

PREFACE

It is the policy of the Department to manage State Forests for multiple uses 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 ten years and beyond, with a review and update planned in five years. Factors such as wood product markets, budget and manpower constraints and forest health problems may necessitate deviations from the scheduled management activities.

INTRODUCTION

A. Generic History of State Forests

New York State is blessed with fertile soils and sufficient rainfall that make it possible for forests to naturally dominate the landscape. In 1609 when Hendrick Hudson first sailed up the Hudson River, it is likely forests covered over 90% of the area that later became New York State. Forests currently cover nearly two thirds of the total land area of New York State and are recognized as an important natural resource.

Forest clearing for agricultural purposes was originally practiced by native Americans. Following the arrival of the first European settlers, the clearing of the forest accelerated. The conversion of forests to farmland in New York state reached its peak in the latter half of the 19th century. By 1890 it is estimated that only one third of the state was still forested, mostly in the Catskill and Adirondack mountains.

Farming declined in New York State in the late 1800's as better transportation made it more difficult to compete with agricultural products from other areas. The poorer hill farms, with shallow soils and a shorter growing season, were generally the first to become uneconomical to operate. By the 1920's millions of acres of farmland were lying fallow.

Farm land abandonment was identified by many as a serious social and economic problem facing New York. Experts who studied the situation felt that one solution might be a massive reforestation program. They felt that this would help to assure a supply of timber for future generations as well as getting land that was basically unsuited for agriculture back on the tax rolls.

The State Legislature responded to these concerns by passing what is known as the State Reforestation Law of 1929 and the Hewitt Amendment of 1931. This legislation authorized the Conservation Department to begin acquisition of land for the purpose of reforestation. The land had to be purchased in contiguous blocks of at least 500 contiguous acres and also suitable for planting trees.

The law stated that these reforestation areas were to be forever devoted to "reforestation and the establishment and maintenance thereon of forests for watershed protection, the production of timber, and for recreation and kindred purposes." The state was required to pay both town and school taxes on these lands. This broad program is presently authorized under Article 9, Title 5 of the Environmental Conservation Law (ECL).

In 1929 the tasks of land acquisition and reforestation were started. The original intent was to acquire and reforest one million acres over a 15 year period. It was the most ambitious state reforestation program ever attempted at the time.

In 1933, the Civilian Conservation Corps (CCC) was begun. Thousands of young men were assigned to plant millions of trees on the newly acquired State Forests. In addition to tree planting, these men were engaged in road and trail building, erosion control, watershed restoration, forest protection and other projects.

During the war years of 1941-1945, land acquisition essentially ended and very little was accomplished on the reforestation areas. Plans for further planting, construction, facility maintenance and similar tasks had to be curtailed. However, through the post-war funding, conservation projects once again received needed attention.

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 additional state forest lands. Today there are over 700,000 acres of State Forest land throughout the State, exclusive of the Catskill and Adirondack Forest Preserve.

The story of New York's reforestation program is one of the great success stories in the history of modern conservation. Lands that had been cut over, farmed out, and abandoned by their owners have been restored to ecological health. Wildlife species that had been wiped out by hunting, trapping and fishing have returned in abundance. Property that was once considered of such low value that it was sold to the State for \$4.00 per acre now generates millions of dollars annually to the economy. The state forests that were established in the 1930's are a testament to the foresight of conservationists and of the recuperative powers of nature.

B. History of the Eminence Management Unit

The first non-Indian settlers moved into the present area of the Eminence Management Unit shortly after the Revolutionary War. The first settler arrived in Eminence in 1794.

Early settlers were subsistent farmers, relying on the land for the majority of their needs. Evidence of the difficulties associated with clearing the fields can still be seen. The ubiquitous stone walls were

built from stones laboriously cleared from fields to make them tillable.

Dairy farming was an important activity for the early farmers, with excess milk being shipped to cities in the form of butter. Early crops no longer grown in this area included wheat, tobacco and hops. In 1875, Schoharie County was the fourth largest producer of hops in the State. Hops were said to exhaust soil rapidly and by the late 1800's, hop production was in rapid decline.

Forests not cleared for farmland were used for many purposes. Potash and charcoal production were two early farm industries that made use of hardwood forests. Potash was used locally and also shipped to Europe. Charcoal was used in blacksmith shops, tin shops and iron foundaries located in every town.

Hemlock was cut for its bark. Tannin extracted from the bark was used in the leather tanning industry. In 1840, there were 14 tanneries in the county. Large tanneries in Gilboa were obtaining bark from the area of the Eminence Management Unit. In addition to its use in the local tanneries, large quantities of tannin were shipped to Europe.

Other wood based industries included sawmills, shingle mills, cooper shops, wood tool factories and a papermill. There were mills of various types on Betty Brook, West Kill, Panther Creek, Doney Hollow Creek, Mill Creek, and their tributaries. Portions of these streams are located on the Eminence Management Unit. Early settlers, up to the late 1800's, could not own the land they worked. This "Patroon" system probably resulted in heavy cutting of the forests because the renters had little interest in the future of their lands. With the widespread cutting taking place, probably every acre of the present day Eminence Management Unit had been cut by the late 1800's.

Fish and wildlife populations were also decimated during this period. The wild turkey, beaver, black bear, wolf, eagle, and whitetail deer were all extirpated from Schoharie County in the 19th and early 20th century. Stream habitat for native trout and other fish was also damaged by pollution from industry and agriculture. Fish and game laws which established seasons and size limits were nonexistent for most of the 19th century.

From the very beginning, these were only marginal farms. By the mid 1800's, the poor soils of some of these hill top farms had been exhausted, and farms were being abandoned. By 1930, large tracts of farmland had been abandoned.

In 1931, under the State Reforestation Law, the State began acquisition of some of these abandoned farmlands. Most of these early purchases were for about \$4.00 per acre and by 1940, land acquisition in the Eminence Management Unit essentially ended.

In the Spring of 1931, State crews began planting tree seedlings on the open land. A Civilian Conservation Corps camp was established in 1934 at Boucks Falls and the CCC's joined State Forest crews planting trees. To date, over 6 million trees have been planted on the Eminence Management Unit. Other early projects included timber stand improvement, stream improvement and protection, construction of truck roads, seed collection for the State tree nursery, forest insect and disease control projects and construction of fencing between State and private lands. Fire Hazard Reduction (FHR) was another project. FHR included construction of water holes, clearing roadsides of slash, building fire breaks around newly established plantations and slash reduction in heavily cut over natural stands.

When the State acquired these lands, the previous owners usually reserved cutting rights. They had up to two years to cut any trees down to a six inch stump diameter. As a result of this logging, and other cutting that took place in the decade before the State acquired the land, there was little timber of any value present. Broken and deformed trees were all that was left in the majority of the forested areas.

There were few sales of forest products until the mid 1950's because of the poor condition of natural forests and the small size of the planted trees. Significant sales did not begin until the 1970's. To date, about 2 1/2 million board feet of sawtimber, 22,000 cords of firewood and 67,000 cords of pulpwood have been sold for a total revenue to the State of over one million dollars. About two-thirds of this revenue came from the plantations which comprise about one-third of the Eminence Management Unit. In the mid 1980's, harvesting and replanting of mature red pine stands was begun.

The Department of Correction Youth Camp was constructed around 1960 on State lands in the Town of Fulton near Summit. This recently became the Summit Shock Incarceration Camp. Projects accomplished by inmates on State Forests include forest road maintenance, wildlife habitat improvement, stream improvement, recreational trail construction and maintenance, timber stand improvement, tree planting and cone collection for the State tree nursery.

Land acquisitions in the 1960's through the 1980's improved access to the Eminence Management Unit, enhanced recreational opportunities, provided additional protection for the streams on the unit and consolidated the unit with the acquisition of interior parcels. Six of the State Forests on this unit now contain over 12,000 acres of contiguous public ownership. This large block of public land will become even more valuable in the future, considering recent trends toward subdividing adjacent private lands.

Many of the wildlife species that were once extirpated have returned to the area. Their recovery can be attributed to the restoration of natural habitat and the enforcement of hunting and fishing regulations. Now that fish and game are once again abundant, the state lands have become very popular areas for fishing and hunting pursuits.

(The above information was obtained from "A History of Schoharie County" by Marion Noyes,

from various issues of the "Schoharie County Historical Review" and from DEC records.)

INFORMATION ON THE UNIT

A. Geographical and Geological Information

The Eminence Management Unit is located in the Towns of Blenheim, Fulton, Jefferson and Summit in Schoharie County. The Unit is located in South-Central Schoharie County, East of NYS Route 10, South of the Village of Cobleskill, West of NYS Route 30, and North of the Delaware County line.

Seven State Forests comprise this management unit:

Schoharie #3 - Burnt-Rossman Hills State Forest -	2717 acres
Schoharie #4 - Burnt-Rossman Hills State Forest -	1034 acres
Schoharie #5 - Burnt-Rossman Hills State Forest -	1237 acres
Schoharie #6 - Burnt-Rossman Hills State Forest -	1299 acres
Schoharie #7 - Mallet Pond State Forest -	2525 acres
Schoharie #9 - Burnt-Rossman Hills State Forest -	3501 acres
Schoharie #21 - Blenheim Hill State Forest -	783 acres
Total Acres -	13,096

The Eminence Management Unit derives its name from the village that is located on the western edge of the unit. The unit is on the northern Allegheny Plateau with elevations ranging from about 1200 feet to 2360 feet above sea level. The underlying rocks are of sedimentary origin and are about 500-800 million years old. Much of the present terrain of the area was shaped by the last glacier 10,000 years ago. Most of the area is gently rolling with some steep slopes interspersed with drainages and wetlands.

