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DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Lands and Forests

The Great Divide Unit Management Plan

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The Great Divide Unit Management Plan

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PREFACE

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

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

The Unit Management Planning Process

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

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

Naming the "Great Divide" Unit Management Plan

Once individual parcels are grouped together to form a geographic area of NYS DEC lands for planning purposes, a name is chosen to reflect something these properties have in common. In this case they all sit on the edge of a great watershed divide. Water from Maple Hill State Forest, Catlin State Forest, and Cayuta Lake Fishing Access Site, flows into the Chesapeake Bay. Water from Catharine Creek Wildlife Management Area and Texas Hollow State Forest flows into the St. Lawrence River.

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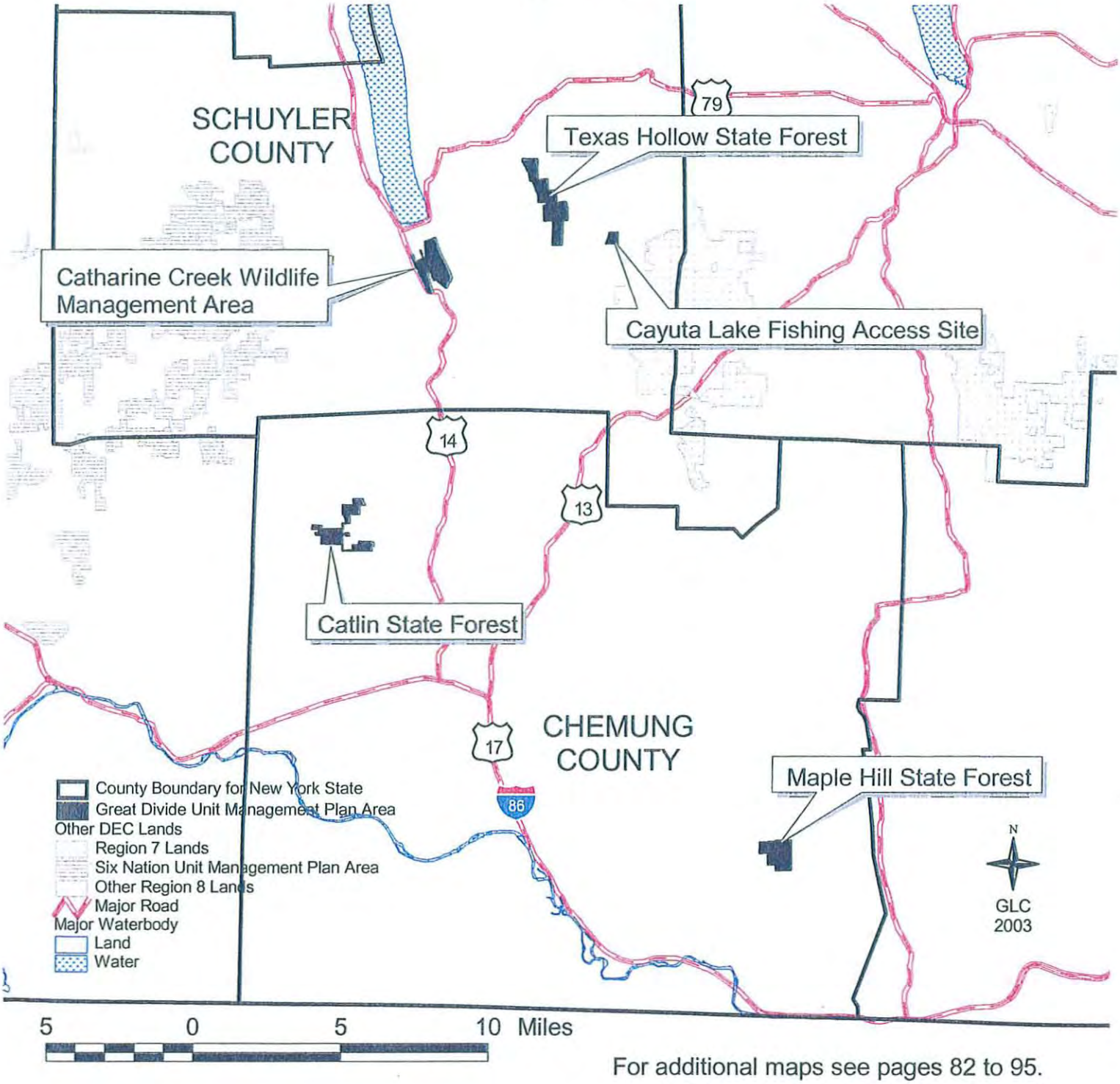
Great Divide Unit Management Plan Area

Texas Hollow State Forest in the Towns of Hector and Catharine
Cayuta Lake Fishing Access Site in the Town of Catharine
Catherine Creek Wildlife Management Area in the Towns of Montour and Dix in Schuyler County,
and
Maple Hill State Forest in the Town of Chemung,
Catlin State Forest in the Town of Catlin in Chemung Co.
New York



For additional maps see pages 82 to 95.

INTRODUCTION

History of State Forests and Wildlife Management Areas

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 New York woodlands were cleared for cultivation and forage.

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 re-occupied 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 purposes. 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 NYS 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, little was accomplished on the reforestation areas. Plans for further planting, construction, facility maintenance, and similar tasks had to be curtailed. However, through postwar 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 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.

Wildlife management areas in New York, like state forests, have a varied history of acquisition. Many were gifted to the New York State by the Federal Government or other cooperating public or private organization. Some parcels were purchased with Bond Act funds or Federal Aid in Wildlife Restoration Program funds. The latter which is commonly called the Pittman-Robertson Act is a federal fund supported by hunters from their purchase of hunting licenses, firearms and ammunition.

Today there are nearly 720,000 acres of state forests and over 200,000 acres of wildlife management areas throughout the state. The use of these lands is important to the economy and to the health and well-being of the people of the state.

History of Great Divide Unit Management Area

The lands within the Great Divide Unit were inhabited prior to the Revolutionary War by the Seneca Indians. The Senecas were nomadic hunters and farmers. Most Senecas were allied with the British in both the French & Indian war and continued to support the British against the colonists during the Revolutionary War. In response to these attacks on European settlers, General John Sullivan was commissioned to attack the Native Americans of western New York. This began a series of skirmishes between Sullivans' troops and the Senecas. After Sullivans' forces claimed victory at Newtown Battlefield word reached "Queen Catharine Montour", tribal leader of the Senecas in what is now Montour Falls, that Sullivans' Army was advancing toward her village. (Queen Catharine Montour is the namesake for

Catharine Creek Marsh and the Village of Montour Falls). The Seneca villagers fled to Niagara Falls, Canada. Historical accounts claim Queen Catharine returned to the Montour Falls area after the revolutionary war, and lived in the area until her death in the early 1800's. Many of Sullivan's soldiers, having observed the potential for agriculture from the Senecas, eventually settled in the valley and became farmers.

It was noted by General Sullivan that it would be feasible to build a canal between the Chemung River and Seneca Lake. When the Erie Canal was completed many communities in the Southern Tier wanted to build their own local canals that could connect with the Erie. Cheap transportation promised to bring prosperity to their community. The Chemung Canal was officially proposed to the state legislature in 1825. Funding was secured in 1829 and construction began on July 4, 1830. The canal began operation in May 1833. The canal was 42 feet wide at the surface and 26 feet wide at the base and 4 feet deep. During the Civil War it was deepened to 6 feet by raising the banks of the canal. The canal proved to be very costly, it was often subject to damage from floods, and the high maintenance costs of the wooden locks. An increase of railroad lines in the southern tier offered cheap, fast, year-round service. The canal was closed permanently in November 1878. A portion of the canal is visible on the Catharine Creek Wildlife Management Area.

It is known that the upland portion of the Great Divide Unit was almost completely forested in 1779. By the late 1800's only 30% of the land area was forested, the remainder having been cleared for agriculture. In Texas Hollow State Forest, farmers raised cranberries in an area that was too wet for other uses. Cranberry Creek derives its name from that endeavor. Almost every acre was used to produce some useable commodity even if it was only firewood to heat the farmhouse.

The Industrial Revolution began another change. By 1900, many agricultural farms in the upland areas of Schuyler and Chemung County were abandoned. Over time these areas reverted back to forest land. Oak/chestnut forests were dominant in this area.

In 1904, a fungal disease called chestnut blight was discovered in New York, having been accidentally imported from Europe. Within 30 years, it spread across the nation and virtually eliminated the American Chestnut. Evidence of American Chestnut can still be seen in the form of stumps and sprouts from root systems of chestnut. Overhead, the holes left by the death of the chestnuts has been filled by red maple, white ash, hickories, beech and oaks.

In response to the decline of agriculture and the demand that the abandoned and eroding farmlands be returned to productive activity, the New York State legislature passed the "Reforestation Law of 1929". Shortly afterwards, the nation plunged into the Great Depression, accelerating the abandonment of agricultural lands.

Catlin State Forest was purchased from several owners starting in 1934 under the "Reforestation Law". Maple Hill State Forest was not acquired until 1965 under "The Park and Recreation Land Acquisition Act". The state took ownership of Cayuta Lake Fishing Access Site in the mid 1980's.

The first 482 acres of Catharine Creek Wildlife Management Area were acquired in 1978 under a federal grant for purposes of wildlife restoration, wildlife research, and public use, specifically hunting and trapping. Additional parcels were purchased into the early 1980's.

Texas Hollow was purchased in several sections, starting in the early 1930's, then the 1940's and most recently in 1998 when a parcel of 88 acres was added to the north end. This northern parcel was locally known as the "Texas Hollow Wildlife (or Bird) Sanctuary". It contains the only bog community in Schuyler Co. In the 1960's the Schuyler Co. Bird Club leased the property from Cotton-Hanlon Inc. This lease lapsed and over time repeated efforts to acquire the property for addition to Texas Hollow State Forest were initiated in 1991, 1994, and 1997 and finally completed in 1998.

INFORMATION ON THE UNIT

Identification

The approximately 2,956 acre Great Divide Unit is comprised of three state forests, one wildlife management area and one fish access site. For management purposes, each state forest is consecutively numbered in the order in which they were purchased in each county.

Great Divide Unit Management Plan includes the following:

Table 1 Acreage of State Land

NAME	STATE FOREST NUMBER	ACREAGE
Texas Hollow State Forest	Schuyler Reforestation Area # 3	937
Catlin State Forest	Chemung Reforestation Area # 1	613
Maple Hill State Forest	Chemung Reforestation Area # 2	604
Catharine Creek Wildlife Management Area		720
Cayuta Lake Fishing Access Site		82

Geography

The Great Divide Unit is situated in the Towns of Hector, Catharine, Montour and Dix in Schuyler County, and the Towns of Catlin and Chemung in Chemung County. Seneca Lake, (approximately 43,343 acres and 38 miles in length) lies immediately north of Catharine Creek Wildlife Management Area. The Villages of Watkins Glen and Montour Falls are located to the north and south of Catharine Creek Wildlife Management Area. Cayuta Lake lies immediately south of Cayuta Lake Fishing Access Site.

The Cities of Elmira, Corning and Ithaca, along with the Villages of Montour Falls, Horseheads, and Watkins Glen lie within a 25 mile radius of all parcels. The Cities of Rochester, and Syracuse are located approximately 100 miles to the north-north east and north-north west of the Unit. The primary access to this unit is via State Routes - 13, 14, 79, 228, and 414, Chemung Co. Routes 3 and 35 and Interstate 86.

Elevations range for the Great Divide Unit vary greatly between the different parcels of land. The highest point for the unit is approximately 1,900 feet (above mean sea level) on Texas Hollow State Forest, and the lowest is approximately 317 feet on the Cayuta Lake Fishing Access Site, at the shore with Cayuta Lake. Texas Hollow has a high of 1,900 and a low of 1,290, Catlin State Forest 1,654 to 1,240, Maple Hill State Forest 1,660 to 1,290, Catharine Creek Wildlife Management area is almost flat at about 450, and Cayuta Lake is almost flat at about 320 feet.

The hilltop topography of the Great Divide Unit is characterized by north-south ridges with deep valleys in between, a result of the many glaciers that have passed over the area.

Table 2 Towns of the Great Divide Unit

Name	Town(s)
Texas Hollow State Forest	Hector, Catharine
Catlin State Forest	Catlin
Maple Hill State Forest	Chemung
Catharine Creek Wildlife Management Area	Montour, Dix
Cayuta Lake Fishing Access Site	Catharine

Climate

The average summer high is 80° F and a low of 56°F while the average winter temperature is a high of 35° F and a low of 17°F. Precipitation averages 33 inches per year, with approximately 43 inches of snow fall each year. Precipitation is often well distributed throughout the year and is usually adequate for the growing season which is about 135 days. In some years there are periods of no rain, interspersed with sudden heavy rainstorms resulting in heavy run off. These averages are modified locally by variations in elevation and proximity to Seneca Lake. Prevailing winds are from the northwest between December and July and from the southwest from August to November.

Climatic data is supplied from the United States National Oceanic and Atmospheric Administration web site.

Adjacent Land - Existing Uses

The land adjacent to the Great Divide Unit is largely in private ownership. There are several larger corporate parcels adjacent to the Catharine Creek Wildlife Management Area.

Agriculture, forestry, and recreation are major land uses. Although agriculture is traditionally the most common land use, it appears to be declining on the uplands. Agriculture of all types, in the valley bottoms, remains strong. Grape growing on the valley sides of the Schuyler County towns also remains strong. The average number of acres per private ownership appears to be declining.

Land Use and Cover data (USGS, Photogrametric Data, no field check ; Photos from 1985; Data compiled 1990 - 1994) for the towns and villages in the Great Divide Unit are summarized below by county:

Table 3: Schuyler Co. Land Use and Cover: Towns of Dix, Catharine, and Hector; Villages of Watkins Glen and Montour Falls

Land Cover and Use Class	% Cover
Residential, Commercial, Industrial	22%
Cropland, Pasture, Vineyard, Orchard	38%
Forested, Shrub, Brush	37%
Water Bodies	2%
Non -Forest Wetlands	1%

Table 4: Chemung County Land Use and Cover: Towns of Catlin and Chemung

Land Cover and Use Class	% Cover
Residential, Commercial, Industrial	1%
Cropland, Pasture, Vineyard, Orchard	27%
Forested, Shrub, Brush	70%
Water Bodies	1%
Non -Forest Wetlands	1%

Real property tax records (as expressed by parcel use codes) agree fairly well with the above distribution

There appears to be a strong split within the Chemung County data. The number of residential properties in the Town of Catlin, is far larger than the number of residential properties for the Town of Chemung.

Distribution, as expressed above, is based on acres, not number of parcels. Thus, the 1% figure for residential, commercial, and industrial parcels is probably correct. The far larger number in this class in the Schuyler County municipalities is explained by the inclusion of the two incorporated villages.

Taxes

State Forest lands acquired for reforestation purposes pursuant to section 9-0501 of the environmental conservation law are subject to taxation for all purposes except county tax.
Town tax and school tax are paid annually to the county clerk for distribution to the appropriate towns and school districts. State forests are valued as if privately owned and assessed in accordance with subdivision 1, Section 542 of the Real Property Tax Law.

State forest lands and multiple use areas less than 3000 acres acquired using monies from the park and recreation land acquisition bond act of 1960 are not subject to real property taxes. Maple Hill State Forest was acquired using 1960 bond act funds and is not subject to property taxes.

Wildlife Management Areas are not subject to real property taxes except where special arrangements have been made at the time of acquisition, or are the subject of special legislation.

Appendix C lists the taxes paid in 1999 on the lands of the Great Divide Unit Management Area.

Further details may be found in Section 534 of the Real Property Tax Law.

Geology

Surface Geology

Background

Most surface geology in the Finger Lakes region and Southern Tier of New York was influenced by the processes of glaciation that occurred during the Pleistocene Epoch. Ice sheets from the last glaciation episode (Wisconsinan glaciation episode) retreated from the area approximately ten thousand (10,000) years ago. Glacial activity left behind numerous sedimentary deposits and surficial features. These included elongate scour features. Some features filled with water creating numerous lakes, small and large. A number of these lakes are now call the Finger Lakes.

Most soils and sediments in the region are related to past glacial activity, and subsequent weathering and erosion processes over the last 20,000 years. The underlying parent rocks (rocks that were subjected to the processes of glaciation, weathering and erosion) of this region are sedimentary rocks; specifically shale, sandstone and minor limestone that were deposited in shallow seas that existed in this region during the Devonian Period of the Paleozoic Era, approximately 370 million years ago. Any post Devonian rocks have been eroded from the region. The presence of rounded igneous and metamorphic clasts are indicative of past glacial activity transporting material into the region from the Canadian Shield to the north.

Great Divide Unit

The resulting surface geology of the State lands included in this unit management plan are variable.

Maple Hill State Forest and the Catlin State Forest include surface geology consisting of glacial till as the dominant deposit in the area. Bedrock outcrops and subcrops of Devonian shales, siltstones, sandstones and minor limestones are located intermittently on the sides and crests of ridges and hills in these areas. Most likely due to the erosion of overlying glacial till, causing the exposure of the bedrock.

Texas Hollow State Forest's surface geology

consists of Kame deposits (coarse to fine sands and gravels that are the result of glacial meltwater river systems) with minor amounts of swamp deposits restricted to topographically low areas at the northern end of the area.

Catharine Creek Wildlife Management Area and Cayuta Lake Fishing Access Site are dominated by swamp deposits consisting of peat, muck and organic rich silts and clays that were deposited in topographically low areas associated with Seneca Lake and Cayuta Lake respectively. Catharine Creek Wildlife Management Area also includes a substantial amount of lacustrine silts and clays at the southern end of the area, that were deposited in association with a proglacial lake. These lacustrine sediments extend to the North beneath the swamp deposits.

Further information on the surface geology of the region is provided by the: *Surficial Geologic Map of New York, New York State Museum - Geologic Survey - Map and Chart series #40, 1986.*

Table 5 Surficial Geologic Material

Name:	Surficial Material:
Maple Hill State Forest	Glacial till: - Deposition beneath glacial ice - Bedrock (shales and silts of the Devonian West Falls Group)
Catlin State Forest	Glacial till: - Deposition beneath glacial ice - Bedrock (shales and silts of the Devonian West Falls Group)
Texas Hollow State Forest	Kame deposits: -Coarse to fine sands and gravels - Deposited adjacent to ice.
Catharine Creek Wildlife Management Area	Swamp deposits: peat, muck,and organic silts/sands/clays. Lacustrine Silts & Clays: laminated silts/clays - calcareous - Deposited in proglacial lake
Cayuta Lake Fishing Access Site	Swamp deposits: peat, muck, and organic silts/sands/clays.

Soils

Detailed soil information is contained in the *Soil Survey of Schuyler & Chemung Counties*, published by USDA, Soil Conservation Service.

The Great Divide Unit contains a number of soil associations, predominately within the *Lordstown - Mardin- Volusia* and *Wayland-Teel-Aquepts* associations. In addition a small acreage of the *Valois-Howard-Chenango* association exists at the north end of Texas Hollow State Forest, and the muck soils at Cayuta Lake Fishing access site.

General association descriptions are in Appendix K and detailed soils maps are outlined in Appendix G.

Bedrock Geology

Background

Bedrock underlying the Finger Lakes region and Southern Tier of New York is inclusive of sedimentary rock units deposited in association with ancient seas and their marine-fluvial-deltaic environments of deposition during the Cambrian (550-500 million years ago (mya)), Ordovician (500-440 mya), Silurian (440-400 mya) and Devonian (400-350 mya) Periods of the Paleozoic Era.

Younger bedrock units deposited during the post-Devonian Periods (such as Mississippian and Pennsylvanian Periods) have been subsequently eroded away by erosional and glacial processes.

Underlying the Paleozoic rocks are pre - Paleozoic Era rocks or Pre-Cambrian rocks generally considered to be composed of igneous and metamorphic rocks. These rocks are generally referred to as "basement" rocks.

Great Divide Unit

Rock units (bedrock) outcropping or subcropping at the surface in the Maple Hill State forest and Catlin State Forest of the Finger Lakes region and southern tier of New York are shales, siltstones, sandstones and intermittent limestones of the West Falls Group that was deposited during the Upper Devonian Period (approximately 350 - 400 million years ago).

The bedrock encountered at Texas Hollow State Forest is shales, siltstones, sandstones and intermittent limestones of the Sonyea, and West Falls Groups that were deposited during the Upper Devonian Period (approximately 350 - 400 million years ago). The older Sonyea Group is encountered at the Northern end of Texas Hollow State Forest and the West Falls Group outcrops farther to the south in Texas Hollow State Forest due to regional dip to the south. Both were deposited during the Upper Devonian Period.

The bedrock underlying Catharine Creek Wildlife Management Area is shales and siltstones of the Genesee Group that was also deposited during the Upper Devonian Period.

At Cayuta Lake Fishing Access Site the underlying bedrock is shales and siltstones that are Upper Devonian in age and are members of the Sonyea Group.

Further information on the bedrock geology of the region is provided by the: Geologic Map of New York - Finger Lake Sheet - New York State Museum and Science Service - Map and Chart #15, 1970.

Numerous wells have been drilled into the subsurface of the areas surrounding the Great Divide Unit. Subsurface information pertaining to the bedrock (that does not outcrop) has been acquired through three (3) specific wells. These wells were drilled between 1976 and 2001 while exploring for oil and natural gas reserves in areas surrounding State Lands contained in Great Divide Unit Management Plan.

These wells were drilled to depths ranging from 4,255 feet to 10,010 feet into the subsurface. Testing the Oriskany Sandstone Formation in the area offsetting Maple Hill State Forest and the deeper Trenton / Black River Formations in the area surrounding Catlin State Forest and an area west of Catharine Creek Wildlife Management Area. These formations were deposited during the Lower Devonian Period (Oriskany) approximately 400 million years ago and the Ordovician Period (Trenton/Black River), over 450 million years ago.

At a surface location approximately 0.5 miles East of Maple Hill State Forest the Seis-Ex Geophysical Limited - Grace #1 well (American Petroleum Institute (API) # 31-015-
11,931) encountered the top of the Devonian Tully Limestone at 2,695 feet, Onondaga Limestone at 4,155 feet, and the Oriskany Sandstone at 4,238'. This well was drilled and plugged during 1976.

At a surface location adjacent to Catlin State Forest the Pennsylvania General Energy Corporation - Hardy #1 well (API# 31-015-22,919) encountered the top of the Devonian Tully Limestone at 2,610 feet, Onondaga Limestone at 3,685 feet, Oriskany Sandstone at 3,732, intermittent Silurian Syracuse salt beds between 4,232 feet and 4,990 feet, top of the Silurian Medina Sandstone at 6,480 feet, top of the Ordovician Queenston Shale at 6,750 feet, top of the Trenton Limestone at 9,173 feet and the top of the Black River Limestone/Dolomite at 9,856 feet into the earth. This well was drilled and plugged during 2001.

At a surface location approximately three (3) miles southwest of Catharine Creek Wildlife Management Area the Fairman Drilling Company - Ganung #1 well (API# 31-097-22,886) encountered the top of the Devonian Tully Limestone at 952 feet, Onondaga Limestone at 2,046 feet, Oriskany Sandstone at 2,109 intermittent Silurian Syracuse salt beds between 2,546 feet and 3,934 feet, top of the Silurian Medina Sandstone at 5,390 feet, top of the Ordovician Queenston Shale at 5,622 feet, top of the Trenton Limestone at 7,971 feet and the top of the Black River Limestone/Dolomite at 8,743 feet into the earth. This well was drilled and plugged during 2001. (See also Appendix I)

Structure

Regional structure of the area is a homocline that dips (is becoming deeper) to the south-southwest at an average dip angle of approximately one (1) degree or deepens 100 feet per each mile traveled to the south-southwest. The *Geologic map of New York - Finger Lakes Sheet #15, 1970*, depicts progressively older rock units outcropping farther to the north, confirming the southerly dip of strata in the region.

Linements, faulting and anticlinal/synclinal structures in the region generally trend in a northeast to southwest direction. North-south trending faults have also been identified in the region. These structures are thought to be due to compressional stress and resulting strain associated with plate tectonics and the opening of the Atlantic Ocean Basin that began at the end of the Paleozoic Era. Structural reference is available at the *Preliminary Brittle Structures Map of New York, New York State Museum-Map and Chart Series No.31E, 1974.*

Mineral Resources

Oil and Gas

Introduction

Article 23, Title 11, Section 23-1101 of the Environmental Conservation Law and State Finance Law authorizes the Department of Environmental Conservation to make leases on behalf of the State for exploration, production and development of oil and gas on State lands. Proposals to lease parcels of State lands managed by the Department of Environmental Conservation will be considered following public notice in the Environmental Notice Bulletin (ENB), and in local newspapers.

Oil and natural gas are valuable resources which can provide energy and revenue, as well as the opportunity for improvements to the existing infrastructure of the Great Divide Unit (such as improving safe and restricted access through upgrading existing roads, culverts and gates) and creation of open space to enhance habitat diversity. As with any other human activity on State lands, oil and natural gas exploration and development can impact the environment. Most impacts are short term and occur during the siting and drilling phases of a well.

In all areas covered by this Unit Management Plan New York State manages the surface estate through the NYS DEC Division of Lands and Forests, or Division of Fish, Wildlife and Marine Resources and the mineral estate is managed through the NYS DEC Division of Mineral Resources.

For more information on the procedures of gas leasing, see the Mineral Resources section on page 35.

Historical Drilling & Production

The drilling of the first commercial oil and natural gas well in the United States occurred in northwestern Pennsylvania during the middle 1800's. The results of this drilling activity carried over into neighboring New York State. Eventually this activity extended into western New York and areas surrounding what is now the Great Divide Unit.

Natural gas was discovered in the northwestern corner of Schuyler County at the Wayne Dundee Field during the 1950's and Gingerbread Field in the 1970's. Natural gas was also discovered in eastern Chemung County at the Van Etten Field during the late 1950's (see map in Appendix G). Production was from the Oriskany Sandstone Formation that was deposited during the Late Devonian Period. Gas was produced from depths ranging from 2,000 feet in Schuyler County to 4,500 feet in Chemung County.

Fields drilled prior to 1986 are shown on the *New York State Gas Field Map - Department of Environmental Conservation - Division of Mineral Resources, 1986*

Recent Activity

Drilling & Production

Natural gas has been discovered recently (1990's to present) from older and deeper Lower Ordovician age rocks of the Trenton / Black River Formations in

Schuyler and Chemung Counties.

A number of gas wells have been recently completed in the areas surrounding Catlin State Forest. The gas is being produced from the Trenton / Black River Formations at a depth of approximately 9,000 feet to 10,000 feet into the subsurface. These wells include one well (Fortuna Energy Inc. - Chemung County SRA No. 1- Parcel A, Well No. 1459, API#: 31-015-22960) drilled on Catlin State Forest during the year 2002 (leased in 1999). It was permitted to a depth of 9,965 feet and is located in Wilson Hollow Field (see map Appendix G).

Additional Trenton / Black River Formation gas wells have recently been drilled at County line Field and Terry Hill South Field in areas north and northeast of Catlin State Forest. These areas are also five to ten miles south of Catharine Creek Wildlife Management Area, Cayuta Lake Fishing Access Site and Texas Hollow State Forest (see Gas Well Location Map in Appendix G).

There has been no recent drilling activity in the areas surrounding Maple Hill State Forest.

Exploration & Drilling

Exploration for gas in the Trenton / Black River Formations continues to expand into southern Schuyler County. During 2003 two gas wells were drilled and completed as producing wells, approximately three miles south of Catharine Creek Wildlife Management Area and Texas Hollow State Forest.

Leasing Activity

An initial title review indicates New York State owns the mineral estate under all areas covered by this unit, with the qualification that mineral reservations may exist and no expressed or implied warranty of title is being offered in this document.

Two areas are currently under oil/gas lease contracts. Leases on the mineral estate under Catlin State Forest were executed on June 6, 1999 between the NYSDEC as "lessor" and Pennsylvania General Energy Corporation as "Lessee", that grant Pennsylvania General Energy Corporation oil and gas rights under Catlin State Forest Parcels A and B, Chemung County, Town of Catlin.

These leases are for a period of five years or as long as oil or gas is produced from the property in commercially paying quantities.

In addition, leases on the mineral estate under Catlin State Forest were executed on June 9, 1999 between the NYS DEC as "lessor" and East Resources Corporation as "Lessee", that grant East Resources Corporation oil and gas rights under Catlin State Forest Parcel C, Chemung County, Town of Catlin. These leases are for a period of five years or as long as oil or gas is produced from the property in commercially paying quantities. Leases on Catlin State Forest have subsequently been assigned from Pennsylvania General Energy Corporation and East Resources Corporation to Fortuna Energy Inc. In 2004 the lease for Parcel C expired, as a result this parcel has been included in the proposed lease sales for 2005.

