



Department of Environmental Conservation

Division of Lands and Forests

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# Hewitt-Cayuga Highlands

## State Forests Unit Management Plan

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April 1994



New York State Department of Environmental Conservation  
MARIO M. CUOMO, Governor      LANGDON MARSH, Acting Commissioner

HEWITT-CAYUGA HIGHLANDS  
UNIT MANAGEMENT PLAN

A Management Unit  
Consisting of Five State Forests  
in Southeastern Cayuga and  
Northwestern Cortland Counties

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July, 1992

MEMORANDUM

APR 15 1994

TO: The Record

FROM: Robert H. Bathrick

SUBJECT: Unit Management Plan  
Hewitt-Cayuga Highlands State Forest Unit

The unit management plan for the Hewitt-Cayuga Highlands State Forest Unit has been completed. It is consistent with Departmental policy and procedure, involved public participation and is consistent with the Environmental Conservation Law, rules and regulations. The plan includes management objectives for a twenty year period and is hereby approved and adopted.

  
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Director of Lands and Forests

Atts.

## 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 twenty years and beyond, with a review and update due in ten years. It should be noted that factors such as wood product markets, budget and manpower constraints and forest health problems may necessitate deviations from the schedule.

In developing the integrated land management goal, it was necessary to make a series of choices aimed at balancing wood production with the other aspects of multiple use management. The selection of rotation length, reservation of grasslands, natural areas, and live snags at the acreage and density recommended are specific cases of multiple use management planning.

**ABSTRACT**

The Hewitt-Cayuga Highlands Unit is composed of 5 State Forests located in Cayuga and Cortland Counties. The forests totaling 9349 acres, lie in the watersheds of Cayuga, Owasco and Skaneateles Lakes, and the Susquehanna River. The forests are important for wood production, watershed protection, recreation, and other uses.

The Unit name is derived from the name of the Cortland County Forest, Hewitt State Forest, and from the location of the Cayuga County Forests in the highland area of southeastern Cayuga County.

The first State Forest in New York was established in 1929. This was the Hewitt State Forest which was named after Senator Charles J. Hewitt from Locke, NY. Senator Hewitt was the sponsor of the Hewitt Reforestation Act which established State Forests outside of the Forest Preserve. The Cayuga County State Forests are the only ones in the county. These forests are the 2 Bear Swamp State Forests, Summer Hill State Forest, and Frozen Ocean State Forest.

The Hewitt-Cayuga Highlands Unit Management Plan examines the uses and demands on the forest areas, and outlines the management of these areas for the next 20 years.

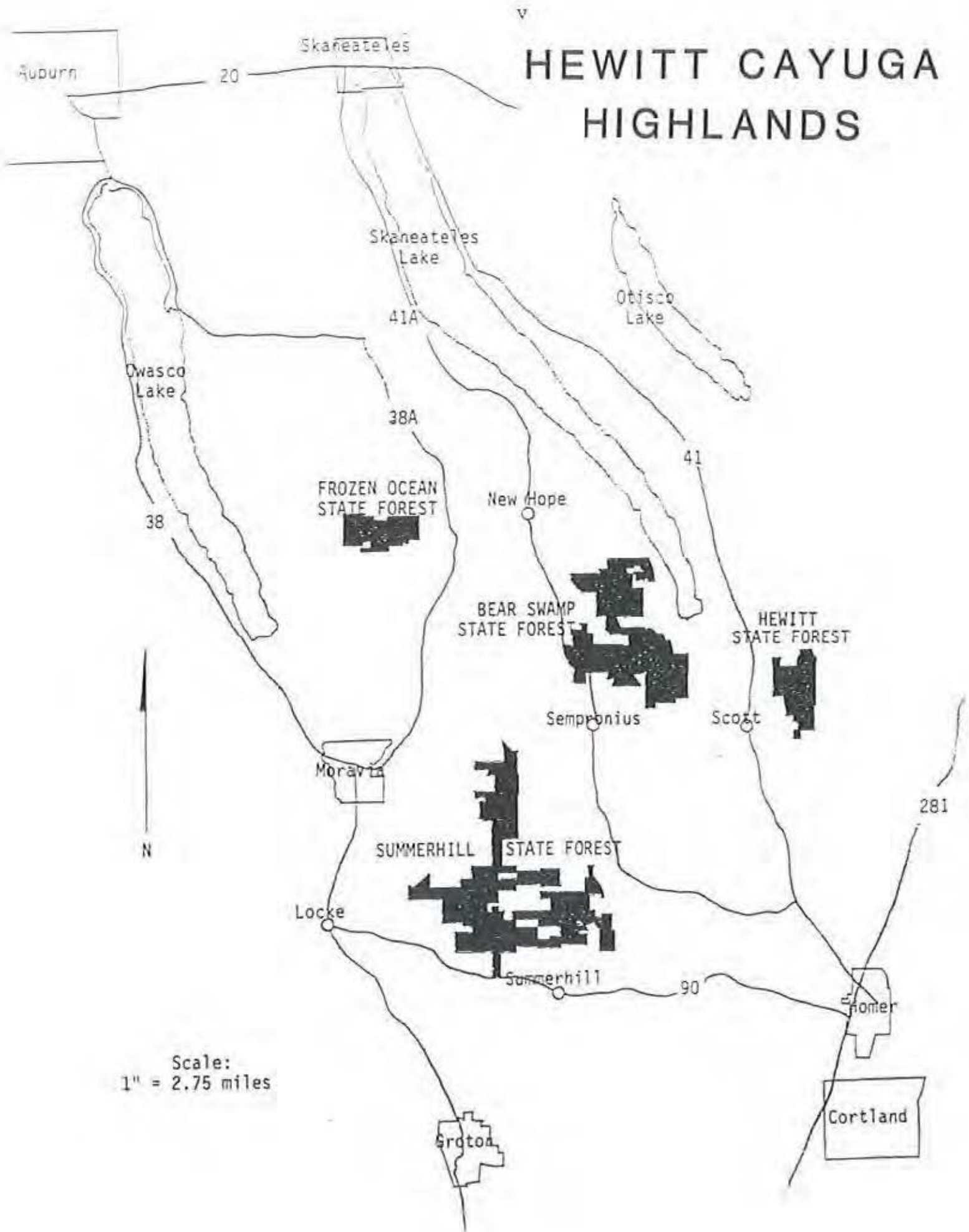
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# HEWITT CAYUGA HIGHLANDS





## INTRODUCTION

## History of State Forests

The forest lands outside the Adirondack and Catskill regions owe their present character, in large part, to the impact of pioneer settlement. Following the close of the Revolutionary War, increased pressure for land encouraged westward expansion. Up to 91% of woodlands were cleared for cultivation and forage.

Early farming efforts met with limited success. As the less fertile soils proved unproductive, they were abandoned and settlement was attempted elsewhere. The stage of succession was set and new forests of young saplings reoccupied the ground once cleared.

The State Reforestation Law of 1929 and the Hewitt Amendment of 1931 set forth the legislation which authorized the Conservation Department to acquire land by gift or purchase for reforestation areas. These State Forests, consisting of not less than 500 acres of contiguous land, 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". This broad program is presently authorized under Article 9, Title 5 of the Environmental Conservation Law.

In 1930, Forest Districts were established and the tasks of land acquisition and reforestation were started. 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, 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 postwar funding, conservation projects once again received needed attention.

The Park and Recreation Land Acquisition Act of 1960, and the Environmental Quality Bond Act of 1972 and 1986 contained provisions for the acquisition of State Forest lands. These lands would serve multiple purposes involving the conservation and development of natural resources, including the preservation of scenic areas, watershed protection, forestry and recreation.

Today there are nearly 700,000 acres of State Forest land throughout the State. The use of these lands for a variety of purposes such as timber production, hiking, skiing, fishing, trapping and hunting is of tremendous importance economically and to the health and well-being of the people of the State.

## History of the Hewitt-Cayuga Highlands Management Unit

The first inhabitants of Cayuga and Cortland Counties were the Cayuga and Onondaga Indians, members of the Iroquois Confederacy along with the Mohawks, Oneidas, Senecas and later the Tuscaroras. The Iroquois territory extended from the Hudson to the Niagara, and from Lake Ontario to the Susquehanna. The highest population of the Confederacy is believed to have numbered about 6000, with a fighting force of 2000.

