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 an 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 lightening 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 lightening 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:

Stand Number	Acres	Species
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:

Stand Number	Acres	Species
A - 25	12	Locust

CONIFER PLANTATIONS TO BE CUT TO MAINTAIN SCENIC VIEW:

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

NO VEGETATIVE ACTION PROPOSED:

Stand No.	Acres	Species / Type
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

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.