An oil and gas lease agreement on the mineral estate under Texas Hollow State Forest was executed on June 2, 2003 between the NYS DEC as "lessor" and Fortuna Energy Inc. as "lessee", granting lessee oil and gas rights under Texas Hollow State Forest, Schuyler County, Hector and Catharine Township. This lease is for a period of five years or as long as oil or gas are produced in commercially paying quantities. Furthermore, the lease pertaining to Texas Hollow State Forest is a non-drilling lease. No drilling, access road construction, or other surface disturbances related to oil and gas drilling will be allowed without reclassification and/or the specific authorization of the department.

As of 2003 there are no oil and gas lease agreements on Maple Hill State Forest, Cayuta Lake Fishing Access Site, and Catharine Creek Wildlife Management Area.

Future Leasing Activity

Due to recent drilling and production activity in western New York, the State may again receive requests to nominate lands for leasing. In the event of this occurrence, the procedures outlined in the Minerals section on pg. 35 will be used. Several parcels have been nominated for lease sale in 2005, including Parcel

C of Catlin State Forest and Maple Hill State Forest.

For further information contact the NYS DEC Mineral Resource staff, Region 8, 6274 East Avon-Lima Road, Avon, New York 14414-9591

Mining

Solution Salt Mining

Solution salt mining in New York State pre-dates oil and gas activity. In the 1640's, salt springs were discovered along the shore of Onondaga Lake in the Syracuse area. An area where salt beds of the Silurian age Salina Group are close to the earth's surface. It was discovered that waters from these springs could be evaporated to produce salt. These discoveries were the beginning of a salt production industry in New York State. In time the industry grew in the Syracuse area, bringing growth and economic development to the area. It fostered the construction of the Erie Canal to improve transportation of salt to markets across the country; eventually becoming the primary commercial salt operation in the United States until 1878.

In 1878, a new technology for salt production was employed in wells that were drilled in Wyoming County. Silurian age salt deposits were produced by solution salt mining. A process where freshwater is pumped down wells into salt beds. The freshwater dissolves the salt, putting the salt into a solution that is then pumped to the surface as a concentrated brine solution. The salt is then removed from the solution thru the process of evaporation. Since the advent of this technology, salt production in New York State continually rose, reaching peak production in the 1970's. Today there are five solution salt mining operations in New York. Three are located in Wyoming County and two in Schuyler County.

The two solution salt mining operations in Schuyler County are located proximal to areas within this unit management plan. Approximately one half (½) mile north of Catharine Creek Wildlife Management Area, Cargill Salt Incorporated operates a solution salt mining operation along the south shore of Seneca Lake in the Village of Watkins Glen. Approximately two miles north of the Cargill Salt Incorporated facility, US Salt Inc. operates a solution salt mining operation along the southwest shore of Seneca lake. At both operations wells have been drilled to depths of approximately 3,000 feet to produce salt from formations of the Silurian age Salina Group. The closest salt drilling to Catharine Creek Wildlife Management Area occurred in 1963 when Texas Eastern Product Pipeline Company drilled a well in the northwest corner of Queen Catharine Marsh (approximately 800 feet from lands now included in Catharine Creek Wildlife Management Area), along Highway 14. This well was drilled through salt to a depth of 2,726 feet into the subsurface. Plans to solution mine a propane storage chamber in bedded salt were never completed and the well was plugged and abandoned in 1963. These operations have not impacted any lands contained in this unit management plan. There are no current plans to develop salt resources under these state lands.

Sand, Gravel & Hard Rock

Sand, gravel, and hard rock resources in the areas surrounding most of the State lands in the Great Divide unit management plan are limited except in portions of the Texas Hollow State Forest. There are no mining contracts, permits, or operations on any areas in this unit management plan.

Only sand and gravel mining occurs close to State lands in the Great Divide unit management plan. There are no hard-rock quarries in the area surrounding these lands. Rock units comprising the bedrock in the Great Divide unit management plan consist mainly of Upper Devonian shales and siltstones which are not generally suitable for aggregate produced by commercial mining operations.

Commercial sand and gravel mining operations occur a little more than a mile to the west/northwest of the Catharine Creek Wildlife Management Area on lands north of Watkins Glen State Park. Surficial materials in the Catharine Creek Wildlife Management Area are mainly swamp deposits underlain by lacustrine clays and silts which would have limited markets. Therefore, the potential for commercial mining interest in this area is limited.

The closest sand and gravel mine to Maple Hill State Forest is located more than 3.5 miles to the west.

Surficial deposits of these State lands are generally a thin layer of glacial till overlying shale bedrock. Sand, gravel, and hard rock resources in this area would be limited and unlikely to have potential for commercial mining.

The closest commercial sand and gravel mines to Catlin State Forest are located more than 1.5 miles to the west where glacial outwash deposits are mined along Post Creek. Surficial deposits in the Catlin State Forest are generally a thin layer of glacial till overlying shale bedrock which offer little potential for commercial mining. There is an active municipal mine less than one mile south of the site; however, the municipality is removing material from a stream which would not have commercial potential.

Kame deposits consisting of coarse to fine sand and gravel occur along the Cranberry Creek and Catlin Mill Creek valleys in the Texas Hollow State Forest. These types of deposits would be suitable for commercial sand and gravel mining operations. There are three commercial mines within two miles (south) of the Texas Hollow State Forest. Two of these mines are located less than two miles southwest of the Cayuta Lake Fishing Access Site. Kame deposits are located along the north, east, and west shores of Cayuta Lake; however, deposits at the Cayuta Lake Fishing Access site are swamp deposits which have little potential for commercial mining.

Vegetative Types and Stages

Great Divide Unit vegetation is dominated by wetland vegetative types on lowlands and pole / small sawtimber sized natural hardwood forests on the uplands. Hardwood species include the oaks, maples, hickories, ash, aspen, birches, beech, and apple.

The softwood component is well balanced. Plantation species such as red pine and Norway spruce, white spruce, and Scotch pine are well represented. White pine and hemlock comprise most of the natural conifer stands. Many of the hardwood forests have a softwood component of white pine and hemlock.

Secondary vegetative types include transition hardwood forests on some upland portions of the Unit. Some of the former agricultural fields have been replanted to conifers or reverted back to "pioneer" forest types. There are significant areas of grassy upland meadows on Maple Hill State Forest. There are some small areas of lowland grassy openings on the Catharine Creek Wildlife Management Area. These are an unusual feature in this area. Management actions are proposed in this plan to assure the long term survival of this community.

The following tables (Tables 6 and 7) list vegetative types and stages for the Great Divide Unit. These records are estimated from the most recent inventories available. Texas Hollow State Forest was inventoried in 1999, Catlin State Forest in 2004, Maple Hill State Forest in 1996, Catharine Creek Wildlife Management Area in 2003 and Cayuta Lake Fishing Access Site in 2002.

Table 6 Vegetative Types and Stages for Maple Hill, Catlin, and Texas Hollow State Forests

Vegetative Type	Acres by Size Class				% of Total
	0 -5 in	6 - 11 in	12+ in	other	
Natural Forest Hardwood	176	794	578		71.9%
Natural Forest Conifer	6	122	40		7.8%
Plantation		242	20		12.2%
Wetland				27	1.3%
Ponds				23	1.1%
Open/Brush				107	5.0%
Other (Roads, Parking lots, etc.)				19	0.9%
Total (Acres)	182	1158	638	176	2154

Table 7 Vegetative Types and Stages for Catharine Creek Wildlife Management Area and Cayuta Lake Fishing Access Site

Vegetative Type	Acres by Size Class				% of Total
	0 -5 in	6 - 11 in	12+ in	other	
Natural Forest Hardwood		94	40		16.7%
Natural Forest Conifer		19			2.4%
Plantation		3			0.4%
Wetland				510	63.6%
Ponds				52	6.5%
Open/Brush				76	9.5%
Other (Roads, Parking lots, etc.)				8	1.0%
Total (Acres)		116	40	646	802

Fish, Wildlife and Habitat

The living creatures associated with the Great Divide management unit are as diverse as the vegetation and topography found within each parcel. Catlin State Forest, Maple Hill State Forest, Texas Hollow State Forests, and to some extent the Cayuta Lake Fishing Access are largely upland forested areas. Oak- hickory, Allegany hardwoods, and Red maple wetland stands can be found as one moves from unit to unit. These stands are of varying age and species composition thus supporting a rich diversity of animal species endemic to the south tier of New York. A wide array of forest bird and mammal species are common. Scattered small

ponds are often the focal point of amphibian and reptile species also commonly found in this portion of the Allegheny Plateau.

The Cayuta parcel offers access to warm water fisheries resources of Cayuta Lake. It also supports a rich forested wetland environment where lesser known plant associations can be found. Catharine Creek on the Wildlife Management Area is well known for its spring run of rainbow trout but select warm water species use the area as rearing habitat for their young. Catharine Creeks large cattail wetland and position relative to migratory bird flyway often has aggregations of common wetland birds as well as rarer species. Several frog and turtles species are found about the marsh. A total of 51 species of butterflies have been recorded breeding in the area. Three of them belong to the Hackberry butterfly family, and can be seen near their tree namesake and warrants special attention as they are very uncommon.

Grassland communities are very small portion of the total area. These areas provide nesting and roosting cover for creatures finding less and less of this resource available.

Towers

There may be the potential for generating electricity with windmills or the construction of towers for radio, cell etc transmission, in the area of the Great Divide Unit. There are currently no windmills for power generation on the Great Divide Unit. NYS DEC does not have the legal authority to authorize the construction of windmills, or commercial towers on the lands covered by this unit management plan.

Cooperative Agreements, Partnerships and Volunteers

Catharine Creek Wildlife Management Area:

Two volunteer groups currently maintain foot trails on the Catharine Creek Wildlife Management Area. They are Friends of Queen Catharine Marsh, and the Finger Lakes Trail Conference, Inc., which maintains the Finger Lakes Trail, (www.fingerlakestrail.org) .

Two State agencies have interests in or near the area. The New York State Canal Corporation, PO Box 308, East Syracuse, NY 13057. 315-438-2309, maintains the Barge Canal and a dredge spoils area through and adjacent to the area. Also the New York State Parks, Recreation and Historic Preservation, Finger Lakes State Park Region, Taughannock Falls Park Road, Trumansburg, NY 14886, 607-387-7041, is in the process of converting the abandoned railroad bed into an improved hiking and bicycling trail known as the Catharine Valley Trail State Park. Texas Eastern Products Pipeline Company (TEPPCO), maintains a gas pipeline through the area.

Texas Hollow State Forest:

The Finger Lakes Trail (see address above) also passes through this area. The Horseheads Snowmobile Club maintains a snowmobile trail through the area. Texas Eastern Products Pipeline Company (TEPPCO) pipeline also passes through the area.

Catlin State Forest:

Fortuna Energy, Inc. maintains a natural gas well and pipeline through the area.

Maple Hill State Forest:

The Wild Turkey Federation established a grassy opening on the area. Chemung County Soil and Water and the Chemung County Federated Sportsmens Clubs constructed several ponds on the area.

Wetlands and Water Resources

Aquifers

There are no principal aquifers associated with the individual land areas of the Great Divide Unit. The existence of secondary aquifers or minor recharge areas is unknown. Adequate protection for all aquifers is provided by using standard Best Management Practices (BMPs) for water quality.

Further information on the BMPs is provided by the: *New York State Forestry Best Management Practices for Water Quality BMP Field Guide.*

Wetlands

Four New York State regulated wetlands occur on the involved units. Catharine Creek is a Class I wetland. This is largely a cattail marsh, (755 total acres) dominating the valley immediately south of Seneca Lake. Part of this wetland is in private ownership, the rest is part of Catharine Creek Wildlife Management Area. There are three Class II wetlands. Two of these are at least partially on the Texas Hollow State Forest, 21 and 19 acres respectively. One of which is a rare dwarf shrub bog with a floating mat. The third Class II wetland is partially on the Cayuta Lake Fishing Access and is 313 acres.

Streams

This unit straddles both the southern portion of the Finger Lakes drainage basin and the northern portion of the Chemung river basin. Catharine Creek (running through Catharine Creek Wildlife Management Area) is a renowned classified stream drawing thousands of anglers annually. Cranberry Creek (Texas Hollow State Forest) is a classified stream supporting a native brook trout population. Together these streams account for a large volume of runoff into Seneca Lake. Numerous permanent as well as intermittent drainages serve to drain the steep hills seasonally and during storm events. Annually, any of these drainages can flush enough rock, soil or other debris into road culverts and bridges to impair road structures as well as travel.

Ponded Waters

Numerous shallow impoundments have been developed throughout Catharine Creek Wildlife Management Area in an effort to provide habitat for wildlife species. Texas Hollow has one pond constructed with a man-made dike, with a concrete control structures to discharge water. In addition Texas Hollow State Forest has several naturally occurring ponds. Maple Hill State Forest has six recently constructed shallow ponds. All the areas on the unit contain terrain that lends itself to supporting the presence of vernal pools.

Significant Plants and Plant Communities

Several rare plants are listed in the Natural Heritage data base on lands included in the Great Divide Unit Management Plan. Two of these reports are from 1920 or before and several attempts by Nature Conservancy and Natural Heritage and DEC staff to find them have failed. One plant threatened in New York State is known to exist in the unit.

There are several plant communities also noted on the Natural Heritage data base. These are: Flood Plain Forest, Silver Maple-Ash Swamp. Not listed by Natural Heritage, but of considerable interest to local naturalists is a Kettlehole Pond and a small dwarf shrub bog.

There is one area in the unit that supports several hundred Pink Lady-slippers (Cypripedium acaule) which is an exploitably vulnerable plant that is prized by naturalists, some gardeners and white tailed deer.

Roads

The Great Divide Unit is accessed by state, county and town roads (see location map, page 1). State and town maintained asphalt and gravel roads comprise the majority of access routes. Some portions of the town roads are seasonal and are not maintained for winter travel.

The road system maintained by NYS DEC 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 NYS DEC maintained roads - public forest access roads, and haul roads and access trails - each provide different levels of access, depending on the standards to which they are constructed.

Public Forest Access Roads are permanent, unpaved roads which may be designed for all-weather use depending upon their location, surfacing and drainage. These roads provide primary access for administration and public use within the Unit. The design standards for these roads are those of the Class A

and Class B access roads as provided in the Unpaved Forest Road Handbook (8/74). As a general guideline, sufficient access is typically achieved when 1 mile of PFAR is developed for each 500 acres of state land, and no position within the Unit lies more than 1 half mile from a PFAR or public highway.

Haul Roads are permanent, unpaved roads which are not designed for all weather travel, but may have hardened or improved surfaces with artificial drainage. They are constructed according to best management practices primarily for the removal of forest products, providing limited access within the unit by log trucks and other heavy equipment. These roads may or may not be open for public motor vehicle use, depending on management priorities and objectives. They may serve as recreational access corridors, but are not maintained according to specific standards or schedules. The design standards for these roads are below those of the Class B access roads as provided in the Unpaved Forest Road Handbook.

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

NYS DEC maintains 2.2 miles of roads on the Great Divide Unit. A number of these roads also are utilized as trails.

Catharine Creek Wildlife Management Area contains 1 mile of haul roads. Cayuta Fishing Access Site contains 0 .4 mile of haul road. Maple Hill State Forest contains 0.8 mile of haul road. The remainder of the roads are used as travel corridors for hiking, bicycling, horseback riding, snowshoeing and cross country skiing. Many hiking trails and portions of the Finger Lakes Trail connect to the administrative roads and provide additional routes of travel.

Maple Hill State Forest has 0.5 mile of a designated section of motor vehicle access by persons with qualifying disabilities. This access is by permit only.

Recreation

The Great Divide Unit provides recreational opportunities within a two hour drive of metropolitan Rochester and Syracuse, and less than a half-hour drive from the cities of Elmira, Ithaca and Corning. Consequently, recreational use is seasonally concentrated and varied.

Recreation Opportunities Include:

- Hunting
- Fishing
- Trapping
- Hiking
- Bird, butterfly and wildlife observation
- Camping
- Canoeing
- Mountain biking
- Snowmobiling (State Forests only)
- Cross country skiing
- Snowshoeing
- Picnicking
- Photography
- Nature study
- Running

Different regulations apply to state forests and wildlife management areas. For example, overnight camping is permitted anywhere on state forests as long as it is not within 150 ft. of any road, trail, spring, stream, pond, or other water source. For groups of less than 10 people and for up to 3 days, no permit is required, longer stays and/or larger groups are allowed to camp with a permit obtained from the NYS DEC Forest Rangers, at the Bath suboffice. Overnight camping is not allowed on Wildlife Management Areas. Regardless of location, camping sites must be kept neat, clean, and in sanitary condition.

ATV and off-road vehicle use is prohibited on all state land within the Great Divide Unit (except by permit for people with qualifying disabilities). Depositing or leaving rubbish or waste material is prohibited. Cutting, removing, or destroying any living, or standing dead trees or plants is prohibited. Users are requested to extinguish all fires completely. Hunting, trapping, and fishing are allowed only during legal

season, consult the NYS DEC Hunting and Trapping, and the Fishing Regulations Guides for seasons, hours, and bag limits.

Hunting

Hunting and trapping are valuable wildlife population control methods, see the Fish, Wildlife and Habitat and Vegetation sections. If populations of deer etc. get too large they damage vegetation by eating it. Hunting is popular on all state lands in the Great Divide Unit. Both small and big game hunting opportunities exist. White-tailed deer is the primary big game species. Archery, muzzleloading, and shotgun seasons open annually in the fall. Permanent tree stands are prohibited. Also prohibited are any equipment that damages the trees, this includes screw in steps, eye hooks etc. Small game include; wild turkey, ruffed grouse, pheasant, woodcock, squirrels, cottontail rabbit, and waterfowl. Trapping of furbearers also occurs.

Fishing

Catharine Creek is a premier Rainbow trout run in the spring. The wetland complex and creeks on Catharine Creek Wildlife Management Area provide many fishing opportunities. Seneca Lake and Cayuta Lake are well stocked with many types of fish, with Cayuta Lake Fishing Access Site providing public access to that lake. Fishing opportunities are limited at Maple Hill, Texas Hollow and Catlin State Forest.

Trails

There are several trails, old roads, old railroad beds and pipelines in the Great Divide Unit to explore, some of these trails are currently marked and mapped, others are not. The Finger Lakes Trail passes through Texas Hollow Forest and just north of Catharine Creek Wildlife Management Area . The Finger Lakes Trail is maintained by the Finger Lakes Trail Conference in an Adopt a Natural Resource Agreement. The Catharine Valley Trail Corridor, an old railroad line, will eventually run between Watkins Glen and Horseheads; a section of which runs through the middle of Catharine Creek Wildlife Management Area. This trail can be accessed from several locations along State Route 14.

All trails in the Great Divide Unit can also be used for walking, running, cross-country skiing, and snowshoeing (however, with one exception, motorized vehicle use by the general public is prohibited). There are no designated horse or bike trails. There is a snowmobile trail crossing one end of Texas Hollow State Forest, which is maintained by the Horseheads Snowmobile Club.

People with Disabilities Access

The only ATV trails that exist are for persons with disabilities - pursuant to NYS DEC Commissioners Policy #3 (CP-3). Individuals with qualifying disabilities may apply for a permit to operate an ATV on trails designated by the NYS DEC. For further inquiries contact the NYS DEC office in Bath. (See Appendix D and G)

Archaeological Resources

There are several known (or suspected) pre-European settlement archaeological sites on this Unit or within close proximity. It is well documented that Native Americans, present during the Woodland period (about 1000 BC to 750 AD), had occupied the valleys encompassed by the unit. There is also evidence of occupation during the Archaic (10,000 BC to 1,000 BC) and Paleo- Indian periods (Pre-10,000 BC), although this evidence is somewhat more scattered. It is assumed the uplands were used for hunting grounds, during the Woodland period. However, it is unlikely settlements were located on these upland areas during this period.

Archaeological Site Protection

The archaeological sites located within this land unit as well as additional unrecorded sites that may exist on the property are protected by the provisions of the New York State Historic Preservation Act (SHPA - Article 14 PRHPL), Article 9 of Environmental Conservation Law and Section 233 of Education Law. Should any actions be proposed which would impact these sites they will be reviewed in accordance with SHPA. Consultation will be given with the Seneca Nation of Indians Tribal Historic Preservation Office. Unauthorized excavation and removal of materials from any of these sites is prohibited by Article 9 of

Environmental Conservation Law and Section 233 of Education Law.

Archaeological Research

The archaeological sites located on this land unit as well as additional unrecorded sites that may exist on the property will be made available for appropriate research. All future archaeological research conducted on the property will be accomplished under the auspices of all appropriate permits. Research permits will be issued only after consultation with the New York State Museum and the Office of Parks, Recreation and Historic Preservation. Extensive excavations are not contemplated as part of any research program in order to assure that the sites are available to future researchers who are likely to have more advanced tools and techniques as well as different research questions.

Historic Sites

The Great Divide Unit has numerous abandoned house/barn foundations as well as remnants of stone, stump and rail fences, all evidence of prior land occupation and uses.

There is an abandoned airport within the Catharine Creek Wildlife Management Area, as well as a significant mileage of abandoned railroad right - of - way. Portions of the State Barge Canal system are immediately adjacent to the Wildlife Management Area. This area also has a long history of harvesting reeds for chair caning (also known as flag cutting). There was a fair amount of truck crops grown on the southern end of the Wildlife Management Area.

The Cayuta Lake Fishing Access Site was until quite recently the site of a popular restaurant and bar. There was also a canal dredged southerly from the shore of Cayuta Lake, with the intention of creating a marina.

The State Forest areas were, by and large, sub - marginal agricultural lands. Acquisition began shortly after agriculture was abandoned in the early 1930's. Acquisition of the Maple Hill State Forest occurred somewhat later than the other state forests. There was active agriculture into the mid 1960's on this site. Acquisition for State Forest purposes is still continuing, with the most recent tract being added to Texas Hollow State Forest in 1998.

NEEDS, ISSUES AND POLICY CONSIDERATIONS

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

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

Funding

Currently NYS DECs' Bureau of State Land Management and Bureau of Wildlife must prioritize spending within available budgets.

Funding, when available, is primarily derived from:

- Capital construction account (State General Fund monies)
- Rehabilitation & improvement account (State General Fund monies)
- Stewardship - Special Revenue Other (SRO) account. State forests only. Note: The primary source of revenue for the SRO account is from commercial sales of forest products.
- Services in lieu of payment during commercial sales of forest products. (These services are limited to the specific location and certain activities, where the sale occurs.)
- Environmental Protection Fund (EPF). This account is primarily funded from real estate transfer tax and other appropriations by the legislature. Appropriations from this fund may be used for a wide variety of projects including habitat enhancement for plants and animals, recreational facilities and forestry improvements such as pre-commercial thinning, artificial regeneration, and control of invasive species.
- Conservation Fund. Wildlife Management Areas only. A state fund consisting primarily of income from the sale of sporting licenses, fines from penalties from fish and wildlife law violations, sale of products off lands administered by the Division of Fish, Wildlife and Marine Resources, and Return a Gift to Wildlife donations. Revenues attributable to the sale of oil and gas leases from Wildlife Management Areas are deposited into the Conservation Fund.
- Wildlife Restoration Program Funds. These are federal funds commonly referred to as Pittman-Robertson Funds. This is a federal program established from money received from excise taxes on the sale of sporting guns and ammunition. Use of land purchased, or activities funded, are federally regulated to certain activities.

Regional allocations from these accounts must be shared by all NYS DEC lands within the region. There is no specific budget established to manage an individual site. Funding is distributed based on priorities for all areas within the region. Tasks listed in the work schedule in this plan are contingent upon available funding and commitments associated with higher priority projects within the region.

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

Summary of Identified Issues

Access

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

The public commented on maintaining public access and trails. Some asked for non-motorized only. Another expressed the desire for increased parking at some sites. One offered property for sale adjacent to the Cayuta Lake Fishing Access Site.

Staff identified the need to acquire access to Texas Hollow State Forest, off Steammill Rd.; the need to monitor the status of Pryne Rd (Maple Hill State Forest) and to continue to work with interested parties on Rock Cabin Rd. project (NYSEG, towns, adjacent property owners) on Catharine Creek Wildlife Management Area.

Vegetation Management

Plant communities are by nature dynamic and ever-changing. Young tree stands get older, and species composition changes with time. Disturbances from fire, wind, insects, disease, timber harvest, and other land-use practices have been an important part of the history of New York forests and have determined the composition and structure of today's forests. By applying different forest management or silvicultural practices, land managers can affect change in vegetative types and stages and associated use by wildlife. The production of forest products is a clearly stated goal in the Reforestation Law of 1929 and is consistent with the proposed management actions in the Great Divide Unit.

Comments expressed concern over the need for responsible loggers to respect the forest, landowners and wildlife, and that timber be managed for timber production with special attention on regeneration including the use of herbicides and fire. The Ruffed Grouse Society offered technical expertise to promote forest dwelling wildlife species.

Staff identified needs such as additional early age grass acres (all); and to maintain improve grassland and upland meadow management at Maple Hill State Forest (top dress with ag. lime and mow).

Water Resources

The Environmental Conservation Law (ECL) dictates that the State Forests within the Great Divide Unit be managed for watershed protection. This is also clearly consistent with Wildlife Management Area objectives and sound conservation practices and public desires. Best Management Practices for water quality are used for all silvicultural practices on state lands. These require specific conservation practices which protect soils and water quality during timber harvest. Well-managed water resources have multiple benefits, including quality fish and wildlife habitats, aesthetically pleasing sites, ground water protection, and flood water retention.

No public comments were received related to water resources. Staff recommended maintaining pond dikes at Maple Hill.

Wildlife And Wildlife Habitat

The public identified the need for increasing wildlife species. Staff identified the need to change the goldenrod fields on Maple Hill State Forest to grasses and to provide early vegetation types for wildlife.

Fish Management

The Division of Fish and Wildlife is charged by Environmental Conservation Law to maintain and improve the fisheries resource and develop and administer measures for making the resource accessible

for the people of the state.

Public Recreation and Use

One comment was opposed to four wheelers and dirt bikes, but approved of snowmobiles, skiers and mountain bikes. Another asked for the lands to be preserved for hunting and fishing only and expressed an opposition to camping. A third favored the use of mountain bikes in the state forest. The Cayuga Trails Club requested the posting of no-biking signs at the trail head on Newtown Rd., Texas Hollow Road and on the west side of Steam Mill Road.

Staff identified the need for simple kiosks for all the areas, and to Improve the parking on Texas Hollow Rd. on Texas Hollow State Forest.

Oil And Gas Leasing

The public expressed varying comments on oil and gas leasing. Three comments expressed opposition to gas leasing; one opposed mining open/pit gravel.

Cooperative Agreements

Additional funds would be needed to optimally maintain the Great Divide Unit. Although there are existing agreements, there is a need for more. There is also a need to identify additional funding and actively search out cooperative agreements and partnerships to maintain roads and trails and other facilities in the Great Divide Unit.

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

Staff identified the need to work closely with the Finger Lakes Trail Conference and the Horseheads Snowmobile club and other interested groups to help with Catherine Valley Trail.

Open Space Conservation

New York State has been a leader in recognizing the value of open, undeveloped land. In September 2002 Governor Pataki issued a plan prepared by DEC and the Office of Parks Recreation and Historical Preservation, entitled, **"Conserving Open Space in New York State".**

The Open Space Plan of 2002 characterizes the need for perpetuation, in a grand sense, of open space and natural landscapes as, "The quality and character of the lives of the people of New York depend upon the quality and character of the land on which we live. These lands shape the way we spend our leisure time, affect the long term strength of our economy, determine whether we have clean air and water, support the web of living things of which we are a part, and affect how we think about ourselves and relate to other New Yorkers." NYS DEC will consider the purchase of selected parcels from willing sellers when funding becomes available.

DEC staff recommends proposed acquisitions adjacent to Rock Cabin Rd near Catherine Creek Wildlife Management Area, finish connecting "parts" of Catlin State Forest, and connecting Texas Hollow State Forest to Steammill Rd.

Aesthetics

In addition to providing open space and a place to experience wildlife and wild land, public lands should also be pleasing to the eye and soul. Scenic vistas, the use of natural materials, and attention to quality design and maintenance are important components of

effectively managing the Great Divide Unit. The challenge is to attract users to the site without destroying what has drawn them there in the first place.

Staff recommends that garbage pick up continue, and encouraging "Pack it in, Pack it out".

Cultural Resources and Historic Preservation

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

Current Known Illegal Use

Regular patrols are made by law enforcement officials such as Forest Rangers, Environmental Conservation Officers and even local Sheriff deputies of the Great Divide Unit, and all other NYS DEC lands. But with the limited resources available it is difficult to stop all illegal activities such as:

- ATV and dirt bike use
- Off road driving
- Dumping / littering
- Vandalism
- Construction of permanent blinds and/or tree stands
- Harvest of ginseng and protected plants
- Cultivation of marijuana
- Poaching
- Underage drinking

Whenever possible, fines or other punishments as the law allows are imposed. As money and other resources allow, the damage is fixed, dumping is cleaned up and illegal plants are removed.