Most of the Iroquois were allies of the English during the American Revolution and mustered 1800 braves to the English side. The Colonials had 220 braves on their side. Atrocities at Wyoming(Wilkes-Barre), in Pennsylvania, and along the frontiers of New York, led to Continental Army Generals John Sullivan and James Clinton's campaign of 1779 to defeat the Indians and drive them out of New York. A force of 5000 men invaded Cayuga, Seneca and Onondaga territory and defeated the combined forces of the British and Iroquois, driving them from a strongly entrenched position about one mile from Newtown(Elmira). The tribes fled to Niagara where they were supported by the English. Only a few Iroquois ever returned to their lands. The Indian power was broken forever in New York State.

Cayuga and Cortland Counties were formed from the former Indian territory which became known as the "Onondaga Military Tract". This included the present counties of Cayuga, Cortland, Onondaga, Seneca and parts of Wayne, Steuben, and Oswego Counties. One million eight hundred thousand acres were set apart for the

payment of bounties to 88 battalions of Continental Army. Many of these men had been with Sullivan and were eager to settle in this western lake country.

The routes over which some early settlers came to this country were circuitous, rude and toilsome in extreme. One summer route was by water from Schenectady to Cayuga and Seneca Lakes by bateaux. The time required was 15-20 days. Many of the early settlers came in the winter season, and often suffered severe hardships. The settlers rode on crude sleds drawn by oxen, through unbroken forest, over widened Indian trails. Deep snows buried the indefinite trails from sight, and made progress through the forest exceedingly slow. Three miles a day was a common rate of speed for days at a time.

The first settlers on or near the Hewitt-Cayuga Highlands arrived in 1792 in Niles, which at the time was a part of Sempronius. Other settlers soon came to Moravia, Locke, Sempronius, Summer Hill, and Scott. These settlers had names such as Van Gilder, Brinkerhoff, Stoyell, Sayles, Carpenter, Mix and Fillmore. Nathaniel Fillmore, who settled in Summer Hill, was the father of U.S. President Millard Fillmore.

An indication of what early life was like was related by Solomon Babcock, an early settler in Scott. He said it was a common occurrence for him to go with a dog to the cornfields to drive off the bears. On another excursion early one March, Babcock went into the woods to cut a birch broomstick. Before a sapling could be secured, he had killed seven deer.

Agriculture has always been the chief means of livelihood in Cayuga and Cortland Counties. The Indians practiced agriculture with marked success before white settlers arrived. The agriculture of the early settlers consisted mostly of growing food and feed crops such as corn, wheat, and vegetables, and raising livestock. The settlers first occupied the valleys, which were easily accessible and in many places partly cleared. The uplands supported heavy stands of timber, which the early settlers cleared, generally by burning. As the timber was removed, the uplands gradually were used for agriculture. After transportation systems were established, a lumber industry of considerable size developed and continued actively for several decades. Remnants of the original forests occur mostly as scattered woodlots and are composed mainly of second and third growth of the original species.

The last remnants of the virgin forests disappeared from the area about one hundred years ago. The original forests of Cayuga and Cortland Counties were thick and continuous stands of chestnut, hard maple, beech, white ash, hickory, basswood, black cherry, yellow poplar, black walnut, black locust, hophornbeam, along with hemlock and white pine.

All of the State Forests in the Hewitt-Cayuga Highlands Unit have a history of farming. The old stone walls, crumbling foundations, stone arch bridges and small cemeteries remain today as proof of man's influence on the area. The once prosperous farms have now returned to the forest.

All of the Hewitt-Cayuga Forests are on the hill tops where the soil is thin and not as fertile as in the valleys. It is now easy to conclude that much

of this land should never have been farmed, but at the time there weren't many places that were easier. Modern agricultural methods favor the survival of the fittest land. So after one hundred or so years of farming these marginal lands, many farmers were forced by economics to abandon their land. Some of this land was purchased by the state for reforestation.

In 1929, the first State Forest in New York was established. This was the Hewitt State Forest in the town of Scott. The State Reforestation Area, as it was called then, was named after Senator Charles J. Hewitt from nearby Locke. Senator Hewitt was the sponsor of the Hewitt Reforestation Act which established State Forests outside of the Forest Preserves. On October 3, 1929, in an impressive ceremony, four Norway Spruce from the State Nursery at Saratoga, were planted on the former Harmon Farm. Planting these first trees were Nelson C. Brown, Acting Dean of the State College of Forestry in Syracuse, who represented Governor Franklin D. Roosevelt, Senator Charles J. Hewitt, Conservation Commissioner Alexander Macdonald, and George D. Pratt, President of the American Forestry Association and a former Conservation Commissioner.

Bear Swamp State Forest, the first Cayuga County State Forest, was established in 1931. The Cayuga County State Forests are the two Bear Swamp State Forests, Summer Hill State Forest, and Frozen Ocean State Forest. These forests are the only State Forests in the county.

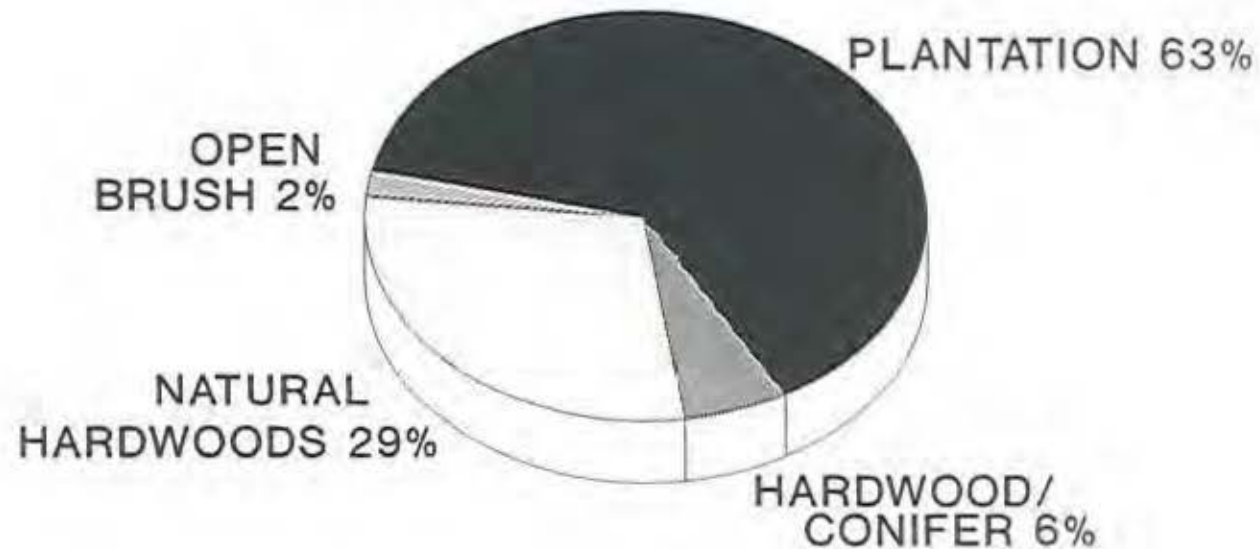
From the time of purchase by New York State until the present day, the area has been reforested. There has been a periodic harvest of wood products along with construction of roads and ponds. The forests have been used and enjoyed by

the public as recreation areas for such activities as hunting, hiking and bird watching.