The majority of the soils are Lordstown, Mardin and Volusia soils. These soils are shallow to moderately deep, medium textured and are on slopes that are nearly level to steep. They range from well drained to somewhat poorly drained, and they formed in glacial till derived from shale and sandstone. These soils have major limitations including a seasonal high water table, shallow depths to a hardpan, droughty conditions during dry periods, low fertility, high acidity and erodibility in steeper slopes. These limitations effect tree growth and management activities such as forest road construction, the location of recreational facilities, the harvesting of forest products and the establishment of conifer

plantations.

B. Forests and Other Habitats

Acreage of Vegetative Types Within the Unit

<u>12"+</u> Vegetative Type	<u>Centage</u>	Seedling	Inter-	mediate	Large	<u>Vegetative Type</u>	<u>Acres</u>	<u>0"-6"</u>	<u>6"-12"</u>
		Sapling	Trees	Trees	Per-				
Natural Hardwoods		3012	153		409	2450			23%
Mixed Hardwoods/ Conifers		4706	40		267	4399			36%
Conifer Plantations		4914	239		599	4076			37%
Open/Brush		55							1%
Wetlands		326							2%
Ponds		44							1%
Other		39							
Total -		13,096	432		1,275	10,925			100%

The above data was compiled from existing inventory records.

"Natural hardwoods" contain trees that have been established through natural regeneration of new seedlings. Some common hardwood species include sugar maple, red maple, beech, red oak, white birch, basswood, white ash and black cherry.

"Mixed hardwoods/conifers" contain trees that have been established naturally, and are composed of at least 10% white pine, Eastern hemlock or red spruce.

"Conifer Plantations" contain trees established by mechanical means. These stands contain red, Scotch and white pine, European and Japanese larch, Norway and white spruce, white cedar and balsam and Douglas fir.

"Other" includes the Summit Shock Incarceration Facility and shale pits.

C. Roads

The State Forest road system provides for both public and administrative access to the Unit. The roads are constructed to standards that will provide reasonably safe travel and to keep maintenance costs at a minimum. There are three types of roads - public forest access roads, haul

roads and access trails - and they provide different levels of access, depending on the standards to which they are constructed.

Public Forest Access Roads are permanent, unpaved roads. They may be designed for all-weather use depending on their location and surfacing. These roads provide primary access within the Unit. The standards for these roads are those of the Class A and Class B access roads as provided for in DEC's Forest Road Handbook. These roads are commonly called truck trails.

Haul Roads are permanent, unpaved roads but are not designed for all-weather travel. They are constructed primarily for the removal of wood products and provide only limited access within the Unit. As such, these roads may or may not be open for public use. The standards for these roads are those of Class C roads as provided for in the Forest Road Handbook.

Access Trails may be permanent, are unpaved and do not provide all-weather access within the Unit. These trails were originally designed for removal of wood products and may be used to meet other management objectives such as recreational trails. These trails are constructed according to DEC's Best Management Practices.

The following roads are located within the Unit: (See Appendix V)

Public Forest Access Roads

Schoharie RA #3 - 4.8 miles
Schoharie RA #4 - 5.1 miles
Schoharie RA #5 - 0.7 miles
Schoharie RA #6 - 3.0 miles
Schoharie RA #7 - 4.1 miles
Schoharie RA #9 - 5.7 miles
Schoharie RA #21 - 1.9 miles
Total- 25.3 miles

Haul Roads

Schoharie RA #3 - 2.4 miles
Schoharie RA #4 - 0.6 miles
Schoharie RA #5 - 2.1 miles
Schoharie RA #6 - 2.7 miles
Schoharie RA #7 - 2.5 miles
Schoharie RA #9 - 1.9 miles
Schoharie RA #21 - 0.4 miles
Total -12.6 miles

Access Trails

Schoharie RA #3 - 4.4 miles
Schoharie RA #5 - 0.3 miles
Schoharie RA #7 - 4.0 miles

Schoharie RA #9 - 7.9 miles
Schoharie RA #21 - 0.9 miles
Total -17.5 miles

Town and County Roads

Schoharie #3 - Yankee Street
Miller Road
Betty Brook Road
Town Line Road
Burnt Hill Road
Cole Hollow Road

Schoharie #4 - Rossman Hill Road
Schoharie #5 - Rossman Hill Road
Thomson Road

Schoharie #6 - Rossman Hill Road
Sawyer Hollow Road (Co. Route 20)
Camp Road

Schoharie #7 - Heathen Creek Road
Fulton Hill Road
Fairlands Road
Rossman Fly Road
Rossman Valley Road
Cemetery Road

Schoharie #9 - West Kill Road (Co. Route 43)
North Road (Co. Route 2)
Betty Brook Road

Schoharie #21 - Welch Road
Allen Road
Quarry Road

Road Regulations

Maximum speed limit on Public Forest Access Roads is 25 m.p.h. Section 190.8(m) of the New York Code Rules and Regulations, Title 6 states: "Use of motor vehicles on State land under the jurisdiction of the Department of Environmental Conservation outside the Forest Preserve is prohibited, except where specifically permitted by posted notice or by permit issued by the Department." The DEC sign "Motor Vehicle Trail" shall be the posted notice permitting motor vehicle use on the Forest Access Roads on this unit.

No trails or haul roads are posted for vehicular use. Vehicles are permitted only on the public forest access roads and town roads on the Unit.

D. Archaeological and Historical Sites

The New York State site location map lists no known Archaeological or Historical Sites on the Unit.

There are 11 cemeteries, several mill sites and numerous old house foundations and stone walls located on the unit. (See Appendix III)

Protection of cultural resources of historic significance is provided for under the New York State Historic Preservation Act. Procedures for review and assessment of impacts are provided under the State Environmental Quality Review Act. Assistance in reviewing sites is available through the New York State Department of Parks and Historic Preservation, Field Services Unit.

E. Wildlife Resources

The Eminence Management Unit lies within the Appalachian Plateau and Schoharie Hills ecozones. The area is characterized by mixed hardwood stands, hardwood/conifer and conifer plantations in various age classes. Much of the area is in moderate to steep slopes. The area is further enriched by the presence of many scattered wetlands and small ponds. This variety of habitat allows a wide diversity of wildlife species to exist on the unit, including many game species.

No formal wildlife survey has been done on the area. Chambers, in his handbook, Integrating Timber and Wildlife Management, 1983(available at DEC Wildlife Offices in Stamford and Schenectady), compiled an extensive list of wildlife likely to be found in the Appalachian Plateau and Schoharie Hills ecozones, and further qualified his list by categorizing species by forest type, forest stage, and special habitat needs. Based on these criteria, 51 species of mammals, 16 species of reptiles, and 22 species of amphibians could inhabit Eminence Management Unit (Appendix VII).

Records compiled from 1980-1985 for the Atlas of Breeding Birds in New York State, 1988, list

118 species of birds breeding in the survey plots covering Eminence Management Unit. Together with the list Chambers compiled, 131 species of birds may occur in the Unit. Fifty-two are listed as confirmed breeders, 36 as probable breeders, and 30 as possible breeders (Appendix VII).

The small ponds and wetlands on the area provide breeding habitat for a variety of amphibians. Frogs, toads and salamander species in which the adults live in burrows and under logs in the forest need permanent or semi-permanent bodies of water where the eggs are laid and the larval stages develop. The ponds which

retain their water for most of the year and which lack a population of fish which would prey upon these eggs and young are especially valuable for these species. The presence of these areas in the State Forest increases the species diversity of the Unit. See Appendix VII for SUNY College of Agricultural and Technology Survey.

The many streams in the area and the young stages of many of the forest stands provide a large amount of potential habitat for beaver. Beaver impoundments add to the habitat diversity of the Unit, but also have the potential for conflicts with human uses.

Deer Management is not specific to the State Forest Unit, but is governed by the objectives of the Deer Management Unit (DMU) of which it is a part. Eminence Management Unit lies within Deer Management Unit 9. The DEC collects data from returned tags from successful hunters statewide to determine the number of deer which were taken each hunting season. From this data the number of bucks taken per square mile is calculated, which is used to estimate the total deer population at the county, town and DMU levels. A Citizen's Taskforce has been organized for each DMU composed of members of the public affected by deer including hunters, farmers, motorists and business interests. Each Task Force considers the present deer population in the DMU and its impact on each of the affected groups. The group then makes a recommendation for the most acceptable population level expressed in buck take/square mile. The goal set by the DMU 9 Citizen's Task Force is to maintain a deer population which produces an annual harvest of 3.4 bucks/square mile. In 1992, the buck take in DMU 9 was 3.3 bucks/square mile.

Because the number of female deer determines the potential size of the population, management is accomplished by regulated hunting of female deer as well as bucks.

F. Rare, Threatened or Endangered Plant and Animal Species

No rare, threatened or endangered plant or animal species have been identified on the unit. The Element Occurrence Records and the Heritage Significant Habitat Maps were consulted for this information.

G. Wetlands

The Eminence Unit contains all or part of thirteen regulated wetlands as well as twenty-three other wetlands which do not come under the statutory provisions of ECL Sections 3-0301 and 24-1301.