Policy Considerations

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

State Laws

State Finance Law
State Historic Preservation Act (SHPA) - Article 14 PRHPL

Environmental Conservation Law (ECL)

ECL Article 8	- Environmental Quality Review
ECL Article 9	- Lands and Forests
ECL Article 11	- Fish and Wildlife
ECL Article 15	- Water Resources
ECL Article 23	- Mineral Resources

ECL Article 24 - Freshwater Wetlands
ECL Article 33 - Pesticides
ECL Article 51 - Implementation of Environmental Quality Bond Act of 1972
ECL Article 71 - Enforcement

New York Code Rules and Regulations (6NYCRR)

Title 6
Chapter I - Fish and Wildlife
Chapter II - Lands and Forests
Chapter III - Air Resources
Chapter IV - Quality Services
Chapter V - Resource Management Services
Chapter VI - State Environmental Quality Review
Chapter VII - Subchapter A
- Implementation of EQBA of 1972
Chapter X - Division of Water Resources

NYS DEC Policies

Public Use
Temporary Revocable Permits
Motor Vehicle Use
Timber Management
Unit Management Planning
Pesticides
Prescribed Burns
State Forest Master Plan
Inventory
Acquisition
Road Construction
Motor Vehicle Access for People with Disabilities Policy (CP-3)
Best Management Practices (Water quality)
General Freshwater Wetlands Permit for Wildlife Management Area Management Activities
Bureau of Fisheries Fish Stocking Policies
Archaeological Site Protection
Archaeological Research
Adopt a Natural Resource
Memorandum of Understanding with BLM for FYO 2004/2005 (leasing of gas wells)
etc.

Federal Law

Americans with Disabilities Act
Federal Wetland Law 404 - Water quality
Federal Land Policy and Management Act of 1976 (FLPMA)
National Environmental Policy Act of 1969 (NEPA)
General Stormwater SPDES Permit.
etc.

GOALS AND OBJECTIVES

Vision

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

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

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

Access

The existing access to the unit is adequate in most cases. However, the need for additional parking in some areas has been determined.

Restricted motor access to administrative roads by gates and signs will continue. The costs to upgrade administrative roads to public access are prohibitive; in addition many public comments indicate no interest in such actions. Access restrictions are needed to maintain the "backwoods character" of the land as well as protecting sensitive areas. NYS DEC reserves the right to limit access to state lands when public safety issues occur.

The maintenance status of some town roads needs to be determined. Pryne Rd. is currently the only road access to Maple Hill State Forest. If the town decides to abandon that road, they need to comply with Section 205b of Article 8 of Chapter 25 (Highway Law) of the Consolidated laws of New York State, resulting in qualified abandonment with continued access by the public.

Management Objectives and Actions for Access

Management Objectives	Mgt. Action	Management Actions	Frequency of Action
1. Identify need for additional access	1.0	Survey site(s)	As Needed
	1.1	Receive public comments	On-Going
	1.2	Solicit public comments	Every 10 yrs
2. Construct identified additional access routes	2.0	Texas Hollow State Forest: acquire access from Steam Mill Rd.	One Time

	2.1	Identify additional access road needs	As Needed
	2.2	Construct access roads	As Needed
3. Determine status of town roads	3.0	Need to monitor status of Pryne Rd. on Maple Hill State Forest	On-Going
	3.1	Continue to work with interested parties on land adjacent to Rock Cabin Rd. (Catharine Creek Wildlife Management Area)	On-Going
4. Maintain roads	4.0	Inspect culverts	Bi-Annually
	4.1	Replace inoperable culverts	As Needed
	4.2	Public access roads - grade and maintain surface.	Bi-Annually
	4.3	Administrative access roads - grade and maintain surface.	Every 5 yrs
	4.4	Mow roads right of way.	Annually
5. Construct identified additional Parking lots	5.0	Construct parking lots (2) off Chambers Rd.(Catlin State Forest)	One time
	5.1	Improve parking along Texas Hollow Rd.	One Time
	5.2	Identify additional parking needs	As Needed
	5.3	Construct parking lots.	As needed
6. Maintain parking areas.	6.0	Litter removal	As Needed
	6.1	Maintain all parking areas.	As Needed
	6.2	Maintain curbing	As Needed
	6.3	Maintain informational signs	Annually
	6.4	Mow all parking areas	As Needed
7. Control access.	7.0	Identify the need for gates and signs.	As Needed
	7.1	Construct gates and post signs	As Needed
	7.2	Maintain gates and signs.	Annually
	7.3	Enforce NYS DEC policies	On-Going
8. Identify state property boundary lines.	8.0	Survey, paint, blaze, and post boundaries.	Every 5 yrs
	8.1	Identify and resolve boundary encroachment issues.	As Needed
	8.2	Repair and replace area signs.	On-Going

Timber and Vegetation Management

Management objectives will strive to maintain a balance of vegetative types and vegetative stages. This balance is intended and enhance biological diversity, wildlife diversity and abundance and to produce marketable forest resources. Presently, all three State Forests have a well balanced mix of vegetative types and stages, the emphasis on State Forest lands should be on maintenance of existing types.

On Catharine Creek Wildlife Management Area and the Cayuta Lake Fishing Access Site significant wetland acres are in place. We will have limited opportunity to influence forest species composition or structure in these areas. Most stands of trees on these areas are not commercially saleable in western New York. Many sites are also too wet to be harvested with conventional logging equipment. Any actions will be evaluated to meet wildlife species needs and appropriate silvicultural action taken accordingly.

Timber management will be used optimize distribution of vegetative stages and types as well as generate revenue. The harvests will be accomplished using a variety of silvicultural techniques such as converting even-age stands to uneven-aged stands, establishing protection areas to maintain and enhance diversity, and protecting ecologically sensitive areas such as stream banks, wetlands, and steep slopes from intensive management. Protection areas receive special consideration whenever management activities are planned which may impact these areas. Examples include: increased use of erosion control devices, seasonal harvest limitations, restrictions of type and/or size of harvesting equipment, and restricted skid trail layout. Some protection areas are restricted from all harvest of forest products. The northern section of Texas Hollow State Forest, locally known as the Bird Sanctuary, has been listed as protected. These practices may also be employed on other areas not designated as protection forest whenever site or vegetation protection is needed. Examples are: Poorly drained soils, slopes over 15%, presence of historical or archeological features, recreational use, wildlife considerations, and preparation for forest regeneration.

All timber sales are planned and the trees to be removed are designated by the forestry staff of NYS DEC using tree marking paint. After designation is complete, a minimum bid is determined based on the estimated volume of the trees marked by the foresters. Stands are prioritized for sale activity based on vegetative types and diversity and the desired future conditions identified by this Unit Management Plan. Prioritization is done by NYS DEC forestry staff, with input by the wildlife staff.

There are two types of timber sale contracts. Sales greater than $10,000 are called Revenue Contracts. Revenue Contracts are marked and the paperwork assembled by regional NYS DEC foresters, then it is sent to NYS DEC Albany office for processing. After processing, the bid notices are sent to the list of known interested bidders, and a legal notice is posted in the paper. Sales up to $10,000 are known as Local Sales. Local Sales are marked, and the paperwork assembled, by the regional foresters and then sent directly to the known interested bidders. Revenue Contract bids are opened in Albany, Local Sale bids are opened in the Bath office, in either case, the high bidder buys the sale for the amount submitted. Each NYS DEC Forestry office maintains a list of known interested bidders who have contacted them. Small Local Sales (minimum bid of less than $500) may be sold without public advertising.

All sales will be administered by a state forester, using standard "DEC Sale of Forest Products" contracts. In the case of Revenue Contract the paperwork is sent from Albany to the high bidder, for Local Sales the high bidder will meet with the local NYS DEC forester. All payments are received in advance of harvesting. Proof of insurance is required, or may be purchased for each sale from NYS DEC. Revenue contracts over $10,000 require a performance bond, sales under $10,000 may require a performance bond at the discretion of regional foresters. The logging is monitored by NYS DEC staff for the duration of the operation. The performance bond is returned if all conditions of the sale have been satisfied.

Forest ecologists have identified conifers as an important component of the ecosystem. The establishment of conifers mostly through natural regeneration, and very limited planting, has created a significant conifer component on the three State Forest areas, at about 20% of the total acres. Catharine Creek Wildlife Management Area and Cayuta Lake Fishing Access Site have about 3% of their total acres in some form of conifer. Given the large wetland acres in these two areas, this is to be expected. A 10% conifer component is generally considered adequate in western New York. Natural regeneration should continue to supply the necessary coniferous component.

Similarly, oak and chestnut are desirable tree species to have on the Great Divide Unit, however, historical

management and disease have discriminated against these species. The objective is to maintain and enhance these species in the Great Divide Unit by using current knowledge of oak silviculture and employing new silvicultural techniques that develop from research. Difficulties with oak and conifer regeneration have led to shade tolerant species such as sugar and red maple becoming well-established. These species will challenge land managers abilities to meet vegetative goals. Should a treatment to control chestnut blight, or resistant trees be developed, efforts would be made to bring back the chestnut to the area.

White tailed deer eat young tree seedlings and by doing so play a major role in the success and failure of managing conifers, oak and chestnut. A reduction in the number of deer on the landscape by liberal harvest via hunting needs to be encouraged to achieve deer population objectives.

Considerable acreage of wetlands environs can be found on the Great Divide Unit. The distribution of aquatic environs is currently heavily skewed to the Wildlife Management Area. The Catharine Creek wetlands are very rich and diverse, meeting the needs of a very wide array of fish and wildlife resources. The wetlands associated with the Cayuta Lake site are also very diverse.

Some levels of insect, disease and natural disaster are recognized as being a beneficial factor in shaping our vegetation. Various endemic and epidemic occurrences of insect, diseases, fires and storms periodically impact the vegetative communities of the Great Divide Management Unit. Infestations of introduced insects such as Gypsy Moth and Hemlock Woolly Adelgid are of present concern and bear regular monitoring. Native insect species such as Pear Thrips and Fall Cankerworms are cyclic in population and may be expected to impact vegetation at some time in the future as they have in the past. The professional foresters of NYS DEC will continue to observe the effects of these factors which influence the vegetation on the unit. By closely monitoring these outbreaks management actions may be able to lesson undesirable impacts.

A forest inventory is required at a minimum of every 10 years.

See appendix E for a listing of silvicultural management style for each stand and maps in appendix G.

Management Objectives and Actions for Vegetation

(percent based on forest acreage)

Management Objectives	Mgt. Action	Management Actions	Frequency of Action
1. Maintain knowledge of forest stands.	1.0	Perform State Forest and Wildlife Management Area inventory.	Every 10 yrs
2. Maintain healthy vegetation	2.0	Practice Integrated Pest Management	On-Going
	2.1	Reduce deer population, to reduce damage to the low growing vegetation.	Annually
3. Texas Hollow, Catlin, and Maple Hill State Forests			
Develop the following vegetative balance:			
5% openings	3.0	Maintain about 107 acres with a 3 yr rotation of mowing	Every 3rd Yr.
6% Protection forest	3.1	Protect 128 acres. (This includes the area	

		locally known as the "Bird Sanctuary")	On-Going
6% Uneven Age silviculture, at a 20 yr cutting cycle.	3.2	Regenerate an average of 3 acres/yr.	Annually
76% Even Age silviculture,	3.3	Regenerate an average of 5 acres/yr.	Annually
at 100 yr rotation.	3.4	Thin an average of 10 acres/yr.	Annually

4. Catharine Creek Wildlife Management Area and Cayuta Lake Fishing Access Site

Develop the following vegetative balance:

10% openings	4.0	Maintain about 76 acres of grasslands	Every 3rd Yr.
64% Wetland	4.1	Enhancement of wetlands (see Fish and Wildlife Habitat)	As Needed
5% Protection forest	4.2	Protect 38 acres	On-Going
16% Even Age silviculture,	4.3	Regenerate an average of 0.3 acres/yr	Annually
at 125 yr rotation	4.4	Thin an average of 2 acres/yr	Annually

Watershed and Wetlands Protection

Compliance with the New York State Freshwater Wetlands Act (ECL Article 24) and the Water Resources Law (ECL Article 15, Title 5) is required by NYS DEC when conducting management activities or construction projects that involve regulated activities within protected wetlands, water bodies, or streams. Timber Harvesting Guidelines which are mandatory for all silvicultural practices on state lands, require specific conservation practices which protect soils and water quality. The ECL dictates that, among other purposes, State Forests within this Unit be managed for watershed protection. This is also clearly consistent with Wildlife Management Area objectives and sound conservation practices and public desires.

Regulated activities within protected wetlands, streams and waterbodies include such things as clear-cutting vegetation and construction of ponds or road crossings. Normal maintenance and repair of existing structures is generally exempt from permit requirements. Well-managed water resources have multiple benefits, including quality fish and wildlife habitats, aesthetically pleasing sites, ground water protection, and flood water retention.

The need for small dug-outs and a larger wetland development were elicited in the objectives for "Fish and Wildlife and Wildlife Habitat".

Management Objectives and Actions for Watershed and Wetlands

Management Objectives	Mgt. Action	Management Actions	Frequency of Action
1. Protect water and wetland resources	1.0	Utilize Best Management Practices (BMP's) for water quality on timber sales, gas well site construction, etc.	On-Going
	1.1	Control erosion through proper road maintenance.	On-Going
	1.2	Comply with the Water Resources Law and Freshwater Wetlands Acts.	On-Going
	1.3	Comply with General Stormwater SPDES Permit.	On-Going

Fish and Wildlife Habitat

The fish and wildlife goals for the unit are (1) to maintain and enhance habitat for fish and wildlife species; (2) to provide public access for activities including hunting, fishing, trapping, hiking, and other compatible outdoor recreational pursuits; (3) to promote and demonstrate stewardship practices to be applied on private lands.

Fish and wildlife management actions to meet the goals for the unit varies with the diverse land and plant forms found on each parcel. Collectively, most animal species found across the expanse of New York's Southern Tier are found somewhere within the unit. However, management of any given species, or suite of species is likely to occur only on a specific parcel or parcels rather than all tracts making up the unit. For example, early successional forest species will be enhanced on Catlin, Maple Hill, or Texas Hollow State Forests, with little opportunity on areas dominated by wetland environs. Rare butterfly species associations on Catherine Creek Wildlife Management Area will be managed only on that tract.

Maintaining differing forest types as well as age classes in forest stands will result in the widest array of forest birds. Emphasis shall be placed on retaining natural conifer stands as well as encouraging their establishment. Healthy coniferous plantations will be managed to meet the needs of wildlife species seeking such habitat. Unhealthy plantations shall be converted to seedling sapling stages to favor early successional wildlife species from warblers to black bear. Trees bearing cavities for nesting and resting sites shall be left in forested stands at a rate of about 3 per acre. Creation and maintenance of small ponds and dugouts in appropriate sites will enhance amphibian and reptile species.

Queen Catherine marsh is one of the largest natural marshes in western New York and dominated by extensive stands of cattails. Level ditching and creation of open water habitats have greatly improved the site for wildlife. Numerous waterfowl and migratory bird species rest and nest in the wetland. Many wetland vertebrate species are observed using the area. Rare plant species have been observed in response to disturbance caused by the wetland enhancement. The possibility exists for further large improvements as funds become available. In contrast, the Cayuta Lake parcel is the site of a largely undisturbed shrub wetland complex harboring its own unique cadre of wildlife. No efforts to manipulate this wetland or its vegetation are planned.

Grassland communities are in short supply and efforts will be made to maintain these rare habitats. Mowing or burning can and should be used to hold back shrub and tree successional stages from overtaking these sites.

Management Objectives and Actions for Fish and Wildlife and Habitat

Management Objectives	Mgt. Action	Management Actions	Frequency of Action
1. Manage habitats for endemic wildlife species and public use	1.0	Conduct all forms of woody vegetation management to achieve balance forest structure. (See Vegetation Management)	As needed
	1.1	Develop and maintain small ponds and dugouts to act as amphibian activity centers.	As opportunities arise
	1.2	Manage conifers in natural forests and plantations.	On-Going
	1.3	Maintain and enhance grassland habitats by mowing and/or burning	At least every three years.
	1.4	Establish one osprey nesting platform in Catharine Creek Wildlife Management Area	By 2007
	1.5	Create diverse habitat in large contiguous	As opportunities

		cattail stands	arise
	1.6	Protect and enhance rare plant and animal communities	Annually
2. Encourage public use to enjoy wildlife resources	2.0	Assist local groups in utilizing and protecting wildlife resources	Annually
	2.1	Work with local and governmental groups to enjoy wildlife habitat by building ponds, observation decks, nesting structure etc.	As opportunities arise
	2.2	Assist OPRHP in development of interpretive signs for Catharine Valley Trail	By 2016
	2.3	Maintain cooperative agreements with Cargill Salt and TEPPCO.	Annually
3. Promote stewardship practices that can be applied to private land	3.0	Participate in field trips of area users such as Friends of Queen Catharine Marsh, Finger Lakes Trail Conference, Chemung County Sportsmen Federation, Schools, Youth programs, etc.	As needed
	3.1	Establish interpretive signs describing management objective at key public access points	On-Going

Public Recreation and Use

One goal of the NYS DEC management is to provide suitable opportunities for the public enjoyment of compatible recreational pursuits in a natural setting. NYS DEC is charged under Environmental Conservation Law with guaranteeing that the widest range of beneficial uses of the environment is attained without unnecessary degradation or other undesirable or unintended consequences. The public has an undeniable stake in identifying both "beneficial uses" and "undesirable consequences." Recreational program opportunities for people with disabilities will be planned in perspective with those available in the region on NYS DEC lands. For a list of access trails available on The Great Divide Unit see Appendix D.

Wildlife-related recreation, including hunting, fishing and trapping, is a dominant and important use of the NYS DEC lands in the Great Divide Unit. Users are encouraged to adhere to standards of equitable distribution, humane treatment, fair chase, ethics and the maintenance of the variety and quality of use. Additional recreational pursuits will continue to be allowed to the extent that they are compatible with habitat integrity, wildlife use and financial resources. Wildlife viewing is also encouraged so long as it occurs in an environmentally responsible manner.

Administrative and public access roads combined with existing logging roads and gas pipelines form an excellent network to access recreational opportunities. Parking areas and informational signs and maps are needed on most areas to help identify and promote public enjoyment and compatible use.

In keeping with current State Forest policy, camping and day use picnicking are acceptable recreational uses of Texas Hollow, Catlin and Maple Hill State Forests. Camping is not allowed on Catharine Creek Wildlife Management Area. There are no plans for increased recreational facilities at these locations. Dispersed recreation will continue to be

encouraged over the entire Great Divide Unit Management Plan area.

The Americans with Disabilities Act (ADA) and Its Influence on Management Actions for Recreation and Related Facilities

The Americans with Disabilities Act (ADA), along with the Architectural Barriers Act of 1968 (ABA) and the Rehabilitation Act of 1973; Title V, Section 504, have had a profound effect on the manner by which people with disabilities are afforded equality in their recreational pursuits. The ADA is a comprehensive law prohibiting discrimination against people with disabilities in employment practices, use of public transportation, use of telecommunication facilities and use of public accommodations. Title II of the ADA applies to the Department and requires, in part, that reasonable modifications must be made to its services and programs, so that when those services and programs are viewed in their entirety, they are readily accessible to and usable by people with disabilities. This must be done unless such modification would result in a fundamental alteration in the nature of the service, program or activity or an undue financial or administrative burden to the Department. Since recreation is an acknowledged public accommodation program of the Department, and there are services and activities associated with that program, the Department has the mandated obligation to comply with the ADA, Title II and ADA Accessibility Guidelines, as well as Section 504 of the Rehabilitation Act.

The ADA requires a public entity to thoroughly examine each of its programs and services to determine the level of accessibility provided . The examination involves the identification of all existing programs and services and an assessment to determine the degree of accessibility provided to each. The assessment includes the use of the standards established by Federal Department of Justice Rule as delineated by the Americans with Disabilities Act Accessibility Guidelines (ADAAG, either adopted or proposed) and/or the New York State Uniform Fire Prevention and Building Codes, as appropriate. The development of an inventory of all the recreational facilities or assets supporting the programs and services available on the unit was conducted during the UMP planning process. The assessment established the need for new or upgraded facilities or assets necessary to meet ADA mandates. The Department is not required to make each of its existing facilities and assets accessible. New facilities, assets and accessibility improvements to existing facilities or assets proposed in this UMP are identified in the "Management Actions" section.

The Americans with Disabilities Act Accessibility Guidelines

The Americans with Disabilities Act (ADA) requires public agencies to employ specific guidelines which ensure that buildings, facilities, programs and vehicles as addressed by the ADA are accessible in terms of architecture and design, transportation and communication to individuals with disabilities. A federal agency known as the Access Board has issued the ADAAG for this purpose. The Department of Justice Rule provides authority to these guidelines.

Currently adopted ADAAG address the built environment: buildings, ramps, sidewalks, rooms within buildings, etc. The Access Board has proposed guidelines to expand ADAAG to cover outdoor developed facilities: trails, camp grounds, picnic areas and beaches. The proposed ADAAG is contained in the September, 1999 Final Report of the Regulatory Negotiation Committee for Outdoor Developed Areas.

ADAAG apply to newly constructed structures and facilities and alterations to existing structures and facilities. Further, it applies to fixed structures or facilities, i.e., those that are attached to the earth or another structure that is attached to the earth. Therefore, when the Department is planning the construction of new recreational facilities, assets that support recreational facilities, or is considering an alteration of existing recreational facilities or the assets supporting them, it must also consider providing access to the facilities or elements for people with disabilities. The standards which exist in ADAAG or are contained in the proposed ADAAG also provide guidance to achieve modifications to trails, picnic areas, campgrounds (or sites) and beaches in order to obtain programmatic compliance with the ADA.

ADAAG Application

Current and proposed ADAAG will be used in assessing existing facilities or assets to determine compliance to accessibility standards. ADAAG is not intended or designed for this purpose, but using it to establish accessibility levels lends credibility to the assessment result. Management recommendations in each UMP will be proposed in accordance with the ADAAG for the built environment, the proposed ADAAG for outdoor developed areas, the New York State Uniform Fire Prevention and Building Codes, and other appropriate guiding documents. Until such time as the proposed ADAAG becomes an adopted rule of the Department of Justice, the Department is required to use the best information available to comply with the ADA; this information includes, among other things, the proposed guidelines.

Management Objectives and Actions for Recreation

Management Objectives	Mgt. Action	Management Actions	Frequency of Action
1. Identify additional recreation needs.	1.0	Receive public input.	On-Going
	1.1	Monitor use patterns	On-Going
	1.2	Assess user satisfaction from comments received.	On-Going
2. Coordinate with volunteer groups to construct and/or maintain existing and/or future recreational facilities	2.0	Identify resources and/or volunteer groups to form additional partnerships.	On-Going
	2.1	Assist the Finger Lakes Trail Conference sponsors in maintenance and enhancement of the Finger Lakes Trail	On-Going
	2.2	Provide resources or utilize opportunities as needed to maintain and enhance existing trail(s)	On-Going
	2.3	Minimize conflicts between hikers, bikers, and other users	On-Going
	2.4	Assist the Horseheads Snowmobile club in maintaining the trail on Texas Hollow State Forest	On-Going
	2.5	Assist the OPRHP in maintaining the Catharine Valley Trail.	On-Going
3. Determine feasibility and/or compatibility of proposed additional recreational opportunities.	3.0	In house review of proposed projects	As Needed
	3.1	Negotiate with sponsoring volunteer groups.	As Needed
	3.2	Enter into agreements with volunteer groups to provide additional recreation.	As-Needed
4. Provide additional recreational opportunities.	4.0	Maintain and improve access for persons with disabilities.	On-Going
	4.1	Provide technical support for volunteer groups.	As-Needed
	4.2	Construct barriers to discourage motorized use of skid trails and abandoned roads after logging operations.	As Needed
	4.3	Construct other new facilities as appropriate.	As Needed

		4.4	Change Sutton Trail (Maple Hill State Forest) from a dead end to a loop trail.	By 2016
5.	Advocate wildlife-based recreation	5.0	Encourage hunting and trapping according to State regulations.	On-Going
6.	Maintain existing and future recreational facilities.	6.0	See Maintenance and Facilities	On-Going
7.	Increase awareness of public recreation opportunities.	7.0	Provide brochures and maps for users.	Update Every 5 yrs
		7.1	Place kiosks at parking areas	By 2016
		7.2	Update maps and brochures to reflect new facilities/trails/acquisitions	As Needed
8.	Enhance visual appeal	8.0	Create and maintain scenic vistas.	As-Needed
		8.1	Establish a litter-free environment by promoting carry in/carry out policy.	On-Going
		8.2	Remove litter from state land.	As-Needed
9.	Enhance and maintain trails on Catharine Creek Wildlife Management Area	9.0	Mow and clear trail of woody debris	Annually

Unit Maintenance and Facilities Management

The goal is to maintain the facilities on the unit to ensure its integrity, character, and safety. This must be done within the money and staff resources that are available. See also the "Access" and "Public Recreation" sections for additional facilities.

The dam on Texas Hollow State Forest needs to be mowed before July 15th of each year.

There may be the potential for generating electricity with windmills or the construction of towers for radio, cell, etc transmission, in the area of the Great Divide Unit. There are currently no windmills for power generation on the Great Divide Unit. On lands purchased with federal money, such as Catharine Creek Wildlife Management Area, federal regulations forbid the construction of such facilities as it would interfere with the purpose for which the property was purchased. NYS DEC does not have the legal authority to authorize the construction of windmills, or commercial towers on the lands covered by this unit management plan.

Management Objectives and Actions for Maintenance and Facilities

Management Objectives	Mgt. Action	Management Actions	Frequency of Action
1. Maintain constructed ponds/potholes.	1.0	Inspect for problems.	Annually
	1.1	Repair dikes, control boxes, etc	As Needed
	1.2	Excavate bottom of ponds.	As Needed
	1.3	Mow dam at Texas Hollow State Forest	Annually

2.	Solicit volunteer groups to help maintain facilities (see also Public Recreation and Use)	2.0	Promote Adopt a Natural Resource Program.	On-Going
		2.1	Enter into agreements with volunteer groups.	On-Going
3.	Maintain existing and future facilities.	3.0	Identify needed maintenance	On-Going
		3.1	Do the needed maintenance, as money allows.	On-Going
		3.2	Enhance law enforcement efforts.	On-Going
		3.3	Maintain wildlife observation tower on Catharine Creek Wildlife Management Area	Annually
		3.4	Re-do the boat launch ramp on Cayuta Lake Fishing Access Site, and if feasible, add a dock	One time
		3.5	Maintain boat launch ramp site on Cayuta Lake Fishing Access Site.	Annually
4.	Maintain existing and future roads.	4.0	Identify needed maintenance	On-Going
		4.1	Do the needed maintenance, as money allows.	On-Going
		4.2	Enhance law enforcement efforts.	On-Going

Land Acquisition

Certain parcels will be considered for purchase or conservation easement if they contain species designated as rare, endangered or threatened in New York State. Protection of wetlands; improved access; or consolidation of public ownership by eliminating inholdings are also criteria for acquisition. It should be clearly understood that NYS DEC intends to acquire these parcels from **willing** sellers as funding becomes available.

In September 2002 NYS DEC and the NYS Office of Parks Recreation and Historical Preservation issued a plan, entitled, **"Conserving Open Space in New York State".** http://www.dec.state.ny.us/website/dlf/osp/toc2002.html is the web site this document can be viewed at, and as new versions are written during the lifetime of this Unit Management Plan they will also be posted on NYS DEC's web site. Included in the Open Space Plan are some parcels adjacent to Catharine Creek Wildlife Management Area which have known occurrences of rare species.

Catlin State Forest has two "common corners" where different sections of the state forest share a corner, but no boundary line. Texas Hollow State Forest does not have any road frontage on Steam Mill Rd., but is very close. The addition of land in these areas, and more road frontage, would increase public access and make management of these state forests easier.

All land acquisitions will be from willing sellers only.

Management Objectives and Actions for Land Acquisition

Management Objectives	Mgt. Action	Management Actions	Frequency of Action
1. Provide improved access to the	1.0	Identify land acquisition needs.	On-Going

	Unit.	1.1	Acquire desired properties from willing sellers as funding permits.	On-Going
2.	Consolidate public ownership by eliminating inholdings.	2.0	Identify land acquisition needs.	On-Going
		2.1	Acquire desired properties from willing sellers as funding permits.	On-Going
3.	Enhance recreational opportunity.	3.0	Identify land acquisition needs.	On-Going
		3.1	Acquire desired properties from willing sellers as funding permits.	On-Going
4.	Protect significant ecological areas.	4.0	Identify land acquisition needs.	On-Going
		4.1	Acquire by fee simple or easement desired properties from willing sellers as funding permits.	On-Going

Mineral Resources

Any party desiring to procure minerals, rocks or oil & gas resources (or the use of the mineral estate in the case of gas or liquid storage in geological formations) from the mineral estate under state lands included in this unit management plan, must obtain contractual rights (such as a lease contract) to those minerals from the appropriate state entity administering those resources. The party must also obtain appropriate consent (temporary revocable permit) from the state to access the surface estate during operations. Prior to the commencement of operations the appropriate permits must be obtained. These procedures are further outlined below.