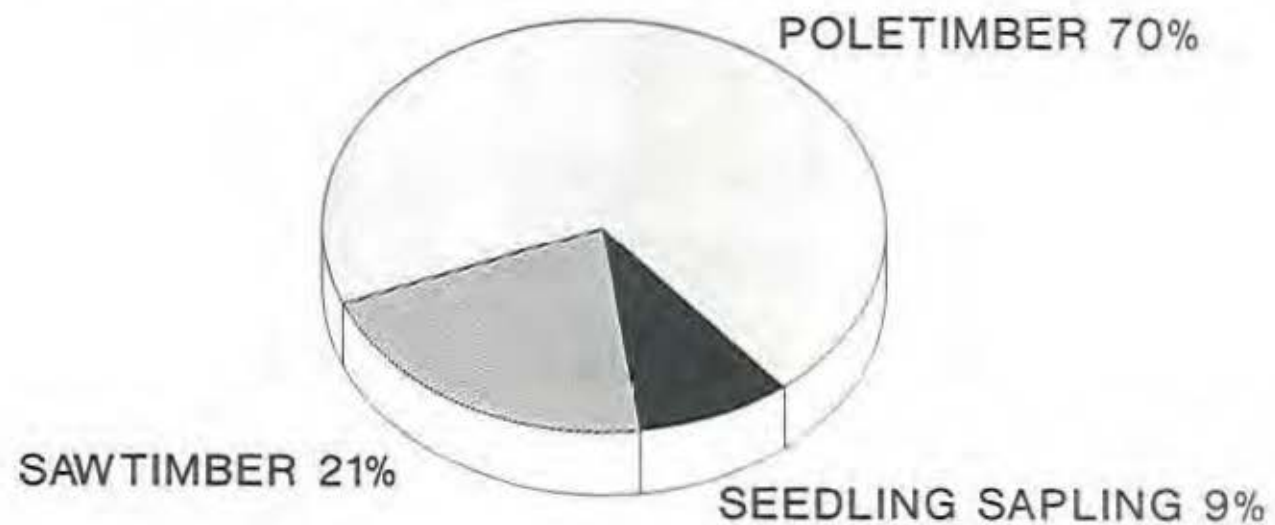


# HEWITT-CAYUGA HIGHLANDS

## FOREST TYPES-1991

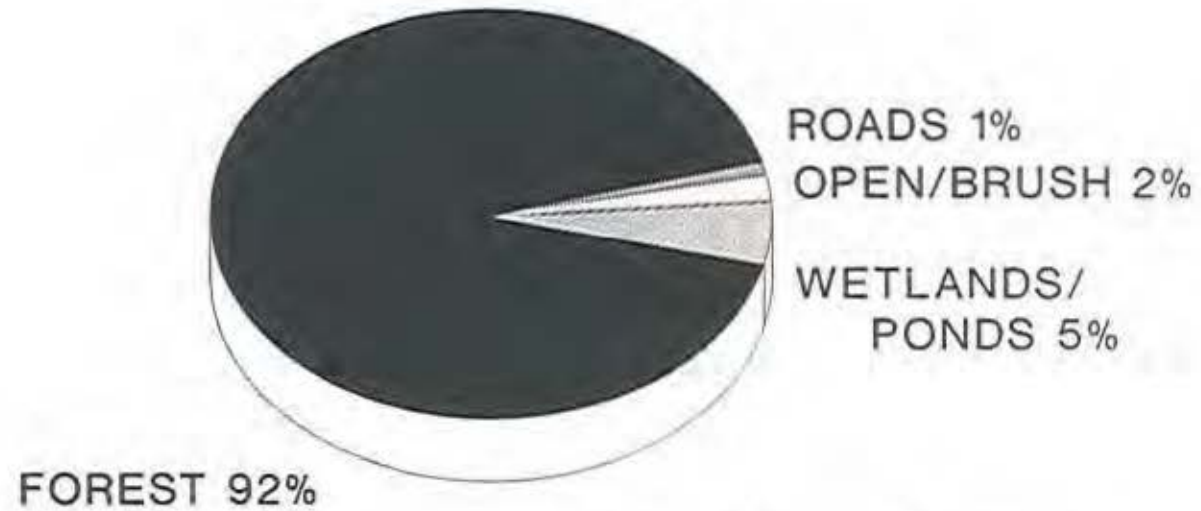


# HEWITT-CAYUGA HIGHLANDS FOREST SIZE CLASSES-1991



# HEWITT-CAYUGA HIGHLANDS

## LAND FORMS-1991



9349 TOTAL ACRES

## INFORMATION ON THE UNIT

### GEOGRAPHICAL AND GEOLOGICAL INFORMATION

The Hewitt-Cayuga Highlands Management Unit is located in the towns of Summerhill, Sempronius, Moravia, Locke, and Niles in Cayuga County and the town of Scott in Cortland County. The unit is southeast of the City of Auburn and northwest of the City of Cortland. Five State Forests comprise this management unit: Cayuga #1 (2072 acres) - Bear Swamp State Forest South, Cayuga #4 (1208 acres) - Bear Swamp State Forest North, Cayuga #2 - Summerhill State Forest (4377 acres), Cayuga #3 - Frozen Ocean State Forest (754 acres), and Cortland #1 - Hewitt State Forest (937 acres). The total forest area is 9349 acres.

The Hewitt-Cayuga Highlands Management Unit is located in the glaciated Allegheny Plateau section of south central New York. The Plateau was formed by the receding Wisconsin glacier approximately 10,000 years ago. The Unit is characterized by rolling flattop hills with scattered small swamps and wetlands. The bedrock is composed of shales and sandstones formed from terrestrial settlements of the Devonian Age. The highest points on the forests of the Unit are west of the Ridge Road in the town of Sempronius and west of the Brake Hill Road in the town of Scott. The elevation of both points is about 1,860 feet above sea level.

The majority of soils are Langford-Erie in Cayuga County and Lordstown, Volusia and Mardin in Cortland County. For the most part, these soils are deep, gently to moderately sloping, and medium textured. They are moderately well

drained and are low in lime content. Most of the soils were formed in a glacial deposits containing various amounts of sandstone, shale, and limestone. Many of the soils have a moderate to strongly developed fragipan that restricts the growth of roots and the movement of water. Limitations of the soils are a seasonally high water table, low fertility, high acidity, and erodibility on steep slopes. The annual rainfall for the area ranges from 35"-40". The average annual temperature in the area is 46.6° Fahrenheit.

### VEGETATIVE TYPES AND STAGES WITHIN THE UNIT

Natural hardwood stands normally contain a mixture of tree species. Common species are sugar maple, red maple, beech, white ash and black cherry.

Natural mixed hardwood/conifer stands are composed of at least 10% white pine or eastern hemlock.

Plantation stands contain trees established by man. These stands may contain red, Scotch, or white pine, European or Japanese larch, white or Norway spruce, or black locust, or some combination of these species.

<u>Vegetative Type</u>	<u>Acres</u>	<u>Seedling/ Sapling</u>	<u>Pole- Timber</u>	<u>Saw- Timber</u>	<u>% of Total</u>
Natural Hardwoods	2558	275 ac.	1475 ac.	808 ac.	27.5
Mixed Hardwood/ Conifer	514	7	174 ac.	333 ac.	5.5
Plantation	5572	500 ac.	4420 ac.	652 ac.	59.9
Open/Brush Lands	167				1.8
Wetlands	460				4.9
Ponds	30				.3
Total Acres	9301				

Total acreage of the Unit is 9349 acres. The discrepancy in acreage is due to the acreage of the roads. The above data was compiled from existing inventory records of the Unit.

WETLANDS AND WATER RESOURCES

The Hewitt-Cayuga Highlands Unit contains all or part of six Class II freshwater wetlands.

<u>REG. WETLAND</u>	<u>LOCATION</u>	<u>ACRES</u>
O-2	Frozen Ocean	23
O-3	Frozen Ocean	22
SP-2	Bear Swamp	145
S-7	Summer Hill	19
S-8	Summer Hill	22
S-11	Summer Hill	19

There are 30 other small unregistered wetlands containing 334 acres on Hewitt-Cayuga Highlands Unit which do not come under the statutory provisions of the Environmental Conservation Law because of their size. All wetlands both registered and unregistered are protected as wetlands.

The ponds on Frozen Ocean State Forest were constructed in 1952 and 1953 under a federal program to develop small marshes for waterfowl breeding areas. The ponds have been quite successful as waterfowl and beaver habitat. Duck boxes have been installed to encourage the brooding of wood ducks.

There are 8 miles of protected streams classified C(T) or above on the Management Unit. There are 10 miles of Class D streams and intermittent streams on the Unit. The streams of the Cayuga forests flow in all directions into either Cayuga, Owasco or Skaneateles Lakes and are part of the Lake Ontario watershed. On Hewitt State Forest, the stream flow is generally south into the Susquehanna River Watershed.



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 keep maintenance costs at a minimum. There are three types of roads constructed on State Forests; public forest access roads, haul roads, and access trails. These roads provide different levels of access depending on the standards to which they are constructed.

All five State Forests are accessed by public highways. Bear Swamp State Forest is accessed by the NYS Route 41A which is paved with asphalt and by the Hartnet, Bear Swamp, Curtin, and Ridge Roads which are gravel. Frozen Ocean State Forest is accessed by Corrigan and Quarry Roads which are gravel. Hewitt State Forest is accessed by the Hewitt and Brake Hill Roads which are gravel. Summer Hill State Forest is accessed by NYS Route 90 and the Fillmore and Skinner Hill Roads which are paved with asphalt and by Hoag Ave. and the Dumplin Hill, Brockway, Lick Street, Salt, Town Line, and Dresser Roads which are gravel roads.

Public Forest Access Roads are permanent, unpaved roads. They may be designed for all-weather use depending on their location and surfacing. These roads are suitable for vehicles up to and including tractor trailers.

Haul Roads are permanent unpaved roads but are not designed for all-weather travel. They are constructed primarily for the removal of forest products and provide only limited access within the Unit. As such, these roads may or may not be open for public use.