Wetlands

<u>Reforestation Area</u>	<u>Stand</u>	<u>Acres</u>	<u>Status</u>	<u>Catalog No.</u>
Schoharie RA #3	A-8	2	Unprotected	
Schoharie RA #3	A-20	1	Unprotected	
Schoharie RA #3	A-22,23,29	21	Protected	SU22
Schoharie RA #3	D-6,7,21	14	Protected	B13
Schoharie RA #3	D-18	3	Unprotected	
Schoharie RA #3	D-24,28	16	Protected	B14
Schoharie RA #3	D-34,35;E-2,3	21	Protected	B5
Schoharie RA #3	E-2,4;F-12	22	Protected	B16
Schoharie RA #3	F-14,15	15	Protected	B17
Schoharie RA #4	A-13,15,19	15	Protected	B7
Schoharie RA #4	A-22,25	18	Unprotected	
Schoharie RA #4	A-34	7	Unprotected	
Schoharie RA #4	A-44	3	Unprotected	
Schoharie RA #4	A-46	3	Unprotected	
Schoharie RA #5	A-21	1	Unprotected	B11
Schoharie RA #5	A-27	5	Unprotected	
Schoharie RA #5	A-37	10	Unprotected	
Schoharie RA #5	A-42,43	21	Protected	
Schoharie RA #5	A-48	2	Unprotected	
Schoharie RA #5	B-1	3	Unprotected	
Schoharie RA #6	A-2	15	Unprotected	
Schoharie RA #6	A-11	17	Protected	SU20
Schoharie RA #6	A-14	3	Unprotected	
Schoharie RA #6	A-25	6	Unprotected	
Schoharie RA #6	B-10	2	Unprotected	
Schoharie RA #6	B-12,18	5	Unprotected	
Schoharie RA #6	B-28;F-1,2,5	15	Protected	B7
Schoharie RA #6	C-1	5	Unprotected	

Schoharie RA #7	A-3	2	Protected	SU8
Schoharie RA #7	A-9,28	12	Protected	SU9
Schoharie RA #7	A-31	2	Protected	SU7
Schoharie RA #7	B-29	4	Unprotected	
Schoharie RA #7	B-32	2	Unprotected	
Schoharie RA #7	B-65	10	Unprotected	
Schoharie RA #7	C-1,2,3	20	Protected	B6
Schoharie RA #9	D-3	2	Unprotected	
Schoharie RA #9	F-19	2	Unprotected	

Total - 326 Acres

H. Fishery Resources

The Eminence Management Unit Area encompasses portions of 4 streams and 2 ponds which provide sportfishing opportunity. Tributary streams too small to support a fishery serve as spawning and nursery areas for the larger waters.

Stream Resources

Streams supporting sportfisheries include Panther Creek, West Kill, Betty Brook and Cole Hollow (Figure 1). Primary sportfish in these streams are brook trout (*Salvelinus fontinalis*), brown trout (*Salmo trutta*), or rainbow trout (*Oncorhynchus mykiss*) (Table 1). Natural trout reproduction occurs in all four waters. Fish populations in these waters and their tributaries are protected by appropriate state water quality classifications and standards (Table 1) that mandate high water quality and prohibit, in most cases, unpermitted disturbances of the stream bed or banks.

Wild trout reproduction in Panther Creek, Betty Brook and Cole Hollow is adequate to populate these streams to their carrying capacity, which ranges from 50-200 lb. of trout/acre, depending on the quality of in-stream habitat (Engstrom-Heg, 1990). Habitat improvement devices designed by the Region 4 Fisheries Office and constructed and maintained by the staff and inmates of the Camp Summit Correctional Facility have significantly increased trout standing crops in portions of these streams. These devices enhance trout habitat by stabilizing streambanks and increasing pool habitat. At traditional light fishing intensities, believed to average around 100 hours/acre, trout catch rates (including released fish) probably range from 0.5 to 3.0 trout per hour. At higher fishing intensities catch rates would be lower (Engstrom-Heg, 1990). The sustainable yield (harvest) potential of these small streams is probably about 25 lbs. of trout per acre per year (Sanford, 1976), or in the case of a stream section averaging five feet wide, about 75, nine-inch trout per 1.7 miles of stream. Statewide angling regulations have historically proven adequate for managing these waters and are expected to

remain adequate in the future.

In the West Kill, natural reproduction is not adequate to maintain the stream at carrying capacity so annual stocking of brown trout yearlings is carried out using New York State Stream Stocking Guidelines (Engstrom-Heg, 1990). Detailed information on fishery resources and fishery management in Panther Creek, Betty Brook and West Kill are available from the Regional Fisheries Office.

Mallet Pond

Mallet Pond was designed by the Region 4 Fisheries Office and built in 1976 by the New York Power Authority as mitigation for adverse fisheries impact incurred by construction and operation of the nearby Blenheim-Gilboa Pumped Storage Power Plant. The 16.5 acre pond was designed to provide ponded trout fishing opportunity, which is scarce in Schoharie County. Maximum depth is 24 feet (Figure 2). Access is available via foot path (0.3 miles) from a 5-car angler parking area (Figure

3). Fishing pressure has never been measured. However, census data collected from nearby Summit Lake in 1975 suggest Mallet Pond supports about 100 trips per acre or 1700 angler trips annually. Adirondack trout ponds, by comparison, support only about 10 trips/acre/year (Pfeiffer, 1979). Current angling regulations include a 9-inch minimum length limit and 5 fish daily limit on trout. The use of fish as bait is prohibited.

Stocking is required to sustain the Mallet Pond trout fishery. Brook, brown and rainbow trout have been stocked at various times but rainbow trout have been the major focus of stocking programs, and are expected to continue as the most important species in the fishery. Some brook trout reproduction occurs in an artificial spawning device installed in the pond in 1977, but natural reproduction is meager due to an undependable water supply, and will not support the fishery. Nevertheless, catch diversity provided by an occasional wild brook trout is considered desirable. Trout growth in Mallet Pond is excellent except during those occasions when other competitive fish species establish reproducing populations. Proliferation of non-trout species including bullheads and minnows has historically depressed the growth and survival of stocked trout to unsatisfactory levels. Draining and piscicide treatment was required in 1993 to eliminate competitive species and restore the growth and survival rates needed for continued trout management, and will be required periodically in the future. Complete treatment involves treating an inlet stream and headwater marsh pond located in a regulated wetland.

Rossman Pond (Rossman Fly)

Rossman Pond (P616 Mohawk-Hudson) comprises 32 surface acres. Its shoreline and

watershed are largely undeveloped. Maximum depth is 16 feet, and aquatic vegetation is abundant. When last surveyed in 1955, the pond supported a self-sustaining warmwater fish population comprised of chain pickerel, brown bullhead, yellow perch, and pumpkinseed.

The pond is not state-owned, but public access is available where the Eminence Management Unit Area meets water's edge (Figure 4). Formal access improvements such as roads and an angler parking area have remained undeveloped because of low demand and the remoteness of the pond. However, as construction of planned housing developments (Figure 5) around the pond is completed, more conventional public access opportunity will be appropriate. More intensive fishery management may also be required as exploitation increases.

I. Recreation

Varied recreational opportunities exist throughout the unit including:

Hunting	Nature Observation	
Trapping	Cross-country skiing	
Fishing	Camping	Hiking
Snowmobiling		
Horseback Riding	Mountain Biking	

Designated Facilities

Schoharie #3, 4, 6, 7, 9

Schoharie Trail - A 10.5 mile marked Hiking Trail from the Westkill Road (County Route 43) to Mallet Pond.

Long Path Trail - A 7.0 mile portion of this trail crosses the management unit. This is a portion of a major North-South trail which will eventually run from New York City to the Mohawk River.

Schoharie #3,9

Camping is allowed at Designated Sites adjacent to Betty Brook and Cole Hollow Brook.

Restrictions

Public Use is not allowed on the 160 acre restricted zone around the Summit Shock Incarceration Camp.

J. Other Facilities
Boundary Lines

Schoharie RA #3 - 16.5 miles
Schoharie RA #4 - 4.9 miles
Schoharie RA #5 - 9.0 miles
Schoharie RA #6 - 9.2 miles
Schoharie RA #7 - 18.0 miles
Schoharie RA #9 - 16.8 miles
Schoharie RA #21 - 6.6 miles

Total - 81.0 miles

State Forest Identification Signs (See Appendix V)

Schoharie RA #3 - 1
Schoharie RA #4 - 1
Schoharie RA #5 - 1
Schoharie RA #7 - 5
Schoharie RA #9 - 1
Schoharie RA #21 - 1

Gates (See Appendix V)

Schoharie RA #7 - 1
Schoharie RA #6 - 1

Hopkins Memorial (See Appendix V)

Cemeteries (See Appendix III)

Schoharie RA #3 - 4
Schoharie RA #4 - 2
Schoharie RA #6 - 1
Schoharie RA #7 - 3
Schoharie RA #9 - 1
Schoharie RA #21 - 1

Summit Shock Incarceration Camp

A 160 acre portion of Schoharie RA #6 adjacent to the camp will be restricted to public use.

Management activities will take place within this area.

K. Other Uses
Shale Pits (See Appendix III)

- Schoharie #3 - 2
- Schoharie #5 - 1
- Schoharie #6 - 1
- Schoharie #7 - 1
- Schoharie #9 - 1

The shale from these pits is occasionally used to surface the public forest roads on these areas.

When available, shale from any of these pits has been depleted or when the pits are no longer needed, the pits will be reclaimed according to the plan in Appendix VI. The shale pits on this unit will not be ready for reclamation within the next 20 years.