Any activity involving the procurement of oil and gas resources and/or storage of gas and liquids in the subsurface on state lands in this unit management plan are administered by the NYS DEC Division of Mineral Resources. The procurement of minerals and rocks (inorganic substances), including the solution mining of minerals (such as salt) on these same state lands are administered by the Office of General Services. All activity associated with mining minerals and rocks, solution mining of minerals and oil & gas drilling, including production, are regulated by the NYS DEC Division of Mineral Resources (including the issuance of mining permits and drilling permits).

The surface estate of these state lands is managed through the NYS DEC Division of Lands and Forests or Division of Fish, Wildlife and Marine Resources. In the event the surface estate is to be used in the evaluation and/or extraction of mineral resources from state lands, a Temporary Revocable Permit (TRP) must be obtained from the NYS DEC Division of Lands and Forests prior to conducting any operations. It should be noted that if the mineral estate is under a lease agreement, only the lessee, or entities authorized by the Lessee, will be issued a TRP for these purposes.

It is NYS DEC policy to recommend excluding operations in surface areas with sensitive habitats (stream banks, wetlands, steep slopes, rare communities etc.) or intensive recreational use. Sites to be excluded from drilling, production and/or other surface occupancy for mining, are listed in appendix G, Maps "Recommended Exclusions for Surface Occupancy." Any proposal for mineral development other than oil and gas would require SEQR review.

Procedures for Oil & Gas Procurement

In the event a party has an interest in exploring and developing oil and gas reserves under lands administered by the NYS DEC. The NYS DEC will receive requests to nominate specific lands for leasing of the mineral rights. Prior to

leasing lands where the mineral estate is owned by New York State, a thorough review of the lands nominated for leasing is conducted to determine:

1.) Which areas can be leased with full rights granted (100% surface entry and no special conditions required),

2.) Which may require special environmental and safety conditions, and

3.) Which may be leased with no surface-disturbance/entry conditions (non-drilling clause).

This review is conducted by the area's land manager (Division of Lands and Forests or Division of Fish, Wildlife and Marine Resources) in coordination with the Division of Mineral Resources. A tract assessment is then conducted that identifies sensitive resources of the unit. These resources include certain management strategies, wetland, riparian zones, steep slopes, recreational trails and areas, unique ecological communities, habitat of rare and endangered species, archeological and cultural sites and scenic vistas and view sheds.

A public meeting will be held to provide information about natural gas development specific to the Unit and receive comments. A 30-day public comment period will follow. The Department will consider all comments prior to making a decision. If the Department decides to pursue leasing, the site specific conditions for limiting impacts on natural resources will be drafted by the Division of Mineral Resources in coordination with the Division of Lands & Forests and/or Division of Fish, Wildlife and Marine Resources and incorporated into contract documents. These conditions will include but not be limited to criteria for site selection, mitigation of impacts and land reclamation upon completion of drilling. A number of factors are considered. Riparian areas, steep slopes, significant recreation areas, presence of rare, threatened or endangered species or unique ecological communities, are all areas which may be excluded from surface disturbance. Certain land management strategies, such as reserves, where timber harvesting is precluded, which may be incompatible with oil and gas well development, may result in exclusion from surface disturbance. This determination is made as part of the tract assessment process on a case by case basis. Individual tract proposal reviews for each forest within this Unit have been completed, and determinations deciding which areas would be excluded from surface disturbance (should leasing be initiated) have been made. Included in the appendix are maps depicting these areas. Any parcel designated as a non-surface entry lease will no longer be subject to the process detailed above due to the prohibition of surface disturbance(s). Exceptions to these tract assessments are possible if additional analysis, protective measures, new technology, or other issues warrant a change in the compatibility status of an area.

If it is determined that oil and gas exploration and development can proceed on these State minerals, a lease sale is conducted. The DEC Division of Mineral Resources is the oil and gas leasing agent for these state lands. Lease sales are then conducted through a competitive bid process administered by the Division of Mineral Resources and in accordance with Article 23, Title 11 of the Environmental Conservation Law and State Finance Law.

Revenues from State Reforestation Areas and Multiple Use Areas (State Forests) are deposited into the General Fund while revenues from Wildlife Management Areas are deposited into the Conservation Fund.

In the event leases are granted and the drilling of a well is desired by the lessee on the leased property, an Application for Permit to Drill, Deepen, Plug Back or Convert a Well subject to the Oil, Gas and Solution Mining Law (form 85-12-5) must be submitted to the Division of Mineral Resources. Site-specific impacts will then be identified by NYS DEC staff during review process and inspection of the proposed well site. The Final Generic Environmental Impact Statement On the Oil, Gas and Solution Mining Regulatory Program (1992) is used to guide the Department in determining whether the proposal will have a significant impact on the environment. Conditions are then attached to the drilling permit as well as the Temporary Revocable Permit (TRP) which covers the mitigation and/or control of surface disturbances.

In the event underground pipelines are planned to transport gas and/or oil across state lands; the Division of Mineral Resources in conjunction with the Division of Lands and Forests, and Division of Fish, Wildlife and Marine Resources will coordinate with the mineral estate lessee to determine the best route for the pipeline(s). It should be noted that any pipelines greater than 1,000 feet in length and/or containing pressures greater than 125 pounds per square inch are regulated by the New York State Public Service Commission.

Once the proposal is approved, a drilling permit with site specific conditions is issued by the Division of Mineral Resources along with a Temporary Revocable Permit issued by either the Division of Lands and Forests or Fish, Wildlife and Marine Resources. These permits are administered by their respective programs and are designed to prevent and/or mitigate environmental impacts. Site inspections are conducted by the Division of Mineral Resources to ensure compliance with Article 23 of the Environmental Conservation Law and 6NYCRR Part 550 - 559. The Division of Lands and Forests or Fish, Wildlife and Marine Resources will also inspect the site to ensure compliance with the TRP.

Procedures for Mineral and Rock Procurement

In the event a party desires to explore and procure minerals and/or rock (including salt) from state lands. The party must be issued a permit, consent or lease of such duration as the commissioner may deem advisable, from the General Services Office, under Article 7 of the New York Consolidated Laws / Public Lands. Prior to operations, a Mining Permit or Drilling Permit in the case of solution mining, must be obtained from the Division of Mineral Resources and a Temporary Revocable Permit (for access and use of land) must be obtained from the Division of Lands and Forests or the Division of Fish, Wildlife and Marine Resources. Mining operations are regulated by the Division of Mineral Resources.

There are no mining contracts, permits, or operations on any areas in this unit management plan. Under Article 7 of the New York State Consolidated Laws, any citizen of the United States may apply for permission to explore and/or extract any mineral on State lands. However, current department policy is to decline any commercial mining application(s) pertaining to any lands covered by this unit management plan.

Surface Use for Evaluation of Mineral Resources

In the event a party desires to use the surface estate to conduct geophysical (such as a seismic survey), geochemical and/or surface sampling procedures on Department lands prior to, or after leasing they must first obtain a Temporary Revocable Permit (TRP) for the access and use of state lands. If the area is subject to a lease agreement, only the lessee, or parties authorized by the lessee, can be issued a TRP for these purposes. A TRP can be applied for through the NYSDEC Division of Lands and Forests, 7291 Coon Road, Bath, New York 14810.

For further information contact the NYS DEC Mineral Resource staff, Region 8, 6274 East Avon-Lima Road, Avon, New York 14414-9591. Additional contacts include; New York State Department of Environmental Conservation-Division of Mineral Resources- Bureau of Oil and Gas Regulation, 3rd Floor, 625 Broadway, Albany, New York 12233.

Management Objectives and Actions for Mineral Resources

Management Objectives	Mgt. Action	Management Actions	Frequency of Action
1. Decide to approve or not approve extraction of mineral resources.	1.0	Nominated properties are reviewed by Division of Mineral Resources (DMN) and Division of Lands and Forests (L&F) and Division of Fish, Wildlife and Marine Resources (Wildlife) per above process. Mining minerals	

			are reviewed by Office of General Services (OGS) instead of the DMN.	As Needed
		1.1	A public meeting is held with a 30 day comment period after.	As Needed
	If extraction is permitted...			
2.	Execute consent contracts.	2.0	DMN conducts lease sale through competitive bid process and executes contracts for oil and gas. OGS executes contracts for minerals.	As Needed
3.	Regulate operations; and access surface estate to extract mineral resources.	3.0	Division of Lands and Forests reviews proposed operations and if approved, issues a "Temporary Revocable Permit"	Every Time
		3.1	DMN reviews proposed operation and issues "Drilling Permit" or "Mining Permit".	Every Time
		3.2	DMN inspects & regulates operations, production and administers royalty payments to State.	Every Time
4.	Monitor reclamation & well plugging	4.0	DMN enforces Rules and Regulations pertaining to plugging procedures.	Every Time
		4.1	DMN and L&F monitors and enforces surface reclamation	Every Time
5.	Administer mineral estate	5.0	DMN monitors lease, production and royalty payments for oil and gas. OGS does same for minerals.	Every Time
6.	Pipeline access and construction	6.0	Granted and directed by terms of lease agreement administered by DMN.	Every Time
		6.1	L&F and/or Wildlife reviews proposed operations and if approved, issues a "Temporary Revocable Permit" (TRP)	Every Time
		6.2	Division of Lands and Forests and/or Division of Fish, Wildlife and Marine Resources enforce TRP provisions.	Every Time

Archaeological and Historic Resources

The archaeological sites located within this land unit as well as additional unrecorded sites that may exist on the property are protected by the provisions of the New York State Historic Preservation Act (SHPA - Article 14 PRHPL), Article 9 of Environmental Conservation Law and Section 233 of Education Law. Should any actions that would impact these resources be proposed they will be reviewed in accordance with SHPA. Unauthorized excavation and removal of materials from any of these sites is prohibited by Article 9 of Environmental Conservation Law and Section 233 of Education Law.

The archaeological sites located on this land unit as well as additional unrecorded sites that may exist on the property may be made available for appropriate research. All future archaeological research to be conducted on the property will be accomplished under the auspices of all appropriate permits. Research permits will be issued only after consultation with the New York State Museum and the Office of Parks, Recreation and Historic Preservation, and the Seneca Nation of Indians Tribal Historic Preservation Office at 716-945-9427.

Management Objectives and Actions for Archaeological and Historical Sites

Management Objectives	Mgt. Action	Management Actions	Frequency of Action
1. Preservation of historical and archaeological resources.	1.0	Avoid any activity which may disturb any historical and/or archaeological resources.	On-Going
	1.1	Comply with state historic preservation act.	On-Going
	1.2	Consultation with the Seneca Nation of Indians Historical Preservation Office.	On-Going

PUBLIC INVOLVEMENT

Initial Mailing

Great Divide Unit Management Plan's citizen participation activities commenced with an initial mailing on December 11, 2003, outlining management plan objectives. An attached mailer requested address corrections and gave a due date for the preliminary round of public comments.

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

- adjacent property owners;
- local town & county officials;
- recreational groups;
- interested industry groups;
- wildlife groups; and
- other general environmental groups;
- local media.

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

Public comments received from the initial mailing is listed in Appendix B, with a summary in the Summary of Identified Issues section starting on page 20. They include: access, vegetation management, water resources, wildlife and wildlife habitat, fish management, public recreation and use, oil and gas leasing, cooperative agreements, open space conservation, aesthetics and cultural resources and historic preservation.

Second Mailing

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

Public Meeting

One public meeting will be held near the Great Divide Unit Management area to present the draft plan and receive comments on it. Following the end of a 30-day public comment period, any modifications based on public comment will be made and questions, responses and letters will be added to Appendix B in the final plan.

Final Notice

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

MANAGEMENT ACTIONS SUMMARY

Priority codes:
C=Critical, Necessary to ensure public health and safety; To stabilize structures so as to not lose the money and time invested in them; Mandated by legislation.
H=High, Necessary for public use, and/or to improve habitat or other natural resources. Often this will be for new projects.
L=Low, Important for the enhancement of public use, habitats or other natural resources.

Management Action Item			Priority Code	Frequency of Action	Est.10 yr Cost	Est. 10 yr Income	Comments
Access	1.0	Survey Site(s)	L	As Needed	10 Work Days		
	1.1	Receive public comments	C	On Going	10 Work Days		
	1.2	Solicit public comments	C	Every 10 yrs	15 Work Days		
	2.0	Texas Hollow State Forest: acquire access from Steam Mill Rd.	L	One Time	Market Value		Unable to predict costs or income
	2.1	Identify additional access road needs	L	As Needed	2 Work Days		
	2.2	Construct access roads	L	As Needed			$10-$25 per linear foot of road.
	3.0	Need to monitor status of Pryne Rd. on Maple Hill State Forest	C	On-Going	5 Work Days		

Management Action Item			Priority Code	Frequency of Action	Est.10 yr Cost	Est. 10 yr Income	Comments
Access	3.1	Continue to work with interested parties on land adjacent to Rock Cabin Rd. (Catharine Creek Wildlife Management Area)	H	On-Going	Market Value, & Work Days		Unable to predict costs
	4.0	Inspect culverts	C	Bi-Annually	10 Work Days		
	4.1	Replace inoperable culverts	C	As Needed	$50,000		
	4.2	Public access roads - Grade and Maintain surface.	H	Bi-Annually	5 Work Days		
	4.3	Administrative access roads - Grade and Maintain surface.	H	Every 5 years	5 Work Days		
	4.4	Mow road right of way.	H	Annually	10 Work Day		
	5.0	Construct parking lots (2) off Chambers Rd. (Catlin State Forest)	H	One time	$20,000		
	5.1	Improve parking along Texas Hollow Rd.	L	One Time	$5,000		
	5.2	Identify additional parking needs	L	As Needed	?	?	
	5.3	Construct parking lots.	L	As Needed	$3,000 or more per lot		
	6.0	Litter removal	L	As Needed	2 Work Years		Cost does not include inmate labor.
	6.1	Maintain all parking areas.	C	As Needed	$7,000		

Management Action Item			Priority Code	Frequency of Action	Est.10 yr Cost	Est. 10 yr Income	Comments
Access	6.2	Maintain curbing	H	As Needed	$4,000		
	6.3	Maintain informational signs	C	Annually	$7,500		
	6.4	Mow all parking areas	H	As Needed	10 Work Days		
	7.0	Identify the need for gates and signs.	C	As Needed	5 Work Days		
	7.1	Construct gates and post sign	C	As Needed	10 Work Days		
	7.2	Maintain gates and signs.	H	Annually	$10,000		
	7.3	Enforce NYS DEC Policies	C	On-Going	$250,000		
	8.0	Survey, paint, blaze, and post boundary lines.	H	Every 5 yrs	130 Work Days		
	8.1	Identify and resolve boundary encroachment issues.	H	As Needed			Unable to predict costs.
	8.2	Repair and replace area signs.	H	On-Going	$8,000		
Vegetation	1.0	Perform State Forest and Wildlife Management Area inventories.	C	Every 10 yrs	60 Work Days		
	2.0	Practice Integrated Pest Management	C	On-Going	10 to 40 Work Days		
	2.1	Reduce deer population, to reduce damage to the low growing vegetation.	H	Annually	?	?	Unable to predict costs.

Management Action Item			Priority Code	Frequency of Action	Est.10 yr Cost	Est. 10 yr Income	Comments
Vegetation (Texas Hollow, Catlin and Maple Hill State Forests)	3.0	Maintain about 100 acres with a 3 yr rotation of mowing	H	Every 3rd Yr.	$10,000		Based on $30 per acre.
	3.1	Protect 128 acres. (This includes the area locally known as the "Bird Sanctuary")	H	On-Going			
	3.2	Regenerate an average of 3 acres/yr.	H	Annually		$7,500	Based on $250 per acre.
	3.3	Regenerate an average of 5 acres/yr.	H	Annually		$18,750	Based on $375 per acre.
	3.4	Thin an average of 10 acres/yr.	H	Annually		$10,000	Based on $100 per acre.
Vegetation (Catharine Creek Wildlife Manage-ment Area and Cayuta Lake Fishing Access Site)	4.0	Maintain about 76 acres of grasslands	H	Every 3rd Yr.	$7,600		Based on $30 per acre.
	4.1	Enhancement of wetlands (see Fish and Wildlife Habitat)	L	As Needed			
	4.2	Protect 38 acres	H	On-Going			
	4.3	Regenerate an average of 0.3 acres/yr	H	Annually		$450	Based on $150 per acre.
	4.4	Thin an average of 2 acres/yr	H	Annually		$2,000	Based on $100 per acre.
Watershed and Wetlands	1.0	Utilize Best Management Practices (BMP's) for water quality on timber sales, gas well site construction, etc.	C	On-Going	--	--	
	1.1	Control erosion through proper road maintenance.	C	On-Going	$10,000	--	See also Access

Management Action Item			Priority Code	Frequency of Action	Est.10 yr Cost	Est. 10 yr Income	Comments
Watershed and Wetlands	1.2	Comply with the Water Resources Law and Freshwater Wetlands Acts.	C	On-Going	--	--	
	1.3	Comply with General Stormwater SPDES permit.	C	On-Going	2 Work Days	--	
Fish and Wildlife Habitat	1.0	Conduct all forms of woody vegetation management to achieve balance forest structure. (See Vegetation Management)	H	As needed	--	--	See Vegetation Management
	1.1	Develop and maintain small water holes, 1 per 160 acres to act as amphibian activity centers.	L	As opportunities arise	--	--	Most of these will be constructed as part of a timber sale.
	1.2	Manage conifers in natural forests and plantations.	L	On-Going	--	--	Most of this will be part of a timber sale
	1.3	Maintain and enhance grassland habitats by mowing and/or burning	L / H	At least every three years.	?	?	See Also Vegetation.
	1.4	Establish one osprey nesting platform in Catharine Creek Wildlife Management Area	H	By 2007	$1,000		
	1.5	Create diverse habitat in large contiguous cattail stands	L	As opportunities arise	$5 per foot.		
	1.6	Protect and enhance rare plant and animal communities	C	Annually	15 Work Days		May also include other costs.
	2.0	Assist local groups in utilizing and protecting wildlife resources	L	Annually			Unable to predict costs.

Management Action Item			Priority Code	Frequency of Action	Est.10 yr Cost	Est. 10 yr Income	Comments
Fish and Wildlife Habitat	2.1	Work with local and governmental groups to enjoy wildlife habitat by building ponds, observation decks, nesting structure etc.	L	As opportunities arise			Unable to predict costs.
	2.2	Assist OPRHP in development of interpretive signs for Catharine Valley Trail	L	By 2016			Unable to predict costs.
	2.3	Maintain cooperative agreements with Cargill Salt and TEPPCO.	L	Annually			Unable to predict costs.
	3.0	Participate in field trips of area users such as Friends of Queen Catharine Marsh, Finger Lakes Trail Conference, Chemung County Sportsmen Federation, Schools, Youth programs, etc.	L	As needed			Unable to predict costs.
	3.1	Establish interpretive signs describing management objective at key public access points	L	On-Going	$5,000 & 5 Work Days		
Public Recreation and Use	1.0	Receive public opinion.	C	On-Going	10 Work Days		
	1.1	Monitor use patterns	C	On-Going	20 Work Days		
	1.2	Assess user satisfaction from comments received.	H	On-Going	20 Work Days		
	2.0	Identify resources and/or volunteer groups to form additional partnerships.	L	On-Going	10 Work Days		

Management Action Item			Priority Code	Frequency of Action	Est.10 yr Cost	Est. 10 yr Income	Comments
Public Recreation and Use	2.1	Assist the Finger Lakes Trail Conference sponsors in maintenance and enhancement of the Finger Lakes Trail	H	On-Going	10 Work Days		
	2.2	Provide resources or utilize opportunities as needed to maintain and enhance existing trail(s)	C	On-Going			Unable to predict costs.
	2.3	Minimize conflicts between hikers, bikers, and other users	H	On-Going	20 Work Days		
	2.4	Assist the Horseheads Snowmobile club in maintaining the trail on Texas Hollow State Forest	L	On-Going	5 Work Days		
	2.5	Assist the OPRHP in maintaining the Catharine Valley Trail.	L	On-Going			Unable to predict costs.
	3.0	In house review of proposed projects.	L	As Needed	10 Work Days		
	3.1	Negotiate with sponsoring volunteer groups.	L	As Needed	10 Work Days		
	3.2	Enter into agreements with volunteer groups to provide additional recreation.	L	As-Needed	10 Work Days		
	4.0	Maintain and improve access for persons with disabilities.	C	On-Going	?		Unable to predict costs.
	4.1	Provide technical support for volunteer groups.	L	As-Needed	?		Unable to predict costs.

Management Action Item			Priority Code	Frequency of Action	Est.10 yr Cost	Est. 10 yr Income	Comments
Public Recreation and Use	4.2	Construct barriers to discourage motorized use of skid trails and abandoned roads after logging operations.	C	As Needed	?		Unable to predict costs.
	4.3	Construct new facilities as appropriate.	L	As Needed	$1,000 to $30,000		
	4.4	Change Sutton Trail (Maple Hill State Forest) from a dead end to a loop trail.	L	By 2016	$20,000		
	5.0	Encourage hunting and trapping according to State regulations.	C	On-Going			Unable to predict costs.
	6.0	See Maintenance and Facilities	--	On-Going	--	--	
	7.0	Provide brochures and maps for users.	H	Update Every 5 yrs	50 Work Days		
	7.1	Place kiosks at parking areas	H	By 2016	$6,000		
	7.2	Update maps and brochures to reflect new facilities/trails/acquisitions	L	As Needed	30 Work Days		
	8.0	Create and maintain scenic vistas.	L	As-Needed	$5,000		
	8.1	Establish a litter-free environment by promoting carry in/carry out policy.	H	On-Going	$2,000		
	8.2	Remove litter from state land.	L	As-Needed			See Access 6.0
	9.0	Mow and clear trail of woody debris	L	Annually	15 Work Days		

Management Action Item			Priority Code	Frequency of Action	Est.10 yr Cost	Est. 10 yr Income	Comments
Unit Maintenance and Facility Management	1.0	Inspect for problems. (Ponds and Potholes)	C	Annually	10 Work Days		
	1.1	Repair dikes, control boxes, etc.	C	As Needed	$20,000 per Each.		
	1.2	Excavate bottom of ponds.	C	As Needed	$10,000 per Each.		
	1.3	Mow dam at Texas Hollow State Forest	C	Annually	10 Work Days		Mowing to be completed before July 15.
	2.0	Promote Adopt a Natural Resource Program.	L	On-Going	?		Unable to predict costs.
	2.1	Enter into agreements with volunteer groups.	L	On-Going	?		Unable to predict costs.
	3.0	Identify needed maintenance	L	On-Going	20 Work Days		
	3.1	Do the needed maintenance, as money allows.	C	On-Going	$1,000 to $100,000		
	3.2	Enhance law enforcement efforts.	C	On-Going	?	?	
	3.3	Maintain wildlife observation tower on Catharine Creek Wildlife Management Area	C	Annually	$1,000 to $5,000		
	3.4	Re-do the boat launch ramp on Cayuta Lake Fishing Access Site, and if feasible, add a dock	H	One time	$5,000 to $15,000		

Management Action Item			Priority Code	Frequency of Action	Est.10 yr Cost	Est. 10 yr Income	Comments
Unit Maintenance and Facility Management	3.5	Maintain boat launch ramp site on Cayuta Lake Fishing Access Site.	C	Annually	$1,000 to $5,000		
	4.0	Identify needed maintenance	L	On-Going	20 Work Days		
	4.1	Do the needed maintenance, as money allows.	C	On-Going	$1,000 to $100,000		
	4.2	Enhance law enforcement efforts.	C	On-Going	?		Unable to predict costs.
Land Acquisition	1.0	Identify land acquisition needs. (Access)	H	On-Going	3 Work Days		
	1.1	Acquire desired properties from willing sellers as funding permits.	H	On-Going	?		Unable to predict costs.
	2.0	Identify land acquisition needs. (Eliminate in holdings)	H	On-Going	1 Work Day		
	2.1	Acquire desired properties from willing sellers as funding permits.	H	On-Going	?		Unable to predict costs.
	3.0	Identify land acquisition needs. (Recreation)	H	On-Going	3 Work Days		
	3.1	Acquire desired properties from willing sellers as funding permits.	H	On-Going	?		Unable to predict costs.
	4.0	Identify land acquisition needs. (Ecological)	H	On-Going	5 Work Days		
	4.1	Acquire desired properties from willing sellers as funding permits.	H	On-Going	?		Unable to predict costs.

Management Action Item			Priority Code	Frequency of Action	Est.10 yr Cost	Est. 10 yr Income	Comments
Mineral Resources	1.0	Nominated properties are reviewed by Division of Mineral Resources (DMN) and Division of Lands and Forests (L&F) and Division of Fish, Wildlife and Marine Resources (Wildlife) per above process. Mining minerals are reviewed by Office of General Services (OGS) instead of the DMN.	C	As Needed	?	?	Unable to predict costs.
	1.1	A public meeting is held with a 30 day comment period after.	C	As Needed	?	?	Unable to predict costs.
	2.0	DMN conducts lease sale through competitive bid process and executes contracts for oil and gas. OGS executes contracts for minerals..	C	As Needed	?	?	Unable to predict costs or income. Lease sales in 1999 and 2003 generated initial lease bonus payments ranging from $15.00 to $587.00/acre leased and $5.00/acre leased in annual rental payments to the state
	3.0	Division of Lands and Forests reviews proposed operations and if approved, issues a "Temporary Revocable Permit"	C	Every Time	?	?	Unable to predict costs.
	3.1	Division of Mineral Resources reviews proposed operation and issues "Drilling Permit" or "Mining Permit".	C	Every Time	?	?	Drilling permits generate between $290 -> $3800 per well permitted, dependent upon depth well is permitted

Management Action Item			Priority Code	Frequency of Action	Est.10 yr Cost	Est. 10 yr Income	Comments
Mineral Resources	3.2	DMN inspects & regulates operations, production and administers royalty payments to State.	C	Every Time	?	?	Unable to predict costs or income.
	4.0	Division of Mineral Resources enforces Rules and Regulations pertaining to plugging procedures.	C	Every Time	?	?	Unable to predict costs.
	4.1	DMN and L&F monitors and enforces surface reclamation	C	Every Time	?	?	Unable to predict costs.
	5.0	DMN monitors lease, production and royalty payments for oil and gas. OGS does same for minerals.	C	Every Time	?	?	Royalty payments in past leases have been based upon 1/8th or 12.5% royalty interest to the State. One bcfg produced from state minerals at a sales price of $5/mcfg, would generate more than $600,000.00
	6.0	Granted and directed by terms of lease agreement administered by Division of Minerals.	C	Every Time	?	?	Unable to predict costs.
	6.1	Division of Lands and Forests and/or Division of Fish, Wildlife and Marine Resources reviews proposed operations and if approved, issues a "Temporary Revocable Permit" (TRP)	C	Every Time	?	?	Unable to predict costs.

Management Action Item			Priority Code	Frequency of Action	Est.10 yr Cost	Est. 10 yr Income	Comments
	6.2	Division of Lands and Forests and/or Division of Fish, Wildlife and Marine Resources enforce TRP provisions.	C	Every Time	?	?	Unable to predict costs.
Arch-aeological and Historic Resources	1.0	Avoid any activity which may disturb any historical and/or archaeological resources.	C	On-Going	?	?	Unable to predict costs.
	1.1	Comply with state historic preservation act.	C	On-Going	?	?	Unable to predict costs.
	1.2	Consultation with the Seneca Nation of Indians Historical Preservation Office.	C	On-Going	?	?	Unable to predict costs.

APPENDICES

Appendix A : Animals on Great Divide Unit Management Plan Area

These are not intended to be all-inclusive lists, some animals will be missed, and some may no longer be found on these areas.

Birds

Based on the quads of the 1980-85 Breeding Bird Atlas.

