentration) to stumps. In wetlands, use Rodeo for cut-stump treatment. Resprouts should be cut again and painted with a 1.5% glyphosphate application. On severely disturbed sites or buffer sites, as a supplemental method, use Garlon 4 as a dormant-season basal-bark treatment, cut stems and then spray resprouts with Garlon 4 or spray foliage with Rodeo.

BUSH HONEYSUCKLES (LONICERA TATARICA, AND VARIOUS HYBRIDS)

Native to Asia and eastern Europe, bush honeysuckles are dense, upright, deciduous shrubs (3–10 feet in height) with shallow roots that have a broad tolerance of various moisture and habitats. They thrive in sunny, upland habitats, including forest edges, roadsides, pastures and abandoned fields. Woodlands are the most affected and are particularly vulnerable if the habitat is already disturbed. They can also be found in fens, bogs, and along lake shores. The widespread distribution is aided by birds, which consume the fruit and disperse the seeds over long distances. Seedlings establish in sparse vegetation and are usually found growing under tall shrubs or trees where birds perch and deposit seeds. Their vigorous growth inhibits development of native shrub and ground layer

species, eventually entirely replacing native species by shading and depleting soil moisture and nutrients. Easily spotted in spring and fall because they leaf out 1–2 weeks before native shrubs and keep their leaves longer into the fall.

Burning: Spring burns may kill seedlings and top-kill larger plants. Resprouts may occur, so annual burning for 5 or more years will be needed.

Chemical: After cutting the stems at the base, treat the stumps with Roundup or Rodeo. Two cuts per year may be needed, one early spring followed by another in early fall. Cuts made in winter will result in vigorous resprouting when the plant comes out of dormancy if they are not followed up with herbicide treatment. Roundup or Rodeo can be applied as a foliar spray just after the flowers bloom (usually June). Krenite can also be used as a foliar spray. Both mechanical and chemical treatments must be repeated for at least 3–5 years.

BLACK LOCUST (ROBINIA PSEUDOACACIA)

Black locust is a leguminous, deciduous tree that grows from 30–80 feet tall and is native to the slopes and forest margins of Southern Appalachia and the Ozarks. It has shallow roots and often spreads by underground rhizomes. They typically form multiple stemmed clones and are slow to leaf out. It is frequently found in upland prairies, savannas, roadsides, old fields, and woodlots. It prefers humid climates with sandy, loamy, well-drained soils in open sunny locations. Black locust produces abundant seeds but it typically reproduces vegetatively by stump sprouting and spontaneous root suckering from extensive root systems. Sprouting shoots and interconnecting fibrous roots form extensive, dense groves of clones. Damage to roots or stems stimulates vigorous sprouting, root suckering, and lateral spread. Black locust commonly occurs in disturbed habitats like pastures, degraded woods, thickets, old fields, and roadsides. Because dense clonal stands shade out most understory vegetation, they should be eliminated.

Burning and Mechanical: Burning and mowing

only temporarily controls the spread. Mowing actually seems to promote seed germination, and burning and cutting stimulates sprouting and clonal spread. Girdling without chemical application is ineffective because it kills the stem but does not prevent suckering formation. Bulldozing may be an option on severely disturbed lands.

Chemical: Because black locust is difficult to control due to rapid growth and clonal spread, management efforts have concentrated on chemical control with variable success. Garlon or Roundup will be applied either to the leaves (foliar) or to the cut stump (basal). Foliar application, however, should not be applied with care in high-quality natural areas because of the danger to desirable species.

Whatever control measure is used, a follow-up treatment is usually required.

SWEET CLOVERS (MELILOTUS ALBA AND M. OFFICINALIS)

Native to Asia and Europe, white sweet clover is a leguminous biennial plant. Sweet clovers grow well in direct sun and partial shade. They seem to prefer calcareous or loamy soils and are most often found in open disturbed, upland habitats. This plant is strictly vegetative the first year and can be found in late summer. In the second year, plants flower from late May through September, set seed and die. The small hardy seeds can remain viable in the soil for as long as thirty years. Sweet clovers are fire-influenced, aggressive, weedy plants that produce populations with high rates of fluctuation. Burning produces excellent growing conditions by scarifying the seeds and stimulating germination. During the year following a burn, many flowering plants will generally emerge.

Burning: It is possible to reduce sweet clover by burning two years in a row. A hot, complete burn early the first year (before green-up, early to mid April) to stimulate germination and a hot, complete burn the following year in early to mid May. If burning is conducted before the buds are developed, the plants will resprout. Heavily infested areas may need this burning sequence repeated after two years.

The fire can be of low intensity—just enough to touch the stems. For small patches a flame gun (torch) may be used when the vegetation is damp to avoid burning the surrounding prairie. Another burn strategy is to mow later in the summer, allow the plants to dry, and then burn. This can be stressful to the native vegetation and insects, so it should not be done every year.

Mechanical: Small patches of sweet clover can be hand pulled when the soil is damp. It is important to remove the root portion or the plant will resprout. Plants can be cut low to the ground after the lower leaves have died and up to the early stages of flowering. If the plant has set seed, they must be removed from the area. Conducting annual inspections to remove scattered individual plants will be necessary. Habitats adjacent to managed areas should also be inspected. Due to the long viability of the seeds, sweet clover must be managed on a nearly continuous basis.

Chemical: Sweet clover can be managed using strategic burning and mechanical controls, and should not require chemical use.

SWALLOWWORT (VINCETOXICUM ROSSICUM)

Swallowwort is a native of Europe and was first documented in the eastern U.S. in 1890's. It has spread from there into Ontario, Michigan, Wisconsin, and Missouri. The seeds are windblown and swallowwort seems to prefer limestone influenced soils. It can tolerate full shade to full sun and quickly forms a monotypic stand.

Mechanical: Dig out entire root crown. It is important to get it all due to its ability to resprout prolifically from the roots.

Chemical: Larger patches require herbicide control.

Burning: No information is available on the impacts of burning in swallowwort.

GRASSLAND SPECIES REINTRODUCTION

A central component of restoration is the replacement of native species that are missing from the area. However, species reintroduction into areas without any management or restoration of the ecological processes that sustain it will not be successful.

Following control of competing and invasive species, site conditions must be created to ensure seeding/planting will be successful. Applications of lime and fertilizer will be required. Exposing mineral soil by discing, or drilling in seed, may be required for germination of some seeds.

Oak openings and the surrounding woodlands require annual burn management that allows the fire to continue from the open areas into the woodland. The “edge” of the woodland and openings should be blended to allow for a more natural interaction of the plants and animals that live there. The canopy should be opened to achieve average ground light levels of 5–15% of available light as measured by a light meter in the middle of the day during the summer. When selecting trees for removal, a full range of size classes should be preserved, leaving a few downed logs per acre and a few standing dead trees for wildlife habitat.

PRESCRIBED FIRE

There is little evidence for determining what was the “natural” fire regime. Both people and lightning played critical roles in establishing and maintaining oak ecosystems. In the oak woodlands around the world, people have regularly set fires for at least the last 5,000 years. Oaks have certain characteristics that make them more resistant to fire than other woody species: thick bark, the ability to stump sprout, and resistance to rotting after scarring. Paleobotanical studies consistently reveal oak pollen to be associated with deposits of charcoal.

Oak ecosystems depend upon frequent (annual to about once a decade) fires for the preservation and maintenance of their structure and biodiversity

for several reasons. Fire increases vegetative productivity, flowering, native species diversity, and suppresses fire-intolerant exotic species that are less adapted to survive periodic fire. In grassy communities, fine fuels (herbaceous plant debris) often accumulate faster than they can decompose. The annual buildup of the litter layer makes it difficult for herbaceous species to germinate and grow. Without fire in woodlands, native woody species become overstocked and nonnative trees and shrubs begin to invade. This creates such intense shade that oaks are unable to reproduce and the herbaceous ground layer, adapted to a more open canopy, cannot grow. Eventually, without a ground layer flora, the hydrology and redox factors are altered and the soil begins to erode, carrying with it seeds, spores, and nutrients.

Overall, a burning schedule should include all tracts that have been restored to native plant communities. Yearly evaluation is important in order to determine follow-up activity, such as overseeding or applying herbicide to resprouts, and to determine the extent to which native biodiversity is burgeoning and weeds are diminishing. Once a significant groundcover and diversity has been reestablished, fire return intervals can probably be relaxed to once every 1–3 years. It is also important to burn across community lines for natural vs. unnatural community boundary demarcation. The focus should be on blending the management units into one interacting ecosystem.