L. Property Records

- Deeded Right-of-Way
- Schoharie RA #5
- Proposal B - Two Rod Row to private land to the northeast Proposal C - Row across
- South Boundary of Proposal C boundary in Lot
- 22. State has rights to living spring to west of
- Proposal F - Water rights to spring on east side of highway and ROW to it.
- Proposal O - State has ROW across private land
- Schoharie RA #6
- Proposal D - ROW to Cemetery Reservation
- Schoharie RA #7
- Proposal K - ROW to cemetery reservation
- Proposal T - State has ROW to state land from Sawyer
- Hollow Road
- Proposal U - TRP for pipeline from spring
- Schoharie RA #9
- Proposal H - ROW to cemetery reservation
- Proposal K - ROW to spring reservation

RESOURCE DEMANDS AND MANAGEMENT CONSTRAINTS ON THE UNIT

The Eminence Management Unit offers a number of diverse resources. Legislation, industry, and individuals alike have influence on these resources.

The flexibility of management programs is governed by the degree of restrictions imposed by legislative mandates and Department policies, rules, and regulations.

I. MANAGEMENT CONSTRAINTS

The management plan has been developed within the constraints set forth by the ECL, Rules and Regulations of the State of New York, and established Policies and Procedures for the administration of the lands involved.

The following is a list of applicable laws, rules, regulations and policies which govern specific management actions on the Unit.

A. Environmental Conservation Laws

	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 52 - Implementation of Environmental Quality	Bond Act of
1986		
	ECL Article 71 - Enforcement	

B. Parks, Recreation and Historic Preservation Law

Article 14
Chapter 354 - Cultural and Historic Resources

C. New York Code, Rules and Regulations

concern.

D. Timber Resources

There is a strong market for most of the variety of wood products which are found on State lands. Over the past two decades, the demand for hardwood sawtimber, red pine logs and utility poles and spruce sawlogs has increased. The demand for spruce pulpwood is stable, while the demand for red pine pulpwood and hardwood fuelwood has decreased.

E. Education and Research

It is well recognized that the ultimate survival of the human species depends on a healthy environment. Yet, serious study of the ecosystem as a science began less than a century ago. More information and greater understanding is needed. The Department will cooperate with colleges and other groups to assist in research and by providing an outdoor laboratory setting for such study.

As the world's population and standard of living grows, greater pressure is inevitably put on land, water, and forests. This pressure is reflected by increasing use of the area for all types of recreation and by substantial increases in the price received for wood products. In many parts of the world these increasing demands result in conflicts and loss of natural habitat.

There is an opportunity to use the Eminence unit as an example of the successful integration of natural use and natural resource protection. If effectively communicated, this will help the public to understand that it is possible to use resources without compromising the viability of the ecosystem.

THE GOAL OF MANAGEMENT

It is the goal of the Department to manage State Forests for multiple uses to serve the needs of the People of New York State. This management will be carried out to ensure the biological diversity and protection of the forest ecosystem, and to optimize the many benefits to the public that forest lands

provide. This goal will be accomplished through the applied integration of compatible and sound land management practices.

OBJECTIVES

State Forests are managed for multiple uses including watershed protection, wildlife, timber crops, recreational use, and other kindred purposes. The objectives which are listed below are derived from the previously identified resource demands and the management goal statement. They form the basis for the schedule of management actions which follow.

A. Protection Management

A fundamental aspect of State land management is to ensure that the basic environmental integrity of the land is not damaged since it forms the basis for all life forms. These objectives will ensure that both cultural and biological resources that are present on the unit will be protected from detrimental activities.

1. Protect 326 acres of wetlands.
2. Protect all streams on the Unit.
3. Protect the forests against damaging fires, insects and diseases.
 4. As resources permit, additional surveys will be made to determine if there are any rare, threatened and endangered plant and animal species on the Unit. Public input on the existence of these species is welcome. If these species are found, they will be protected and where appropriate, habitat should be manipulated to improve their chances of survival.
 5. Protect cultural resources, where they exist, as provided for under the New York State Historic Preservation Act. Protect old house foundations, millsites and stone walls.
 6. Protect State lands from trespass by maintaining well marked boundary lines.
 7. Control vandalism, dumping, and other illegal activities by regular patrols of the area by Forest Rangers and other DEC staff.

B. Public Use and Recreation

The opportunity for public use and recreation is one of the most direct benefits that these lands provide to the average citizen. These objectives will provide for a number of recreational opportunities that are basically compatible with each other and consistent with the natural characteristics of the land.

1. Provide and improve access to this State Forest Unit.
2. Provide maps and informational brochures on the Unit.
3. Identify State land by maintaining boundary lines, posting State Forest signs along public highways and by maintaining State Forest identification signs.

4. Continue present recreational opportunities.
5. Provide additional opportunities which are identified in the demands section, provided they are compatible with the other uses on the Unit.
6. Limit access or recreational opportunities where degradation of the Unit's resources is occurring.
7. Provide for trash pick-up on the unit.
8. Protect and enhance scenic resources including vistas, stone walls, large old growth trees, wildflower beds, dogwoods, pinksters, etc..

C. Wildlife Objectives

These objectives will enhance the diversity and recreational opportunities related to various wildlife species.

1. Maintain a diversity of native wildlife species at levels compatible with the carrying capacity of their habitats.
2. Maintain wildlife-related recreation opportunity for the public including hunting, trapping and observation.
3. Provide for 50,000 person-trips/year of big game and small game hunting and trapping on the area.
4. Provide for 50,000 person-trips/year of other recreational uses such as hiking, natural appreciation and wildlife observation.
5. Manage a minimum of 7%(900 acres) in an open-brush condition.
6. Manage Varying hare through the establishment of conifer plantations and their subsequent management, harvest, and re-establishment.
7. Maintain an average of four dead snags and four live snags per acre in all natural stands capable of producing them.

D. Fishery Management Objectives

These objectives will promote a healthy population of fish and ample fishing opportunities.

1. Manage Betty Brook, Cole Hollow, and Panther Creek to provide a wild trout catch rate (including released fish) of at least 0.5 fish/hour. This catch rate is consistent with an annual trout harvest of no more than 25 lb/acre/year.
2. Manage West Kill to provide a trout catch rate (including released fish) of 0.5 fish/hour. This catch rate is consistent with a trout harvest rate of 0.1 lb/hour and an average fishing intensity of 100 hours/acre/year.
3. Manage other streams to serve as spawning and nursery areas for larger waters.
4. Manage Mallet Pond for trout to provide 1,700 angler trips annually and an average length of harvested trout of 10 inches or better.

5. Manage Rossman Pond to provide warmwater fishing opportunity that is easily accessible to the public.

E. Forest Resources

These objectives will provide a sustainable yield of various wood products that will provide income and employment opportunities without compromising the overall health and productivity of the forest ecosystem. (See Appendix IV)

1. Maintain a variety of tree species and age classes on the unit in order to provide for biodiversity of both flora and fauna.

2. Calculate an annual allowable cut that will allow for a sustained yield of wood products that is within the productive biological capacity of the forest and which does not significantly compromise other resource values.

3. Manage 5,471 acres of the natural hardwood and mixed natural hardwood/conifers to develop even-aged forests which will be harvested at 100-120 years of age. Some acres presently in plantation will be converted to this type.

4. Manage 1,856 acres of the natural hardwood/conifers to develop all-aged forests with maximum age classes of 120-150 years. All the areas needed to fulfill this objective presently exist.

5. Manage 4,815 acres of conifer plantations. These acres are made up of existing and newly established plantations. As the 1930's plantations are harvested, the percentage of plantations on the unit will be reduced from 37% to 25% of the total acreage on the unit. Most of the acreage which is not retained as conifer forest will grow into even aged natural hardwoods.

6. Manage 463 acres of natural hardwoods/conifer types with no cutting or removal of timber. These acres will come from the even-aged natural hardwood/conifer type, from the all-aged natural hardwood/conifer type and from the plantation type.

7. Maintain 123 acres in an open-brush or a grassland condition. 55 Acres of this type presently exists. The remaining acres will come from openings in natural stands or by converting some plantations to this type. There will also be additional habitat of this type provided with the annual mowing of the forest access road edges. Some temporary habitat of this type (for 10-20 years) will be created when mature plantations or even-aged natural stands are harvested.

8. Establish 30 acres of new conifer cover for each of the next 20 years through reforestation and natural conifer regeneration.

9. Conduct a forest inventory program on a 20 year cycle.

F. Educational and Research Objectives

These objectives will provide for opportunities to learn about the area and natural resource management.

1. Encourage research and educational endeavors by accomodating researchers and educators where possible and appropriate.
2. Provide information to the general public about the unit through brochures, signs, press releases and woods walks conducted by DEC staff.

INFORMATION IN SUPPORT OF THE GOAL AND OBJECTIVES

Article 9, Titles 5 and 7, of the Enviromental Conservation Law authorizes the Department of Environmental Conservation to provide for the management of lands outside the Adirondack and Catskill Parks. Management as defined by these laws includes watershed protection, the production of forest products, recreation and kindred purposes. The State Forest Land Master Plan provides the overall direction and framework for meeting this legal mandate.

For the Eminence Management Unit, the land management goal has been established in recognition of the legal mandate and also closely follows the guidelines set forth in DEC's State Land Master Plan. The goal is a statement that incorporates the potential of the natural resources to provide benefits to as broad a constituent group as possible while maintaining a healthy environment over the long term. In meeting this goal, specific objectives have been listed to direct our management efforts. These objectives are a means of promoting biodiversity and maintaining the health of the plant and animal species on the unit. The objectives will also expand public use opportunites on the unit.