MBTA - Migratory Bird Treaty Act

By common name, scientific name & protective status

Common Name	Scientific Name	Protect Fed	Protect NY
Alder Flycatcher	*Empidonax alnorum*	MBTA	Protected
American Coot	*Fulica americana*	MBTA	Game Species
American Goldfinch	*Carduelis tristis*	MBTA	Protected
American Kestrel	*Falco sparverius*	MBTA	Protected
American Redstart	*Setophaga ruticilla*	MBTA	Protected
American Robin	*Turdus migratorius*	MBTA	Protected
American Woodcock	*Scolopax minor*	MBTA	Game Species
Barn Swallow	*Hirundo rustica*	MBTA	Protected
Black-and-white Warbler	*Mniotilta varia*	MBTA	Protected
Black-billed Cuckoo	*Coccyzus erythropthalmus*	MBTA	Protected
Black-capped Chickadee	*Parus atricapillus*	MBTA	Protected
Black-crowned Night-Heron	*Nycticorax nycticorax*	MBTA	Protected
Barred Owl	*Strix varia*	MBTA	Protected
Belted Kingfisher	*Ceryle alcyon*	MBTA	Protected
Blue-gray Gnatcatcher	*Polioptila caerulea*	MBTA	Protected
Brown-headed Cowbird	*Molothrus ater*	MBTA	Protected
Bank Swallow	*Riparia riparia*	MBTA	Protected
American Black Duck	*Anas rubripes*	MBTA	Game Species
Blue Jay	*Cyanocitta cristata*	MBTA	Protected
Blackburnian Warbler	*Dendroica fusca*	MBTA	Protected
Bobolink	*Dolichonyx oryzivorus*	MBTA	Protected
Northern Bobwhite	*Colinus virginianus*	Unprotected	Game Species
Brown Creeper	*Certhia americana*	MBTA	Protected
Brown Thrasher	*Toxostoma rufum*	MBTA	Protected
Black-throated Blue Warbler	*Dendroica caerulescens*	MBTA	Protected
Black-throated Green Warbler	*Dendroica virens*	MBTA	Protected
Broad-winged Hawk	*Buteo platypterus*	MBTA	Protected
Blue-winged Warbler	*Vermivora pinus*	MBTA	Protected

Common Name	Scientific Name	Protect Fed	Protect NY
Canada Goose	*Branta canadensis*	MBTA	Game Species
Northern Cardinal	*Cardinalis cardinalis*	MBTA	Protected
Canada Warbler	*Wilsonia canadensis*	MBTA	Protected
Carolina Wren	*Thryothorus ludovicianus*	MBTA	Protected
Cedar Waxwing	*Bombycilla cedrorum*	MBTA	Protected
Chipping Sparrow	*Spizella passerina*	MBTA	Protected
Chimney Swift	*Chaetura pelagica*	MBTA	Protected
American Crow	*Corvus brachyrhynchos*	MBTA	Game Species
Northern Flicker	*Colaptes auratus*	MBTA	Protected
Common Moorhen	*Gallinula chloropus*	MBTA	Game Species
Common Grackle	*Quiscalus quiscula*	MBTA	Protected
Cooper's Hawk	*Accipiter cooperii*	MBTA	Protected-Special Concern
Common Merganser	*Mergus merganser*	MBTA	Game Species
Common Snipe	*Gallinago gallinago*	MBTA	Game Species
Common Yellowthroat	*Geothlypis trichas*	MBTA	Protected
Cerulean Warbler	*Dendroica cerulea*	MBTA	Protected-Special Concern
Chestnut-sided Warbler	*Dendroica pensylvanica*	MBTA	Protected
Dark-eyed Junco	*Junco hyemalis*	MBTA	Protected
Downy Woodpecker	*Picoides pubescens*	MBTA	Protected
Eastern Bluebird	*Sialia sialis*	MBTA	Protected
Eastern Kingbird	*Tyrannus tyrannus*	MBTA	Protected
Eastern Meadowlark	*Sturnella magna*	MBTA	Protected
Eastern Phoebe	*Sayornis phoebe*	MBTA	Protected
Eastern Wood-Pewee	*Contopus virens*	MBTA	Protected
Field Sparrow	*Spizella pusilla*	MBTA	Protected
Great Blue Heron	*Ardea herodias*	MBTA	Protected
Great Crested Flycatcher	*Myiarchus crinitus*	MBTA	Protected
Golden-crowned Kinglet	*Regulus satrapa*	MBTA	Protected
Great Horned Owl	*Bubo virginianus*	MBTA	Protected
Northern Goshawk	*Accipiter gentilis*	MBTA	Protected-Special Concern
Gray Catbird	*Dumetella carolinensis*	MBTA	Protected
Green-backed Heron	*Butorides striatus*	MBTA	Protected
Grasshopper Sparrow	*Ammodramus savannarum*	MBTA	Protected-Special Concern
Golden-winged Warbler	*Vermivora chrysoptera*	MBTA	Protected-Special Concern
Hairy Woodpecker	*Picoides villosus*	MBTA	Protected
Henslow's Sparrow	*Ammodramus henslowii*	MBTA	Threatened
Hermit Thrush	*Catharus guttatus*	MBTA	Protected
House Finch	*Carpodacus mexicanus*	MBTA	Protected
Horned Lark	*Eremophila alpestris*	MBTA	Protected-Special Concern

Common Name	Scientific Name	Protect Fed	Protect NY
House Sparrow	*Passer domesticus*	Unprotected	Unprotected
Hooded Warbler	*Wilsonia citrina*	MBTA	Protected
House Wren	*Troglodytes aedon*	MBTA	Protected
Indigo Bunting	*Passerina cyanea*	MBTA	Protected
Killdeer	*Charadrius vociferus*	MBTA	Protected
Marsh Wren	*Cistothorus palustris*	MBTA	Protected
Least Flycatcher	*Empidonax minimus*	MBTA	Protected
Louisiana Waterthrush	*Seiurus motacilla*	MBTA	Protected
Northern Harrier	*Circus cyaneus*	MBTA	Threatened
Mallard	*Anas platyrhynchos*	MBTA	Game Species
Magnolia Warbler	*Dendroica magnolia*	MBTA	Protected
Northern Mockingbird	*Mimus polyglottos*	MBTA	Protected
Mourning Dove	*Zenaida macroura*	MBTA	Protected
Mourning Warbler	*Oporornis philadelphia*	MBTA	Protected
Nashville Warbler	*Vermivora ruficapilla*	MBTA	Protected
Northern Oriole	*Icterus galbula*	MBTA	Protected
Northern Waterthrush	*Seiurus noveboracensis*	MBTA	Protected
Ovenbird	*Seiurus aurocapillus*	MBTA	Protected
Pied-billed Grebe	*Podilymbus podiceps*	MBTA	Threatened
Pine Warbler	*Dendroica pinus*	MBTA	Protected
Pileated Woodpecker	*Dryocopus pileatus*	MBTA	Protected
Prairie Warbler	*Dendroica discolor*	MBTA	Protected
Purple Finch	*Carpodacus purpureus*	MBTA	Protected
Purple Martin	*Progne subis*	MBTA	Protected
Rose-breasted Grosbeak	*Pheucticus ludovicianus*	MBTA	Protected
Red-breasted Nuthatch	*Sitta canadensis*	MBTA	Protected
Red-bellied Woodpecker	*Melanerpes carolinus*	MBTA	Protected
Red-eyed Vireo	*Vireo olivaceus*	MBTA	Protected
Red-headed Woodpecker	*Melanerpes erythrocephalus*	MBTA	Protected-Special Concern
Ring-necked Pheasant	*Phasianus colchicus*	Unprotected	Game Species
Rock Dove	*Columba livia*	Unprotected	Unprotected
Red-shouldered Hawk	*Buteo lineatus*	MBTA	Protected-Special Concern
Rufous-sided Towhee	*Pipilo erythrophthalmus*	MBTA	Protected
Red-tailed Hawk	*Buteo jamaicensis*	MBTA	Protected
Ruby-throated Hummingbird	*Archilochus colubris*	MBTA	Protected
Ruffed Grouse	*Bonasa umbellus*	Unprotected	Game Species
Red-winged Blackbird	*Agelaius phoeniceus*	MBTA	Protected
Northern Rough-winged Swallow	*Stelgidopteryx serripennis*	MBTA	Protected

Common Name	Scientific Name	Protect Fed	Protect NY
Savannah Sparrow	*Passerculus sandwichensis*	MBTA	Protected
Eastern Screech-Owl	*Otus asio*	MBTA	Protected
Scarlet Tanager	*Piranga olivacea*	MBTA	Protected
Sora	*Porzana carolina*	MBTA	Game Species
Song Sparrow	*Melospiza melodia*	MBTA	Protected
Solitary Vireo	*Vireo solitarius*	MBTA	Protected
Spotted Sandpiper	*Actitis macularia*	MBTA	Protected
Sharp-shinned Hawk	*Accipiter striatus*	MBTA	Protected-Special Concern
European Starling	*Sturnus vulgaris*	Unprotected	Unprotected
Swamp Sparrow	*Melospiza georgiana*	MBTA	Protected
Tree Swallow	*Tachycineta bicolor*	MBTA	Protected
Wild Turkey	*Meleagris gallopavo*	Unprotected	Game Species
Tufted Titmouse	*Parus bicolor*	MBTA	Protected
Turkey Vulture	*Cathartes aura*	MBTA	Protected
Veery	*Catharus fuscescens*	MBTA	Protected
Vesper Sparrow	*Pooecetes gramineus*	MBTA	Protected-Special Concern
Virginia Rail	*Rallus limicola*	MBTA	Game Species
Warbling Vireo	*Vireo gilvus*	MBTA	Protected
White-breasted Nuthatch	*Sitta carolinensis*	MBTA	Protected
Willow Flycatcher	*Empidonax traillii*	MBTA	Protected
Winter Wren	*Troglodytes troglodytes*	MBTA	Protected
Wood Duck	*Aix sponsa*	MBTA	Game Species
Wood Thrush	*Hylocichla mustelina*	MBTA	Protected
Whip-poor-will	*Caprimulgus vociferus*	MBTA	Protected-Special Concern
White-throated Sparrow	*Zonotrichia albicollis*	MBTA	Protected
Yellow-billed Cuckoo	*Coccyzus americanus*	MBTA	Protected
Yellow-bellied Sapsucker	*Sphyrapicus varius*	MBTA	Protected
Yellow Warbler	*Dendroica petechia*	MBTA	Protected
Yellow-rumped Warbler	*Dendroica coronata*	MBTA	Protected
Yellow-throated Vireo	*Vireo flavifrons*	MBTA	Protected

Reptiles and Amphibians

Based on the quads of the NYS Amphibian and Reptile Atlas, 1990-1999.

By scientific name, common name, and order.

Scientific Name	Common Name	Order
Ambystoma jeffersonianum x laterale	Jefferson Salamander Complex	Salamanders

Scientific Name	Common Name	Order
Ambystoma maculatum	Spotted Salamander	Salamanders
Bufo a. americanus	Eastern American Toad	Frogs
Chelydra s. serpentina	Common Snapping Turtle	Turtles
Chrysemys picta	Painted Turtle	Turtles
Clemmys guttata	Spotted Turtle	Turtles
Clemmys insculpta	Wood Turtle	Turtles
Desmognathus fuscus	Northern Dusky Salamander	Salamanders
Desmognathus ochrophaeus	Allegheny Dusky Salamander	Salamanders
Desmognathus spp.	Dusky Salamander	Salamanders
Diadophis punctatus edwardsii	Northern Ringneck Snake	Snakes
Eumeces a. anthracinus	Northern Coal Skink	Lizards
Eurycea bislineata	Northern Two-lined Salamander	Salamanders
Eurycea l. longicauda	Longtail Salamander	Salamanders
Gyrinophilus p. porphyriticus	Northern Spring Salamander	Salamanders
Hyla versicolor	Gray Treefrog	Frogs
Lampropeltis t. triangulum	Eastern Milk Snake	Snakes
Liochlorophis vernalis	Smooth Green Snake	Snakes
Nerodia s. sipedon	Northern Water Snake	Snakes
Notophthalmus v. viridescens	Red-spotted Newt	Salamanders
Plethodon cinereus	Northern Redback Salamander	Salamanders
Plethodon glutinosus	Northern Slimy Salamander	Salamanders
Pseudacris c. crucifer	Northern Spring Peeper	Frogs
Rana catesbeiana	Bullfrog	Frogs
Rana clamitans melanota	Green Frog	Frogs
Rana palustris	Pickerel Frog	Frogs
Rana pipiens	Northern Leopard Frog	Frogs
Rana sylvatica	Wood Frog	Frogs
Storeria d. dekayi	Northern Brown Snake	Snakes
Storeria o. occiptomaculata	Northern Redbelly Snake	Snakes
Terrapene c. carolina	Eastern Box Turtle	Turtles
Thamnophis sauritus	Ribbon Snake	Snakes
Thamnophis sirtalis	Common Garter Snake	Snakes

Resident Fish Species

Provided by NYS DEC Bureau of Fisheries.

By common name and scientific name

COMMON NAME	SCIENTIFIC NAME
Sea lamprey	*Petromyzon marinus*
Alewife	*Alosa pseudoharengus*
Stoneroller	*Campostoma anomalum*
Redside dace	*Clinostomus elongatus*
Carp	*Cyprinus carpio*
Cutlips minnow	*Exoglossum maxillingua*
Eastern silvery minnow	*Hyybognathus regius*
Common Shiner	*Notropis cornutus*
Spottail shiner	*Notropis hudsonius*
Golden Shiner	*Notemiqonus crysoluecas*
Fathead Minnow	*Pimephales promelas*
Longnose Dace	*Rhinichthys cataractae*
Blacknose Dace	*Rhinichthys atratulus*
Creek Chub	*Semotilus atromaculatus*
White Sucker	*Catostomus commersoni*
Northern Hogsucker	*Hypentelium nigricans*
Brown Bullhead	*Ameiarus nebulosus*
Stonecat	*Noturus flavus*

Margined madtom	*Noturus insignis*
Chain pickerel	*Esox niger*
Rainbow Trout	*Oncorhynchus mykiss*
Brown Trout	*Salmo trutta*
Brook Trout	*Salvelinis fontinelis*
Banded Killifish	*Fundulus diaphanus*
Mottled Sculpin	*Cottus bairdi*
Pumpkinseed	*Lepomis gibbosus*
Bluegill	*Lepomis macrochirus*
Rock Bass	*Ambloplites rupestris*
Smallmouth Bass	*Micropterus dolomieui*
Largemouth Bass	*Micropterus salmoides*
Black Crappie	*Pomoxis nigromaculatus*
Tessellated darter	*Etheostoma olmstedi*
Johnny Darter	*Etheostoma nigrum*
Yellow Perch	*Perca flarecens*
Walleye	*Stizostediaon vitreum*

Observations from Specific Locations on the Great Divide Unit

Birds observed at Texas Hollow State Forest

by Ed Gates

Common Name	**Scientific Name**
Mallard	*Anas platyrhynchos*
Osprey	*Pandion haliaetus*
Goshawk	*Accipiter gentilis*
Killdeer	*Charadrius vociferus*
Ovenbird	*Seiurus aurocapillus*
Crow	*Corvus brachyrhynchos*
Raven	*Corvus corax*
Veery	*Catharus fuscescens*

Starling	*Sturnus vulgaris*
Bobolink	*Dolichonyx oryzivorus*
Rusty Blackbird	*Euphagus carolinus*
Red-winged Blackbird	*Agelaius phoeniceus*
Eastern Bluebird	*Sialia sialis*
Indigo Bunting	*Passerina cyanea*
Northern Cardinal	*Cardinalis cardinalis*
Gray Catbird	*Dumetella carolinensis*
Black-capped Chickadee	*Parus atricapillus*
Brown-headed Cowbird	*Molothrus ater*

Common Name	Scientific Name
Brown Creeper	*Certhia familiaris*
White-winged Crossbill	*Loxia leucoptera*
Red Crossbill	*Loxia curvirostra*
Black-billed Cuckoo	*Coccyzus erthropthalmus*
Yellow-billed Cuckoo	*Coccyzus americanus*
Rock Dove or Domestic Pigeon	*Columba livia*
Mourning Dove	*Zenaida macroura*
Ring-necked Duck	*Aythya collaris*
Wood Duck	*Aix sponsa*
Purple Finch	*Carpodacus purpureus*
House Finch	*Carpodacus mexicanus*
Northern Flicker	*Colaptes auratus*
Least Flycatcher	*Empidonax minimus*
Alder Flycatcher	*Empidonax alnorum*
Willow Flycatcher	*Empidonax traillii*
Olive-sided Flycatcher	*Contopus borealis*
Great Crested Flycatcher	*Myiarchus crinitus*
Blue-gray Gnatcatcher	*Polioptila caerulea*
American Goldfinch	*Spinus tristis*
Canada Goose	*Branta canadensis*
Common Grackle	*Quiscalus quiscula*
Pine Grosbeak	*Pinicola enucleator*
Evening Grosbeak	*Coccothraustes vespertinus*
Rose-breasted Grosbeak	*Pheucticus ludovicianus*
Ruffed Grouse	*Bonasa umbellus*
Ring-billed Gull	*Larus delawarensis*
Herring Gull	*Larus argentatus*
Northern Harrier (Marsh Hawk)	*Circus cyaneus*
Red-tailed Hawk	*Buteo jamaicensis*
Sharp-shinned Hawk	*Accipiter striatus*
Coopers Hawk	*Accipiter cooperii*
Red-shouldered Hawk	*Buteo lineatus*
Broad-winged Hawk	*Buteo platypterus*
Green-backed Heron	*Butorides virescens*
Great Blue Heron	*Ardea herodias*
Ruby-throated Hummingbird	*Archilochus colubris*
Blue Jay	*Cyanocitta cristata*
Dark-eyed Junco	*Junco hyemalis*
American Kestrel	*Falco sparverius*
Eastern Kingbird	*Tyrannus tyrannus*
Belted Kingfisher	*Ceryle alcyon*
Ruby-crowned Kinglet	*Regulus calendula*
Golden-crowned Kinglet	*Regulus satrapa*
Horned Lark	*Eremophila alpestris*
Eastern Meadowlark	*Sturnella magna*
Hooded Merganser	*Mergus cucullatus*
Northern Mockingbird	*Mimus polyglottos*
Red-breasted Nuthatch	*Sitta canadensis*
White-breasted Nuthatch	*Sitta carolinensis*
Baltimore Oriole	*Icterus galbula*
Barred Owl	*Strix varia*
Great Horned Owl	*Bubo virginianus*
Eastern Screech Owl	*Otus asio*
Wood Pewee	*Contopus virens*
Ring-necked Pheasant	*Phasianus colchicus*
Eastern Phoebe	*Sayornis phoebe*
Spotted Sandpiper	*Actitis macularia*
Solitary Sandpiper	*Tringa solitaria*
Yellow-bellied Sapsucker	*Sphyrapicus varius*
Pine Siskin	*Spinus pinus*
Field Sparrow	*Spizella pusilla*
Song Sparrow	*Passerella melodia*
Chipping Sparrow	*Spizella passerina*
Tree Sparrow	*Spizella arborea*
White-crowned Sparrow	*Zonotrichia leucophrys*
Fox Sparrow	*Passerella iliaca*
Savannah Sparrow	*Ammodramus sandwichensis*
House Sparrow	*Passer domesticus*
Vesper Sparrow	*Pooecetes gramineus*
White-throated Sparrow	*Zonotrichia albicollis*
Swamp Sparrow	*Passerella georgiana*
Bank Swallow	*Riparia riparia*

Common Name	Scientific Name
Barn Swallow	*Hirundo rustica*
Rough-winged Swallow	*Stelgidopteryx ruficollis*
Tree Swallow	*Tachycineta bicolor*
Chimney Swift	*Chaetura pelagica*
Scarlet Tannager	*Piranga olivacea*
Blue-winged Teal	*Anas discors*
Brown Thrasher	*Toxostoma rufum*
Hermit Thrush	*Catharus guttatus*
Gray-cheeked Thrush	*Catharus minimus*
Wood Thrush	*Catharus mustelinus*
Swainson's Thrush or Olive-backed Thrush	*Catharus ustulatus*
Tufted Titmouse	*Parus bicolor*
Eastern Towhee	*Pipilo erythrophthalmus*
Wild Turkey	*Meleagris gallopavo*
Yellow-throated Vireo	*Vireo flavifrons*
Solitary Vireo	*Vireo solitarius*
Red-eyed Vireo	*Vireo olivaceus*
Warbling Vireo	*Vireo gilvus*
Turkey Vulture	*Cathartes aura*
Wilson's Warbler	*Wilsonia pusilla*
Connecticut Warbler	*Oporonis agilis*
Mourning Warbler	*Oporornis philadelphia*
Yellow Warbler	*Dendroica petechia*
Hooded Warbler	*Wilsonia citrina*
Blue-winged Warbler	*Vermivora pinus*
Golden-winged Warbler	*Vermivora chrysoptera*
Tennessee Warbler	*Vermivora peregrina*
Yellow-rumped Warbler	*Dendroica coronata*
Nashville Warbler	*Vermivora ruficapilla*
Canada Warbler	*Wilsonia canadensis*
Blackpoll Warbler	*Dendroica striata*
Chestnut-sided Warbler	*Dendroica pensylvanica*
Magnolia Warbler	*Dendroica magnolia*
Bay-breasted Warbler	*Dendroica castanea*
Palm Warbler	*Dendroica palmarum*
Blackburnian Warbler	*Dendroica fusca*
Redstart Warbler	*Setophaga ruticilla*
Pine Warbler	*Dendroica pinus*
Prairie Warbler	*Dendroica discolor*
Black-throated Blue Warbler	*Dendroica caerulescens*
Black-throated Green Warbler	*Dendroica virens*
Cape May Warbler	*Dendroica tigrina*
Norther Parula Warbler	*Parula americana*
Common yellow-throated Warbler	*Dendroica dominica*
Black & white Warbler	*Mniotilta varia*
Northern Waterthrush	*Seiurus noveboracensis*
Louisiana Waterthrush	*Seiurus motacilla*
Cedar Waxwing	*Bombycilla cedrorum*
American Woodcock	*Scolopax minor*
Pileated Woodpecker	*Dryocopus pileatus*
Hairy Woodpecker	*Picoides villosus*
Downy Woodpecker	*Picoides pubescens*
Red-bellied Woodpecker	*Melanerpes carolinus*
House Wren	*Troglodytes aedon*
Winter Wren	*Troglodytes troglodytes*

Butterflies Observed at Texas Hollow State Forest

by Robert Dirig, Cornell University

Common Name	Scientific Name
Least Skipper	*Ancyloxypha numitor*
European Skipper	*Thymelicus lineola*
Inland Broad-winged Skipper	*Poanes viator viator*
Dun Skipper	*Euphyes vestries metacomet*
Leonard's Skipper	*Hesperia leonardus*
Hobokok Skipper	*Poanes hobomok*
Long Dash	*Polites mystic*

Tiger Swallowtail	*Papilio glaucus*
Cabbage White	*Pieris rapae*
Alfalfa Butterfly	*Colias eurytheme*
Eastern Tailed Blue	*Everes comyntas*
Spring Azure	*Celastrina ladon, group f. marginata*
Pearl Crescent	*Phyciodes tharos*
Grey Comma	*Polygonia progne*

Red Admiral	*Vanessa atalanta rubria*
White Admiral	*Limenitis arthemis*
Viceroy	*Limenitis archippus*
Eyed Brown	*Satyrodes eurydice*
Appalachian Brown	*Satyrodes appalachia*
Little Wood Satyr	*Megisto cymela*
Monarch	*Danaus plexippus*

Moths Observed at Texas Hollow State Forest
by Robert Dirig, Cornell University

Common Name	Scientific Name
Hummingbird Clearwing	*Hemaris thysbe*
Yellow-collared Scape Moth	*Cisseps fulvicollis*

Dragonflies Observed at Texas Hollow State Forest and Cayuta Lake Fishing Access Site
by Fred Sibley (Ret.)

Scientific Name	Common Name
Enallagma vesperum	Vesper Bluet
Coenagrion resolutum	Taiga Bluet
Nasiaescna pentacantha	Cyprano Darner
Lanthus parvulus	Northern Pygmy Clubtail
Somatochlora Walshii	Brush-tipped Emerald
Celithemis eponina	Halloween Pennant
Libellua incesta	Slaty Skimmer

Butterflies of Queen Catharine Marsh And Rock Cabin Road
by Robert Dirig, Cornell University

R = resident, **M** = migrant, **U** = locally unusual or scarce, * = naturalized non-native, **P** = puddling

Common Name	Scientific Name	
Silver-spotted Skipper	*Epargyreus clarus*	R
Juvenal's Duskywing	*Erynnis juvenalis*	R
Wild Indigo Duskywing	*Erynnis baptisiae*	R, P
Least Skipper	*Ancyloxpha numitor*	R, P

*European Skipper	*Thymelicus lineola*	R, P
Checkered Skipper	*Pyrgus communis*	M, P, U
Peck's Skipper	*Polites peckius*	R, P
Dion Skipper	*Euphyes dion*	R, U
Dun Skipper	*Euphyes vestris metacomet*	R, P
Little Glassywing	*Pompeius verna*	R

Common Name	Scientific Name	
Northern Broken Dash	*Wallengrenia egeremet*	R
Delaware Skipper	*Atrytone logan*	R, U, P
Hobomok Skipper	*Poanes hobomok*	R
Broad-winged Skipper	*Poanes viator*	R, U
Black Swallowtail	*Papilio polyxenes asterius*	R
Tiger Swallowtails	*Pterourus glaucus group*	R, P
Spicebush Swallowtail	*Pterourus troilus*	R
*Cabbage White	*Pieris rapae*	R, P
Clouded Sulphur	*Colias philodice*	R, P
Alfalfa Butterfly	*Colias eurytheme*	M, P
American Copper	*Lycaena phlaeus*	R
Bronze Copper	*Hyllolycaena hyllus*	R, U
Banded Hairstreak	*Satyrium calanus falacer*	R
Hickory Hairstreak	*Satyrium caryaevorum*	R, U
Acadian Hairstreak	*Satyrium acadicum*	R, U
Striped Hairstreak	*Satyrium liparops*	R, U, P
Coral Hairstreak	*Harkenclenus titus*	R
Olive Hairstreak	*Mitoura grynea*	R, U
Eastern Pine Elfin	*Incisalia niphon*	R, U, P
Eastern Tailed Blue	*Everes comyntas*	R, P
Spring Azures	*Celastrina ladon group*	R, P
Summer Azure	*Celastrina neglecta*	R, P
Pearl Crescent	*Phyciodes tharos*	R, P
Northern Pearl Crescent	*Phyciodes selenis*	R, P
Great Spangled Fritillary	*Speyeria cybele*	R, P
Baltimore Checkerspot	*Euphyrdryas phaeton*	R
Mourning Cloak	*Nymphalis antiopa*	R, P
Milbert Tortoiseshell	*Aglais milberti*	R, U, P
Questionmark	*Polygonia interrogationis*	M, P
Eastern Comma	*Polygonia comma*	M, P
Grey Comma/Progne	*Polygonia progne*	R, U, P
American Painted Lady	*Vanessa virginiensis*	M, P
Cosmopolitan Painted Lady	*V. cardui*	M, U
Red Admiral	*V. atalanta rubria*	M, P
Red-spotted Purple	*Basilarchia arthemis astyanax*	R, P
Banded Purple	*Basilarchia arthemis arthemis*	R, P
Viceroy	*Basilarchia archippus*	R, P
American Snout	*Libytheana carinenta*	M, U, P
Hackberry Butterfly	*Asterocampa celtis*	R, U, P
Tawny Emperor	*Asterocampa clyton*	R, U, P
Northern Pearly Eye	*Enodia anthedon*	R, U, P
Wood Nymph	*Cercyonis pegala*	R
Eyed Brown	*Satyrodes eurydice*	R
Little Wood Satyr	*Megisto cymela group*	R, P
Inornate Ringlet	*Coenonymphia inornata*	
Monarch	*Danaus plexippus*	M

Diurnal Moths

Grape Epimenis	*Psychomorpha epimenis*	R, P

Common Name	Scientific Name	
Blue-collared Scape Moth	*Cisseps fulvicollis*	R, M
Virginia Ctenucha	*Ctenucha virginica*	R
Black-and-Orange Lichen Moth	*Lycomorpha pholus*	R
White-striped Black	*Trichodezia albovittata*	R
Hummingbird Clearwing	*Hemaris thysbe*	R
Snowberry Clearwing	*Hemaris axillaris*	R
Promethea Moth	*Callosamia promethea*	R

Damselflies and Dragonflies of Cayuta Lake

Provided by Kestrel Haven Avian Migration Observatory - http://home.att.net/~kestrelhaven/
(Revised August 2005 - 45 species)

From personal observations of Fred C. Sibley and Thomas Donnelly's The Dragonflies and Damselflies of New York, 1999 (privately published). See notes at end for source information. New common names are in bold face.