At the beginning of a restoration program, the fuel present in woodlands is considerably different from that which originally maintained these communities. In particular, more woody growth in the form of live stems, dead standing stems and woody debris on the ground is present. Fine fuels (dead grasses, sedges, and forbs), which previously formed the main source of fuel for fires, are lacking. Initially, these conditions will result in fires that may have “hot spots” that burn for longer periods around sources of accumulated woody fuel or unburned areas due to a lack of continuous cover of fine fuels. As the fine fuel becomes established,

fires will burn more quickly and fewer hot spots will be present.

Spring burns can carry irregularly through areas influenced by a high spring water table. This "patchy" fire coverage leaves hiding places for invertebrates and other species, and may permit oak seedling establishment. Late spring burns may cause greater harm to woody plants than fall burns. Fall fires will burn wet prairies and marshes that were too moist to burn in the spring. Fall was the typical time for presettlement Indian-set fires, virtually the sole source of ignition, since dry lightning was rare to absent during the fall and spring burn windows.

It should be recognized that fire in woodlands is quite different from fires in grassy openings. Prairie grass fires are often characterized by longer flame lengths and shorter resident time. When burning through the patchy distribution of fine fuels and dried leaves in a contemporary woodland, under the appropriate prescription, the small and slow-moving fires are often difficult to keep alight.

A burn policy should include a public education strategy to increase the understanding and awareness of the critical need for prescribed fire in natural areas. Prescribed burn training programs for resource management at all levels should be expanded, upgraded, and intensified.

Various endemic and epidemic occurrences of insects and diseases periodically impact the types of vegetative communities found on Bare Hill. As noted above Gypsy Moth is of paramount concern in the hardwood timber stands of this area. Fall Cankerworm is of concern and will undoubtedly impact this area in the future, as they have in the past. The grassland areas do not seem to be subject to catastrophic insect attack.

Some level of insect, disease, and natural disaster is recognized as beneficial in shaping the vegetative communities of this area, although quantifiable standards are not currently available.

NATURAL HARDWOOD FOREST STAND IN NEED OF THINNING:

<u>Stand Number</u>	<u>Acres</u>	<u>Species</u>
A - 10	31	Oak - Hickory
A - 23	5	Oak - Hickory
A - 26	24	Oak - Hickory
A - 29	11	Oak - Hickory

BLACK LOCUST STAND TO BE CUT TO MAINTAIN SCENIC VIEW:

<u>Stand Number</u>	<u>Acres</u>	<u>Species</u>
A - 25	12	Locust

CONIFER PLANTATIONS TO BE CUT TO MAINTAIN SCENIC VIEW:

<u>Stand Number</u>	<u>Acres</u>	<u>Species</u>
A - 12	5	Scotch Pine
A - 13	9	European Larch
A - 17	2	White Spruce
A - 18	10	Scotch Pine

NO VEGETATIVE ACTION PROPOSED:

<u>Stand No.</u>	<u>Acres</u>	<u>Species / Type</u>
A - 1	6	Oak - Hickory
A - 2	7	Oak - Hickory
A - 3	3	Red Pine
A - 4	2	Pioneer Hardwoods
A - 5	2	Oak - Hickory
A - 6	7	Oak - Hickory
A - 7	1	Gravel Pit
A - 8	2	Pioneer Hardwoods
A - 9	1	Black Locust
A - 11	6	White Spruce
A - 14	3	Red Pine
A - 16	1	Red Pine
A - 19	1	Pond
A - 21	3	Oak - Hickory
A - 22	3	Pioneer Hardwoods
A - 24	4	Pioneer Hardwoods
A - 27	1	Pond
A - 28	10	Oak - Hickory
A - 30	6	Pioneer Hardwoods
A - 31	26	Black Locust
A - 32	18	Black Locust
A - 33	3	Oak Hickory

MAINTAIN AS OPEN:

A - 20	73	Open
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MANAGEMENT OBJECTIVES AND ACTIONS FOR VEGETATION

Management Objectives	Mgt. Action	Priority	Management Actions	Frequency of Action
1. Improve knowledge of vegetative communities	1.0	H	Conduct multi-disciplinary inventory	Every 10 Years
2. Protect against insect, disease, and wildfire	2.0	C	Suppress wildfires	On-Going
	2.1	L	Address insect and disease problems through Integrated Pest Management	On-Going
3. Maintain grassy opening	3.0	C	Mow / burn at least every 2 years	

			(1/2 of total acres each year)	Annually
4. Restore grassy opening using native species	4.0	H	See above narrative and appendix G for specific actions	Once
5. Maintain vigor in natural hardwood forest, even aged management (150 yr . rotation)	5.0	L	Thin selected stands	As needed
6. Prepare conifer plantations for natural regeneration	6.0	L	Convert selected stands to grassland	When possible
7. Maintain and expand current scenic view of Canandaigua Lake	7.0	H	Cut Black Locust stands and apply herbicide to resulting sprouts.	Once
	7.1	H	Mow critical area each year	Yearly
	7.2	L	See 6.0	When Possible

WATERSHED PROTECTION

The ECL dictates that State Forests be managed for watershed protection. This is consistent with Bare Hill Unit objectives, sound conservation practices and public desires. "New York State Forestry Best Management Practices for Water Quality" are mandatory for all silvicultural practices on state lands and require specific conservation practices which protect soils and water quality. Compliance with the New York State Freshwater Wetlands Act (ECL Article 24) and the Protection of Waters Act (ECL Article 15) is required by NYS DEC when conducting management activities or construction projects that involve regulated activities within protected wetlands, water bodies, or streams. Regulated activities are such things as clear-cutting vegetation and construction of ponds or road crossings. Normal maintenance and repair of existing structures is generally exempt from permit requirements. Well-managed water resources have multiple benefits, including quality fish and wildlife habitats, aesthetically pleasing sites, ground water protection, and flood water retention.

MANAGEMENT OBJECTIVES AND ACTIONS FOR WATERSHED AND WETLANDS

Management Objectives	Mgt. Action	Priority	Management Actions	Frequency of Action
1. Use watershed protection guidelines.	1.0	C	Utilize Best Management Practices (BMP's) for timber sales.	On-Going
	1.1	C	Control erosion through proper road maintenance.	On-Going
	1.2	C	Comply with the Protection of Waters	On-Going
	1.3	C	Comply with General Stormwater SPDES Permit.	On-Going

FISH AND WILDLIFE

Management for wildlife has been, and will be, passively focused on providing the greatest species diversity of endemic species. Grasslands for the associated bird species that are in decline will be seriously considered. However, the practicality of these actions will depend on resources being available to evaluate and establish various grassland communities. Forest and grassland management techniques, covered under Vegetation Management, will be the primary tools needed to achieve these goals.

The wildlife objectives for the Bare Hill Unit focus on: (1) enhancing overall species diversity and abundance by developing and maintaining plant species diversity and age class diversity; (2) achieving the appropriate size for wildlife populations; (3) providing information about wildlife; (4) knowing the status and distribution of species.

MANAGEMENT OBJECTIVES AND ACTIONS FOR FISH AND WILDLIFE

Management Objectives	Mgt. Action	Priority	Management Actions	Frequency of Action
1. Enhance species diversity.	1.0	H	Develop habitat to provide diverse plant species and structure. (See Vegetation Management)	On going
	1.1	L	Maintain pond environs.	On going
2. Achieve appropriate population size.	2.0	L	Monitor deer wintering and turkey roosting sites.	Annually
3. Provide information	3.0	H	Prepare educational material for kiosks	Annually
	3.1	L	Develop and implement actions to convey information to the public.	As needed
4. Know status of wildlife.	4.0	L	Survey breeding birds.	Every 10 years.

PUBLIC RECREATION AND USE

One goal of the NYS DEC is to provide suitable opportunities for the public enjoyment of compatible recreational pursuits in a natural setting. We are charged under Environmental Conservation Law with guaranteeing that the "widest range of beneficial uses" of the environment is attained "without unnecessary degradation or other undesirable or unintended consequences." The public has an undeniable stake in identifying both "beneficial uses" and "undesirable consequences." Recreational program opportunities for people with disabilities will be planned in perspective with those available elsewhere in the Region on NYS DEC lands. At a minimum, parking will comply with the Americans with Disabilities Act Accessible Guidelines.

The annual ritual of lighting the "Ring of Fire" is expected to continue to be organized by the Middlesex Historical Society, under permit from NYS DEC.

Wildlife-related recreation, including hunting and trapping, is a dominant and important use of the NYS DEC lands in the Bare Hill Unit. Wildlife users adhere to standards of equitable distribution, humane treatment, fair chase, ethics and the maintenance of the variety and quality of use. Wildlife viewing is also encouraged according to standards of ethical treatment.