A. Protection Management

Protection of wetlands and the maintenance of high water quality in several streams fulfill the watershed protection objectives on the unit. For the most part, these lands and streams are at the top of the watershed and, as such, can considerably influence downstream uses of our water resources. These specialized habitats also bring vegetative diversity to an otherwise forested ecosystem.

The forested wetlands on this unit are not timber producing sites. For that reason no commercial timber harvests will take place on the wetlands of the unit.

The objective which ensures fire and insect and disease control systems are in place will provide a reasonable measure of protection from unpredictable outbreaks of fire, diseases and insects, as well as providing for the controlled use of fire to accomplish vegetative manipulation.

Those objectives which concern the protection of rare, endangered and threatened plant and animal species, as well as the protection of cultural resources take into account an increasing awareness that rare plant and animal species and cultural resources should be protected whenever possible.

B. Public Use and Recreation

These objectives provide direction for achieving public use of the unit. Public use and recreation will be encouraged if the activities are compatible with the overall goal of management on State Forests. Additional recreation opportunities will be provided when they are compatible with the other objectives for this unit. Some present uses will be restricted if they become incompatible with other objectives or if those uses are causing degradation of the unit. As other public use and recreational demands are identified and if they are compatible with the other objectives for this unit, they will be incorporated into the plan.

The Question of ATV Use

Commissioner Jorling approved a position paper recognizing all terrain vehicles (ATV's) as a legitimate recreational use on state forests. The Department believes that ATV trails can be established, under proper conditions, without causing irreversible environmental damage. Furthermore, the feasibility of ATV trails are to be considered in the development of plans such as this one.

In 1990, DEC staff in Region 4 did consider the feasibility of developing an ATV trail on the Eminence Unit. Based on the available information on soils, rare and endangered plants, and important wildlife habitats, regional staff felt an ATV trail could be operated without any significant environmental problems. A trail proposal was subsequently presented to the public at a meeting in Summit. People spoke out both for and against the proposal. Eventually, hundreds of letters and petitions were received. However, because of the size and intensity of opposition and the lack of a statewide DEC policy, the proposal was not pursued.

The most recent public meeting in Summit concerning this management plan also generated many public comments about the feasibility of an ATV trail. People spoke out both for and against the idea of an ATV trail. Letters and petitions signed by hundreds of people on both sides of the issue were received. The evidence suggests that an ATV trail or trails are desired by a large number of people. However, a large number of people remain adamantly opposed to the idea of a trail near

Eminence. This suggests that at this time such a development would be incompatible at this location.

The current position statement makes it clear that before an ATV trail is constructed, a number of criteria should be met. The proposed Eminence ATV trail will not meet the requirement of compatibility with other recreational uses. A substantial percentage of people who are using the area for hiking, hunting, horseback riding and fishing expressed opposition to the idea in 1990 and in 1994. There is no evidence which suggests the extent of opposition has changed significantly.

In summary, the most controversial aspect of this plan is that an ATV trail was not proposed. It is clear that a large number of individuals and organizations support the creation of a trail. It is also clear that a large number are opposed to a trail at this particular location. Consequently, an ATV trail is not proposed in this unit plan because of the incompatibility with many other recreational users of the area.

C. Fishery Management Needs

The following needs must be met to achieve the fishery management objectives for the Eminence Management Unit.

Rossman Pond

1. Existing angler access to the fishery must be improved.
2. A contemporary fishery data base must be developed.
3. Habitat and recruitment of sport fish must remain adequate to support the fishery.

Mallet Pond

1. Habitat must remain adequate to support trout growth rates averaging 4-5 inches per year for the first 2 growing seasons in the pond. The pond must remain free of non-trout species.
2. Recruitment must remain adequate to support the fishery-stocking will be required.
3. Adequate public and administrative access must be maintained.

Stream Resources

1. Habitat and recruitment of young trout must remain adequate to support the fishery.

Strategies

Rossman Pond

Impending development around the pond and increasing demand for fishing opportunity

statewide and nationwide (U.S. Dept. of the Interior, 1992) warrants improved public access on the State-owned land. Access is most appropriately provided by improving and formalizing a fishing access site for launching car top boats and canoes and to provide shore fishing opportunity.

An accurate, contemporary fishery data base should be obtained to help make sound fish management and resource protection decisions.

Mallet Pond

Continued stocking will be required to maintain the trout fishery in Mallet Pond. Brook, brown, and/or rainbow trout must be stocked at a rate of 91 fingerlings/acre, which is commensurate with the pond's carrying capacity. Although some wild (brook) trout recruitment is expected from the artificial spawning facilities in the pond, recruitment is too erratic to sustain a trout population capable of providing the desired fishery. Trout growth and survival needed to sustain the fishery is not possible if non-trout competitive species establish reproducing populations. Periodic pond draining and piscicide use will be required to eliminate these populations as they occur. The existing minimum size limit of 9 inches takes advantage of the excellent growth potential in the pond. The use of fish as bait, alive or dead, must continue to be prohibited to avoid contamination. Water quality in the pond must conform to water quality stands for C(ts) waters. The artificial spawning device must be maintained in satisfactory functional condition. Existing roads to the pond must remain functional and the shoreline and dike must be annually mowed to prevent encroachment of trees and brush that interfere with fishing and jeopardize dike stability. The road from the angler parking area to the pond will continue to be limited to foot traffic only.

Stream Resources

Although the actual catch rate of trout in the streams within the Eminence Management Unit is not known, predictions of catch rates using models of fishing intensity and population density of yearling trout (Engstrom-Heg, 1990) indicate that catch rate objectives of 0.5 trout per hour for these waters is currently being achieved or exceeded. Trout standing crops in stream reaches where stream improvement devices have created additional pool habitat support a trout biomass that is nearly triple that present in average, "natural" stream reaches (Region 4 file data). Since structures are built and maintained by correction camp labor at very low cost, the stream improvement program significantly enhances fishery resources at a relatively low cost.

The key to achieving fishery objectives for streams in the Eminence Management Unit lies generally in a sound environmental protection program that will maintain habitat and water quality suitable for continued trout production. Limited natural recruitment in the lower reach of the West Kill requires that a small annual stocking of brown trout yearlings be made to achieve the catch rate objective there.

Trout waters in the Eminence Management Unit require a permit from DEC for any activity involving disturbance to the bed and banks. Permits will be reviewed by the Regional Fisheries Office to mitigate or prevent activities which are detrimental to the fishery resource. Changes in stream course which shorten streams, diminish aquatic habitat and increase stream velocity causing accelerated scouring of the stream bed will be discouraged. Restriction of streams in culverts or other artificial beds, smaller in cross sectional area than the existing stream channel, can lead to wash out and downstream damages. Additionally, some culverts have proven to be a barrier to fish passage because of increased gradient, lack of holding or resting areas or inability of fish to enter the culvert due to downstream cutting or degradation of the stream bed. Bridges are a better alternative for stream crossings than culverts.

There is a need to maintain riparian vegetation along the stream and its tributaries. Such greenbelts help maintain stable stream banks, reduce erosion, provide shade to help maintain cooler water temperatures, and contribute to the food supply. Land use practices in the watershed which avoid ponding of tributary streams, warmer water temperatures, and erosion and siltation will be encouraged.

D. Timber Management

The harvest of pulpwood and timber is a basic objective as well as an important tool for achieving many of the other management objectives for the area. For example, the removal of trees by a logging contractor can be used to make openings in the forest to create wildlife habitat. Tree removal can eliminate diseased or insect infested material that would otherwise spread to surrounding forest. The removal of slow growing trees stimulates the growth of residual trees resulting in a healthier forest. Tree removal results in the creation of skid trails and woods roads which can subsequently be used for recreational trails. Tree removal can be used to create conditions needed for the survival of specific species and thus contributes to the maintenance of biodiversity.

The acreages segregated by rotation age, hardwood/conifer type, plantation, open-grassland and brushland and stands receiving no treatment as well as snag retention rates, reflect the best information to date for the silvicultural requirements of various tree species and the habitat requirements of a variety of plant and animal species.

All-aged natural types provide a range of tree sizes from seedlings and saplings to large trees throughout the stand at all times. These stands provide some of the characteristics of old growth forest (there are always large trees, dead snags, breaks in the canopy, etc. present) and they provide habitat for those species that require these characteristics. However, this type can only be sustained over the long run where shade tolerant species such as hard maple, beech and hemlock, which can regenerate under shaded conditions, are present. These stands are difficult to maintain if deer browsing is heavy.

Even-aged natural types contain trees of one age class, such as seedling-sapling, intermediate,

or large sized trees. Each of these size classes provide differing habitats for breeding, forage and shelter for a variety of animal species. Intolerant species such as oak, cherry and ash are often found in even-aged stands since they require extensive sunlight on the forest floor to regenerate and will not reproduce well in full or mixed shade. At the present time, the majority of the stands of this type are in the intermediate size class. More balance is needed between the different age classes in order to maintain diversity. This will partially be obtained as intermediate size trees continue growing into the larger tree class. Additional acreage in the seedling-sapling class will be obtained by clearcutting some plantations and allowing hardwoods to seed in. It may be some time before a better balance of age classes is achieved.

Plantations are another forest type that add to the diversity of the area. Benefits to wildlife include escape and thermal cover, roosting and nesting areas and a food source. Plantation species are often best suited to the hilltop sites that comprise the majority of the Eminence Unit. Fifty year old plantations on these sites often contain three to four times the volume of timber of adjacent 100 year old hardwood stands. Plantations are managed as even-aged types and when they are harvested, they are allowed to regenerate naturally or new plantations are mechanically established.