Access Trails may be permanent, are unpaved, and do not provide all-weather access within the Unit. These trails are originally designed for removal of forest products and may be used to meet other management objectives such as recreational trails.

The following roads are located in the Unit:

Public Forest Access Roads:

Bear Swamp State Forest - 1.7 miles  
Frozen Ocean State Forest - None  
Hewitt State Forest - 1.25 miles  
Summer Hill State Forest - 1.1 miles

Haul Roads:

There are none on any State Forest.

Access Trails:

Bear Swamp State Forest - 1.7 miles  
Frozen Ocean State Forest - 0.5 miles  
Hewitt State Forest - 1.5 miles  
Summer Hill State Forest - 0.8 miles

Shale and sand pits are developed and excavated to yield native shales and sand to be used as surface material on public forest access roads and haul roads. Hewitt State Forest has one shale pit located along the Brake Hill Road. Bear Swamp State Forest has two sand pits located along the Hartnet Road.

There are no designated off-road motor vehicle trails on the Management Unit. Off-road vehicle travel by other than snowmobiles is prohibited. The use of ATV's on the State Forests including roads is prohibited without a permit.

### SIGNIFICANT PLANT COMMUNITIES

Two rare plant and three exemplary natural communities have been identified on the Unit as of 1990. These plants and communities will be protected through a cooperative project with The Nature Conservancy and the New York Natural Heritage Program.

The tamarack and balsam fir surrounding this picturesque wetland are very reminiscent of an Adirondack bog setting.

### RECREATION

There is little recreational development on the management area. There is a 15 mile trail on Bear Swamp State Forest that is used for hiking, cross-country skiing and mountain biking. It was constructed in 1985 by the Cortland Self Challenge of Cortland and receives a lot of use.

The wetland community and surrounding forest at the south end of Bear Swamp State Forest is an area of special interest. The Department plans to build a nature trail, with accompanying information, so the public can view the rich sloping fen in this part of the wetland.

Summer Hill State Forest has a 28 mile snowmobile trail system that was built by the Department in the 1970's.

Other recreational opportunities on the Unit include camping, hunting, fishing, snowmobiling, horseback riding, and bird watching. There is a fair amount of illegal recreational activity that occurs in the form of off-road vehicle use. There are no designated trails or locations for off-road vehicles.

### WILDLIFE

The Hewitt-Cayuga Highlands Forest Unit is located within the landform area designated as the Appalachian Plateau in New York State. The Appalachian Plateau is part of a physiographic region extending into Pennsylvania and other states. Within this largest of the land form zones in New York State, 10 subzones have been identified based on such natural and cultural factors as topography, bedrock geology, climate, vegetation, and land use.

The Central Appalachian Subzone, in which the Hewitt-Cayuga Highlands Unit is situated, encompasses an area of approximately 8,830 square miles. This subzone is characterized as having land elevations lying above 1,500 feet for the most part, with a few heights reaching 2,300 feet. Roughly one-third of the land is forested, mixtures of hardwoods predominate with hemlock and white pine as common conifer species. The prevailing climate is characterized by cold snowy winters and cool wet summers.

Chambers (1983), compiled a listing of 51 mammal species, 126 bird species, 20 species of reptiles, and 23 species of amphibians as occurring in this subzone. The Atlas of Breeding Birds in New York State (1988) adds to the knowledge of species diversity. A listing of wildlife species confirmed or likely to be present on the Hewitt-Cayuga Highlands Unit and the surrounding area is listed in the Appendix.

The Hewitt-Cayuga Highlands Unit contains 36 Class II Regulated and unregulated Freshwater Wetlands and 2 ponds comprising in total, approximately 584 acres. The presence of wetland and stream or riparian habitats enhances the diversity and abundance of both resident and migratory wildlife species in the Unit. Wetlands and riparian habitats comprise some of the most productive ecosystems and provide unique habitat for certain wildlife species.

Region 7 Wildlife Unit records of 1989 indicate that a minimum of 15 potential beaver colony sites existed in the Hewitt-Cayuga Highlands Unit.

Region 7 Wildlife Unit harvest records for the past 10 years of deer, beaver, and coyotes legally harvested throughout the Towns of Locke, Niles, Scott, Sempronius, and Summerhill are shown in Appendix F. The 1988 hunting and fishing license sales for Cayuga and Cortland Counties are presented in Appendix G.

### DEMANDS ON THE UNIT

Timber Production	Oil and Gas Leasing
Hunting	Horseback Riding
Fishing	Cross Country Skiing
Hiking	Snowmobiling
Bird Watching	Boating
Roads	Canoeing
Camping	Shale and Sand Pits
Mountain Biking	Naturism activities
Water	

### 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, not only to ensure the biological improvement and protection of the forest ecosystem, but also to optimize the many benefits to the public that forest land provides.

In developing the integrated land management goal, it was necessary to make a series of choices aimed at balancing wood production with the other aspects of multiple use management. The selection of rotation length, reservation of grasslands, natural areas, and live snags at the acreage and density recommended are specific cases of multiple use management planning.

## MANAGEMENT OBJECTIVES

### Access

It is the policy of the Department to provide an adequate access system on all State Forests. Access is important for:

- (1) Forest protection - as fire control or emergency rescue.
- (2) Public recreation - a road and trail system with adequate parking provides primary access for the public.
- (3) Forest product sales - to remove firewood, timber, and other products. Roads constructed for the removal of forest products often provide access for other activities.
- (4) General administration - roads allow Department personnel access to manage, protect, and improve State Forests.

A detailed description of the road system for the Hewitt-Cayuga Highlands Unit appears in the information section, on pages 15-17. In general, access throughout the five forests is good. More access trails will be built as management for forest products on the Unit continues.



### Acquisition

It is the objective of the Department to acquire certain parcels that would be considered in-holdings and that would increase access to the 5 State Forests and ease administrative burdens.

The department generally acquires reforestation lands by friendly negotiations with willing sellers. Eminent domain is rarely used and only as a last resort, when public need has been clearly established and other alternatives have been exhausted.

Examples of the type of parcels that would be desirable for acquisition are shown in maps in the appendix. As the maps show, all these parcels are fairly small.

### Aesthetics

The aesthetics objective is to maintain the natural beauty of the Unit. Such scenic features as the Bear Swamp drainage, forest variety along the Hewitt truck trail, vistas of Skaneateles Lake, and the ponds of Frozen Ocean are significant scenic habitats.

## Fish and Wildlife Management

The fish and wildlife objective is to enhance the fish and wildlife potential of the Unit by the use of forest management practices and other methods designed to improve habitat. Individual habitat types within the Unit are particularly adapted or adaptable to meeting the needs of certain species or groups of fish and wildlife species.

### Protection

It is the objective of the Department to protect the Management Unit from all environmental degradation wherever possible. Regulatory authority for the Unit comes under the jurisdiction of Article 9, Environmental Conservation Law and the New York State Codes of Rules and Regulations, Title 6, Part 190. Other provisions of the law such as Article 15, Stream Protection Law and Article 24, the Wetlands Law also apply. Under these laws and rules and regulations, damage to State Forest property is prohibited but normal uses are permitted. These uses are described in the various objective sections.

It is the intent of the Department to protect the Unit from forest fires. It is also the Department's intent to protect the Unit from damage from forest insects and disease attacks wherever possible. Current integrated pest management practices will be used consistent with DEC policy.

Archaeologically significant artifacts will be protected in accordance with the State Historical Preservation Act. Cemeteries, historical bridges, and significant foundations will also be protected.

### Recreation

The recreation objective is to provide for and encourage the use of these lands for forest recreation by the public.

Recreation is an important use on the Unit. Since these five State Forests are close to Syracuse, Auburn and Ithaca, public use and recreation are on the increase. Suburban development has also added to the recreational pressure and demands. This trend will continue.

Multiple use and complimentary uses are certainly demonstrated through recreation. Because of past timber and firewood sales, the number of roads, trails, parking areas, and plant and wildlife diversity have increased. Hikers, hunters, skiers, and other recreational users have benefitted from these wood product activities.

The Department has a goal to encourage public use consistent with protecting the forest environment. Recreational use will be in balance with the forest's capacity to sustain this use.

### Timber Management

The timber management objective is to create and maintain healthy and diverse forests. The dominant living component of the forest is the trees. Therefore, trees that are diseased, over-crowded, and mature are harvested and thinned.

Locally, there are strong markets and demand for forest wood products. The Department makes sales of firewood, pulpwood, sawlogs, and other wood products to satisfy local demand and maintain healthy, diverse forests.

The Department manages the forest wood products on a sustained yield basis. Wood production is a primary objective on the majority of the forest stands of the Unit.