MANAGEMENT OBJECTIVES AND ACTIONS FOR RECREATION

Management Objectives	Mgt. Action	Priority	Management Actions	Frequency of Action
1. Assess and identify users satisfaction with recreational opportunities.	1.0	L	Receive public opinion.	On-Going
	1.1	L	Survey users	On-Going
2. Determine feasibility and/or compatibility of proposed additional recreational opportunities.	2.0	C	NYS DEC review of proposed projects	As Needed
	2.1	H	Negotiate with sponsoring volunteer groups.	As Needed
	2.2	H	Enter into agreements with volunteer groups to provide additional recreation.	As-Needed
	2.1	H	Provide technical support for volunteer groups.	As-Needed
3. Coordinate with volunteer groups to construct and/or maintain existing and/or future recreational facilities.	3.0	H	Identify and coordinate with local community officials and/or volunteer groups to encourage cross-country skiing, hiking, Ring of Fire, and other activities.	On-Going
	3.1	L	Construct other new facilities as appropriate.	As Needed
	3.2	L	Promote Adopt a Natural Resource Program.	On-Going
4. Provide additional recreational opportunities.	4.0	C	Maintain and improve access for persons with disabilities.	On-Going
5. Identify needed maintenance activities.	5.0	H	List and prioritize activities needed to be maintained.	On-Going
6. Maintain existing and future recreational facilities.	6.1	H	Establish a litter-free environment by promoting carry in/carry out policy.	On-Going
	6.2	H	Install, update, repair, and replace information on signs/kiosks	On-Going
	6.3	C	Enhance law enforcement efforts.	On-Going
7. Increase awareness of public recreation opportunities.	7.0	L	Provide brochures and maps for users.	Update Every 5 yrs

8. Enhance visual appeal	8.0	H	Create and maintain scenic vistas. (See Vegetation)	As-Needed
	8.1	H	Remove litter from state land.	As-Needed

UNIT MAINTENANCE AND FACILITIES MANAGEMENT

The goal is to maintain the facilities on the Bare Hill Unit to ensure its integrity and character. This must be done within the resources available.

MANAGEMENT OBJECTIVES AND ACTIONS FOR MAINTENANCE AND FACILITIES

Management Objectives	Mgt. Action	Priority	Management Actions	Frequency of Action
1. Maintain constructed ponds.	1.0	C	Inspect for problems.	Annually
	1.1	C	Repair dykes, control boxes, etc	As Needed
	1.2	C	Mow dykes/dams	Every 2 yrs
	1.3	H	Excavate bottom of ponds.	As Needed
2. Solicit volunteer groups to help maintain facilities.	2.0	L	See Public Recreation and Use	On-Going
3. Maintain kiosk, area sign and any other facilities.	3.0	H	Inspect for problems.	Annually
	3.1	H	Repair problems.	As Needed

LAND ACQUISITION

It is not NYS DEC's goal to significantly enlarge the size of the state land. However, certain parcels will be considered for purchase if they contain rare, endangered or threatened species in NY; improve access; or consolidate public ownership by eliminating inholding. It should be understood that the NYS DEC may acquire parcels from **willing** sellers as funding becomes available.

MANAGEMENT OBJECTIVES AND ACTIONS FOR LAND ACQUISITION

Management Objectives	Mgt. Action	Priority	Management Actions	Frequency of Action
1. Provide improved access to Bare Hill Unit.	1.0	L	Identify land acquisition needs.	On-Going
	1.1	L	Acquire desired properties from willing sellers as funding permits.	On-Going
2. Recreational opportunity.	2.0	L	Identify land acquisition needs.	On-Going
	2.1	L	Acquire desired properties from willing	

			sellers as funding permits.	On-Going
3. Significant ecological areas.	3.0	L	Identify land acquisition needs.	On-Going
	3.1	L	Acquire desired properties from willing sellers as funding permits.	On-Going

MINERAL RESOURCES

Gas and other mineral leases are reviewed by the NYS DEC Bureau of Public Lands. It is the Bureau of Public Lands policy to recommend the exclusion drilling or mining in areas with sensitive habitats, intensive recreational use, and cultural and/or historic sites. Bare Hill Unique Area receives intensive recreational use and is a culturally significant site. Following public input, "No entry" leases of mineral resources may be allowed. Requests for exploration/research activities such as seismic or test drilling will be reviewed on an individual case basis to ensure public safety and maintain integrity of the site.

MANAGEMENT OBJECTIVES AND ACTIONS FOR MINERAL RESOURCES

Management Objectives	Mgt. Action	Priority	Management Actions	Frequency of Action
1. Prohibit surface disturbance from drilling/mining	1.0	C	Provide maps and explanations to the Division of Mineral Resources.	As-Needed
2. Administer seismic work and drilling	2.0	C	Review Temporary Revocable Permit (TRP) applications.	As-Needed
	2.1	C	Enforce TRP permit conditions	As-Needed

ARCHAEOLOGICAL AND HISTORIC RESOURCES

It is the goal of NYS DEC to identify and protect any archaeological and/or historic sites on state land. The department will attempt to locate and preserve any structure such as stone walls, fence lines, etc. and update OPRHP of new discoveries whenever necessary.

MANAGEMENT OBJECTIVES AND ACTIONS FOR HISTORICAL SITES

Management Objectives	Mgt. Action	Priority	Management Actions	Frequency of Action
1. Explore for archaeological and historic resources	1.0	L	Continue exploration	On-Going
2. Preserve historical and archaeological resources.	2.0	C	Avoid any activity which may disturb any historical and/or archaeological resources.	On-Going
	2.1	C	Comply with state historic preservation act.	On-Going

PUBLIC INVOLVEMENT

All comments or questions should be addressed to one of the NYS DEC committee members, who can be contacted at the Bath Sub-office located at 7291 Coon Rd. Bath, NY 14810.

INITIAL MAILING

Bare Hill Unit Management Plan's citizen participation activities commenced with a July 14, 2000 mailing announcing the start of the management plan process. An attached mailer requested address corrections and a preliminary round of public comments was due August 18, 2000.

The initial mailing's targeted audience consisted of previously identified:

- adjacent property owners,
- local government officials,
- recreational groups,
- forest industry groups,
- wildlife groups and
- other general environmental groups.

Based on those returned and other public comments received, the mailing list was amended to add other interested parties and/or correct outdated names and addresses.

SECOND MAILING

Upon completion of the draft Bare Hill Unit Management Plan, a second fact sheet will be sent to those on the updated mail list, including the media, summarizing objectives of the draft plan, listing local document repositories and announcing a public meeting. A notice will also be posted in the Environmental Notices Bulletin (ENB) two weeks prior to the meeting.

PUBLIC MEETING

One public meeting was held near the Bare Hill Unit Management area, in the Middlesex Fire Hall where the draft plan was presented and to receive comments on it. Following the end of a 30-day public comment period, any modifications based on public comment will be made and a responsiveness summary was added as an appendix to the final plan.

FINAL NOTICE

Commentators, and those on the updated mail list will receive a notice of availability of the final plan. Document repositories will again be identified and any significant modifications based on public comment will be noted.

APPENDICES

APPENDIX A : LEGEND OF BARE HILL

Two very majestic hills along the east side of Canandaigua Lake, Bare Hill and Whaleback, hold a very prominent place in Seneca Indian tradition and the history of the Naples Valley.

Genundowa, or Bare Hill, is located 5 miles north of Woodville at the head of Canandaigua Lake. The summit of Bare Hill is 865 feet above the lake; it was the traditional site of the Seneca Indian council fires.

There have been many published accounts of the legend of Bare Hill. David Cusick, a native Seneca writer, published an early account of the legend in the mid-1800's. Mary Jamison's biography also presents a similar version.

Briefly, the tale goes this way: A young Seneca boy, while paddling his canoe through the Naples swamp at the head of Canandaigua Lake found a very pretty snake that he decided to take home to his wigwam.

The boy named the snake Osaista Wanna. He fed it insects, frogs and flies. The snake grew and grew until it was consuming squirrels, woodchucks, and raccoons. The snake continued to grow and clamored for more and larger game.

When local supplies of game and fish became unavailable, the Indian villagers decided to build a fort to protect themselves from the reptile. Their fort was built at the summit of Bare Hill. However, before it was completed and made totally safe, the monster serpent appeared. It used its vast body to coil around the entire fort, completely encircling the people. Many of the Indians nearly starved and, in seeking to escape in the dark, ran down the serpent's throat.

Two children in the Indian village, a young boy and his sister, did not try to escape; they relied upon the advice given to them by an Indian God in their dreams. The boy, in his dream, was told how to slay the monster by stringing his bow with his sister's hair. He was told to make one unerring shot into the third scale on the serpent's throat and all would be saved. The youth shot the dart, and it pierced the monster's heart.

The death of the serpent did not come easily. It writhed and twisted and turned for hours after it had been hit by the charmed arrow. The body, which weighed several tons, lashed at the hillside, knocking down trees, tumbling boulders. The job was so complete when the serpent finally died, that the entire hill was barren of trees and bushes. The Senecas named the site Bare Hill.