At the present time, there is not much age diversity within the plantation type on this unit. Most of the plantations were established in the 1930's. Some of them, especially the red pine, are now biologically mature or approaching biological maturity.

Some of these plantations will be harvested by clearcutting resulting in the establishment of new forest stands. The reasons for doing this include the following:

1. Once a stand of plantation pine has reached biological maturity, mortality is often extensive, occurring in just a few years. The dead and dying trees have little value for wood products, are often unsightly, constitute a fire hazard, and provide a breeding ground for insects that may threaten healthy trees.

2. Young stands provide benefits, such as escape cover for some wildlife species, that are not provided by the older plantations.

3. Young stands are more vigorous and less susceptible to insect and disease attack.

4. Harvesting some of the mature stands now may alleviate future large scale mortality. In most cases, harvesting will be limited to blocks of 10 acres or less.

5. Establishing new stands now will help insure a future sustained yield of forest products. Hopefully, these new stands will be producing forest products before the last of the 1930's plantations are harvested. The 1930's red pine plantations are scheduled to be harvested over the next 60 years. In the schedule of management actions, only the next 10 years of red pine harvests are listed. This schedule will be reevaluated at the end of that time. Surveys of the 1930's red pine plantations have shown reduced tree vigor in recent years. This is indicated by reduced growth rates and mortality. If there is increased mortality at the ten year reevaluation, the rate of cutting may be increased.

There are several hundred acres where timber harvesting will not take place. These areas include stream corridors, areas around ponds and steep slopes. The purpose of these no harvest areas is to filter sediment, preserve vegetation that shades the streams and ponds, inhibit bank erosion, maintain stream integrity, and enhance recreational use. Interior wildlife species that require an unbroken forest canopy will utilize these areas. A portion of this acreage, adjacent to the Westkill Road and the West Kill, provides an easily accessible area for the public to observe a natural area with large trees. Several small stands will be allowed to go through the natural successional process and these stands will add further diversity to the area. A one-half mile nature trail will be marked through this area. The Long Path Hiking Trail also goes through a portion of this area. (See fisheries management strategies and fisheries environmental protection for additional justification for this objective.)

Adjacent to some of these untreated areas, and in particular adjacent to the Betty Brook stream corridor, will be areas of the all-aged forest type. These areas, even after a timber harvest, will only have small openings in the forest canopy. This will increase the area of relatively unbroken forest canopy, and when added to the acreage in untreated areas, should provide sufficient acreage for interior wildlife species requiring the large acreages of unbroken forest canopy. Several of these species appear to be nesting successfully on Eminence now.

MANAGEMENT ACTIONS

The following scheduled management actions to achieve the stated objectives are dependent upon several factors:

- 1) The markets for forest products are constantly changing. The treatment of some stands may be delayed by a lack of markets at the time of scheduled treatment. If markets develop for the products from stands that are presently considered non-commercial, the plan may be amended to include these stands in the cutting schedule.
- 2) Disease, insect or storm damage may necessitate unscheduled salvage actions.
- 3) Budget constraints may also delay scheduled management actions. These actions will be

completed as soon as possible within these constraints.

4) Many of the public use and recreation, wildlife, fisheries and land management actions will be accomplished with resources from the Summit Shock Incarceration Camp. Any limitation in the available resources from the Camp will delay or eliminate scheduled actions.

PROTECTIVE ACTIONS

A. Insect and Disease

Authority to conduct forest insect and disease control activities is found in Title 13, Article 9 of the ECL and Chapter II of the New York Codes, Rules and Regulations.

The health of plant populations on the Unit will be maintained through the integrated pest management approach. Observations of harmful agents will be made and reported by State personnel. Public reports will be received and may be investigated. Monitoring of problems will be made. When warranted, appropriate control strategies will be developed to keep damage within acceptable levels.

B. Fire Control, State Land Security and Public Safety

An adequate level of program involvement will be maintained so as to assure minimum risk of loss to the forest and land resources, facilities and minimum risk to the public.

The authority to conduct this program is provided by Article 9 of the ECL.

C. Temporary Revocable Permits

Authority for the issuance of temporary use permits is provided by Article 3-030l of the ECL.

Permits may be granted for the temporary use of State land by the public within stated guidelines and legal constraints so as to protect the State lands and their resources.

D. Wetlands

Protection of the significant benefits of both protected (12.4 acres and over) and non-protected wetlands will be sought by adhering to the requirements of ECL 3-030l and 24-130l in Freshwater

Wetlands Laws. In addition, Silvicultural Best Management Practices shall be followed.

E. Watersheds

Protection of streams and ponds from water quality degradation and visual pollution will be accomplished by adhering to Silvicultural Best Management Practices (BMP's) as detailed in the Timber Management Handbook, Chapter 200. 1. No timber harvests will take place within 100 feet of the following streams and ponds:

(A) Betty Brook; (B) Cole Hollow Creek; (C) Doney Hollow creek from the Westkill to the north edge of Schoharie #9, Compartment J; (D) Panther Creek; (E) Mine Creek; (F) a Tributary of the West Kill from Schoharie #9, Compartment A; (G) Four tributaries of Panther Creek from Schoharie #7; (H) Mallet Pond; (I) Marsh Pond - Schoharie #3; D-34; (J) Marsh Pond - Schoharie #7; A-9; (K) Rossman Pond.

2. There will be no timber harvests on the State lands south of the Westkill Road. These areas border the West Kill.

3. Further protection will be accomplished by laying out log roads so stream crossings will not be needed on the above mentioned portions of: (A) Betty Brook; (B) Cole Hollow Creek; (C) Doney Hollow Creek; (D) West Kill.

4. Log roads will not be laid out within 100 feet of the above mentioned ponds.

5. When it is necessary for log roads to cross other streams, this will be done according to BMP's.

F. Cultural 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 this Unit. This involved completion of the Structural-Archaeological Assessment Form (SAAF) and reviewing the New York State Archaeological Site Locations Map. OPRHP and the New York State Museum have been consulted in any instance where the Site Locations map indicated an archaeological or historical site may occur on management unit lands. The SAAF will be updated at the time this plan is updated. Option #1: The results of the SAAF evaluation indicate that no further cultural resources review is required.

Protection of the cemeteries, old house sites and mill sites will be provided for when planning timber harvests and construction projects. The eleven cemeteries and the stone walls surrounding them will receive regular maintenance by the Summit Shock Camp. Major emphasis for the protection of stonewalls will be placed on those walls that are well preserved. These walls will be protected by limiting damage during felling and skidding. New openings through the walls will only be allowed where absolutely necessary.

The stone walls around the cemeteries and the water holes will be kept in repair as time allows when the Shock Incarceration Camp is working on these facilities.

G. Public Roads

The removal of logs and pulpwood from state land by logging contractors requires the use of trucks and public roads. Some of these roads are dirt roads without an adequate base and can be damaged by vehicular use during certain times of the year.

In order to minimize the chance of damage, any active logging operations will be stopped during mud season. In addition, private contractors will be held liable for any damage to public roads as a result of their activities.

PUBLIC USE AND RECREATION ACTIONS

Public use shall be permitted and regulated according to provisions within Title 6, New York Codes, Rules and Regulations as well as special regulations that apply to forests on this Unit. Wherever possible, logging activities will be used to increase recreational opportunities on the Unit. For instance, skid roads may be incorporated into the trail system and some landing areas may be used as parking or camping areas after logging is complete.

1. Expand the present snowmobile trail by about 15 miles. The majority of this expansion will utilize existing logging roads or logging roads constructed with future timber sales.
2. Extend the snowmobile trail from Monkey Run Road to County Route 20 (Sawyer Hollow Road). Construct a parking lot on County Route 20. Extend the trail north from County Route 20 to existing Access roads on Schoharie RA #7.
3. Provide alternate routes on the existing snowmobile trail so snowmobilers can avoid areas where occasional plowing or logging operations will take place.
4. Work with local snowmobile groups to connect trails on State land with trails on adjacent private land. Pursue with local groups to obtain additional volunteer work on the trails.
5. Work with Minekill State Park officials and private landowners to connect the Eminence Trails with the Park.

6. Sign approximately 30 miles of the snowmobile trail, north of County Route 43, as a horse trail. Do additional clearing, where necessary, to accommodate horseback riders. Restrict horseback riding to the period of May 1 to November 15.

7. Put up informational bulletin boards at the parking areas on County Route 20, County Route 43 (Westkill Road) and at the Mallet Pond parking area.

8. Continue to provide informational brochures on Eminence Management Unit to the public from the DEC offices at Stamford and Schenectady.

9. Put up additional directional signs on the trail. 10. Reroute the present Schoharie Hiking Trail to utilize a portion of the Long Path Hiking Trail. Construct a lean-to on the hiking trail between Thompson Road and the Burnt Hill Truck Trail.

11. Mark an one half mile nature trail through the area adjacent to the Westkill Road.

12. Put up camping signs at designated camping sites adjacent to Betty Brook and Cole Hollow Creek.

13. On a trial basis, put picnic tables on the Westkill Road, the Cole Hollow Road, the Burnt Hill Truck Trail opposite the marsh pond, and the Burnt Hill Truck Trail near the small waterfalls. These are areas presently being used as primitive camping sites. If vandalism or garbage becomes a problem, the tables will be removed.

14. Maintain 81 miles of State Forest boundary line on a 10 year cycle. State Forest signs will be put up on all corners and State Forest signs will be put up every 0.1 mile along all public roads and truck trails.