Management during this planning period and subsequent periods will favor intolerant and mid-tolerant tree species. This group of species has the highest value and provides the greatest growth. Additionally, plantations acreage will diminish as plantations are regenerated to native species. Native softwoods, particularly hemlock, will continue to invade and while the overall percentage of conifers will decline as plantations are converted, native softwoods will continue to be a significant part of the resource.

### Watershed Management

The five State Forests are located in watersheds at higher elevations along ridge and upland valleys. This is where streams and waterways originate; thus watershed values are high priority. The original reforestation laws stressed watershed protection as a primary reason for acquiring and managing State Forests. All water resources have been identified on the five State Forests. There are 36 protected wetlands and many small streams that drain either into the Finger Lakes or into the Susquehanna River drainage system. Since most of the waterways lead into Owasco and Skaneateles Lakes, which are public water supplies for Auburn and Syracuse, the quality water discharge from the forests of the Unit is very important.

The watershed objective is to continually protect the watershed value of these forest lands.

### Information in Support of the Goal and Objectives

Article 9, Titles 5, of the Environmental Conservation Law provides authorization for the Department of Environmental Conservation to acquire land outside the Adirondack and Catskill Parks which are adapted for reforestation and the establishment and maintenance thereon of forests for watershed protection, the production of timber and other forest products, and for recreation and kindred purposes.

It is the policy of the Department of Environmental Conservation to manage State Forest land for multiple purposes to serve the needs of the people of this state. This management shall be carried out in such a manner as not only to insure biological improvement and protection of the forest ecosystem but also to optimize the benefits to mankind that forest land affords.

Management of State Forest land shall be directed toward those activities which will enhance the resources of the land. These activities include timber production, recreation, wildlife and watershed protection. They shall be carried out in a manner which reflects the land's capability for these uses.

## MANAGEMENT ACTIONS

Access

No additional access projects are planned on the Unit at this time. Regular maintenance of roads will insure good access for all uses.

Acquisition

Acquire additional acreage to decrease boundary line maintenance and increase public access. Acquisition of fee simple titles would be negotiated with willing sellers.

Aesthetics

Management activities will be done in a manner that will preserve unique and scenic areas. The scenic beauty of the Hewitt-Cayuga Highlands Unit will be maintained, especially along travel corridors.

There will be a modified cutting zone along most trails, ponds, and other areas of natural beauty. Cutting will also be modified to enhance aesthetics and create scenic vistas.

Along improved roads, tree removal will generally be minimal. Tops, landings, and work zones will normally be located off roads to maintain scenic and natural settings.



The Department will seek to inform the public about the scenic features of the Unit with educational brochures, and on-site trails and vistas. This will increase public awareness and use of the Unit's natural beauty.

Littering is a recurring problem on all five areas. There will be a vigorous cleanup program along roads, particularly in spring and throughout the summer. Law enforcement and education efforts will help control littering.

All facilities, including signs and parking areas, will be built and displayed in an unobtrusive manner.

The Department will continue to highlight trees, water, wildlife, and scenic views in a relatively undisturbed forest setting.

### Fish and Wildlife

Inventory and periodic evaluation of cover types will be used to identify wildlife habitats on the Hewitt-Cayuga Highlands Unit. Biological surveys of the resource and monitoring of responses to management practices will ensure that identification of wildlife habitats within the Unit remains current. Practices will include promotion of aspen stands, maintenance of snags for wildlife utilization, and installation and maintenance of wood duck nesting boxes.

A biological survey to assess the current and future potential of the fishery resources on the Hewitt-Cayuga Highlands Unit will be conducted in cooperation with the Division of Fish and Wildlife. This survey will provide the

necessary data for future management and will be designed to achieve maximum recreational fishing opportunity by promoting fish species most appropriate.

The legal harvest of fish and wildlife will be continued and promoted on the Hewitt-Cayuga Highlands Unit through active habitat management, maintenance of access, and staff contacts with the public regarding the availability of hunting and fishing opportunities in the Cortland-Cayuga County area.

A wide variety of forest management practices will be used in the Hewitt-Cayuga Highlands Unit to maintain a diversity of habitat types. This habitat diversity is necessary to meet the broad range of habitat benefits needed to maintain a diversity of fish and wildlife species in the Unit. Forest management practices such as timber stand improvement, harvest of wood products, protective buffer zones for ponds and streams, length of cutting cycles, leaving snag trees, leaving dead material on the ground, etc. shape the habitat and consequently the abundance and diversity of the fish and wildlife present.

A specific example of habitat management for a target species is grouse habitat management on Cayuga #2 and Cayuga #4. The Department plans to release wild apple trees and cut competing trees and brush along Lick Street in stand B-40 and the Bear Swamp Road in stands A-21 and B-25. Periodic mowing will maintain this habitat.

### Protection

Off-road use of motor vehicles except snowmobiles, and the removal and destruction of any plant or material without a permit is prohibited as a means of protecting our public forests for future generations.

Wetlands and stream banks will be protected from most uses and will normally not be invaded by timber harvest or construction. It has been and will be necessary to cross certain streams with roads and trails. These crossings will be at selected sites, and wherever possible, at right angles to minimize impact.

Any and all forest wildfires will immediately be attacked and suppressed as quickly as possible. The Department's Forest Ranger force is equipped and trained in all facets of forest fire control including presuppression. Work will continue with the local fire companies and the public to prevent forest wildfires. The Department may use prescribed burning as a plant community manipulation tool for all five forest's management and wildlife management.

Construction of any facilities such as camping areas, parking lots, or additional roads and trails will be done in accordance to State Forest standards and with a minimum of disturbance.

Boundary lines on the 5 areas have been surveyed and blazed. There are 68.5 miles of boundary lines on the area that will be maintained by brushing and repainting on a seven year schedule.

Special boundary line problems exist on the Unit. Three problems have been identified and survey requests are on file with the Real Property Unit of DEC in Syracuse. It is essential that these problems be cleared up and the integrity of the boundary lines be returned. Without properly maintained boundary lines, the Unit is at risk of serious degradation.

Timber harvesting will be done under contract with payment in advance. Large sales will be accompanied by a performance bond to insure proper compliance with the contract standards. All timber harvesting will be done in accordance with the applicable sections of the "Timber Harvesting Guidelines" developed by the New York State Society of American Foresters.

Hunting and fishing regulations will be enforced as well as recreation regulations that govern camping and hiking. Patrol of the Unit is provided by Forest Rangers, Conservation Officers, and other Department personnel. Complaints, reports, or violations may be reported to them or to the Department's office on Fisher Avenue in Cortland.

Recreational Development or Enhancement

(1) Build a series of off-road parking lots and hiking trails for public use. The purpose is to increase public awareness and use of the scenic and natural features of the Unit.

A. On the Bear Swamp State Forest, the existing parking area at the sand pit on the Hartnet Road will be improved. Construct a foot trail south and west of the creek and swamp. About 1/2 mile of scenic trail will lead to a vista of this 65 acre wetland and surrounding woodland to public enjoyment. A sign and brochure will identify this recreation facility.

B. Also on the Bear Swamp State Forests, and adjacent to the Ridge Road that runs above Skaneateles Lake, scenic vistas will be built to create views of the lake.

C. The existing Nordic ski trail will be relocated to eliminate conflicting use where the trail passes through managed plantations and hardwood stands. Greater use of existing fire lanes, main skid trails, and scenic corridors will improve the recreational potential of the trail system.

D. On Frozen Ocean State Forest, a trail exists from the Quarry Road east for about 1/4 mile to an 11 acre pond. A small parking

area, an appropriate sign, and a brochure are planned to encourage public use.

A 1/2 mile trail and parking area is planned for the Corrigan Road. The foot trail will lead west to a scenic 16 acre pond. Thus the ponds of Frozen Ocean will be featured for recreational use.

E. On Hewitt State Forest, a well-built stone arch bridge exists over a small stream. This bridge will be highlighted for its historic value, by building a parking area and 1/4 mile foot trail to the bridge. A brochure will elaborate on man's effect on the forest.

Since the Hewitt State Forest has such historic importance for the State Forest Program, the Department hopes to emphasize this history with brochures, signs, and other on-site displays. It is the Department's intention to manage the conifer-plantation stands to perpetuate some plantations on the Forest. These stands will be a reminder that the Hewitt State Forest was the first state forest purchased and planted with reforestation funds.

F. On Summer Hill State Forest, the existing snowmobile trail needs maintenance to continue to serve the recreation needs. There are no plans for other facilities.