Also, as the serpent plunged into Canandaigua Lake near Vine Valley, it disgorged the heads of its Seneca Indian victims, most of which had turned to stone. Round stones found in the vicinity of Bare Hill are now known to geologists as septaria; local residents, however, call them Indian heads.

Whaleback is a hill at the south end of Canandaigua Lake; it is also called South Hill and Sunnyside. This hill was especially revered by the Seneca Indians. There is a deep gorge on the east side of this hill that rises 1,100 feet above the valley floor. This gorge, called Clark's Gully today, once had an ancient cave which is said

to be the birthplace of the Seneca Nation. The Senecas believe that the earth opened, and the first Senecas arrived in the world in this remote site, adjacent to West River, many, many years ago.

Provided by Middlesex Heritage Group

THE SERPENT AT BARE HILL

-from Ancient History of the Six Nations by David Cusick

There was a woman and son who resided near the fort, which was situated near a note, which was Jenneatowaka; the original seat of the Te-hoo-nea-nyo-hent (Senecas) the boy one day, while amusing in the bush he caught a small serpent called Kaistowanea, with two heads, and brings it to his apartment; the serpent was first placed in a small warm box to keep tame, which was fed with birds, flesh, etc. After ten winters the serpent became considerable large and rested on the beams within the hut, and the warrior was obliged to hunt deers and bears to feed the monster; but after awhile the serpent was able to maintain itself on various game; it left the hut and resided on top of a nole; the serpent frequently visited the lake, and after thirty years it was prodigious size, which in a short time inspired with an evil mind against the people, and in the night the warrior experienced the serpent was brooding some mischief, and was about to destroy the people of the fort; when the warrior was acquainted of the danger he was dismayed and soon moved to other fort; at daylight the serpent descended from the heights with the most tremendous noise of the trees, which were trampled down in such a force that the trees were uprooted, and the serpent immediately surrounded the gate; the people were taken improvidentially and brought to confusion; finding themselves circled by the monstrous serpent, some of them endeavored to pass out at the gate, and others attempted to climb over the serpent, but were unable; the people remained in this situation for several days, the warriors had made oppositions to dispel the monster, but were fruitless, and the people were distressed of their confinement, and found no other method than to rush out at the gate, but the people were devoured, except a young warrior and his sister, which detained, and were only left exposed to the monster, and were restrained without hope of getting released; at length the warrior received advice from a dream, and he adorned his arms with the hairs of his sister, which he succeeded by shooting at the heart, and the serpent was mortally wounded, which hastened to retire from the fort and retreated to the lake in order to gain relief, the serpent dashed on the face of the water furiously in the time of agony; at last it vomited the substance which it had eaten and then sunk to the deep and expired. The people of the fort did not receive any assistance from their neighboring forts as the serpent was too powerful to be resisted. After the fort was demolished the Council fire was removed to other fort called Than-gwe-took, which was situated west of now Geneva Lake.

APPENDIX B: ANIMALS ON BARE HILL UNIT

BIRDS

BY COMMON NAME, SCIENTIFIC NAME & PROTECTIVE STATUS

COMMON NAME	SCIENTIFIC NAME	PROTECTIVE STATUS	
		FEDERAL	STATE
American Crow	<i>Corvus brachyrhynchos</i>	MBTA	Game Species
American Goldfinch	<i>Carduelis tristis</i>	MBTA	Protected
American Kestrel	<i>Falco sparverius</i>	MBTA	Protected
American Redstart	<i>Setophaga ruticilla</i>	MBTA	Protected
American Robin	<i>Turdus migratorius</i>	MBTA	Protected
Baltimore Oriole	<i>Icterus galbula</i>	MBTA	Protected
Barn Swallow	<i>Hirundo rustica</i>	MBTA	Protected
Belted Kingfisher	<i>Ceryle alcyon</i>	MBTA	Protected
Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>	MBTA	Protected
Black-capped Chickadee	<i>Poecile atricapillus</i>	MBTA	Protected
Blue Jay	<i>Cyanocitta cristata</i>	MBTA	Protected
Bobolink	<i>Dolichonyx oryzivorus</i>	MBTA	Protected
Brown Thrasher	<i>Toxostoma rufum</i>	MBTA	Protected
Brown-headed Cowbird	<i>Molothrus ater</i>	MBTA	Protected
Cedar Waxwing	<i>Bombycilla cedrorum</i>	MBTA	Protected
Chestnut-sided Warbler	<i>Dendroica pensylvanica</i>	MBTA	Protected
Chimney Swift	<i>Chaetura pelagica</i>	MBTA	Protected
Chipping Sparrow	<i>Spizella passerina</i>	MBTA	Protected
Common Grackle	<i>Quiscalus quiscula</i>	MBTA	Protected
Common Yellowthroat	<i>Geothlypis trichas</i>	MBTA	Protected
Downy Woodpecker	<i>Picoides pubescens</i>	MBTA	Protected
Eastern Bluebird	<i>Sialia sialis</i>	MBTA	Protected
Eastern Kingbird	<i>Tyrannus tyrannus</i>	MBTA	Protected
Eastern Meadowlark	<i>Sturnella magna</i>	MBTA	Protected
Eastern Phoebe	<i>Sayornis phoebe</i>	MBTA	Protected
Eastern Towhee	<i>Pipilo erythrophthalmus</i>	MBTA	Protected
Eastern Wood-Pewee	<i>Contopus virens</i>	MBTA	Protected
European Starling	<i>Sturnus vulgaris</i>	Unprotected	Unprotected
Field Sparrow	<i>Spizella pusilla</i>	MBTA	Protected
Gray Catbird	<i>Dumetella carolinensis</i>	MBTA	Protected
Great Crested Flycatcher	<i>Myiarchus crinitus</i>	MBTA	Protected
Hairy Woodpecker	<i>Picoides villosus</i>	MBTA	Protected
Horned Lark	<i>Eremophila alpestris</i>	MBTA	Protected-Special Concern
House Finch	<i>Carpodacus mexicanus</i>	MBTA	Protected
House Sparrow	<i>Passer domesticus</i>	Unprotected	Unprotected
House Wren	<i>Troglodytes aedon</i>	MBTA	Protected
Indigo Bunting	<i>Passerina cyanea</i>	MBTA	Protected
Killdeer	<i>Charadrius vociferus</i>	MBTA	Protected
Least Flycatcher	<i>Empidonax minimus</i>	MBTA	Protected
Mourning Dove	<i>Zenaida macroura</i>	MBTA	Protected
Northern Cardinal	<i>Cardinalis cardinalis</i>	MBTA	Protected
Northern Flicker	<i>Colaptes auratus</i>	MBTA	Protected
Northern Harrier	<i>Circus cyaneus</i>	MBTA	Threatened
Northern Mockingbird	<i>Mimus polyglottos</i>	MBTA	Protected
Northern Rough-winged Swallow	<i>Stelgidopteryx serripennis</i>	MBTA	Protected
Ovenbird	<i>Seiurus aurocapillus</i>	MBTA	Protected

Pileated Woodpecker	<i>Dryocopus pileatus</i>	MBTA	Protected
Purple Finch	<i>Carpodacus purpureus</i>	MBTA	Protected
Purple Martin	<i>Progne subis</i>	MBTA	Protected
Red-eyed Vireo	<i>Vireo olivaceus</i>	MBTA	Protected
Red-tailed Hawk	<i>Buteo jamaicensis</i>	MBTA	Protected
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	MBTA	Protected
Ring-necked Pheasant	<i>Phasianus colchicus</i>	Unprotected	Game Species
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>	MBTA	Protected
Ruby-throated Hummingbird	<i>Archilochus colubris</i>	MBTA	Protected
Savannah Sparrow	<i>Passerculus sandwichensis</i>	MBTA	Protected
Scarlet Tanager	<i>Piranga olivacea</i>	MBTA	Protected
Song Sparrow	<i>Melospiza melodia</i>	MBTA	Protected
Spotted Sandpiper	<i>Actitis macularia</i>	MBTA	Protected
Tree Swallow	<i>Tachycineta bicolor</i>	MBTA	Protected
Tufted Titmouse	<i>Baeolophus bicolor</i>	MBTA	Protected
Turkey Vulture	<i>Cathartes aura</i>	MBTA	Protected
Veery	<i>Catharus fuscescens</i>	MBTA	Protected
Vesper Sparrow	<i>Pooecetes gramineus</i>	MBTA	Protected-Special Concern
Warbling Vireo	<i>Vireo gilvus</i>	MBTA	Protected
White-breasted Nuthatch	<i>Sitta carolinensis</i>	MBTA	Protected
Wild Turkey	<i>Meleagris gallopavo</i>	Unprotected	Game Species
Wood Thrush	<i>Hylocichla mustelina</i>	MBTA	Protected
Yellow Warbler	<i>Dendroica petechia</i>	MBTA	Protected