15. Provide regular patrols by the Forest Rangers to limit unauthorized use of the State Forests.

16. Place new Burnt-Rossman Hill State Forest identification signs on County Route 20, on County Route 2 and on County Route 43. These replace four outdated Burnt-Rossman Hill signs.

17. Place directional signs to Mallet Pond on the corner of County Route 20 and Rossman Valley Road and also on the corner of Rossman Valley Road and Rossman Fly Road.

18. Pursue the acquisition with willing sellers of seven private parcels totaling about 660 acres. These acquisitions would reduce boundary line maintenance, increase public access and provide additional protection to the Betty Brook, Cole Hollow Creek and Doney Hollow creek corridors and Rossman Pond.

19. Restrict access to the marsh ponds north of Mallet Pond. Gates will be placed on each end of the access road leading to these ponds.

20. Install "No Motor Vehicles Beyond This Point" signs on several unimproved access roads and haul roads and on the Mallet Pond access road. These roadways will be blocked in the signs are ignored.

21. Reconstruct the following roads:

(1) Schoharie #21 - Allen Road - 1.3 Miles

(2) Schoharie #21 - Quarry Road - 1.0 Miles

(3) Schoharie #6 - Monkey Run Road - 1.5 Miles

(4) Schoharie #9 - Betty Brook Road - 2.0 Miles

22. Maintain the above mentioned roads and the forest access roads through annual cleaning of ditches and culverts, mowing and grading. Resurface and brush the forest access roads as needed.

23. Pursue the maintenance of the western portions of the Burnt Hill Town Road and the Cole Hollow Town Road with the Town of Blenheim. Pursue the maintenance of Thompson Road with the Town of Fulton.

24. Maintain Looking Glass Road north from Rossman Hill Road to the beginning of town maintenance. This road will only be maintained to the standard that it can be used as 4-wheel drive access.

25. Provide the public with an opportunity to view management types ranging from open-wetland, seedling-sapling stands, pole and sawtimber stands to stream corridors with no harvest operations.

26. Top lopping will be done in harvest areas adjacent to public highways or forest access roads. Larger trees will be retained along roadsides wherever possible.

27. Maintain trails annually.

28. Maintain the eleven cemeteries and their surrounding stone walls.

WILDLIFE ACTIONS

1. Natural hardwood and mixed hardwood/conifer stands will be managed to produce and/or maintain an average of four live and four dead snags per acre.

2. Manage a minimum of 7% (900 acres) of the unit in an open-grass or brush condition. These openings may include permanently maintained openings or openings that are temporarily in this condition following clearcuts.

3. Deer wintering areas will be delineated and detailed management plans will be developed for them.

4. Continue to provide informational brochures on Eminence Management Unit to the public from the DEC Offices at Stamford and Schenectady.

5. Erect woodduck boxes around ponds and wetlands.

6. Release apple trees to perpetuate them as well as to stimulate bud and fruit production.

7. Reseed logging roads and log landings with herbaceous species having value as wildlife food and cover.

8. Clearcut stands of red pine in several segments of two to ten acres each over a 60 year period. These cuts should be distributed over the unit to create optimum wildlife habitat diversity.

9. Small potholes will be developed where practical.

10. Some of the small water holes built during the 1930's, which have since filled in, will be cleaned

out.

11. Maintain approximately 25% of the acreage in plantations at all levels of growth to benefit wildlife species. The early stages of growth are especially important for some species of wildlife.
12. Favor fruit and mast producing trees whenever they are present in timber sale areas or in non-commercial treatment areas and when this is consistent with other management objectives.
13. Protect open wetland areas.
14. Within budget and constraints, thin pole stands to increase browse.
15. In selectively marked stands, make small clearcut openings of 1/4 acre to 2 acres wherever appropriate.
16. Encourage winter cutting of hardwoods whenever practical.

FISHERIES ACTIONS

Species Management, Habitat Management and Public Use

Rossman Pond

1. A parking area/car-top boat launching site for six cars with a suitable access road for vehicles will be provided near the interface of State land and the pond's high water mark. The existing roadway and parking will be utilized to the greatest extent possible.
2. A fishery survey of the pond will be conducted, and a management plan prepared.

Mallet Pond

1. Mallet Pond will continue to be managed primarily for trout fishing, the specific purpose for which it was designed and built.
2. The growth and vigor of the trout population will be maintained by preventing establishment of reproducing populations by non-trout fish in the pond and its watershed. Draining of the pond and use of piscicides in the pond and its watershed will be required periodically.
3. Brook, brown and/or rainbow trout will continue to be stocked annually as required.
4. A reproducing population of brook trout will continue to be maintained through maintenance of the artificial spawning box.
5. The dam, spillways, valve, artificial spawning devices, and access road, and angler parking area will be maintained.
6. The grass area around the pond will be mowed annually to prevent encroachment of trees and brush

that will jeopardize dike stability and interfere with fishing.

7. Existing trout angling regulations will be continued for the foreseeable future. These include:

Minimum length - 9 inches

Daily limit - 5

Open season - April 1-September 30

The use of fish as bait, dead or alive, is prohibited.

Stream Resources

1. The lower reaches of the West Kill will continue to be stocked annually with brown trout yearlings using New York Stream Stocking Guidelines (Engstrom-Heg, 1990). Management practices which foster stability of the bed and banks of the West Kill will be encouraged.
2. Other streams and stream reaches will continue to be managed for wild trout only.
3. Existing stream improvement structures will be maintained as recommended by the Region 4 Fisheries Office using correction camp labor as available.
4. New stream improvement structures will be installed as recommended by the Region 4 Fisheries Office using correction camp labor as available.
5. Statewide angling regulations will apply.

Pond and Water Quality

Habitat and water quality in the ponds and streams must be maintained and improved where possible to promote growth, survival, and/or reproduction of desired fish populations. To assure that adverse impacts are recognized and mitigated, any proposed projects or actions in the watersheds of these ponds and streams should be reviewed carefully by DEC pursuant to State Environmental Quality Review (SEQR) protocols or other appropriate authority. Projects with the potential to cause the impacts listed below are of particular concern:

- a. Water temperature increases.
- b. Reduction of streamflow.
- c. Reduction in groundwater contribution to streamflows which may be caused by groundwater withdrawals for water supply or other purposes.
- d. Increases in turbidity or sedimentation which may be caused by land clearing and construction, or other earthwork operations, especially on steep slopes.
- e. Reduction in dissolved oxygen levels.
- f. Contravention of any state water quality standard.
- g. Any decline or change in stream benthos.
- h. Any addition of nutrients, especially phosphorous.

- i. Reduction in water transparency.
- j. Any deterrent to fish spawning.
- k. Loss of riparian vegetation.
- l. Loss of habitat due to construction activity.
- m. Stream bed or bank instability.

TIMBER MANAGEMENT ACTIONS

The Timber Management Objectives will be accomplished by using a broad range of silvicultural techniques. This will be the use of cutting methods such as selection, shelterwood, seed tree, and clearcutting. The use of clearcutting will be limited and where applied will generally be kept to ten acres or less.

Sustained wood production will be achieved through the regulation of cutting schedules which target the practices of woodland improvement and harvest on an acreage control basis. These practices will be applied in an environmentally sound and silviculturally proven manner.

The majority of the natural hardwood and natural hardwood/conifer stands will be managed to produce trees of approximately the same age for a maximum of 100-120 years. This is an even-aged management system. Reasons for using this silvicultural method include promoting vigorous tree growth and high value wood production. The more productive sites (Sites I & II) will have intermediate harvest or improvement cuts at 20-25 year intervals. The less productive sites (Site III) will have these cuts at 40 year intervals. Through the regulation of these intermediate and harvest cuts, an equal amount of acreage in all age classes will be created. On the Eminence Management Unit, it will take several rotations to achieve this regulation. The reason for this is, like the plantations, the majority of the natural stands are in the 60 year age class. These stands will be due for harvest at about the same time, so during this rotation some stands will grow beyond 120 years. Preparations for assuring the regeneration of the forest will be made in advance of the final harvest.

The majority of the higher quality sugar maple/hemlock stands will be managed for trees of all ages on a continuous basis, with individual trees being harvested at a maximum age of 150 years (All Aged Management). Sugar maple and hemlock are two species noted for their longevity and for their ability to regenerate under shaded conditions. At 20-30 year intervals, harvest cuts will be made to maintain a balanced distribution of age classes and promote habitat diversity.

Future red pine and larch plantations will be managed for a maximum of 60 years. At present, we plan on managing Norway spruce for a maximum of 100 years. As we gain more experience with our 60 year old plantations, we may find these rotations will have to be adjusted. We will make this adjustment in future updates of the plan. Intermediate thinnings and harvest cuts at 15 years for Site I & II stands and at 20 years for Site III stands will maintain the health and vigor of the trees. Releasing

may be necessary in some cases to maintain the vigor of

young plantations. This will involve eliminating the competition from undesirable species by mechanical means or through the use of herbicides. Most new plantations will be established through planting, but some Norway spruce will be established through natural regeneration.

Site preparation will be necessary to reforest some plantation sites and to achieve desirable regeneration in some natural stands. Site preparation may include prescribed burning, herbicide application, mechanical methods or a combination of these.

Untreated stands will be exempt from timber harvesting, which indirectly provides for active wildlife habitat manipulation where practiced. Although timber revenues will be foregone on these areas, the benefits of watershed protection, old growth habitat and aesthetics will be enhanced.

Natural hardwood and mixed hardwood/conifer stands will be managed to produce and/or maintain an average of four live and four dead snags per acre. A snag is a tree which provides specific wildlife habitat needs for cavity nesting birds and mammals as well as a food source for insect eating birds.