G. Also on Summer Hill State Forest, horseback riding is a popular activity arising mainly from two commercial riding stables off Lick Street. This recreational use has grown for several years using an

informal trail system in all seasons. Supervision of this activity along with a formal trail system is needed. This area is wet so the trail will be located on higher ground that can withstand horse travel. This trail will be monitored for erosion and maintenance problems. There will be a definite season of use which will generally be from May through October.

(2) Provide information on these recreational areas. A sign board is in place at the west end of the Hartnet Road in Bear Swamp State Forest. Information brochures will be provided to encourage use.

(3) Continue recreation such as camping, fishing, hiking, hunting, skiing, and snowmobiling on the Unit. Adequate trails, roads, and facilities are now in place, but these facilities must be monitored to prevent environmental damage from overuse. Littering and illegal vehicle use demand law enforcement to stem these increasing problems.

(4) There are no plans at this time to recommend off-road motor vehicle trails in this Unit.



Timber

Within the 20-year planning period, the following are planned:

- (1) Revenue Contract - Hardwood Timber Sales -  
12 sales for 1639 acres.
- (2) Revenue Contract - Red Pine Sales -  
11 sales for 864 acres.
- (3) Revenue Contract - Spruce Sawtimber Sales-  
13 sales for 1234 acres.
- (4) Firewood Sales - about 2800 cords on 560 acres over the  
20 year planning period.
- (5) Pulpwood Sales - about 8000 cords on 1600 acres over the 20 year  
planning period.
- (6) Timber Stand Improvement(TSI) - 1418 acres over the 20 year  
planning period.

These sales may include some acreage of clearcuts or final removal shelterwoods. No planting is planned as it is anticipated that any stand that is clearcut will have natural regeneration in place.

In summary, the inventory calls for 7315 acres needing harvest or thinning. If market demand continues as in the recent past, the Department should treat 5897 acres commercially in the planning period, although lack of markets and poor access could lower this acreage. About 1418 acres should be treated noncommercially, if funding is available.

### Watershed Management

The importance of watershed management and protection will continue to be stressed on the Hewitt-Cayuga Highlands Unit. Water quality is of primary importance in any management plan and activity. In the past, the Department planted trees to stabilize soils on abandoned farm fields. Soil erosion was minimized and streams ran clear and clean through upland state forests. All activities on the Unit will take into account watershed protection and will be monitored to ensure the continuation of high quality water runoff.

All activities will be done in accordance with best management practices. Examples of this are:

A. Any activity that may disturb the protected wetland will be coordinated with the Wetlands Unit of DEC and necessary permits will be secured. In the past, as well as in the near future, the Department plans no activities on or near these wetlands.

B. Tree harvesting, road building, and other site disturbance activities will continue to be curtailed or prohibited on steep terrain, wetlands or next to active streams. Buffer zones of uncut trees will be left along active streams.

Of the 9349 acres of land the Department manages in the Unit, only 106 acres is on a slope close to Skaneateles Lake. This small acreage is being managed to avoid water-quality problems. There is no State Forest land in the Unit that is close to Owasco Lake.

C. Stream crossings for access or logging purposes will follow DEC guidelines. Culvert pipes or bridges will be used where necessary to minimize the impact on water quality.

D. Access road and skid trail location will be carefully planned as integral parts of the timber harvesting program. Where necessary, upon completion of the harvesting operations, water bars and diversion structures will be required to minimize soil erosion.

Water quality will continue to be protected by these management safeguards. There has been a very successful track record for over 25 years of actively harvesting forest products, and safe-guarding water quality and other environmental features. This stewardship will be continued.

#### 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 and archaeological or historical site may occur on management unit lands. The SAAF will be updated when this plan is updated. The results of the SAAF evaluation indicate that no further cultural resources review is required.

## TREATMENT SCHEDULE AND BUDGETARY NEEDS

- 1992 - Forest inventory - Cayuga #1 - 2072 acres.  
 Firewood sales up to 140 cords, area wide as markets permit.  
 Pulpwood sales up to 400 cords, area wide as markets permit.  
 Cayuga #2 - Stands A-10, 13, B-59, C-42, 64 - Spruce Sawtimber Sale - 81 acres.  
 Litter pickup and sign maintenance. \$1000  
 Relocate Nordic ski trail, Cayuga #1. Brush and tree removal, along with posting of trail signs. Distribute brochures on trail system. \$2000.  
 Annual inspection for insect, disease, and water quality. \$250  
 Road maintenance. \$2500  
 Maintain snowmobile trail. \$1000  
 Timber stand improvement - 83 acres - stands are listed in appendix A. \$8300.
- 1993 - Firewood sales up to 140 cords, area wide as markets permit.  
 Pulpwood sales up to 400 cords, area wide as markets permit.  
 Cortland #1 - Stands A-2, 11, 20, 21, 28, 45, 50 - Red Pine Sale - 144 acres.  
 Cayuga #2 - Stands D-18 - Red Pine Sale - 100 acres.  
 Litter pickup and sign maintenance. \$1000  
~~Timber stand improvement - 60 acres. \$6000~~ *variable - depending on the timber*  
 Grouse habitat improvement - 5 acres. Cayuga #4, stands A-21, B-25. \$2500.  
 Maintain ski trail. \$500  
 Annual inspection for insect, disease, and water quality. \$250  
 Maintain snowmobile trail. \$1000  
 Biological survey for fish resources. \$2000  
 Timber stand improvement - 83 acres - stands are listed in appendix A. \$8300.  
*Cayuga 1 secondary forest - 12.3 miles*
- 1994 - Firewood sales up to 140 cords, area wide as markets permit.  
 Pulpwood sales up to 400 cords, area wide as markets permit.  
 Cayuga #1 - Stands B-19, 23, C-6, 13, 36, 37 - Red Pine Sale - 100 acres.  
 Cayuga #1 - Stands C-2, 3, 5, 16, 33, 34, 35, 38 - Hardwood Sawtimber Sale - 138 acres.  
 Cayuga #2 - Stands A-3, 14, 20, B-26 - Red Pine Sale - 60 acres.  
 Grouse habitat improvement - 10 acres. Cayuga #2, stands B-40. \$5000.  
 Litter pickup and sign maintenance. \$1000  
 Inspect and rehabilitate Frozen Ocean Ponds. \$3000  
 Maintain ski trail. \$500  
 Annual inspection for insect, disease, and water quality. \$250  
 Road maintenance. \$2500  
 Maintain snowmobile trail. \$1000  
 Timber stand improvement - 83 acres - stands are listed in appendix A. \$8300.  
*Cayuga 2 secondary forest - 33.4 miles*



- 1995 - Firewood sales up to 140 cords, area wide as markets permit.  
 Pulpwood sales up to 400 cords, area wide as markets permit.  
 Cayuga #1 - Stands A-10, 11, B-3, 8, 9, 17, 18, 25 - Hardwood Sawtimber Sale - 203 acres. *(see #1)*  
 Cayuga #2 - Stands A-12, B-52, C-49, D-22 - Red Pine Sale - 70 acres.  
 Cayuga #2 - Stands C-25, 28, 30 - Spruce Sawtimber Sale - 116 acres.  
 Construction of nature trail - Cayuga #1. Improve parking lot and post trail signs. \$4000.  
 Construction of nature trails - Cayuga #3 off Quarry and Corrigan Roads. Post trail signs. \$2000.  
 Litter pickup and sign maintenance. \$1000  
~~Timber stand improvement - 60 acres. \$6000~~ *goes with always*  
 Boundary line maintenance (repaint boundaries). \$1400  
 Maintain ski trail. \$250  
 Annual inspection for insect, disease, and water quality. \$250  
 Maintain snowmobile trail. \$1000  
 Timber stand improvement - 83 acres - stands are listed in appendix A. \$8300.
- 1996 - Firewood sales up to 140 cords, area wide as markets permit.  
 Pulpwood sales up to 400 cords, area wide as markets permit.  
 Cayuga #2 - Stands B-14, 20, 64, C-46 - Red Pine Sale 60 acres.  
 Cayuga #1 - Stands B-1, 19, 21, 22, 23, C-23, D-12, 13 - Spruce Sawtimber Sale - 63 acres. *(see #2)*  
 Litter pickup and sign maintenance. \$1000  
 Maintain ski trail. \$500  
 Annual inspection for insect, disease, and water quality. \$250  
 Maintain nature trails. \$500  
 Road maintenance. \$2500  
 Maintain snowmobile trail. \$1000  
 Timber stand improvement - 83 acres - stands are listed in appendix A. \$8300.
- 1997 - Firewood sales up to 140 cords, area wide as markets permit.  
 Pulpwood sales up to 400 cords, area wide as markets permit.  
 Cayuga #2 - Stands B-47, 53, 54, D-3, 4, 5, 7, 14 - Hardwood Sawtimber Sale - 147 acres.  
 Cortland #1 - Stands A-9, 14, 19, 38 - Hardwood Sawtimber Sale - 77 acres.  
 Cayuga #2 - Stands A-21, C-34, 38, 42 - Red Pine Sale - 65 acres.  
 Cayuga #1 & 4 - A-3, 9, B-8, C-4, 9, 29, 30 - Red Pine Sale - 100 acres.  
 Litter pickup and sign maintenance. \$1000  
 Maintain ski trail. \$500  
 Annual inspection for insect, disease, and water quality. \$250  
 Maintain snowmobile trail. \$1000  
 Maintain nature trails. \$500  
 Timber stand improvement - 83 acres - stands are listed in appendix A. \$8300.  
*Cayuga 3 boundary lines - 5.8 miles*  
*Maintain ditches on Troyer Green Pond - \$5000*