Broad-winged Damselflies - *Calopterygidae* (1)		Flight Period
Ebony Jewelwing	*Calopteryx maculata*	5/17 - 9/12
Spreadwings - *Lestidae* (4)		
Sweetflag Spreadwing	Lestes forcipatus	6/9 - 10/13
Elegant Spreadwing	*Lestes inaequalis*	5/24 - 8/22
Slender Spreadwing	*Lestes rectangularis*	6/6 - 10/13
Swamp Spreadwing	*Lestes vigilax*	5/29 - 9/6
Pond Damsels - *Coenagrionidae* (13)		
Smoky-winged Dancer	***Argia fumipennis violacea***	**5/28 - 9/18**
Powdered Dancer	*Argia moesta*	6/6 - 9/20
Aurora Damsel	*Chromagrion conditum*	5/15 - 8/16
Tule Bluet	*Enallagma carunculatum*	6/20 - 9/28
Stream Bluet	*Enallagma exulans*	6/3 - 9/14
Skimming Bluet	*Enallagma geminatum*	5/24 - 10/5
Hagen's Bluet	*Enallagma hageni*	6/4 - 9/5
Orange Bluet	*Enallagma signatum*	5/24 - 9/20
Slender Bluet	*Enallagma traviatum*	6/23 - 8/21
Vesper Bluet	*Enallagma vesperum*	5/29 - Sept.
Fragile Forktail	*Ischnura posita*	4/25 - 9/20
Eastern Forktail	*Ischnura verticalis*	5/1 - 10/8
Sedge Sprite	*Nehalennia irene*	5/29 - 8/18
Darners - Aeshnidae (8)		
Lance-tipped Darner	*Aeshna constricta*	June - 10/5
Shadow Darner	*Aeshna umbrosa*	6/16 - 11/6
Common Green Darner	Anax junius	3/16 - Dec.

Springtime Darner	*Basiaeschna janata*	5/5 - 7/9
Ocellated Darner	*Boyeria grafiana*	8/9 - 10/8
Fawn Darner	*Boyeria vinosa*	June - 10/23
Harlequin Darner	*Gomphaeschna furcillata*	5/17 - 7/2
Cyrano Darner	*Nasiaeschna pentacantha*	5/22 - 7/25
Clubtails - Gomphidae (5)		
Lilypad Clubtail	*Arigomphus furcifer*	5/19 - 7/30
Unicorn Clubtail	*Arigomphus villosipes*	5/11 - 8/9
Lancet Clubtail	*Gomphus exilis*	5/11 - Sept.
Dusky Clubtail	*Gomphus spicatus*	5/12 - 7/14
Eastern Least Clubtail	***Stylogomphus albistylus***	**5/29 - 8/18**
Emeralds - Corduliidae (3)		
Beaverpond Baskettail	*Epitheca canis*	4/29 - 7/1
Common Baskettail	*Epitheca cynosura*	4/23 - 8/11
Ski-tailed Emerald	Somatochlora elongata	June - 8/22
Skimmers - Libellulidae (11)		
Halloween Pennant	*Celithemis eponina*	May - 9/20
Eastern Pondhawk	*Erythemis simplicicollis*	5/18 - 9/19
Dot-tailed Whiteface	*Leucorrhinia intacta*	4/26 - 8/1
Slaty Skimmer	*Libellula incesta*	5/24 - 9/19
Widow Skimmer	*Libellula luctuosa*	5/25 - 9/28
Common Whitetail	*Libellula lydia*	4/27 - 9/22
Eastern Amberwing	*Perithemis tenera*	6/1 - 9/11
Cherry-faced Meadowhawk	*Sympetrum internum*	6/7 - 10/21
White-faced Meadowhawk	*Sympetrum obtrusum*	June - 9/28
Autumn Meadowhawk	***Sympetrum vicinum***	**6/29 - 12/6**
Black Saddlebags	*Tramea lacerata*	5/12 - 10/4

NOTES:

1. **Scientific Names** from:
Dragonflies of North America. James Needham, Minter Westfall and Michael May. Gainesville, FL.: Scientific Press, 2000.
Damselflies of North America. Minter Westfall, and Michael May. Gainesville, FL.: Scientific Publishers, 1996.

2. **Common Names** from:
A Checklist of North American Odonata. Dennis Paulson and Sidney Dunkle, 1999. Common name changes in accordance with Common Names Committee report - *Argia* 16:3, p.29.

3. **Flight period** dates from Donnelly as modified by Gregoire/Sibley field records.

4. This list includes the Cayuta Lake inlet, outlet and small ponds draining into the lake. There has been no attempt to make a complete survey of the area. The area has the potential to produce several other species.

5. Additions should be directed to KHMO@ATT.NET

Damselflies and Dragonflies of Texas Hollow

Provided by Kestrel Haven Avian Migration Observatory - http://home.att.net/~kestrelhaven/

(Revised August 2005 - 64 species)

From personal observations of Fred C. Sibley, Sue and John Gregoire and from Thomas Donnelly's The Dragonflies and Damselflies of New York, 1999 (privately published). See notes at end for source information. New common names are in bold face.

Broad-winged Damselflies - *Calopterygidae (1)*		Flight Period
Ebony Jewelwing	*Calopteryx maculata*	5/17 - 9/12
Spreadwings - *Lestidae* (8)		
Spotted Spreadwing	Lestes congener	6/14 - 11/14
Northern Spreadwing	***Lestes disjunctus***	**6/10 - 9/23**
Emerald Spreadwing	*Lestes dryas*	6/3 - 8/19
Amber-winged Spreadwing	*Lestes eurinus*	5/28 - 8/14
Sweetflag Spreadwing	*Lestes forcipatus*	6/9 - 10/13
Elegant Spreadwing	*Lestes inaequalis*	5/24 - 8/22
Slender Spreadwing	*Lestes rectangularis*	6/6 - 10/13
Swamp Spreadwing	*Lestes vigilax*	*5/29 - 9/6*
Pond Damsels - *Coenagrionidae* (12)		
Smoky-winged Dancer	*Argia fumipennis violacea*	5/28 - 9/18
Aurora Damsel	*Chromagrion conditum*	5/15 - 8/16
Taiga Bluet	*Coenagrion resolutum*	5/26 - 7/9
Azure Bluet	*Enallagma aspersum*	6/10 - 9/21
Boreal Bluet	*Enallagma boreale*	5/25 - 7/10
Northern Bluet	*Enallagma cyathigerum*	5/12 - 8/12
Marsh Bluet	*Enallagma ebrium*	5/26 - 9/11
Skimming Bluet	*Enallagma geminatum*	5/24 - 10/5
Hagen's Bluet	*Enallagma hageni*	6/4 - 9/5
Slender Bluet	*Enallagma traviatum*	6/23 - 8/21
Fragile Forktail	*Ischnura posita*	4/25 - 9/20
Eastern Forktail	*Ischnura verticalis*	5/1 - 10/8
Sedge Sprite	*Nehalennia irene*	5/29 - 8/18
Darners - *Aeshnidae* (10)		
Canada Darner	*Aeshna canadensis*	6/14 - 10/10
ance-tipped Darner	Aeshna constricta	June - 10/5
Variable Darner	*Aeshna interrupta*	8/16 - 9/18
Spatterdock Darner	*Aeshna mutata*	6/4 - 7/9
Black-tipped Darner	*Aeshna tuberculifera*	7/11 - 10/10
Shadow Darner	*Aeshna umbrosa*	6/16 - 11/6
Green-striped Darner	*Aeshna verticalis*	6/17 - 10/22
Common Green Darner	*Anax junius*	3/16 - Dec.
Fawn Darner	*Boyeria vinosa*	June - 10/23
Harlequin Darner	*Gomphaeschna furcillata*	5/17 - 7/2

Clubtails - Gomphidae (6)		Flight Period
Lilypad Clubtail	*Arigomphus furcifer*	5/19 - 7/30
Lancet Clubtail	*Gomphus exilis*	5/11 - Sept.
Ashy Clubtail	*Gomphus lividus*	5/4 - 6/26
Dusky Clubtail	*Gomphus spicatus*	5/12 - 7/14
Northern Pygmy Clubtail	*Lanthus parvulus*	5/20 - Aug.
Eastern Least Clubtail	***Stylogomphus albistylus***	**5/29 - 8/18**
Spiketails - Cordulegastridae (2)		
Delta-spotted Spiketail	*Cordulegaster diastatops*	5/16 - 7/24
Twin-spotted Spiketail	*Cordulegaster maculata*	5/18 - July
Emeralds - Corduliidae (6)		
American Emerald	*Cordulia shurtleffii*	5/17 - 8/8
Racket-tailed Emerald	*Dorocodulia libera*	May - 8/8
Beaverpond Baskettail	*Epitheca canis*	4/29 - 7/1
Common Baskettail	*Epitheca cynosura*	4/23 - 8/11
Prince Baskettail	*Epitheca princeps*	5/28 - 8/30
Brush-tipped Emerald	*Somatochlora walshii*	7/13 - Sept.
Skimmers - Libellulidae (19)		
Calico Pennant	*Celithemis elisa*	5/31 - 9/6
Halloween Pennant	*Celithemis eponina*	May - 9/20
Eastern Pondhawk	*Erythemis simplicicollis*	5/18 - 9/19
Crimson-ringed Whiteface	*Leucorrhinia glacialis*	5/17 - Aug.
Hudsonian Whiteface	*Leucorrhinia hudsonica*	5/1 - 1 Aug
Dot-tailed Whiteface	*Leucorrhinia intacta*	4/26 - 8/1
Belted Whiteface	***Leucorrhinia proxima***	**6/7 - 8/8**
Chalk-fronted Corporal	*Libellula julia*	5/16 - 8/3
Widow Skimmer	*Libellula luctuosa*	5/25 - 9/28
Common Whitetail	*Libellula lydia*	4/27 - 9/22
Twelve-spotted Skimmer	*Libellula pulchella*	5/24 - 9/18
Four-spotted Skimmer	*Libellula quadrimaculata*	5/16 - Aug.
Blue Dasher	*Pachydiplax longipennis*	5/22 - 9/22
Eastern Amberwing	*Perithemis tenera*	6/1 - 9/11
Cherry-faced Meadowhawk	*Sympetrum internum*	6/7 - 10/21
White-faced Meadowhawk	*Sympetrum obtrusum*	June - 9/28
Band-winged Meadowhawk	*Sympterum semicinctum*	7/20 - Oct.
Autumn Meadowhawk	***Sympetrum vicinum***	**6/29 - 12/6**
Black Saddlebags	*Tramea lacerata*	5/12 - 10/4

NOTES:

1. **Scientific Names** from:
Dragonflies of North America. James Needham, Minter Westfall and Michael May. Gainesville, FL.: Scientific Press, 2000.

Damselflies of North America. Minter Westfall, and Michael May. Gainesville, Fl.: Scientific Publishers, 1996.

2. **Common Names** from:
A Checklist of North American Odonata. Dennis Paulson and Sidney Dunkle, 1999. Common name changes in accordance with Common Names Committee report - *Argia* 16:3, p.29.

3. **Flight period** dates from Donnelly as modified by Gregoire/Sibley field records.

4. There has been no attempt to make a complete survey of the unit. These data are all from the main impoundment and bog areas. At least one new species has been found each year and the potential is for more rare bog species. There are several species that have been found in the county only at Texas Hollow and most of these are represented by very few records in the southern counties of New York.

5. Additions should be directed to KHMO@ATT.NET

Appendix B : Public Comment

Initial Mailing Responses

The following Great Divide Unit Management Plan public comments were received as a result of an initial December 11, 2003 mailing to a previously identified audience including adjacent property owners, local government officials, recreational groups, forest industry groups, wildlife groups and other general environmental groups and the local media:

Referring to Texas Hollow State Forest: 1) timber management needs responsible loggers who respect the forests, landowners and wildlife; 2) gas leasing is an abomination in this beautiful valley (absolutely opposed); 3) public access, wonderful trails, hunting and fishing; 4) recreation-I'm against allowing four wheelers and dirt bikes (too much damage) snowmobiles are OK, also skiers and mountain bikes.

As a previous resident and landowner in Texas Hollow, I am very interested in futures of Texas Hollow State lands. I am adamantly opposed to gas leasing! I would like to see these lands preserved for hunting and fishing only, no camping. For years, historical files: 1. Texas Hollow Creek runs north from approximately half way through the hollow and South through the southern half of the hollow; 2. There is an earthen dam (the dam served a mill of some kind) on the north side of Texas Hollow in the larger swamp; 3 General Sullivan supposedly marched through Texas Hollow and lost a cannon somewhere in that swamp; 4. Beavers built the original bird sanctuary dam.

All of the timber stands should be managed for timber production. Special attention should be placed on regeneration. Potential use of herbicides to promote desirable regeneration. Potential use of fire to maintain desired habitat. This is all in addition to the other uses of the forest, hunting, hiking, birding.

In Schuyler County, Catharine in geographical reference of any kind (creek, valley, marsh, town, hamlet, etc.) is correctly spelled CATHARINE and pronounced Kath-eh-reen, the name honors Catharine Montour. Since the name is of French extraction, the above is the correct spelling and pronunciation.

The Great Unit Management Plan is a name well chosen for this project. Incidently, I shall mention that we have title to acreage adjoining the Great Divide in Texas Hollow. In years past, I've enjoyed this area very much. One must yield to dictates in life that limit our ability to function as we would prefer. I'm in no position to accept your invitation to serve this most worthy endeavor. I wish you well.

Timber and wildlife management (yes) gas leasing (no) mining open/pit gravel (no) public access (non motorized- yes) recreation (yes) prescribed burns(?)

I am in favor of mountain bike use, specifically in the Texas Hollow State Forest. Other mountain bikers and myself ride a trail between Steam Hill and Texas Hollow Roads, which was originally blazed to be used as part of the Finger Lakes Trail System. Please let me know if mountain bikes are allowed in the state forests.

The concept of the Great Divide name is in and of itself intriguing. It would seem that promoting the goals of the plan to the whole public would be of great interest and importance.

I approve of your procedures to date.

Public Meeting Responses

Written and verbal comments on the draft plan were received during the September 7, 2005 public meeting held at the Rural Urban Center in Montour Falls, NY. Written comments were accepted until October 7, 2005. A summary of the comments and DEC responses follows:

Q 1: While this involves four counties, the planning departments and/or EMCs of these counties should have had a copy of the draft plan to pass on to their members and review prior to the meeting. Could you provide it on CD?

A: A CD would be difficult, in the future we hope to have plans posted on the Web, but that didn't happen in time for this plan. Those that contacted us before the day of the meeting were sent a hard or "soft" copy if they were unable to get to one of the DEC offices or Libraries that had copies.

Q 2: What is the status of the fishing access ramp at Cayuta Lake? It is a good resource for the area.

A: It is a good resource, and does need to be redone. DEC has submitted to receive funds to replace the ramp with a new ramp at the proper slope and a boarding dock. This project is in competition with other projects across the State for a limited money supply. It has been added to the Management Objectives and Actions for Maintenance and Facilities table on pg 34.

Q 3: Is there any way the ramps can be closed, say after midnight? There is a potential for more vandalism at night.

A: No, but we could ask for increased patrols. It is kept open at night to allow for fishing Walleye after dark.

Q 4: We would like to put in a dock at the ramp to help improve access. We would use it to help pull out our boats.

A: A dock is a good idea, but it is difficult, although not impossible, to accept gifts from private groups. A feasibility study would need to be done to decide about maintenance and winter removal/spring setup of it. If it passes, then it could be done as part of the ramp re-do. Also, as noted under Question 2, when funds become available, it is planned to have a boarding dock built in association with a new ramp.

Q 5: The Lake Association has a dam but we need help fixing the dam. Can the DEC help repair it? Are there any grants available? It was built in 1967. DEC should control the water level. The state tells homeowners about the increased value of their property on the lake. The government should take care of the lake.

A: The dam is privately owned by the Cayuta Lake Property Owners Association, which controls the water level and maintenance of the dam. There is Bond Act money available from DEC to fix dams, but only "Taxing Districts" may apply.

Q 6: Queen Catherine Marsh borders on Rock Cabin Rd. Where does the Queen Catherine Marsh border end? To the middle of the road? To the salt plant?

A: Property line goes to the middle of Rock Cabin Rd. Current northern boundary is approximately 4000 ft south of Rt

414. The new addition to the north that is in the works will have a eastern boundary 100 feet from centerline of Rock Cabin Rd.

Q 7: Where Rock Cabin Road starts in the south, there is a westward access road 100-150 feet to a locked gate. Can a parking lot be constructed there large enough for a couple of school buses?

A: There is an existing parking area located on Seneca St that is within easy walking distance of the gated lane way. This parking lot can easily accommodate a couple of school busses.

Q 8: Could you identify the parking lot in terms of availability, post signs, etc.?

A: The parking area on Seneca St is a grass parking area with log/rock border. It is available 24 / 7 / 365, snow conditions permitting.

Q 9: The drilling on Texas Hollow, does that mean vertical drilling versus angular drilling?

A: Under the current oil and gas lease pertaining to Texas Hollow State Forest, drilling operations are not permitted on the surface of this State Forest.

However, the owner of the lease pertaining to Texas Hollow State Forest could conduct drilling operations outside the State Forest and directionally drill (angular drilling) under the State Forest. They are required to disclose the location of a directionally drilled wellbore from surface to total depth.

Q10:Is it possible to dredge Cayuta Lake?

A: The purpose of this plan is management of the lands identified, and this is outside of the scope of this plan. It the Cayuta Lake Property Owners Association wishes to pursue this they should contact NYS DEC Division of Environmental Permits to identify the requirements and contacts needed. Dredging is possible under strict guidelines in certain instances, such as removing accumulated sediment from stream mouths. Dredging to allow for larger vessels or as a macrophtye control measure is not viewed favorably.

Q11:Can we get a copy of the comments and the final plan?

A: Yes, after the plan is finalized copies will be available from the Avon and Bath DEC offices, as well as copies placed at the Horseheads and Watkins Glen Libraries.

Q12:What is meant by even-aged stands?

A: A forest in which all of the trees are essentially the same age, having started to grow within a few years of each other.

Mailed Responses after the Public Meeting

The following comments are submitted relative to DEC's draft plan for management of the 2,956 acres of land that includes part of Cauyta Lake:

- Cayuta is a pearl of a lake that could be ideal for small boats, canoes and kayaks. Unfortunately, there is only one public access point on the entire lake. This roadway access is narrow, neglected, poorly maintained, and inadequate for the many boaters that would like to enjoy the lake.

- Half the access area is permanently under a pool of standing water that could easily be remedied with a few loads of gravel fill.

- The concrete boat ramp is rarely used because it is too steep. Boaters have to launch their boats from the adjacent lake edge.

- Nowhere on the lake perimeter is there anywhere for the public to picnic.

- There are no toilet facilities at the access area.

With minor capital expenditures, the Cayuta Lake access point could be made into a pleasant public recreational area. The access area should be widened, a few picnic tables provided, and a pit toilet built.

Ian G. Mackenzie
Corning, New York

Dear D.E.C.

I live across the road from your Cayuta Lake fishing access site. I'm disabled, I have a 3-wheel (to) get about but it's not good fishing from shore because of the weeds.

The boat launch is not very good there. A lot of boats have trouble. It needs work or a new one. Put in a long dock that is wheel chair access would be a big plus.

There, at the end of the lake, was at one time a nice big yard, but it needs cleaning up and mowing, then it would be good for picnics or camping.

There are spots up the road that could be campsites and across the road from my house too. We see turkeys, deer and a bear now and then. We need something to bring people here for.

George Clearwater
Alpine, New York

Dear Gretchen:

We regret not being include in this process from the start as we have several substantial additions to this UMP. Thanks you for your quick response and copy of the draft.

1. Missing information from "Information and Needs" section:

The Schuyler County Comprehensive Plan (2001) recognizes the ecological importance of the Catharine Creek Wildlife Management Area (CCWMA) and its riparian area (Rock Cabin Road) as well as the Texas Hollow bog area (TH). The Town of Hector Comprehensive Plan also recognizes the significance of TH.

A major recommendation of the Schuyler Plan is that both areas be designated as Critical Environmental Areas (CEA) under 6NYCRR Part 617.14 (SEQRA) and supports further marsh and riparian area acquisition or property conservation easements. By enacting the CEA designation, all riparian property receives immediate protection in so much that development on lands riparian to a CEA must follow the complete Environmental Impact Statement process. It appears to us that this designation should be a critical DEC goal.

The Queen Catharine Marsh, or CCWMA, was nominated and accepted as a state Important Bird Area. It is cited in IBAs of New York, J.V. Wells, National Audubon Society, 1998, p219. We recently updated that designation and that is published in IBAs of NY State, 2nd edition - Habitats Worth Protecting, Burger and Liner, Audubon NY, 2005, pp. 94-95. In the early 2000s, KHAMO conducted the fieldwork and drafted the nomination of CCWMA for state Bird Conservation Area Status. The nomination was accepted and formal designation now sits in the Governor's queue for announcement of that special management status.

2. Management Action Item Comments:

A. There appears to be a critical typo on page 33 MAI 1.3 and repeated on page 49 MAI 1.3 This item calls for mowing of the TH dike "before 15 July". This would be disastrous to wildlife. We very strongly recommend this be changed to "after 15 August". This timing should also apply to grassland management at CCWMA where early mowing in the recent past has extirpated a rare nesting species (Sedge Wren). That is at page 40 MAI 4.0. Rationale for date: Although post 15 July is a date often associated with agricultural areas, we can afford to be more liberal, and safer, with the later August date. Not only will this protect nesting birds but it will also maintain the cover and prey base of Odonates, which is particularly critical at TH. The later date will also provide a nectaring source for Lepidoptera.

B. Construction of an Osprey Nesting Platform is location and design critical. Ospreys nested at CCWMA for the first time in 2004 on a self-built natural nest and have made several attempts in the past few years at TH. KHAMO would be pleased to consult with the DEC before this project is undertaken.

3. Appendices:

It is more professional and utile to present biological lists in phylogenetic order. The overall unit bird list is very incomplete and carries incorrect nomenclature. That list does not offer a complete list of the birds documented in the unit nor does it identify breeding status. We recommend this list and others be replaced and have provided updated lists for both the unit as a whole and specific lists for CCWMA and TH. KHAMO maintains the official county biological lists for Schuyler and they are updated annually. They can be found on our website.

Two lists are presented. The first is an overall list for the unit (it is a Schuyler list but covers species documented in Chemung as well). This list also contains the breeding status of birds in CCWMA. KHAMO conducted a mini-atlas on CCWMA and TH during the 2000-2004 DEC Breeding Bird Atlas Project.

The second list is annotated to depict species known to breed in TH as documented in the BBA.

Mr. Dirig should be contacted to update/verify the butterfly and moth lists.

Mr. Sibley is incorrectly cited as "Professor" and does not know where this list and attribution came from. We work closely with Mr. Sibley and in recent days have compiled specific Odonata lists for both TH and Cayuta Lake for your use. They are also enclosed. These are not as yet available on our website but we can send you electronic copies at your behest.

4. General Recommendation:

We very strongly recommend that this UMP designate specific DEC individuals as managers/points of contact for each of the units areas. Those individuals should then liaise with organizations such as us to maintain currency and be available when problems are identified. This has been a great weakness in the last twenty years that we have been working for the benefit of the CCWMA and TH.

PS. Although we are professional ornithologists, we are versed in general naturalist areas and are particularly well qualified in Odonata and Lepidoptera as these are our avocational interests.

John & Sue Gregoire, Field Ornithologists
Kestrel Haven Avian Migration Observatory
http://home.att.net/~kestrelhaven/
Burdett, New York

The lists of damselflies and dragonflies of Texas Hollow and Cayuta lake included with this letter are located in Appendix A: Animals on the Great Divide Unit Management Plan Area.

Appendix C : Taxes

School and Town general taxes for 1999

		Acres of eligible land	Amount Paid
Chemung Co.	Town of Catlin	518	$4,661
Schuyler Co.	Town of Catharine	175	$3,281
	Town of Hector	762	$5,890

Appendix D : Facilities

Unpaved Roads

	Site	Miles
1.	Cayuta Lake Fishing Access Site	0.4
2.	Catharine Creek Wildlife Management Area	2.0
3.	Texas Hollow State Forest	0.1
4.	Maple Hill State Forest	0.8
	Total	3.3

Ponds/pot Holes

	Site	Number
1.	Catharine Creek Wildlife Management Area	5 potholes
2.	Texas Hollow State Forest	3 ponds(2 are natural)
3.	Maple Hill State Forest	6 ponds
	Total	5 potholes/ 9 Ponds

Unpaved Parking Lots

	Site	Number
1.	Cayuta Lake Fishing Access Site	1
2.	Catharine Creek Wildlife Management Area	3
3.	Texas Hollow State Forest	1
4.	Catlin State Forest	1
	Total	6

Area Signs

	Site	Number
1.	Cayuta Lake Fishing Access Site	2
5.	Catharine Creek Wildlife Management Area	4
6.	Texas Hollow State Forest	2
7.	Catlin State Forest	1
8.	Maple Hill State Forest	1
	Total	10

Metal Gates

	Site	Number
1.	Catharine Creek Wildlife Management Area	3
2.	Texas Hollow State Forest	1
3.	Maple Hill State Forest	1
	Total	5

People with Disabilities Access Trails

	Site	Miles	Name
1.	Maple Hill State Forest	.3	Sutton Trail
2.	Catharine Creek Wildlife Management Area	2.0	

Regulation Signs

	Site	Number
1.	Catharine Creek Wildlife Management Area	5
2.	Cayuta Lake Fishing Access Site	1
	Total	6

Misc.

1.	Catharine Creek Wildlife Management Area	56 bird nesting boxes 1 observation tower 27751 feet of level ditch 1 storage building 1 two mile trail
2.	Cayuta Lake Fishing Access Site	1 concrete boat ramp
3.	Texas Hollow State Forest	3 bird nesting boxes 1 trail, 2.8 miles 1 earth dam

Appendix E : Timber Management

See also maps on pages 86-88.

Stands (with trees) Designated Protection Management

Texas Hollow State Forest
Schuyler RA#3

Stand	Acres
A - 1	34
A - 3	6
A - 4	19
A - 5	16

Catlin State Forest
Chemung RA#1

none

Maple Hill State Forest
Chemung RA#2

none

Catharine Creek Wildlife Management Area

none

Cayuta Lake Fishing Access Site

Stand	Acres
A - 2	38

Stands Designated Even Aged

Texas Hollow State Forest
Schuyler RA#3

Stand	Acres
A - 6	9
A - 7	10
A - 10	21
A - 11	8
A - 12	58
A - 13	69
A - 15	47
A - 17	75
A - 18	37
A - 21	20
A - 23	19
A - 24	14
A - 25	38
A - 26	37
A - 27	11
A - 29	11
A - 34	19
A - 36	91
A - 38	10

Catlin State Forest
Chemung RA#1

Stand	Acres
A-1	28
A-2	15
A-4	78
A-7	14
A-11	41
A-12	25
A-13	19
A-14	32
A-16	24
A-17	8
A-19	6
A-20	14

Maple Hill State Forest
Chemung RA#2

Stand	Acres
A - 4	36
A - 8	57
A - 11	14
A - 12	4
A - 13	9
A - 14	14
A - 15	20
A - 19	21
A - 22	5
A - 23	134
A - 24	58

Catharine Creek Wildlife Management Area

Stand	Acres
A-1	4
A-2	26
A-3	33
A-4	10
A-5	7
A-6	13
A-7	3

Cayuta Lake Fishing Access Site

Stand	Acres
A - 1	19

Stands Designated Uneven Aged

Texas Hollow State Forest
Schuyler RA#3

none

Catlin State Forest
Chemung RA#1

Stand	Acres
A-5	36
A-6	18
A-8	15
A-10	58

Maple Hill State Forest
Chemung RA#2

Stand	Acres
A - 1	20
A - 3	9
A - 18	15
A - 21	8

Catharine Creek Wildlife Management Area

none

Cayuta Lake Fishing Access Site

none

Stands Designated Plantation Management

Texas Hollow State Forest
Schuyler RA#3

Stand	Acres
A-16	15
A-20	8
A-28	12
A-32	48
A-33	30
A-35	18
A-37	17

Catlin State Forest
Chemung RA#1

Stand	Acres
A-3	79
A-22	35

Maple Hill State Forest
Chemung RA#2

none

Catharine Creek Wildlife Management Area

none

Cayuta Lake Fishing Access Site.

Stand	Acres
A - 3	3

Stands Designated Open Land

Texas Hollow State Forest
Schuyler RA#3

none

Catlin State Forest
Chemung RA#1

Stand	Acres
A-940	3
A-950	4

Maple Hill State Forest
Chemung RA#2

Stand	Acres
A - 6	48
A - 9	36
A - 20	11
A - 17	4

Catharine Creek Wildlife Management Area

Stand	Acres
A-941	61

Cayuta Lake Fishing Access Site

Stand	Acres
A - 4	15

Stands Designated Seedling / Sapling

Texas Hollow State Forest
Schuyler RA#3

Stand	Acres
A - 19	7
A - 22	26
A - 30	6
A - 31	15

Catlin State Forest
Chemung RA#1

Stand	Acres
A-9	35
A-15	5
A-18	5
A-21	3

Maple Hill State Forest
Chemung RA#2

Stand	Acres
A - 2	6
A - 5	15
A - 7	45
A - 10	5
A - 16	9

Catharine Creek Wildlife Management Area

none

Cayuta Lake Fishing Access Site

none

Appendix F : Water Resources

WIN - Watershed Index Number: Numbering system used by NYSDEC to identify individual streams/ponds/lakes.