Forest inventory on all stands of the unit will be conducted at least every 20 years. In addition, all stands will be re-inventoried after treatment.

Open grassy areas and brushy herbaceous openings increase forage and provide shelter for wildlife. Openings also enhance the opportunity to view wildlife. These areas may be maintained through harvest cuts, non-commercial cuttings, mowing or by prescribed burning. Where appropriate, new haul roads and landings will be mowed and maintained as grassland.

For a listing of Forest Stand Descriptions and Management Actions, see Appendices I and II.

COORDINATIVE ACTIONS

If a proposed management action will affect an adjoining landowner, notification and coordination of activities may be required. These actions include, but are not exclusive of trail networks and road construction or rehabilitation. ECL regulations and local codes provide procedural requirements for other types of actions such as herbicide application and prescribed burning.

DATA COLLECTION ACTIONS

1. Inventory of all forest stands of the unit will be conducted at least once every 20 years. In addition, all stands will be reinventoried after silvicultural treatment.
2. Pursue a survey of the unit for endangered, rare or threatened plant species and plant communities.

BORROW PIT ACTIONS

Shale from the six pits on the unit (Appendix III) will occasionally be used to surface or rehabilitate the forest access roads. If there is a need for more than 1,000 tons/year from one pit, a mined land plan will be made for that pit according to the Mined-Land Reclamation Law. When the

shale from a portion of the pit has been depleted, that portion of the pit will be reclaimed according to the plan in Appendix VI.

TWENTY YEAR SCHEDULE OF MANAGEMENT ACTIONS

A. Timber Harvesting & Improvement Cuts - See Appendix I for schedule of stands.

B. Apple Tree Release and Rehabilitation

	<u>State Forest</u>	<u>Stands</u>	<u>Acres</u>	<u>Year</u>	
	9	A-5	7	1992-2002	
	7	A-3	2	93-03	
	7	A-13	1	93-03	
	7	A-25	8	93-03	
	9	A-12	1	93-03	
	9	A-14	3	93-03	
	9	A-15	1	93-03	
	9	A-17	3	93-03	
	9	G-3	1	93-03	
	9	G-5	1	93-03	
	6	B-22	2	94-04	
	6	B-25	1	94-04	
	6	D-5	1	94-04	
	6	F-3	10	94-04	
	7	B-65	2	94-04	
	9	E-23	1	94-04	
	9	E-27	1	94-04	
	9	E-30	1	94-04	
21	B-1	3	94-04		
21	B-2	1	94-04		
21	B-4	2	94-04		
	3	A-3	1	95-05	
	3	A-13	1	95-05	
	3	A-14	1	95-05	
	3	A-35	1	95-05	
	3	A-43	1	95-05	
	7	C-6	2	95-05	
	7	C-10	2	95-05	
	7	C-11	2	95-05	

4	A-23	2	96-06
6	A-14	1	96-06
7	A-22	2	96-06
7	A-47	1	96-06
7	A-64	1	96-06
3	A-27	2	97-07
3	C-1	1	97-07
3	D-38	1	97-07
4	A-48	1	97-07
4	A-62	1	97-07
4	A-64	2	97-07
6	A-10	1	00-10
3	B-7	1	2005

C. Grassland Maintenance

Areas will be mowed or burned every three years or as needed.

See Appendix III for schedule of stands.

<u>State Forest</u>	<u>Stand</u>	<u>Acres</u>	<u>Year Beginning</u>	
3	D-35	1	1992	
4	A-13	1	1992	
6	F-3	2	1992	
7	A-45	1	1992	
7	A-9	1	1992	
9	H-4	2	1992	
3	A-31	1	1993	
3	D-28	1	1993	
7	C-11	1	1993	
9	A-17	1	1993	
9	C-20	1	1993	
9	I-8	1	1993	
6	B-30	1	1994	
7	A-55	1	1994	
7	B-36	1	1994	
21	B-1	1	1994	

Grassland habitat will also be maintained by the mowing of the 25 miles of public forest access roads. There will be additional grassland temporarily created in the red pine stands

after clear-cut and during and after planting. There will be a grassland component in these stands until the young trees have grown enough to shade the ground.

D. Maintained Herbaceous Openings

See Appendix III for Schedule of Stands.

<u>State Forest</u>	<u>Stand</u>	<u>Acres</u>	<u>Years</u>	
3		A-17	4	1992-2007
6		B-22	2	94-04
6		D-5	1	94-04
3		B-6	3	95-10
7		B-17	2	95-05
7		C-1	2	95-05
4		A-23	3	96-11
7		A-22	2	96-00-06-11
7		A-37	1	96
7		A-47	1	96-06
7		A-62	2	96-11
3		D-38	1	98
7		B-17	3	00-10

Herbaceous openings will also be created by clear-cutting. Those stands that are being naturally regenerated temporarily provide the habitat of the open-brush type. Some of the open-brushy wetlands also provide this habitat.

E. Boundary Line Maintenance

<u>State Forest</u>	<u>Miles</u>	<u>Years</u>
3	16.5	1994-2001
4	4.9	1994-2001
5	9.0	1994-2001
6	9.2	1994-2001
7	18.0	1993-2000
9	16.8	1994-2001
21	<u>6.6</u>	1994-2001
	81.0	

F. Maintenance of Public Forest Access Roads & Haul Roads

Annual maintenance of the public forest access roads includes ditch and culvert cleanout, headwall reconstruction, grading and mowing. Some haul roads are mowed to keep them open.

<u>State Forest</u>	<u>Mileage</u>
3	6.3
4	5.7
5	2.8
6	5.3
7	5.9
9	7.6
21	<u>2.3</u>
	35.9

G. Forest Inventory

<u>State Forest</u>	<u>Year</u>
3	2006
4	2007
5	2007
6	2007
7	2010
9	2006
21	2007

H. Trail Maintenance

All existing and proposed trails will be cleared and brushed annually. Signs and snowmobile bridges will be replaced as needed.

I. Parking Maintenance

All existing and proposed parking areas will have litter picked up annually and will be rehabilitated as needed.

J. Litter Pickup

Litter will be picked up on an annual basis as time permits.

K. Construction Projects

Year

1993 1. Re-route the present Schoharie Hiking Trail to connect with the proposed Long Path Hiking Trail.

2. Install seven new Burnt-Rossman Hill State Forest Identification Signs.

3. Re-construct Allen Road on Schoharie #21.

1994 1. Expand the snowmobile trail to County Route 20 (Sawyer Hollow Road from Monkey Run Road and from County Route 20 to Schoharie #7 Access Road). 2. Construct a parking lot near Rossman Pond. 3. Rehabilitation of Rossman Pond Access Road.

4. Construct a parking lot on County Route 20.

5. Install additional directional signs on the snowmobile trail.

6. Do additional clearing, where necessary, on the snowmobile trail so it can be used as a horse trail.

7. Sign the horse trail.

8. Place four picnic tables on the area.

9. Install two gates to restrict access to the marsh pond north of Mallet Pond.

1995 1. Sign six additional miles of snowmobile trails utilizing existing access trails and roads.

2. Construct a lean-to on the hiking trail between Thompson Road and the Burnt-Hill Truck

Trail.

3. Rehabilitate Eminence Truck Trail.

4. Rehabilitate Monkey Run Road on Schoharie #6.

5. Construct a parking lot on Camp Road.

6. Sign the hiking trail from the new parking lot on Sawyer Hollow Road to Mallet Pond.

1996 1. Reconstruct Betty Brook Road on Schoharie #9.

2. Put up informational bulletin boards at the parking areas on County Route 20, County Route 43 and at the Mallet Pond

Parking Area.

1997 1. Rehabilitate Schoharie #5 Truck Trail.

1998 1. Rehabilitate Burnt-Hill Truck Trail.

1999 1. Reconstruct Quarry Road on Schoharie #21.

2000 1. Rehabilitate Cemetery Truck Trail.

2001 1. Rehabilitate Access Road between Betty Brook Road and Burnt Hill Truck Trail.

CONSTRUCTION PROJECT COSTS

	<u>Cost</u>	<u>Year</u>
1. Reroute hiking trail	\$1500	1993
2. Install seven new State Forest Identification Signs	850	1993
3. Expand snowmobile trail to County Route 20 with bridge across Panther Creek and from County Route 20 to Schoharie #7 access road	800	1994
4. Construct parking lot County Route 20	1000	1994
5. Rehabilitation of Rossman Pond Access Road	1700	1994
6. Construct parking lot Rossman Pond	1000	1994
7. Additional clearing and signing of horse trail	2000	1994
8. Put up four picnic tables	560	1994
9. Install two gates to restrict access to the marsh pond north of Mallet Pond	700	1994
10. Construct lean-to and replace culverts	8000	1995
11. Put up informational bulletin boards on County Rt. 20 & County Route 43	1000	1995
12. Sign six additional miles of snowmobile trail	300	1995
13. Construct a parking lot on Camp Road	1000	1995
14. Reconstruct Betty Brook Road	70,000	1996
15. Rehabilitate Monkey Run Road	25,000	1995
16. Rehabilitate Burnt-Hill Truck Trail	50,000	1998
17. Reconstruct Quarry Road	35,000	1999
18. Rehabilitate Cemetery Truck Trail	35,000	2000
19. Rehabilitation of Schoharie #5 truck trail	12,000	1997
20. Rehabilitation of access road		

from Betty Brook Road to Burnt
Hill truck trail 12,000 2001

* Does not include Inmate labor from the Summit Shock Camp.

APPENDICES