- 1998 - Firewood sales up to 140 cords, area wide as markets permit.  
 Pulpwood sales up to 400 cords, area wide as markets permit.  
 Cayuga #1 - Stands D-1, 5, 10, 11 - Hardwood Sawtimber Sale 144 acres.  
 Cayuga #2 - Stands A-11, 14, B-2 - Red Pine Sale - 60 acres.  
 Litter pickup and sign maintenance. \$1000  
~~Timber stand improvement - 60 acres. \$6000~~  
 Maintain ski trail. \$500  
 Annual inspection for insect, disease, and water quality. \$250  
 Road maintenance. \$2500  
 Maintain snowmobile trail. \$1000  
 Maintain nature trails. \$500  
 Timber stand improvement - 83 acres - stands are listed in appendix A. \$8300.  
*Cortland boundary lines - 6.5 miles Cayuga boundary lines 6.5 miles*
- 1999 - Firewood sales up to 140 cords, area wide as markets permit.  
 Pulpwood sales up to 400 cords, area wide as markets permit.  
 Cayuga #2 - Stands A-5, 19, 23, 40, 55 - Hardwood Sawtimber Sale - 118 acres.  
 Cayuga #3 - Stands A-12, 20, 21, B-14, 15, 16 - Hardwood Sawtimber Sale - 89 acres.  
 Cayuga #2 - Stands D-1, 11, 13 - Red Pine Sale - 30 acres.  
 Cayuga #3 Stands A-15, 24, 32, B-5, 17 - Red Pine Sale - 75 acres.  
 Cayuga #3 - Stands A-24, 29 - Spruce Sawtimber Sale - 59 acres.  
 Litter pickup and sign maintenance. \$1000  
 Maintain ski trail. \$500  
 Annual inspection for insect, disease, and water quality. \$250  
 Maintain snowmobile trail. \$1000  
 Maintain nature trails. \$500  
 Timber stand improvement - 83 acres - stands are listed in appendix A. \$8300.
- 2000 - Firewood sales up to 140 cords, area wide as markets permit.  
 Pulpwood sales up to 400 cords, area wide as markets permit.  
 Cortland #1 - Stands A-1, A-22, 23, 30, 31 - Hardwood Sawtimber Sale - 89 acres.  
 Cayuga #1 - Stands C-25, 28, 29, 30, 31 - Red Pine Sale - 95 acres.  
 Cortland #1 - Stands A-4, 5, 17, 18 - Spruce Sawtimber Sale - 113 acres.  
 Litter pickup and sign maintenance. \$1000  
 Timber stand improvement - 60 acres. \$750  
 Maintain ski trail. \$500  
 Annual inspection for insect, disease, and water quality. \$250  
 Maintain snowmobile trail. \$1000  
 Maintain nature trails. \$500  
 Timber stand improvement - 83 acres - stands are listed in appendix A. \$8300.  
 Road maintenance. \$2500  
*CAYUGA BOUNDARY LINES - 12.3 miles*

- 2001 - Forest inventory - Cayuga #4 - 1280 acres.  
 Firewood sales up to 140 cords, area wide as markets permit.  
 Pulpwood sales up to 400 cords, area wide as markets permit.  
 Cayuga #2 - Stands B-1, 2, 7, 11, 32 - Spruce Sawtimber Sale 95 acres.  
 Litter pickup and sign maintenance. \$1000  
 Timber stand improvement - 60 acres. \$5000  
 Maintain ski trail. \$500  
 Annual inspection for insect, disease, and water quality. \$250  
 Maintain snowmobile trail. \$1000  
 Maintain nature trails. \$500  
 Timber stand improvement - 83 acres - stands are listed in appendix A. \$8300.  
*CAYUGA 2 BOUNDARY LINES - 33.4 MILES*
- 2002 - Firewood sales up to 140 cords, area wide as markets permit.  
 Pulpwood sales up to 400 cords, area wide as markets permit.  
 Cayuga #2 - Stands C-8, 10, 12, 14, 15 - Hardwood Sawtimber Sale - 118 acres.  
 Cayuga #1 - Stands D-6, 7, 13 - Red Pine Sale - 55 acres.  
 Cayuga #2 - Stands B-10, 20, 26, C-2, 38 - Red Pine Sale - 138 acres.  
 Litter pickup and sign maintenance. \$1000  
 Timber stand improvement - 60 acres. \$750  
 Maintain ski trail. \$500  
 Annual inspection for insect, disease, and water quality. \$250  
 Maintain snowmobile trail. \$1000  
 Maintain nature trails. \$500  
 Timber stand improvement - 83 acres - stands are listed in appendix A. \$8300.  
 Road maintenance. \$2500
- 2003 - Firewood sales up to 140 cords, area wide as markets permit.  
 Pulpwood sales up to 400 cords, area wide as markets permit.  
 Cayuga #4 - Stands A-6, 7, 18, 22, B-4, 6, 10, 11, 12, 13, 15, 29, 30 - Hardwood Timber Sale - 232 acres.  
 Cayuga #2 - Stands D-18, 22 - Red Pine Sale - 78 acres.  
 Litter pickup and sign maintenance. \$1000  
 Maintain ski trail. \$500  
 Annual inspection for insect, disease, and water quality. \$250  
 Maintain snowmobile trail. \$1000  
 Maintain nature trails. \$500  
 Timber stand improvement - 83 acres - stands are listed in appendix A. \$8300.  
 Road maintenance. \$2500  
~~CAYUGA 3~~
- 2004 - Firewood sales up to 140 cords, area wide as markets permit.  
 Pulpwood sales up to 400 cords, area wide as markets permit.  
 Cayuga #2 - Stands B-56, 61, D-1 - Spruce Sawtimber Sale - 137 acres.  
 Litter pickup and sign maintenance. \$1000  
 Maintain ski trail. \$500  
*CAYUGA 3 BOUNDARY LINES - 5.8 MILES*

Annual inspection for insect, disease, and water quality. \$250  
 Maintain snowmobile trail. \$1000  
 Maintain nature trails. \$500  
 Timber stand improvement - 83 acres - stands are listed in  
 appendix A. \$8300.  
 Road maintenance. \$2500

- 2005 - Firewood sales up to 140 cords, area wide as markets permit.  
 Pulpwood sales up to 400 cords, area wide as markets permit.  
 Cortland #1 - Stands A-10, 13, 36 - Red Pine Sale - 72 acres.  
 Cayuga #1 - Stands A-17, 20, 21 - Spruce Sawtimber Sale - 106  
 acres.

Litter pickup and sign maintenance. \$1000  
 Maintain ski trail. \$500  
 Annual inspection for insect, disease, and water quality. \$250  
 Maintain snowmobile trail. \$1000  
 Maintain nature trails. \$500  
 Timber stand improvement - 83 acres - stands are listed in  
 appendix A. \$8300.  
 Road maintenance. \$2500 *CORTLAND 1 BOUNDARY LINES - 6.5 MILES*  
*CAYUGA 4 BOUNDARY LINES - 9.3 MILES*

- 2006 - Forest inventory - Cayuga #3 - 754 acres.  
 Firewood sales up to 140 cords, area wide as markets permit.  
 Pulpwood sales up to 400 cords, area wide as markets permit.  
 Cayuga #2 - Stands A-7, 12, 14 - Spruce Sawtimber Sale - 85  
 acres.