Water Classifications
Class C - Fishing and any other usages except for bathing or as a source of water supply for drinking, culinary, or food processing purposes.

Class C(T) - Same as Class C plus it is designated as trout waters

Class C(TS) - Same as Class C plus waters are suitable for trout spawning

Catlin State Forest

Streams

NAME	WIN	MILES(approx)	CLASS	FISHERIES RESOURCE
SING SING CREEK	PA-3-39	0.4	C	Minnows
MADISON CREEK	PA-3-39-8	0.5	C	Minnows
UNNAMED TRIB	PA-3-39-8-1-2	0.7	C	Minnows

Wild brown trout resource found in Sing Sing Creek approximately 2.5-2.75 miles downstream of the southernmost boundary of Catlin State Forest.

Texas Hollow State Forest and Cayuta Lake Fishing Access Site

Streams

NAME	WIN	MILES(approx)	CLASS	FISHERIES RESOURCE
CATLIN MILL CK	ONT-66-12-P369-59-5A	0.45	C(TS)	Brown trout
CRANBERRY CK	ONT-66-12-P369-59-5A-2	0.35	C(TS)	Brook trout
UNNAMED TRIB	ONT-66-12-P369-59-5A-7	1.00	C(TS)	Brown trout
UNNAMED TRIB (TEXAS HOLLOW)	ONT-66-12-P369-56-4	1.25	C(TS)	Brown trout

Ponds/Lakes

UNNAMED TRIB	ONT-66-12-P369-56-4-P372A	?
CAYUTA LAKE	PA-1-P8	Warmwater (walleye, bass, perch, sunfish)

Catharine Creek Wildlife Management Area

Streams

NAME	WIN	MILES	CLASS	FISHERIES RESOURCE
CATHARINE CK	ONT-66-12-P369-59	3.0	C(T) & C(TS)	Rainbow trout
OLD BARGE CANAL	ONT-66-12-P369-60-1	1.4	C(T)	Rainbow trout

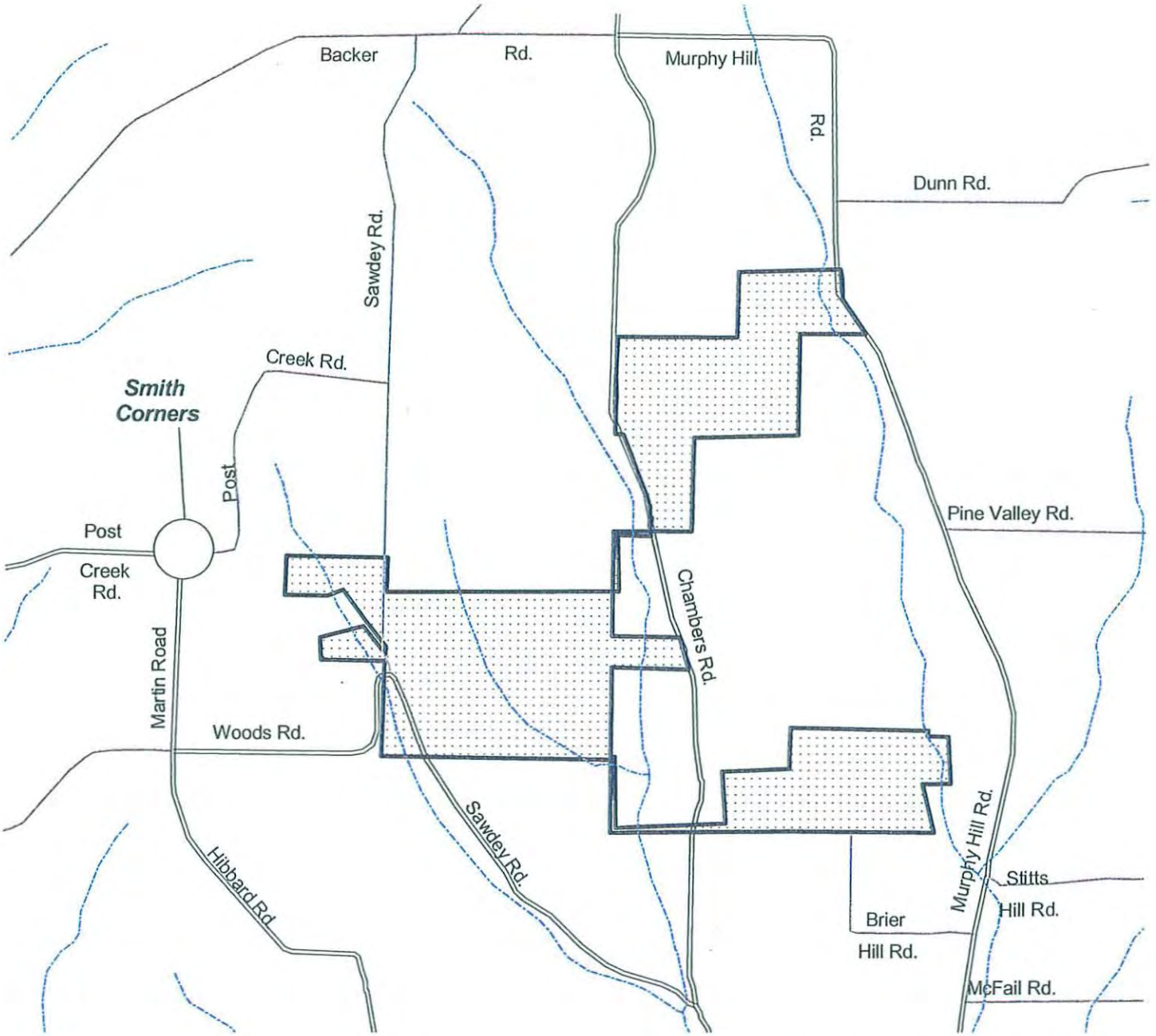
Catharine Creek supports a important recreational rainbow trout fishery. The stream and its tributaries serve as a vital spawning and nursery area for rainbow trout. Spring runs of rainbow trout draw thousands of anglers to the area annually.

Maple Hill State Forest

Streams

NAME	WIN	MILES	CLASS	FISHERIES RESOURCE
UNNAMED TRIB	PA-3-6-8	0.2	C	Minnows

Appendix G: Maps
Access / Location and Streams, Ponds and Wetlands



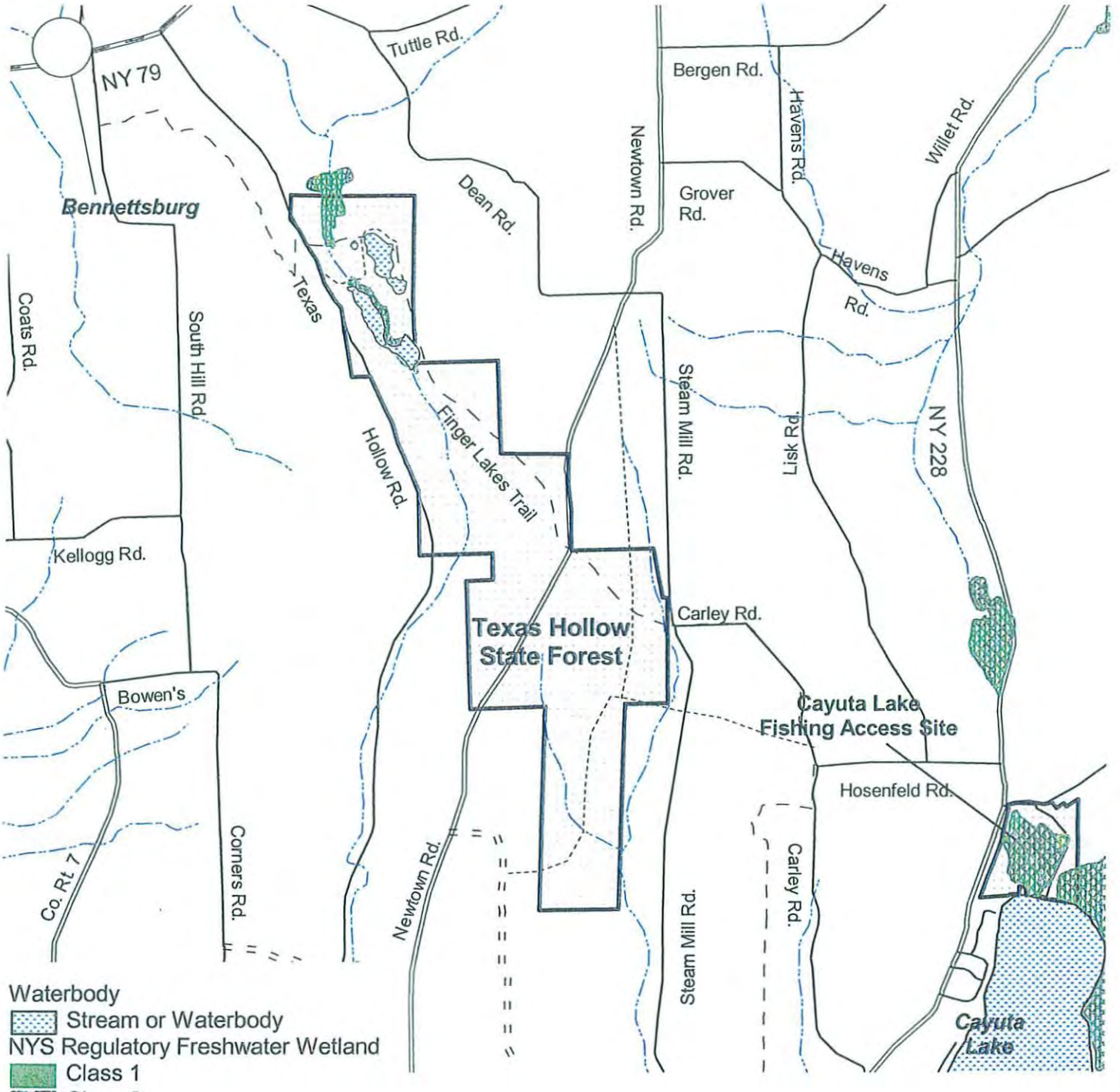
Catlin State Forest
613 Acres

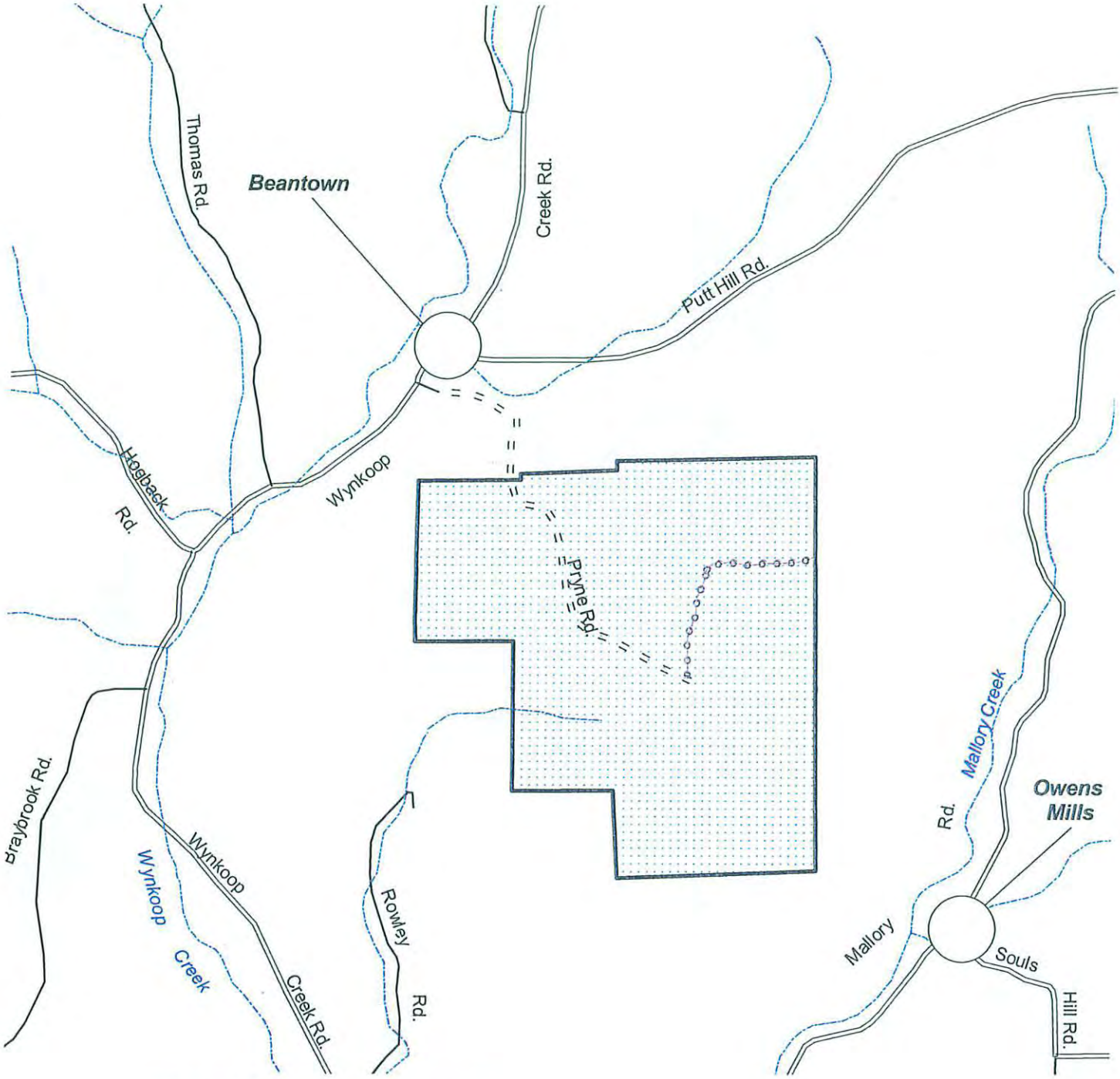
N

0.5 0 0.5 1 Miles

NYS Regulatory Freshwater Wetland
- Class 1
- Class 2
- Class 3
- Class 4
- Uncoded
- Streams

Roads
- County Roads
- Town Roads
- State Land


NY 79
Tuttle Rd.
Bennettsburg
Dean Rd.
Newtown Rd.
Bergen Rd.
Havens Rd.
Willet Rd.
Grover Rd.
Havens Rd.
Texas
Coats Rd.
South Hill Rd.
Hollow Rd.
Finger Lakes Trail
Steam Mill Rd.
Lisk Rd.
NY 228
Kellogg Rd.
Texas Hollow State Forest
Carley Rd.
Bowen's
Cayuta Lake Fishing Access Site
Hosenfeld Rd.
Co. Rt 7
Corners Rd.
Newtown Rd.
Steam Mill Rd.
Carley Rd.
Cayuta Lake
Waterbody
Stream or Waterbody
NYS Regulatory Freshwater Wetland
Class 1
Class 2
Class 3
Class 4
Uncoded
Finger Lakes Trail / North Country Nat'l Scenic Trail
Snowmobile Trail
Streams
Roads
State Highway
County Roads
Town Roads
Seasonal Roads
State Land
N
Texas Hollow State Forest
and
Cayuta Lake Fishing Access Site
937 Acres and 82 Acres
0.5 0 0.5 1 Miles



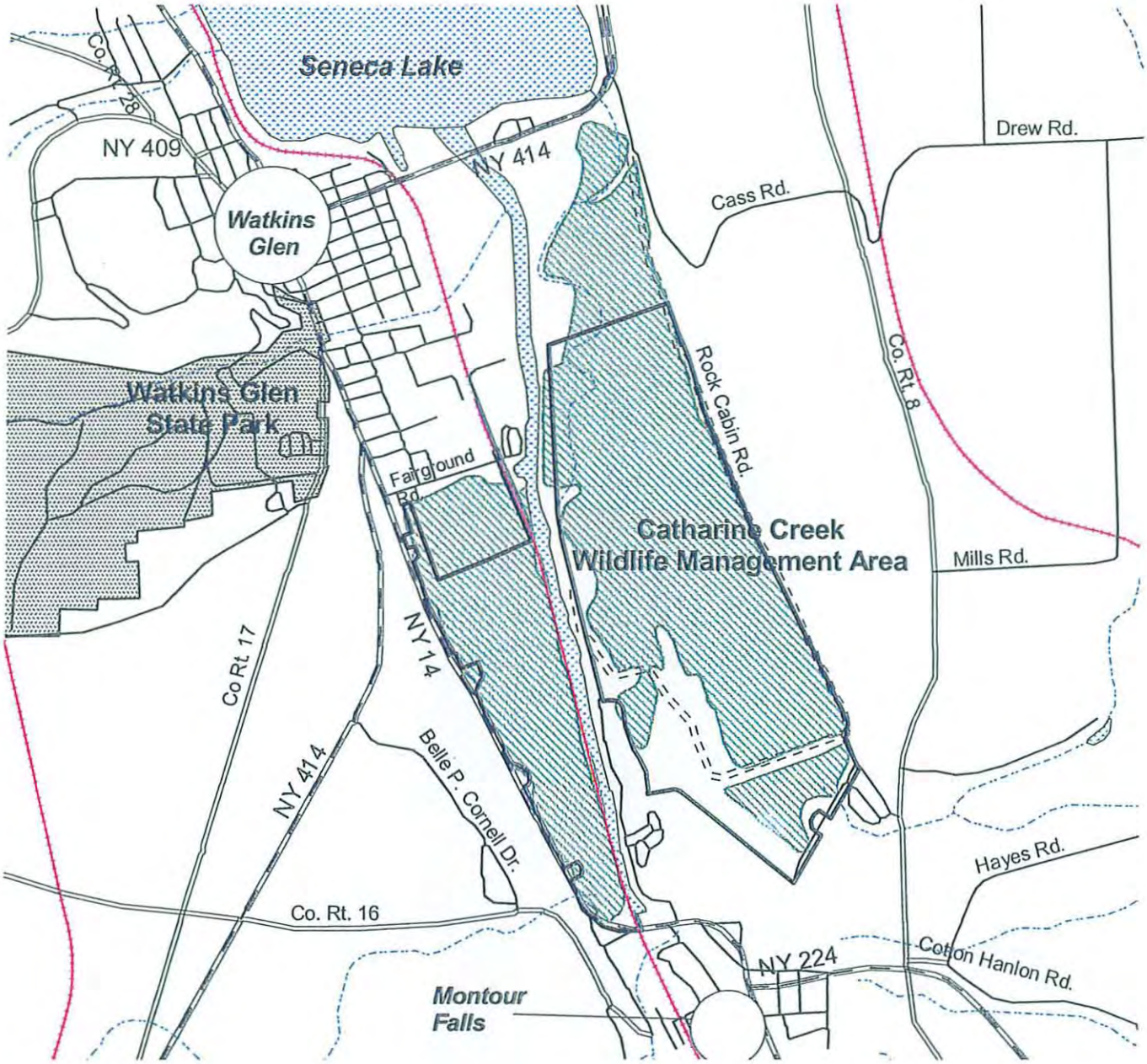
Maple Hill State Forest

604 Acres

N

0.5 0 0.5 1 Miles

Mobility Impaired Access Trail (Sutton Trail)
Streams
NYS Regulatory Freshwater Wetland
Class 1
Class 2
Class 3
Class 4
Uncoded
Roads
County Roads
Town Roads
Seasonal Roads
State Land



Roads
- State Highway
- County Road
- Town Road
- Seasonal Road
- Old Railroad Bed
- Water
- Stream
- State Park
- State Land

NYS Regulatory Freshwater Wetland
- Class 1
- Class 2
- Class 3
- Class 4
- Uncoded

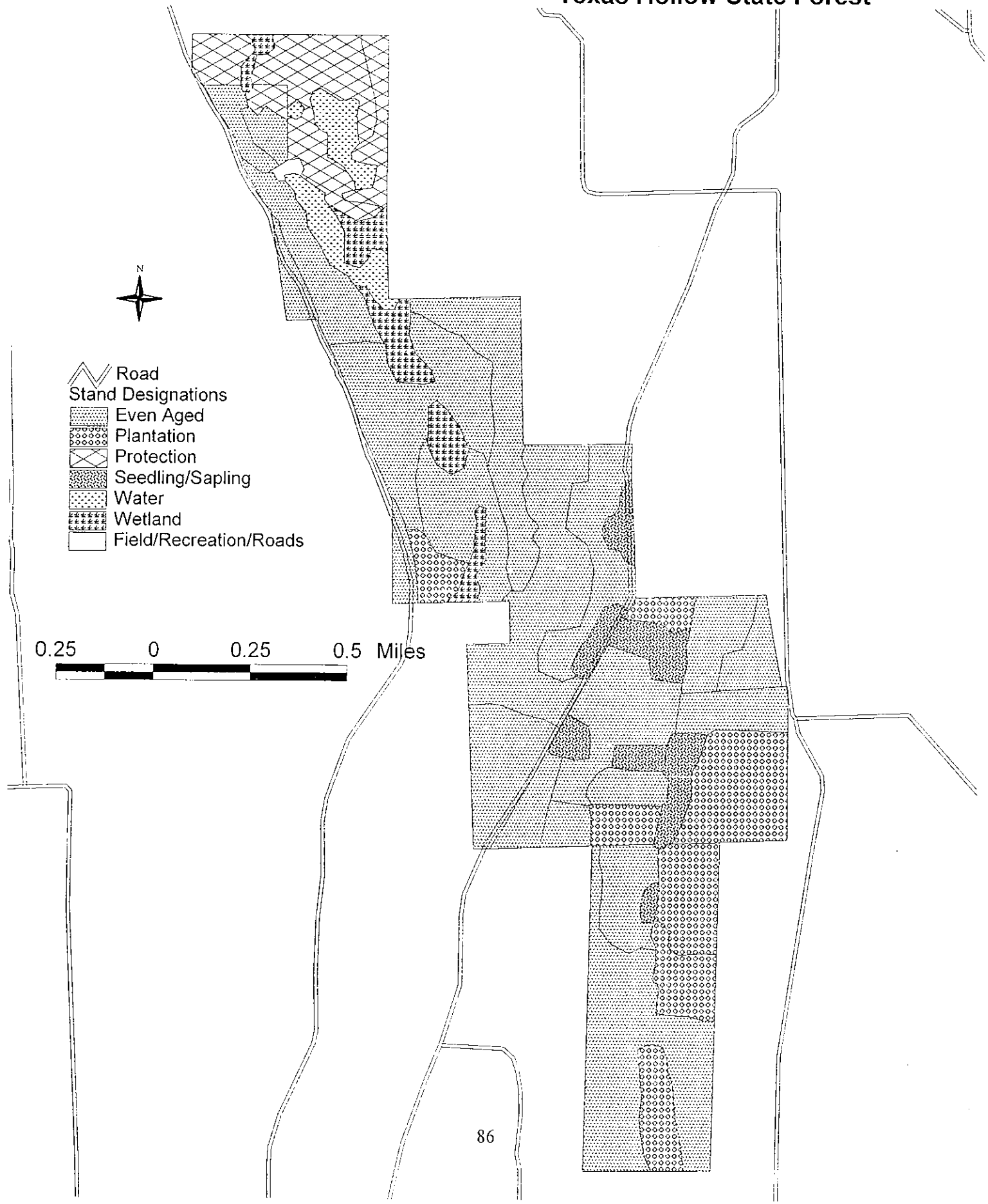
Catharine Creek Wildlife Management Area