MAMMALS

BY COMMON NAME, SCIENTIFIC NAME & PROTECTIVE STATUS

COMMON NAME	SCIENTIFIC NAME	PROTECTIVE STATUS	
		FEDERAL	STATE
Virginia Opossum	<i>Didelphis virginians</i>	UN	Game species
Least Shrew	<i>Cryptotis parva</i>	UN	UN
Star-nosed Mole	<i>Condylura cristata</i>	UN	UN
Little Brown Bat	<i>Myotis lucifugus</i>	UN	UN
Big Brown Bat	<i>Eptesicuc fuscus</i>	UN	UN
Coyote	<i>Canis latrans</i>	UN	Game species
Red Fox	<i>Vulpes vulpes</i>	UN	Game species
Gray Fox	<i>Urocyon cinereoargenteus</i>	UN	Game species
Raccoon	<i>Procyon lotor</i>	UN	Game species
Ermine	<i>Mustela erminea</i>	UN	Game species
Long-tailed Weasel	<i>Mustela frenata</i>	UN	Game species
Mink	<i>Mustel vison</i>	UN	Game species
Striped Skunk	<i>Mephitis mephitis</i>	UN	Game species
White-tailed Deer	<i>Odocoileus virginianus</i>	UN	Game species
Eastern Chipmunk	<i>Tamias striatus</i>	UN	UN
Woodchuck	<i>Marmota morax</i>	UN	UN

Fox Squirrel	<i>Sciurus niger</i>	UN	Game species
Gray Squirrel	<i>Sciurus carolinensis</i>	UN	Game species
Red Squirrel	<i>Tamiasciurus hunsonicus</i>	UN	UN
Southern Flying Squirrel	<i>Glaucomys volans</i>	UN	UN
Northern Flying Squirrel	<i>Glaucomys sabrinus</i>	UN	UN
Deer Mouse	<i>Peromyscus maniculatus</i>	UN	UN
White-footed Mouse	<i>Peromyscus leucopus</i>	UN	UN
Southern Red-backed Vole	<i>Clethrionokys gapperi</i>	UN	UN
Meadow Vole	<i>Microtus pennsylvanicus</i>	UN	UN
Woodland Vole	<i>Microtus pinetorium</i>	UN	UN
Muskrat	<i>Ondatra zibethicus</i>	UN	Game species
Southern Bog Lekking	<i>Synaptomys cooperi</i>	UN	UN
Meadow Jumping Mouse	<i>Zapus hudsonius</i>	UN	UN
Woodland Jumping Mouse	<i>Napaeozapus ingignis</i>	UN	UN
House Mouse	<i>Mus musculus</i>	UN	UN
Norway Rat	<i>Rattus norvegicus</i>	UN	UN
Eastern Cottontail	<i>Sylvilagus floidanus</i>	UN	Game species

REPTILES AND AMPHIBIANS

BY COMMON NAME, SCIENTIFIC NAME & PROTECTIVE STATUS

COMMON NAME	SCIENTIFIC NAME	PROTECTIVE STATUS	
		FEDERAL	STATE
Red-spotted Newt	<i>Notophthalmus v. viridescens</i>	UN	UN-spec.
Northern Dusky Salamander	<i>Desmognathus fuscus</i>	UN	UN
Northern Two-lined Salamander	<i>Eurycea bislineata</i>	UN	UN
Northern Spring Peeper	<i>Pseudacris c. crucifer</i>	UN	UN
Western Chorus Frog	<i>Pseudacris triseriata</i>	UN	UN
Bullfrog	<i>Rana catesbeiana</i>	UN	UN
Green Frog	<i>Rana clamitans melanota</i>	UN	Game species
Wood Frog	<i>Rana sylvatica</i>	UN	Game species
Leopard Frog	<i>Rana pipiens-s. utricularius</i>	UN	Game species
Northern Brown Snake	<i>Storeria d. dekayi</i>	UN	UN
Common Garter Snake	<i>Thamnophis sirtalis</i>	UN	UN
Northern Ringneck Snake	<i>Diadophis punctatus edwardsii</i>	UN	UN

RESIDENT FISH SPECIES

BY COMMON NAME AND SCIENTIFIC NAME

COMMON NAME	SCIENTIFIC NAME
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Brown bullhead
Bluegill
Pumpkinseed
Largemouth Bass

Ictalurus nebulosus
Lepomis macrochirus
Lepomis gibbosus
Micropterus salmoides

APPENDIX C : PUBLIC COMMENT

THE FOLLOWING PUBLIC COMMENTS WERE RECEIVED AS A RESULT OF THE JULY 14, 2000, MAILING:

1. Keep Bare Hill in its natural state! No ATV's no dirt bikes, no development!
2. Have been hunting and trapping around the area for about 10 years. Also very nice for walks and hikes. May have a few erosion problems. But all in all seems animals and trees are healthy and doing well, please keep in touch. Would like to volunteer to help.
3. Passive recreation like hiking and cross country skiing should be encouraged; cell phone towers not to be constructed; motorized vehicles discouraged.
4. Maintenance of Bare Hill as a natural area is of paramount importance. Non-motorized usage should be maintained. Management for diverse wildlife presence - not just huntable species should be emphasized. Native American usage is appropriate, however better clean-up by them after their events would promote more respectful usage by others - parking is currently adequate, additional spaces would be detrimental.
5. On line I could find no information about the plan. Therefore I cannot comment.

THE FOLLOWING PUBLIC COMMENTS WERE RECEIVED AT THE MARCH 21, 2001 PUBLIC MEETING:

Question: How many acres of tree cutting will need to be done?

Response: The minimum number of acres to that would need to be cleared to restore the view from the bon fire area would be about 3 acres. The maximum that would be cleared for views would be about 100 acres. This would include clearing the semi-open field on top, the planted softwood, and hardwood that has grown up to block good views. Potential acres that could be thinned is also about 100 acres. The actual number of acres that get cut will very depending on such things as money available and markets for the trees.

Question: Do you mean the trees on the west side of the fire circle?

Response: Yes, there are some black locust trees that are blocking the view of the lake now and are growing several feet a year in height. If we don't cut these the view will be blocked completely in very few years. Since black locust sprouts when cut a follow up with an herbicide will be required to kill the trees completely. There are some other scattered trees that need to be cut to maintain the view from the trail into the council fire area, and to simplify mowing.

Question: What do you mean by native hardwoods?

Response: Native hardwoods to the area include red and white oak, hickory, aspen and, white ash.

Question: What are your intentions if you plan to improve the road?

Response: The access road will remain gated and will be used by DEC employees for the maintenance of the property. It will also provide the Town of Middlesex Heritage Group with better access to the council fire area for permitted events. Hauling firewood in for the fall festival has been troublesome. When the existing road is wet and it is difficult for persons with disabilities to access the council fire area. Access will also improve for fire trucks and emergency vehicles.

Question: Does anyone patrol to keep ATVs away?

Response: Yes, the area is patrolled by Forest Rangers. We have been pretty successful in keeping unauthorized ATVs and 4-wheel drive vehicles out with the gate and stone barriers. We have also stopped mowing for fifty feet behind the barriers, the tangle of vegetation that has grown up has discouraged unauthorized riders as well. Overall, I think we have made considerable progress on this problem although it isn't solved completely.

Question: Complement on your work. Under what circumstances will you use herbicides? Is there a concern regarding the runoff and Canandaigua Lake?

Response: The UMP outlines two major potential projects where herbicides may be used. Of high priority is controlling the black locust stand below the council rock. Black Locust is a prolific sprouter and will need to be killed to keep them from growing back and blocking the view of the lake again in a few years. The other potential use of herbicides would be native grassland restoration efforts in the open areas of this property. When used properly these herbicides bond quickly with organics and will not leach through the soil or runoff into waterbodies. Most of herbicides quickly break down within two weeks in the environment.

Question: I have experience with Black Locust and have used Roundup to get the new growth.

Response: Roundup (glyphosate) is a herbicide we are considering to use on the black locust. The final selection of available products listed for use on black locust will be made just prior to implementing the project.

Question: It's worth getting rid of to look at the vista.

Response: We also believe the vista is one of Bare Hill's best features and should be preserved.

Question: If [the road] is presently gated, how can emergency vehicles currently get through?

Response: The local volunteer fire departments have been given a gate key. If they can't find it they have our permission to cut the lock to get in for an emergency. We'll be happy to replace the lock for that situation.

Question: Have you been mowing once a year?

Response: I think we have mowed about an acre at the council fire area each year. We have tried to mow the rest of the area that we are committed to keeping open every two years. This has not been entirely successful as we seem to be gaining more dogwood.

Question: Do you plan on cleaning out the ponds? It was pretty bad 10 years ago, it's probably smaller by now. Is that every two years on the dikes?