Litter pickup and sign maintenance. \$1000  
 Maintain ski trail. \$500  
 Annual inspection for insect, disease, and water quality. \$250  
 Maintain snowmobile trail. \$1000  
 Maintain nature trails. \$500  
 Timber stand improvement - 83 acres - stands are listed in  
 appendix A. \$8300.  
 Road maintenance. \$2500

- 2007 - Firewood sales up to 140 cords, area wide as markets permit.  
 Pulpwood sales up to 400 cords, area wide as markets permit.  
 Cayuga #2 - Stands B-18, 20 - Spruce Sawtimber Sale - 114 acres.

Litter pickup and sign maintenance. \$1000  
 Maintain ski trail. \$500  
 Annual inspection for insect, disease, and water quality. \$250  
 Maintain snowmobile trail. \$1000  
 Maintain nature trails. \$500  
 Timber stand improvement - 83 acres - stands are listed in  
 appendix A. \$8300.  
 Road maintenance. \$2500

- 2008 - Firewood sales up to 140 cords, area wide as markets permit.  
 Pulpwood sales up to 400 cords, area wide as markets permit.  
 Cortland #1 - Stands A-6, 16 - Hardwood Sawtimber Sale - 40  
 acres.

Cayuga #2 - Stand A-41 - Red Pine Sale - 56 acres.



- Litter pickup and sign maintenance. \$1000  
 Maintain ski trail. \$500  
 Annual inspection for insect, disease, and water quality. \$250  
 Maintain snowmobile trail. \$1000  
 Maintain nature trails. \$500  
 Timber stand improvement - 83 acres - stands are listed in  
 appendix A. \$8300.  
 Road maintenance. \$2500
- 2009 - Firewood sales up to 140 cords, area wide as markets permit.  
 Pulpwood sales up to 400 cords, area wide as markets permit.  
 Cayuga #3 - Stands B-3, 4, 10 - Spruce Sawtimber Sale - 74 acres.  
 Litter pickup and sign maintenance. \$1000  
 Maintain ski trail. \$500  
 Annual inspection for insect, disease, and water quality. \$250  
 Maintain snowmobile trail. \$1000  
 Maintain nature trails. \$500  
 Timber stand improvement - 83 acres - stands are listed in  
 appendix A. \$8300.  
 Road maintenance. \$2500
- 2010 - Firewood sales up to 140 cords, area wide as markets permit.  
 Pulpwood sales up to 400 cords, area wide as markets permit.  
 Cayuga #2 - C-62, D-23, 24, 27, 44 - Hardwood Sawtimber Sale -  
 244 acres.  
 Cayuga #4 - Stands B-17, 25, 34 - Red Pine Sale - 138 acres.  
 Cayuga #1 - Stands A-9, 16, B-5, C-31 - Spruce Sawtimber Sale -  
 84 acres.  
 Litter pickup and sign maintenance. \$1000  
 Maintain ski trail. \$500  
 Annual inspection for insect, disease, and water quality. \$250  
 Maintain snowmobile trail. \$1000  
 Maintain nature trails. \$500  
 Timber stand improvement - 83 acres - stands are listed in  
 appendix A. \$8300.  
 Road maintenance. \$2500
- 2011 - Forest inventory - Cayuga #2 - 4355 acres.  
 Firewood sales up to 140 cords, area wide as markets permit.  
 Pulpwood sales up to 400 cords, area wide as markets permit.  
 Cayuga #4 - Stands A-9, B-5, 17, 25, 34 - Red Pine Sale - 107  
 acres.  
 Cayuga #2 - Stands C-5, 34, 36 - Spruce Sawtimber Sale - 107  
 acres.  
 Litter pickup and sign maintenance. \$1000  
 Maintain ski trail. \$500  
 Annual inspection for insect, disease, and water quality. \$250  
 Maintain snowmobile trail. \$1000  
 Maintain nature trails. \$500  
 Timber stand improvement - 83 acres - stands are listed in  
 appendix A. \$8300.  
 Road maintenance. \$2500

## REFERENCES CONSULTED

- Andrie, R. F. and J. R. Carroll. The Atlas of Breeding Birds in New York State. Cornell University Press. Ithaca, NY, 1988.
- Anonymous. Checklist of the Amphibians, Reptiles, Birds, and Mammals of New York State, Including Their Protective Status. N.Y.S.D.E.C. Publication. 1987.
- Chambers, R. E. Integrating Timber and Wildlife Management Handbook. S.U.N.Y. College of Environmental Science and Forestry and New York State Department of Environmental Conservation. 1983.
- Dickinson, N. R. A Division of Southern and Western New York State into Ecological Zones. Fed. Aid Final Report, Project W-162-R, New York State Department of Environmental Conservation. 1979.
- Gotie, R. F. Biological Reconnaissance of the Wildlife Management Areas in Region 7 - Pharsalia W.M.A. Fed. Aid Perf. Report W-137-D, N.Y.S.-D.E.C. 1983.
- Hutton, Frank Z. Jr. Soil Survey of Cayuga County, New York. USDA SCS in Cooperation with the Cornell University Agricultural Experiment Station. Washington, 1971.
- Reschke, Carol. Ecological Communities of New York State. New York Natural Heritage Program, N.Y.S. Department of Environmental Conservation. Latham, NY, 1990.
- Seay, Billy D. Soil Survey of Cortland County, New York. USDA SCS in Cooperation with the Cornell University Agricultural Experiment Station. Washington, 1961.
- Smith, H. P., ed. History of Cortland County. D. Mason and Co. Publishers, Syracuse, NY, 1885.
- Storke, Elliot G., assisted by Jas. H. Smith. History of Cayuga County, New York (with Illustrations and Biographical Sketches of its Prominent Men and Pioneers). D. Mason and Co. Publishers, Syracuse, NY, 1879.
- Sullivan, James, ed. History of New York State 1523-1927. Lewis Historical Publishing Co., Inc., New York and Chicago, 1927. Vol. II, pp. 727-742.

# Explanation of Abbreviations in Stand Summaries

**Type** - See forestry inventory data code sheet page

**Size** - SS (Seedling-Sapling) - up to 5.5" diameter  
 LP (Light Pole) - 5.6" to 8.5" diameter  
 HP (Heavy Pole) - 8.6" to 11.5" diameter  
 LST (Light Sawtimber) - 11.6" to 14.5" diameter  
 MST (Medium Sawtimber) - 14.6" to 17.5" diameter  
 HST (Heavy Sawtimber) - 17.6" and over diameter

**BA** - Basal area. A measure of stand density.

**Vol** - Per acre volume expressed in board feet.

**Cull** - A measure of defect in percent.

**Rec-Mgt** - Recommended Management Code  
 1 - Sawtimber harvest (1-10 years)  
 2 - Sawtimber harvest (11-20 years)  
 3 - Firewood harvest (1-20 years)  
 4 - Pulpwood harvest (1-20 years)  
 5 - TSI (1-20 years)  
 6 - Plant (1-20 years)  
 7 - Other (1-20 years)  
 8 - No treatment necessary

## FOREST INVENTORY DATA CODE SHEET

FOREST TYPE CODESNATURAL

10--Northern Hardwood  
 11--Northern Hardwood--Hemlock  
 12--Northern Hardwood--White Pine  
 13--Northern Hardwood--Spruce-Fir  
 14--Pioneer Hardwood  
 15--Swamp Hardwood  
 16--Oak  
 17--Black Locust  
 18--Oak-Hickory  
 19--Oak-Hemlock  
 20--Hemlock  
 21--White Pine  
 22--White Pine-Hemlock  
 23--Spruce-Fir  
 24--Spruce-Fir-Hemlock-White Pine  
 25--Cedar  
 26--Red Pine  
 27--Pitch Pine  
 28--Jack Pine  
 29--Tamarack  
 30--Oak-Pine  
 31--Transition Hardwoods (NH-Oak)  
 32--Other

PLANTATION

40--Red Pine  
 41--White Pine  
 42--Scotch Pine  
 43--Austrian Pine  
 44--Jack Pine  
 45--Norway Spruce  
 46--White Spruce  
 47--Japanese Larch  
 48--European Larch  
 49--White Cedar  
 50--Douglas Fir  
 51--Balsam Fir  
 52--Black Locust  
 53--Pitch Pine  
 54--Misc. Pure Species  
 60--Red Pine-White Pine  
 61--Red Pine-Spruce  
 62--Red Pine-Larch  
 63--White Pine-Spruce  
 64--White Pine-Larch  
 65--Scotch Pine-Spruce  
 66--Scotch Pine-Larch  
 67--Larch-Spruce  
 68--Bucket Mixes  
 70--Pine--Natural Species  
 71--Spruce--Natural Species  
 97--Seedling-Sapling, Natural  
 98--Seedling-Sapling, Plantation  
 99--Non-Forest