Response: Grassy sections of the dykes should be mowed every two years with the rest of the open area. Removal of woody vegetation from the dykes is on the list to be done this year, but may not get done. There is no current plans to deepen the ponds

Question: Does the state contract that work out?

Response: I think all of the work that has been done on Bare Hill so far has been accomplished with DEC Operations employees from the Naples shop. We may use contractors in the future if the funding is available and it is cost-effective. We may also use "trade-off" work from logging contractors to complete certain jobs.

Volunteers might also be used to build hiking trails, set up bluebird houses, inventory plants and birds and help with interpretive signs.

Question: Does logging get contracted out?

Response: All logging is contracted out by one of two methods.

- Sales less than \$10,000 are bid as local sales handled by the region. Sales less than \$500 may be negotiated by the region provided there is only one interested buyer.
- Sales over \$10,000 are bid as revenue contract sales and are processed through the state comptrollers office. These sales require prior conceptual approval by Albany DEC state forest supervisors and public legal notice.

Question: Is there a place to put up signs? Who puts them up? Do they change the signs?

Response: We have a very nice kiosk on the main trail near the parking lot. It has a map of the area and some information on the history of Bare Hill. We would like to add a pamphlet/trail map and, seasonally, information on birds and plants that are on the area. DEC Forestry staff has made up the current display but we would be happy to get volunteer help to expand the human history section and add natural history materials.

Question: There are bottles, cans, broken glass, although I haven't seen them dump sofa beds.

Response: Litter is certainly a problem whenever you have public land without a full time attendant. Some of the broken glass you see on top of the trail was from old bottles that were broken and scattered from our first mowing years ago. But most of the mess is confined in or near the parking lot. The gate and stone barriers that keep out motor vehicles also slow the spread of

littering. I don't think you see big items - like sofa beds or appliances, dumped here anymore because the litterers feel trapped at the end of a dead end road.

Question: Whose responsible for the parking area, is that up to the Town of Middlesex or volunteer groups?

Response: The gravel parking area is actually the turn around for Van Epps Road, which belongs to the Town of Middlesex. The grassy area between the road and the rock barrier is mostly in the road right-of-way but some of it is on state land. In reality, litter pickup is done by whoever is there and willing to do the work as both levels of government, their employees and volunteers want to keep the area presentable.

Question: There has been less litter from year to year.

Response: We agree. Removing the trash barrels that were rapidly filled to overflowing with household trash and pressure from law enforcement have made a difference.

Question: There are incidents of people breaking into cars (mainly in summer). Are they aware of that?

Response: I'm not aware of any recent incidents, but see me after the meeting and I'll see that any information you have on this gets to our Forest Rangers. I hope each incident will be promptly reported to the rangers or sheriff. If we don't know it happened we certainly can't investigate or solve the problem.

Question: Peter [Jemison] mentioned eagles. Are the nearest eagles at Hemlock Lake? Should Reintroduction of eagles be promoted? Aren't there's too many people for eagles?

Response: At this location the nearest nests are two at Hemlock. Eagles have large ranges and need to be near a water body, so the nearest likely site would be on Canandaigua's south end.

Question: There are osprey around here.

Response: The nearest active nest is at Seneca Army Depot. There is potential for osprey on the West River on High Tor Wildlife Management Area.

Question: You mentioned an acquisition plan. Do you plan to add to this property?

Response: It is not our goal to significantly enlarge the Bare Hill Unique Area. However, if a parcel is offered for sale from a willing seller, or as a gift, we will evaluate it to see if it would be an asset to the area.

Question: On page 17, closing of roads. What are those roads, farm roads, non-major roads? ATVs? How many roads? Will they be made into hiking trails?

Response: Two roads will be maintained, the remainder will be closed and fixed to stop erosion.

They will be open for hiking and other non-motorized recreational use. The two administrative roads are the road to the bonfire site and the lower road along the east side of the property.

Question: What region is the Avon DEC office?

Response: Avon is the Region 8 office. However, most of the Forestry staff is located in the Region 8 Bath Sub office. The majority of the region's forest land are in Steuben and Schuyler counties so being located in Bath reduces the time and expense of traveling to the lands we manage.

Question: Is anyone disappointed there are no condominiums?

Response: No one here. Bare Hill is a very desirable recreational property with an interesting history and a grand view of Canandaigua Lake. I think we are all glad that this piece of green space was saved for the public.

THE FOLLOWING PUBLIC COMMENTS WERE RECEIVED AFTER THE MARCH 21, 2001 PUBLIC MEETING:

Email received 3/21/01:

Through out the years what process kept the trees from growing? There is only one logical answer, fire. Not mowing, not the legend of the serpent that came out every year to swing his tail and knock down all the trees, (however that myth is enjoyable).

I believe the ring of fire that we celebrate each year to follow tradition, was started by using bon fires. It is my belief that the entire hill side was set a blaze. This accomplishes many good uses, the new growth grasses were used for grazing animals, while the uneatable brush was kept to a minimum. This open space became a community center of sorts.

I suggest you have a controlled burning each autumn. That sounds glorious but I suppose it isn't practical for this modern age. To that end, keep the hill bare by whatever means necessary. Keep the legend alive.

Thank you
Dwight E Symonds



**Western Lakes Chapter
Finger Lakes Land Trust**

P.O. Box 653
Canandaigua, New York 14424

...working to protect the natural integrity of the Finger Lakes Region.

March 28, 2001

Ms. Gretchen Helfinstine, Forester
NYS DEC Region 8
7291 Coon Rd.
Bath, NY 14810

Re: BARE HILL UNIQUE AREA DRAFT MANAGEMENT PLAN

Dear Ms. Helfinstine:

We are familiar with the property, have reviewed the draft management plan and offer the following comments.

We suggest the inclusion of a USDA NRCS Soil Map and a USGS Topographic Map as part of the Management Plan (enclosed).

Bare Hill, as a land form, covers 850 to 900 acres (as measured at the 1200' contour on a topographic map). We understand that the management plan only covers the 298 acres currently owned by the State but suggest that the situation calls for a broader look at the land form and adjacent property owners. For example, the management plan calls for reduction of exotic, invasive species and an increase, both quantitatively and qualitatively, of native species on the property. We are very much in favor of this direction but believe that best results will require the participation of other landowners in the area. If the State extirpates invasive exotics on its property but neighbors maintain seeding stock of the same plants just across property lines, success is unlikely. Perhaps the State should look at cooperative management agreements for adjacent property owners as they do in the management of the Honeoye Wetlands.

We feel that the State should not preclude consideration of "significantly" adding to the Bare Hill Unique Area, as you seem to do on pages 11, 13, and 30. Though current NYS DEC budgets may be tight, as the plan points out, funding for land acquisition may originate elsewhere, such as in the EPF. Also, other protection options, such as the acquisition of conservation easements, may be used to enlarge the protected area without affecting the property tax base of the Town of Middlesex. We feel that the option for increasing the size of the Bare Hill Unique Area should be left open. The Finger Lakes Land Trust shares an interest with the NYS DEC in promoting the health, beauty and integrity of the Finger Lakes region. Bare Hill is within one of our priority areas, and we would welcome an opportunity to approach nearby property-owners on matters of mutual concern to the Land Trust and the NYS DEC.

The terms "unique areas," "state forests," and "wildlife management areas" (such as Hi Tor) are used throughout the document. Are there legal or functional meanings to these different terms? Do the different terms imply different management strategies?



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We appreciate the inclusion of comments by Peter Jemison, the Manager of the NYS Historic Site at Ganondagan. Given Bare Hill's proximity to Ganondagan, Ganondagan's success in presenting history from a Ho-de-no-sau-nee point of view, and the native associations with Bare Hill, we encourage the State to actively seek input from native leaders such as Mr. Jemison on the management of Bare Hill.

We are very much in favor of the use of management techniques which will maintain grassland habitat at the summit of Bare Hill and will reduce non-native species. The views of and from Bare Hill are extremely important to the local community. We encourage the use of fire and mowing where these management methods will be most successful. *and discourage the use of herbicides, whose use may have negative implications for water quality.* Where herbicide use is necessary, we urge diligent monitoring, as the protection of the Canandaigua Lake drinking water supply is of utmost concern.

Though the Bare Hill property contains no wetlands of a size to be regulated under law, it does contain many small wetland areas and pools. These "vernal" wetlands are only present seasonally but may have important functions for reptiles and amphibians. A spring survey would be useful.

We are very much in agreement with the limitations on motorized recreational use, structures, and mineral resource leasing.

We are sure that you are aware that simple diversity of species is not a meaningful goal for a management plan (pg. 17). Attention must also be paid to the kinds and qualities of species present and the integrity of the ecosystem of which they are a part. We believe that the Bare Hill management plan should plainly state a preference for native species and for restoring Bare Hill to a "natural" condition. Researchers use a variety of techniques (such as soil types, pollen analysis, and vegetative conditions on similarly located, undisturbed sites) to determine approximately "natural" conditions. It appears to us that Bare Hill was being kept bare by native people using fire.

We note that you have included "The Legend of Bare Hill" as Appendix A of the plan. While we agree that it is good to include the legend, perhaps it would be best to include the earliest version, which was recorded by the Tuscarora David Cusick in Ancient History of the Six Nations and re-published in William Beauchamp's Iroquois Folk Lore. A copy is enclosed.



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The State should seek to discover and enhance the uniqueness of the Bare Hill Unique Area especially with regard to its aesthetic appearance. Views of and from Bare Hill are tremendously important to the community. Though not a large hill in itself, its position as the northern-most of the Alleghenies and its prehistorical connections give it a significance beyond its physical size.

Sincerely,

Mark House, Chair
Western Lakes Chapter
Finger Lakes Land Trust



Canandaigua Lake Watershed Task Force

480 North Main Street, Canandaigua, New York 14424

March 27, 2001

Mr. James Bagley, Forester
NYS DEC Region 8
7291 Coon Rd.
Bath, NY 14810

Re: BARE HILL UNIQUE AREA DRAFT MANAGEMENT PLAN

Dear Mr. Bagley:

The Canandaigua Lake Watershed Task Force is a non-profit, community-based, public policy education body focused on the protection of water resources of the Canandaigua Lake Watershed. To meet this goal, the Task Force functions as an umbrella organization to identify, coordinate and provide leadership for the efforts of public and private groups which have a stake in the Canandaigua Lake Watershed.

We were unable to attend the Public Hearing on March 21 but have reviewed the draft management plan and offer these comments.

Bare Hill is larger than the 298 acres currently owned by New York State. The management plan should look more closely at current and future patterns of land use in the area. In the event that development incompatible with the archaeological and aesthetic values of Bare Hill is proposed, the State should be prepared to act, as it has in the past, to preclude these land uses through purchase of properties. Language should be added to the management plan to establish the State's willingness to pursue such options.

We are pleased to see the Watershed Protection section of the draft plan. All runoff from Bare Hill goes to Canandaigua Lake, either through Vine Valley Creek or numerous small unnamed tributaries. We trust that these water quality protection practices will be enforced as potentially polluting actions specified in the plan are carried out.

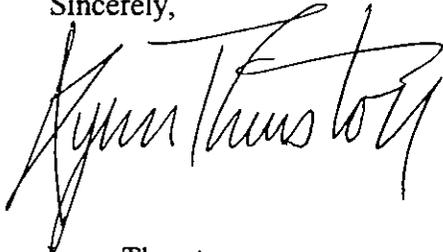
We are concerned about the plan's proposal to thin 24 acres in stand # 26, which is some of the steepest land on the property. Trying to establish roads or haulways in such terrain is almost bound to cause erosion. We are also skeptical about the benefits of such thinning: the combination of steep slopes and thin soils is unlikely to ever produce large trees. On the contrary, it seems most likely to produce an "overstock" of trees that never have an opportunity to mature. If thinning is to be done in this area, it would be better carried out without harvest, so that the roads don't have to be built.

The limitations on motorized recreational use, structures, and mineral resource leasing included in the draft management plan are welcome.

Many of our members and supporters feel strongly about Bare Hill. It is an important part of the local landscape. Many people feel that the Native American connections of Bare Hill should be honored by preserving it in an undeveloped state.

Thank you for the opportunity to comment on the draft Bare Hill Unique Area Management Plan.

Sincerely,

A handwritten signature in black ink, appearing to read "Lynn Thurston". The signature is fluid and cursive, with a large initial "L" and "T".

Lynn Thurston
Chair

APPENDIX D : TAXES

No School and Town general taxes are paid for Unique Areas such as Bare Hill.

APPENDIX E : FACILITIES

NYS DEC Maintained Unpaved Roads: 1.5 Miles

Man-made Ponds: 2

Unpaved Parking Lots: 1

Kiosks: 1

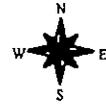
Metal Gates: 1

Facility ID Signs: 1

Bare Hill Unique Area

Canandaigua
1976

East Lake Rd.



- ★ Council Rock
- Pond

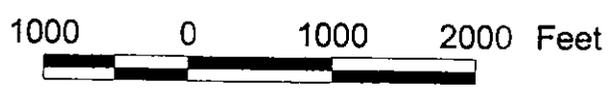
Van Epps Rd.

Bare Hill Rd.

Co. Rt. 10

- Major Roads
- Secondary Roads
- Access Roads
- Trail
- Bare Hill Unque Area
- Canandaigua Lake

N. Vine Valley Rd.



Dinehart Rd.

S. Vine Valley Rd.

51

Vine Valley

APPENDIX G: OAK OPENINGS

WHAT THEY ARE:

Bare Hill Unique Area was acquired because of its cultural and aesthetic significance. Interest has been expressed in attempting to restore the area to its' original state prior to European settlement. It is possible that this area was an Oak Opening plant community. This community provides essential habitat for many species of wildlife which require open (grass) land.

Oak openings are composed of native prairie grasses and associated plants usually surrounded by oak/hickory forests. Characteristic species are Indian grass, a.k.a. buffalo grass (*Sorghastrum nutans*), little bluestem grass (*Schizachyrium scoparium*), thimbleweed (*Anemone cylindracea*), butterfly-weed (*Asclepias tuberosa*), wild bergamot (*Monarda fistulosa*), chinquapin oak (*Quercus muhlenbergii*) and other oaks (*Quercus* spp.), and hickories (*Carya* spp.). The woods buffalo (*Bison bison* var. *athabascae*), now extirpated from the United States, was once a prominent mammal habituating oak openings. Elk (*Cervus canadensis*) were also a feature of Oak Opening communities. The mix of forest and grassland provided a habitat similar to areas in the Rocky mountain regions.

Oak Openings are maintained by periodic burning. Historically, fires were set by Native Americans or caused by lightning strikes. Oak Openings can be variable in size, from just an acre to several thousand acre complexes.

Pioneer accounts include descriptions such as: "[Oak] Openings about Bloomfield so clear of trees and bushes, that in many places deer could be seen from half to three quarters of a mile off." "The oaks forming open thin groves, or being present as scattered clumps or individuals, with the ground being occupied by grasses and other herbaceous vegetation." "A short distance to the west [of Toledo, Ohio] were hills of sand upon which only oak trees grew, and so sparse were the trees (that) a wagon could be driven in any direction through the patches of forest without need of hewing a path." "Goioguen [Cayuga Co.] is the fairest country that I have seen in America. It is a tract situated between two lakes, and not exceeding four leagues in width, consisting of almost uninterrupted plains, the woods bordering which are extremely beautiful."

HISTORICAL PERSPECTIVES:

Prior to European settlement, Oak Openings were quite common throughout the Midwest states extending eastward into western N.Y., and Ontario, Canada. Local historical accounts indicate Oak Openings were found throughout the length of Genesee Valley, Irondequoit Creek drainage, plus Victor, Perinton, East Rochester, Chili, Wheatland, Mendon, LeRoy, Bloomfield and Honeoye Falls. Other areas of the Southern Tier may also have contained "Prairie" like communities. It is likely the "Wadsworth Oaks", listed in the NYS Historic Tree Registry, were at one time part of an Oak Opening Community. Local historical accounts are described further in articles "An Ecological Survey of the Vegetation of Monroe County, New York" and "Central and Western New York Natural History Trivia".

Oak Openings are fire dependent plant communities similar to the prairies of the plains states. Although some of the fires were likely due to lightening strikes, the Native American Indians had a profound effect on the maintenance and enhancement of this plant community. Native Americans routinely set fires for a variety of purposes, to keep land clear for their agriculture, to clear areas for village sites (open areas around villages had fewer mosquitos and other insect pests, were less damp and safer, since enemies could not attack by surprise), and to drive game for hunting. "Among the early events that now occur to me, was the firing of lands by the Indians for the purpose of taking game... they set a train of fire which enclosed and area of about seven miles square, of the oak openings between the Canascraga [Canaseraga Creek] and Conesus Lake.". It is also likely Indians understood the wildlife habitat benefits of Oak Openings. These areas would have produced much more game (food) than old growth forests.

This area of western New York was first surveyed in 1792 as part of the Phelps and Gorham Purchase . European settlement began in earnest about 1800. Early pioneers found Oak Openings easy spots to settle compared to areas of old growth forests. Trees did not have to be cleared for agriculture, there was ready pasture for animals, and plentiful game. This made survival the first couple winters much easier until a good cabin could be constructed and additional land cleared for agriculture. Intensive agriculture and pasturing, plus the introduction of non-native species (such as white sweet clover, and cool season grasses for forage) destroyed most of the Oak Opening plant communities. "Drainage, fire suppression [in the last 50 years], urban development, and agriculture have all played a part in changing the landscape."

GLOSSARY

(BMP'S) Best Management Practices - Techniques and practices that minimize erosion problems.

Buffer Strips - A strip of vegetation used to protect sensitive areas from soil erosion and siltation.

Classified Water Bodies - A system whereby water bodies are protected under Environmental Conservation Law.

Conifer - Needle bearing trees.

Conifer/Conifer Hardwood Forest - A forest stand in which either of the two leading species is a conifer.

Conifer Stand - A forest stand containing 50% or more conifer species.

D.B.H. - (diameter at breast height) - The diameter of a tree at roughly breast height or 4½ feet from the ground.

Dug-Out - A 500 square foot by 3 feet deep pot hole constructed of earth and containing water.

Early Successional Wildlife Species - Animal species which require early vegetative stages such as grass, brush, Aspen.

Ecological Diversity - The number of species living in an ecosystem.

Ecological Subzone - A geographic area containing fauna and flora which are adapted to that particular area.

Ecosystem - A complex of living organisms and their environment.

Erosion - To wear away by the action: water, wind, or ice.

Even Aged - A forest in which all of the trees are essentially the same age.

Fragipan - An impervious subsurface soil layer (sometimes known as "hardpan") which restricts rooting and internal soil drainage.

Hardwood Forest - A forest stand in which each of the two predominant species by percent is a hardwood.

Hardwoods - Broadleafed trees.

Herbaceous Opening - A non-forest vegetative type consisting of grasses and forbs.

Large Coarse Woody Debris - The accumulation of dead woody material, both standing and fallen, which occurs in a forest stand.

Lean-To - A small, open fronted, log shelter used for overnight camping.

Log Landing - An area to which logs are skidded and then loaded for removal.

Multiple Use - A management philosophy by which many uses are derived for a specific land area.

Natural Regeneration - The regrowth of a forest stand by natural means.

Natural Forest - A forest established by natural regeneration.

No Entry Lease - A lease to explore and develop underground mineral resources without any surface disturbance. Above ground facilities and equipment to remove mineral resources must be located off the subject property.

Oak Opening - a globally rare plant community, also known as an oak savannah. The community is composed of native prairie grasses and associated plants usually surrounded by oak/hickory forests. Oak Openings are maintained by periodic burning. Historically, fires were set by Native Americans or caused by lightning strikes. Oak Openings can be variable in size, from just an acre to several thousand acre complexes.

Off - Site - The species are growing (or at least have been planted) where these species would not ordinarily be found, due to unfavorable site conditions.

Plantation - A forest established by planting.

Pole Sized - A young tree with a DBH of 6 to 11 inches.

Pre-Commercial - To do a stand treatment when the trees are too small to sell for profit, requiring the payment of someone to do the work.

Regeneration - To reestablish a forest stand.

Rotation - The length of time between the establishment and the harvest of a forest stand.

Seedling/Sapling Sized - A young tree with a DBH of less than 6 inches.

Sawtimber Sized - A tree with a DBH of 12 inches or greater.

Site - Site is defined as a group of features (such as slope, aspect, soil type, etc.) which characterize a given area of land.

Silviculture - The establishment, development, care, and reproduction of forest stands.

Softwoods - Needle bearing trees, conifers

Species Diversity - The occurrence of a variety of plants and animals.

Stand - A group of plants with similar characteristics that are treated as a single unit in a management plan.

Stand Analysis - A systematic method of evaluating stands to determine the need for treatment.

Stand Treatment - Work done in a stand which is directed towards the management of the stand.

State Forest - Lands owned by the state of New York and administered by the Department of Environmental Conservation which are managed for the establishment and maintenance of forests for watershed protection, the production of timber, and for recreation and kindred purposes.

Sustained Yield - The maintenance of a continuous flow of a particular product.

Temporary Revocable Permit - A permit to use state forest land for a specific purpose for a prescribed length of time.

Top Lopping - The cutting of limbs from the tops of felled trees to reduce fire danger and improve visibility. On state forests top lopping of conifers is required by law.

Uneven Aged - A forest containing trees of two or more age classes.

Unique Area - A state project to acquire lands of special natural beauty, wilderness character, geological, ecological or historical significance for the state nature and historic preserve, and may include lands within a forest preserve county outside the Adirondack and Catskill Parks.

Vegetative Stage - A description of a plant community based on the age of the component plants.

Vegetative Type - A description of a plant community based on species composition.

Water Hole - A laid up stone cistern built by C.C.C. volunteers and originally used for water for fire protection purposes.

Watershed - The land area from which a stream receives its water.

Wetland - Transition areas between upland and aquatic habitat.

Yield - The production of a commodity such as; forest products, water, or wildlife.

617.21
Appendix F
State Environmental Quality Review
NEGATIVE DECLARATION
Notice of Determination of Non-Significance
Identifying # 2001-PL/SF-8-121

Project Number _____ **Date** November 14, 2001

This notice is issued pursuant to Part 617 of the implementing regulations pertaining to Article 8 (State Environmental Quality Review Act) of the Environmental Conservation Law.

The NYS Department of Environmental Conservation as lead agency, has determined that the proposed action described below will not have a significant effect on the environment and a Draft Environmental Impact Statement will not be prepared.

Name of Action: Bare Hill Unit Management Plan

SEQR Status: Type 1 X
 Unlisted _____

Conditioned Negative Declaration: _____ **Yes**
 X **No**

Description of Action: The Bare Hill Unit Management plan sets forth the proposed goals, objectives, management actions and associated costs for the management of 298 acres of Unique Area within Yates County. The plan details management activities for a 10-year period, from 2001 - 2011. A review and amendment process will take place at the end of the fifth year. Public participation has been sought via mailings and a public meeting on March 21, 2001. Full consideration for public input will be sought prior to completion of the final draft.

Management activities planned for this unit include: The general maintenance of the facilities, forest, wildlife management and land acquisition. Creating and maintaining up to 117 acres of open fields and logging up to 119 acres; Maintaining the shallow water impoundments by excavating the bottoms of existing ponds and mowing dykes. Upgrade two access roads, and close all other roads by controlling erosion. Closed roads will be available for use by non-motorized recreational users. Scenic vistas will be created by removal of trees and shrubs and restored with native grasses and forbs.

Location: (Include street address and the name of the municipality/county. A location map of appropriate scale is also recommended.)

Bare Hill Unique Area, in the town of Middlesex, Yates County.

Reasons Supporting This Determination:**(See 617.6(g) for requirements of this determination; see 617.6(h) for Conditioned Negative Declaration)**

Activities planned for the unit will be covered by the following Generic Environmental Impact Statements:

State Forest Commercial Product Sales Program, Wildlife Management Program, Red Pine Plantation Clearcut Program, Conserving Open Space in New York State, and State Forest Recreation Management Program.

Activities which might require site specific environmental reviews, include, prescribed fire and site preparation. In addition, if after the public review process, activities are added to the plan to provide better management of the unit and are not covered by this Negative Declaration or cited Generic Environmental Impact Statements, DEC will undertake a site specific environmental review for such activities.

Activities in the plan will be performed in accordance with the standards and policies and procedures set forth in the following DEC documents:

Continuous Forest Inventory Handbook, State Forest Multiple Use Management Plan, Unpaved Forest Road Handbook, and the Timber Management Handbook.

In addition, activities in the plan will be guided by the Environmental Conservation Law, best management practices, the expertise of foresters and biologists, and the views expressed by the participating public.

Construction of new facilities shall include upgrading administrative access roads. The project will entail: clearing, grading, ditching, installation of culverts, and graveling. This will improve public access and safety. The closing of roads will entail: construction of water control devices such as waterbars and ditches. The aesthetic resources will be protected by law enforcement activities, screening of logging activities, and by limiting disturbance in sensitive areas. Scenic views will be improved by the removal of screening vegetation. There will be a favorable impact on energy resources, since timber management will produce fuelwood. The noise impact of construction and logging will occur so briefly that it will be inconsequential.

Archeological/Historical impacts will be minimized by disturbing the ground as little as possible. These actions will not have a significant impact on the environment.

If Conditioned Negative Declaration, provide on attachment the specific mitigation measures imposed.

For Further Information:

Contact Person: Gretchen Helfinstine

Address: NYS DEC

7291 Coon Road

Bath, NY 14810

Telephone Number: (607)776-2165 ext. 29

For Type 1 Actions and Conditioned Negative Declarations, a Copy of this Notice Sent to:
Commissioner, Department of Environmental Conservation, 625 Broadway, Albany, New York
12233

Appropriate Regional Office of the Department of Environmental Conservation
Office of the Chief Executive Officer of the political subdivision in which the action will be
principally located.

Applicant (if any)

Other involved agencies (if any)