720 Acres

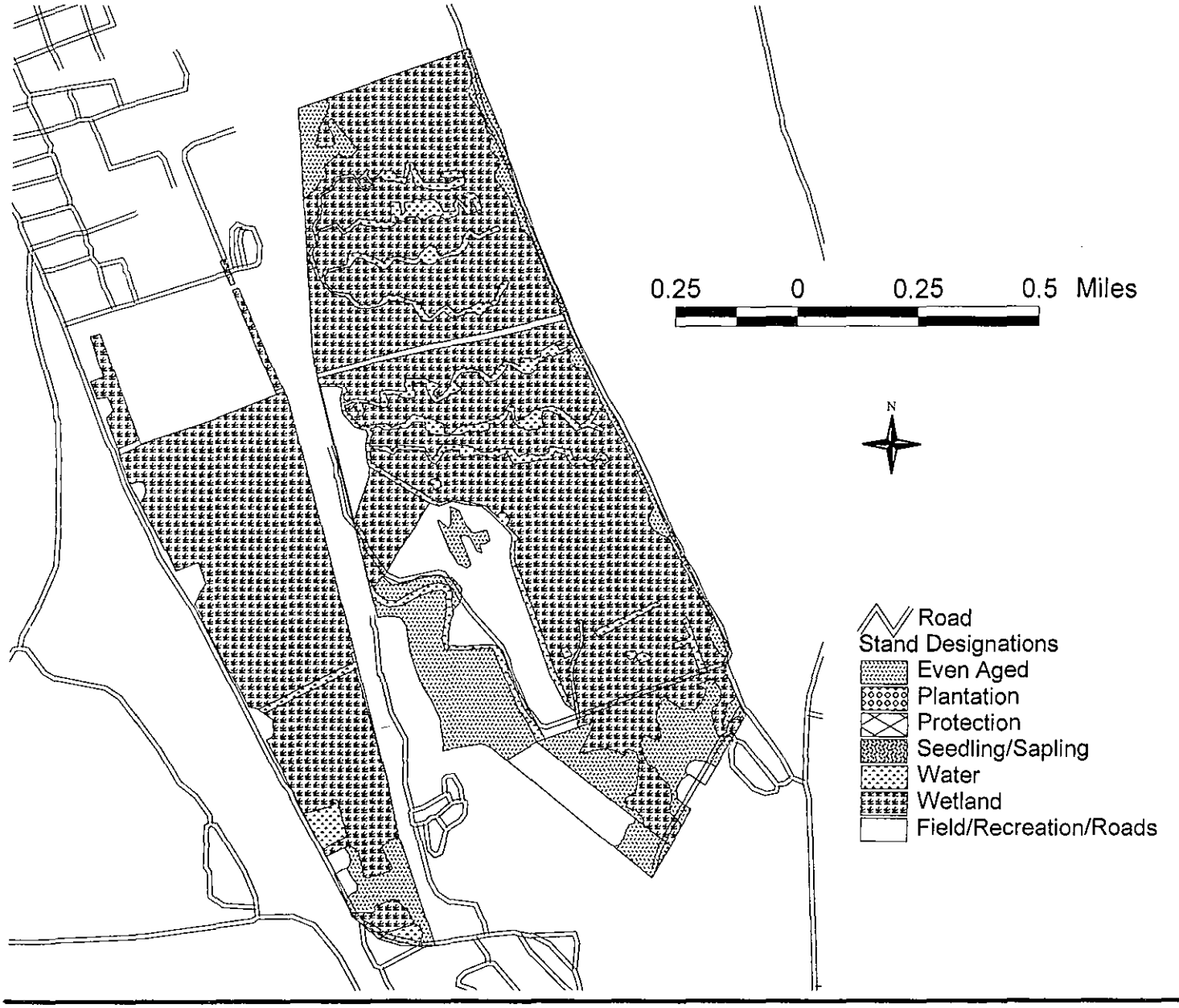
N

0.6 0 0.6 1.2 Miles

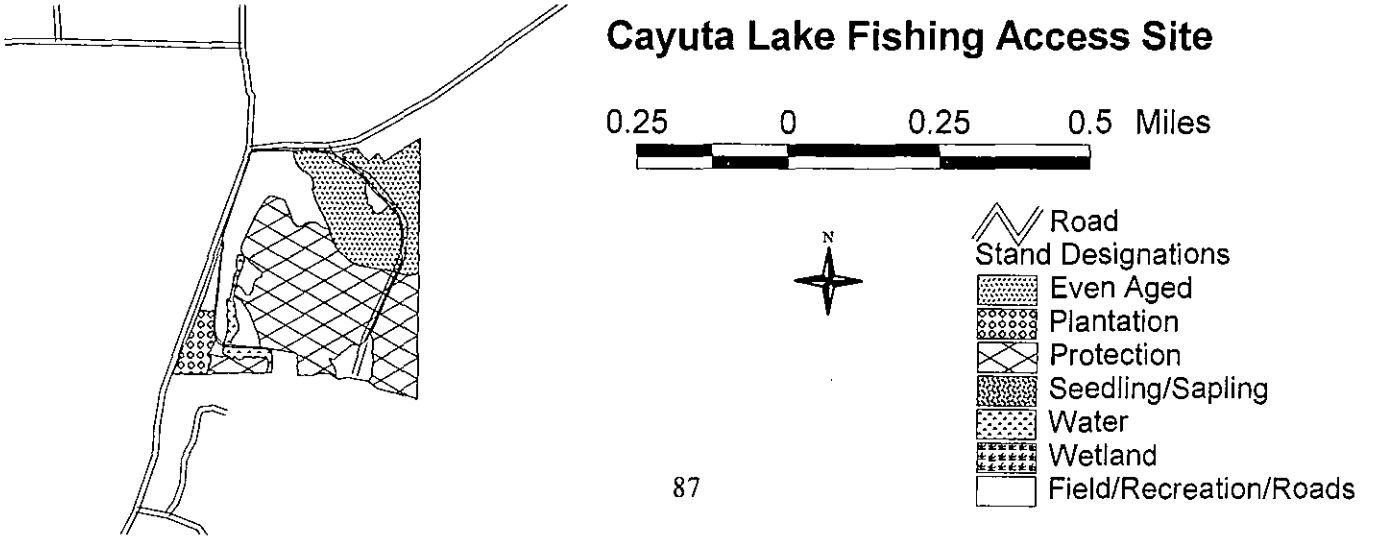
Stand Designations

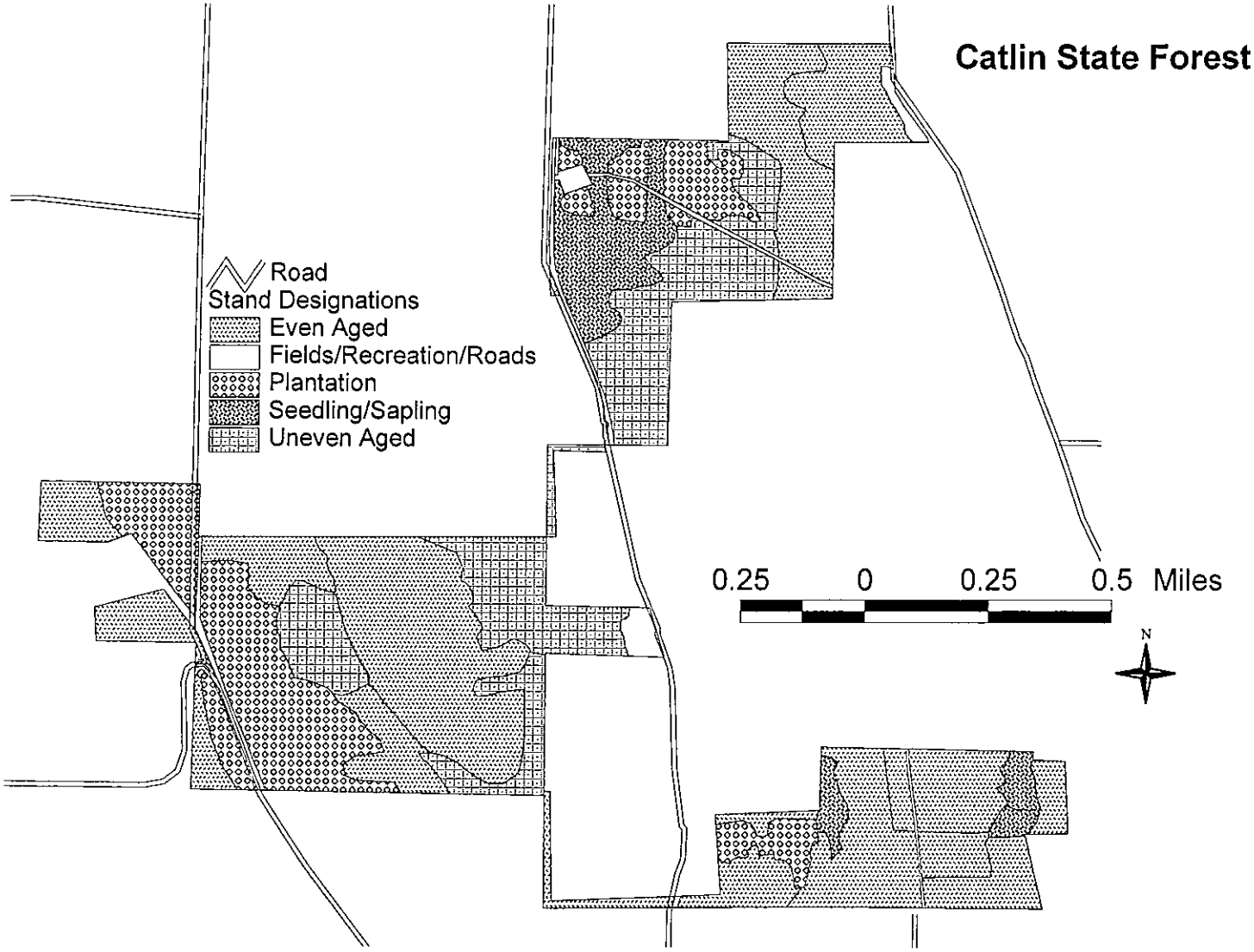


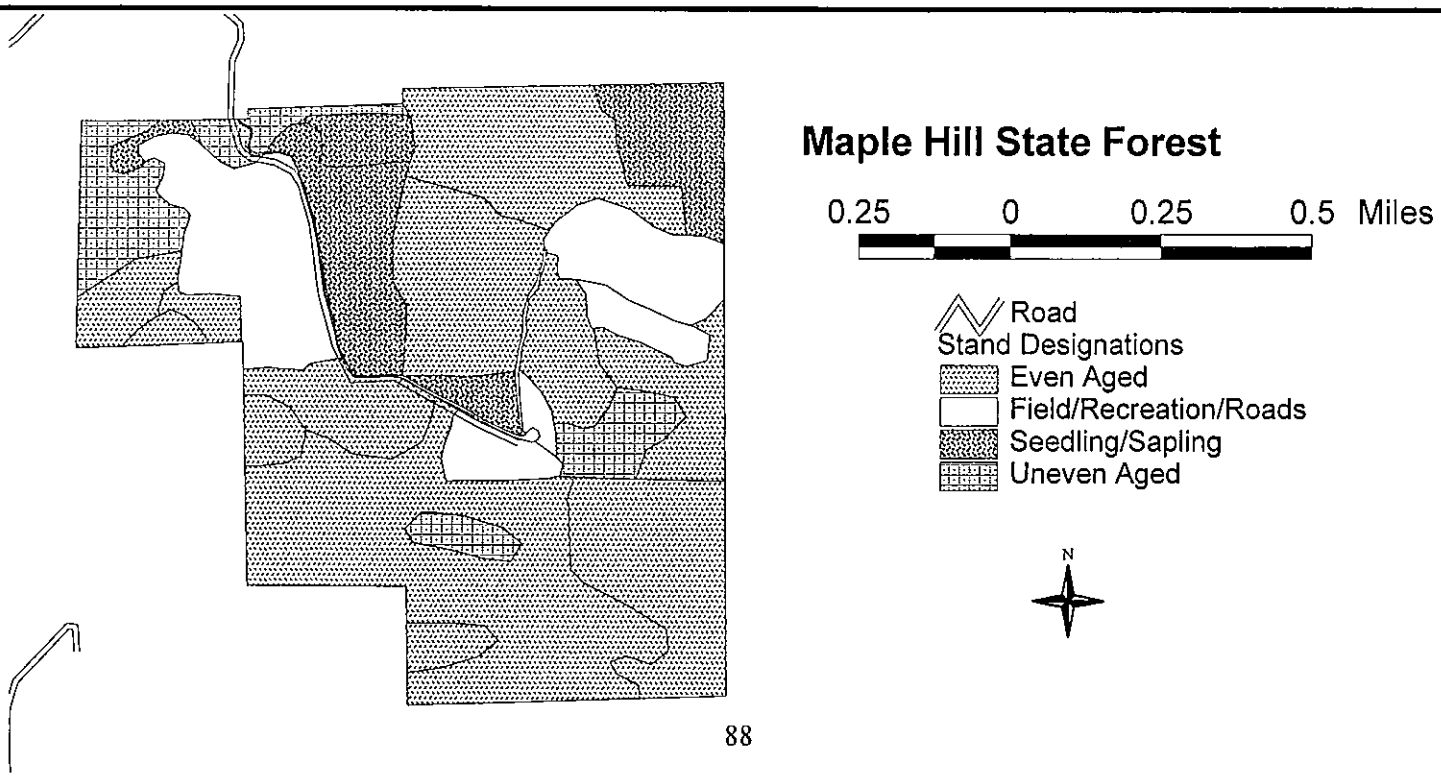
Catharine Creek Wildlife Management Area



Cayuta Lake Fishing Access Site



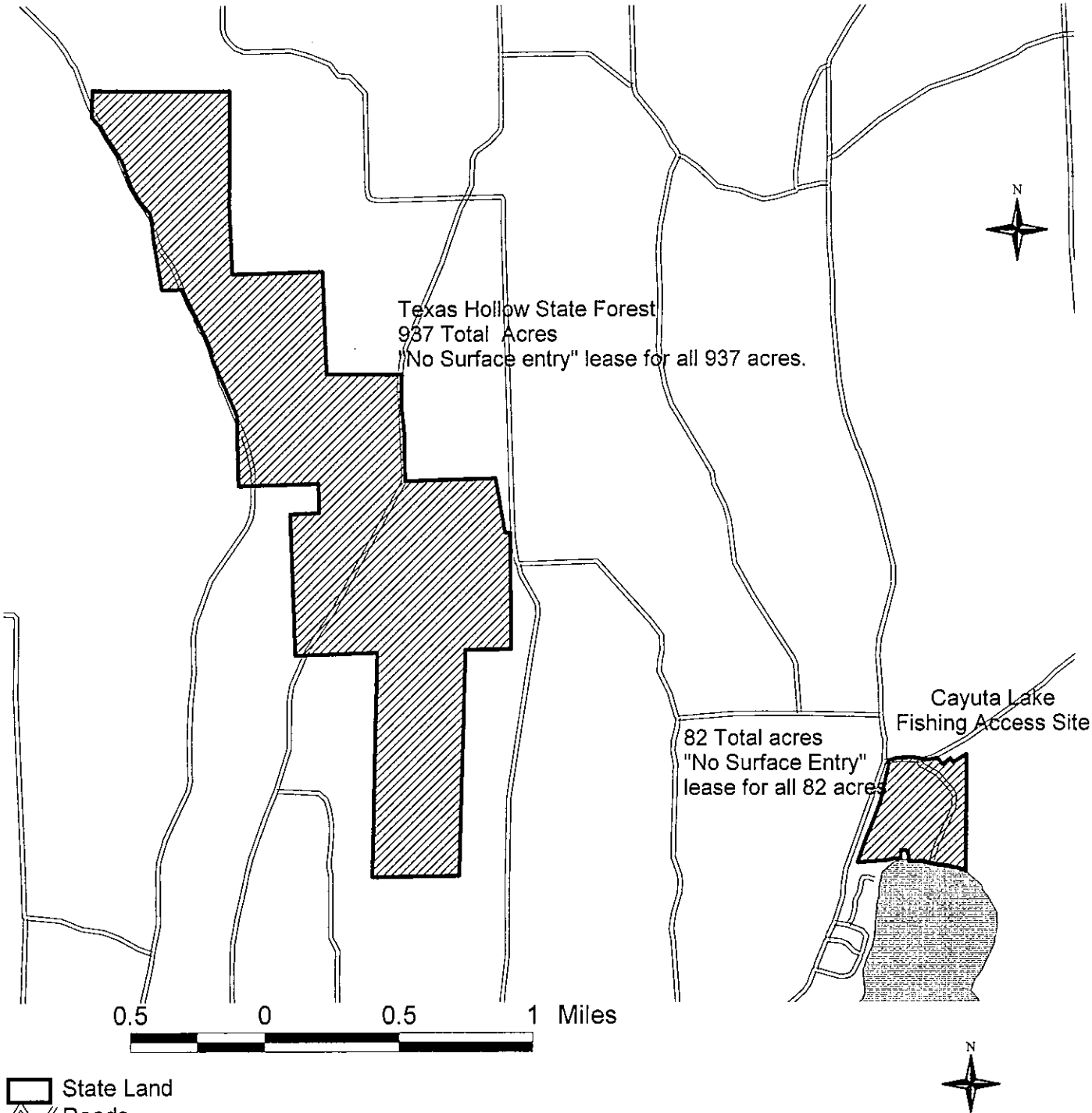

Catlin State Forest
Road
Stand Designations
Even Aged
Fields/Recreation/Roads
Plantation
Seedling/Sapling
Uneven Aged
0.25 0 0.25 0.5 Miles
N


Maple Hill State Forest
0.25 0 0.25 0.5 Miles
Road
Stand Designations
Even Aged
Field/Recreation/Roads
Seedling/Sapling
Uneven Aged
N

Recommended Exclusions from Surface Occupancy for Oil and Gas Extraction

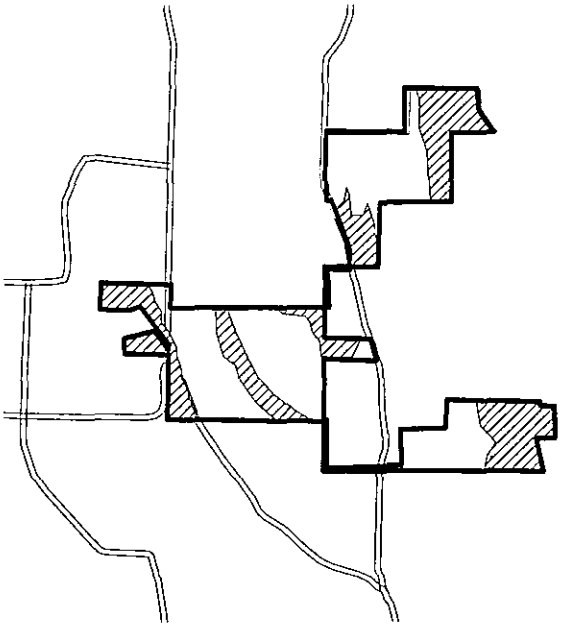
The following maps show areas that are excluded from having well pads or mines constructed. All other activities are permitted on a case by case basis during the Temporary Revocable Permit(TRP) process. See Mineral Resources sections pages 9 and 35.

Texas Hollow State Forest and Cayuta Lake Fishing Access Site



Catlin State Forest

In the event mineral rights are leased out after the current lease expires the crosshatched areas are recomended for no surface occupancy.



0.5 0 0.5 1 Miles

Catlin State Forest
613 Total Acres
About 230 Acres Excluded

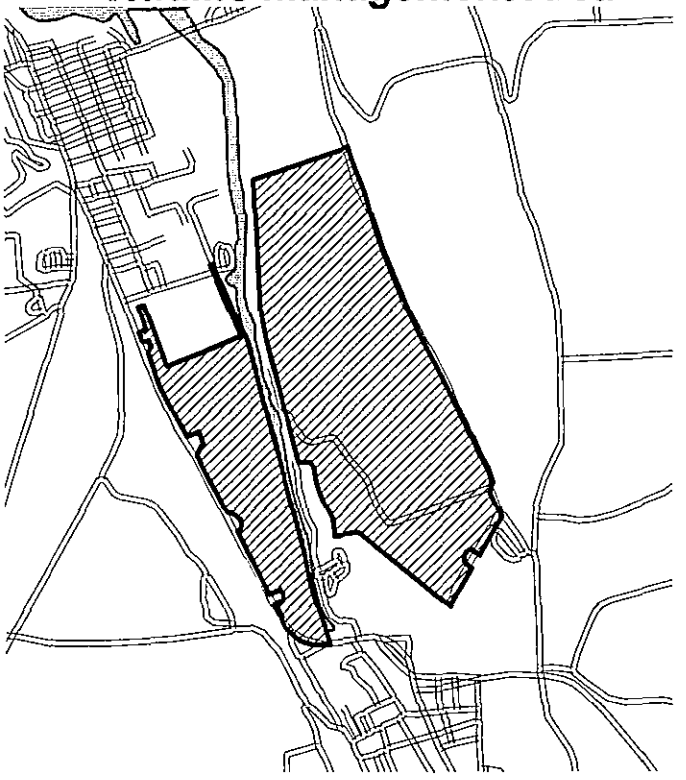
Catharine Creek Wildlife Management Area
720 Total Acres
"No Surface Entry" lease for all 720 Acres.

Maple Hill State Forest
604 Total Acres
About 220 Acres Excluded

Roads
State Land
Areas excluded from surface occupancy
Water
Stream or Lake

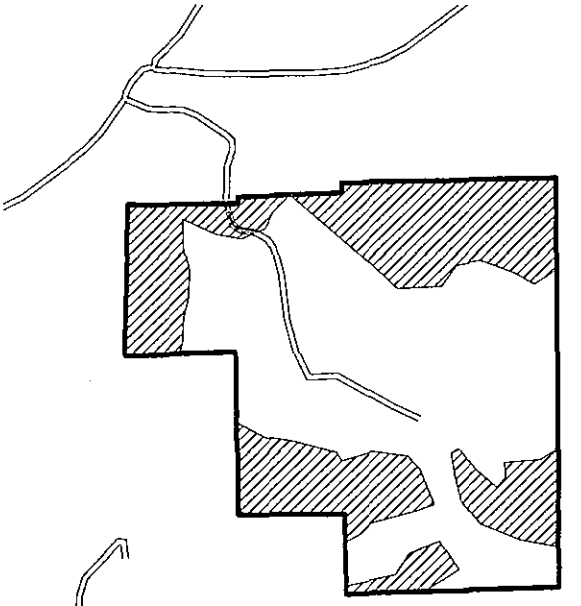
N

Catharine Creek Wildlife Management Area



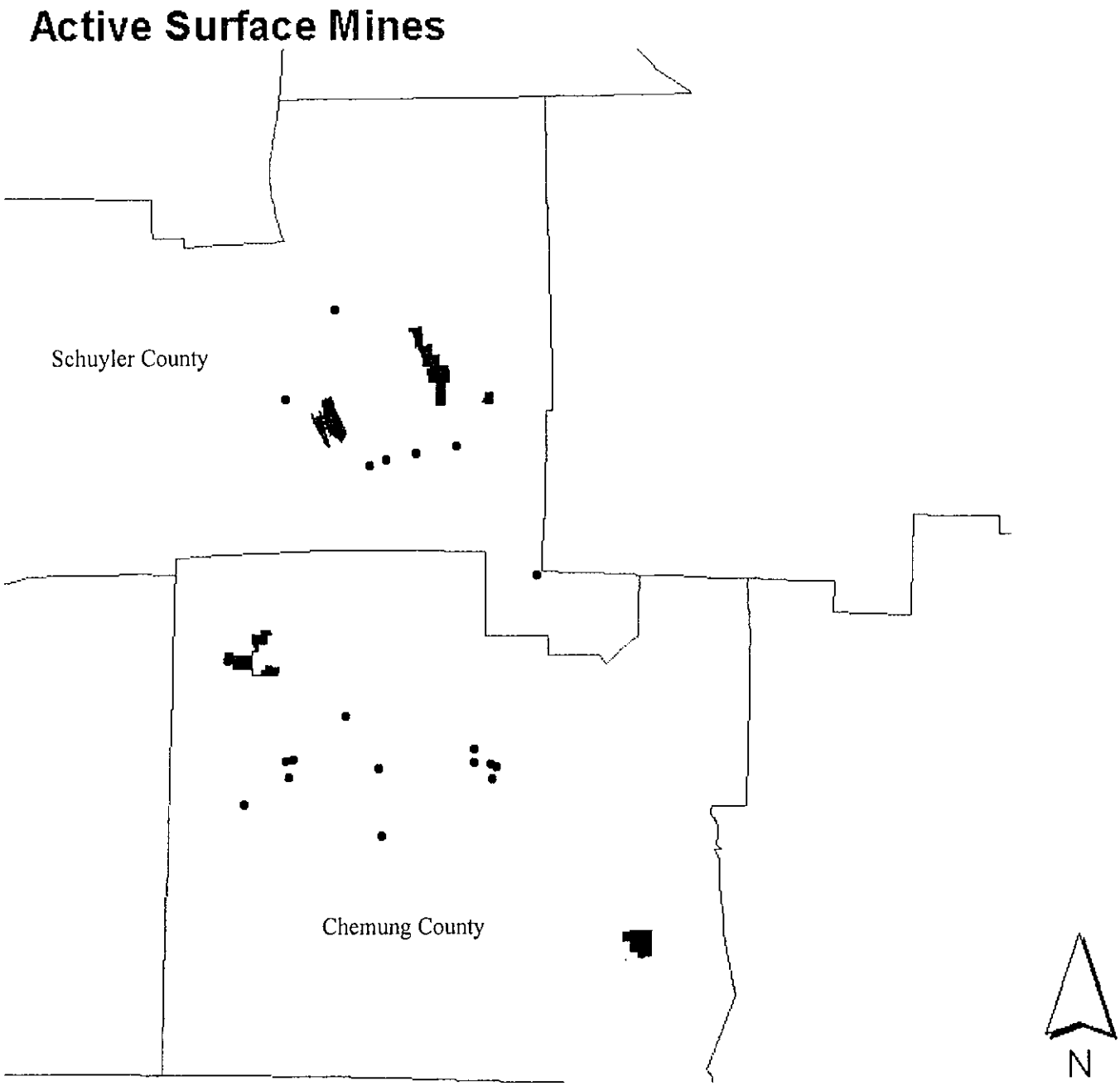
0.5 0 0.5 1 Miles

Maple Hill State Forest

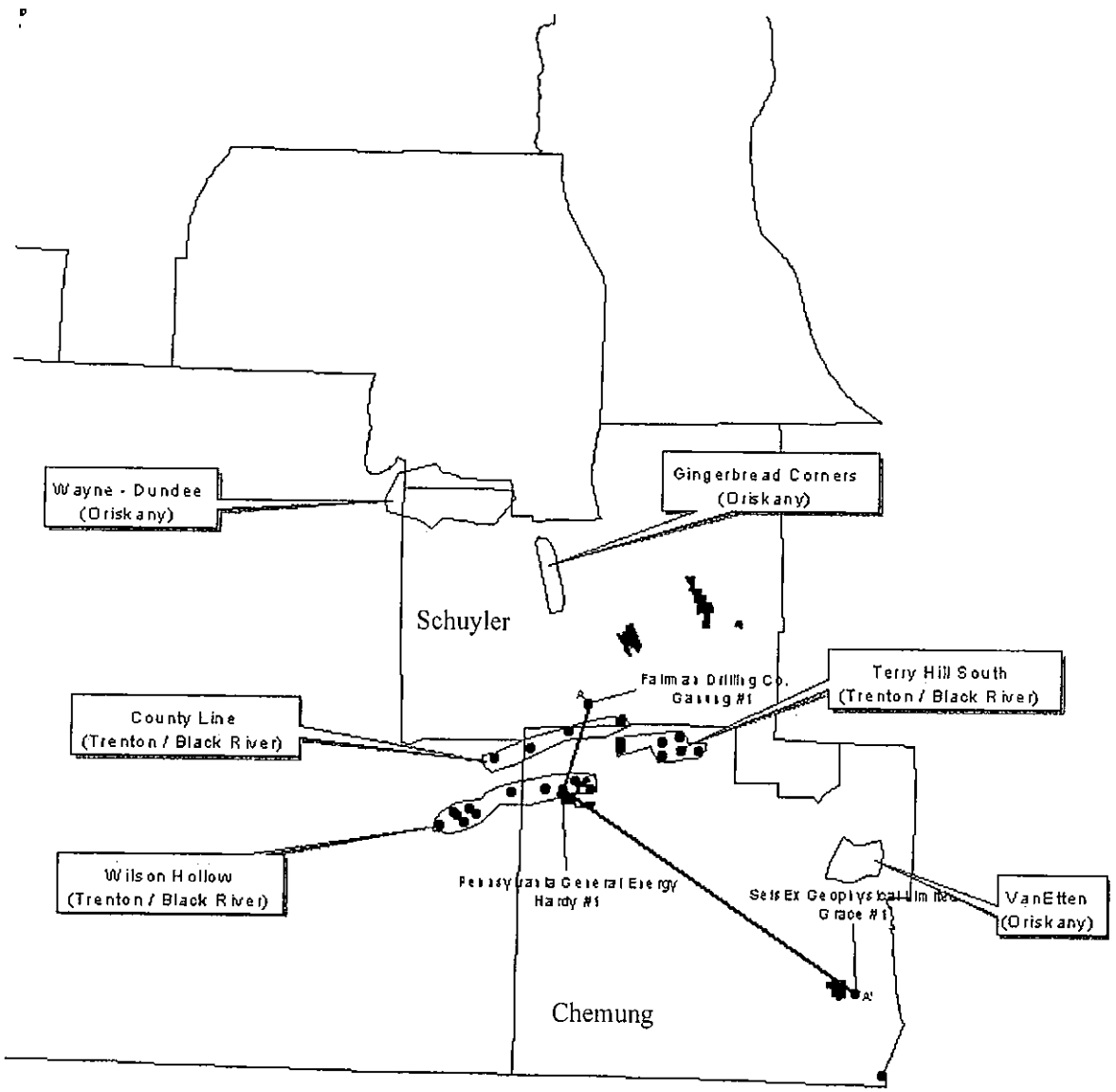


0.5 0 0.5 Miles

Gas Well and Gravel Mine Locations



Gas Well Locations



Please Note: In the interest of clarity numerous older or non-productive wells have been eliminated from this map.

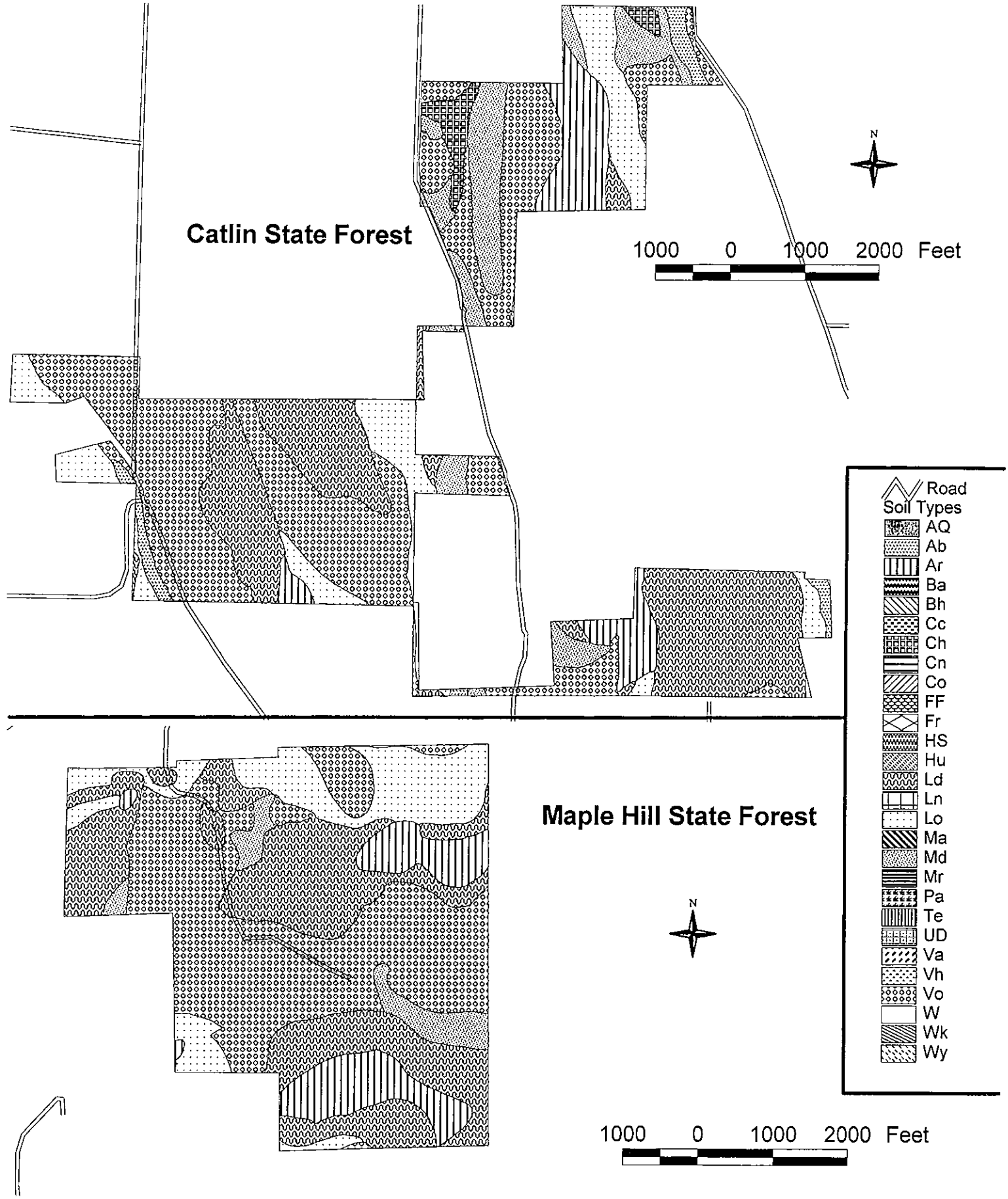
N

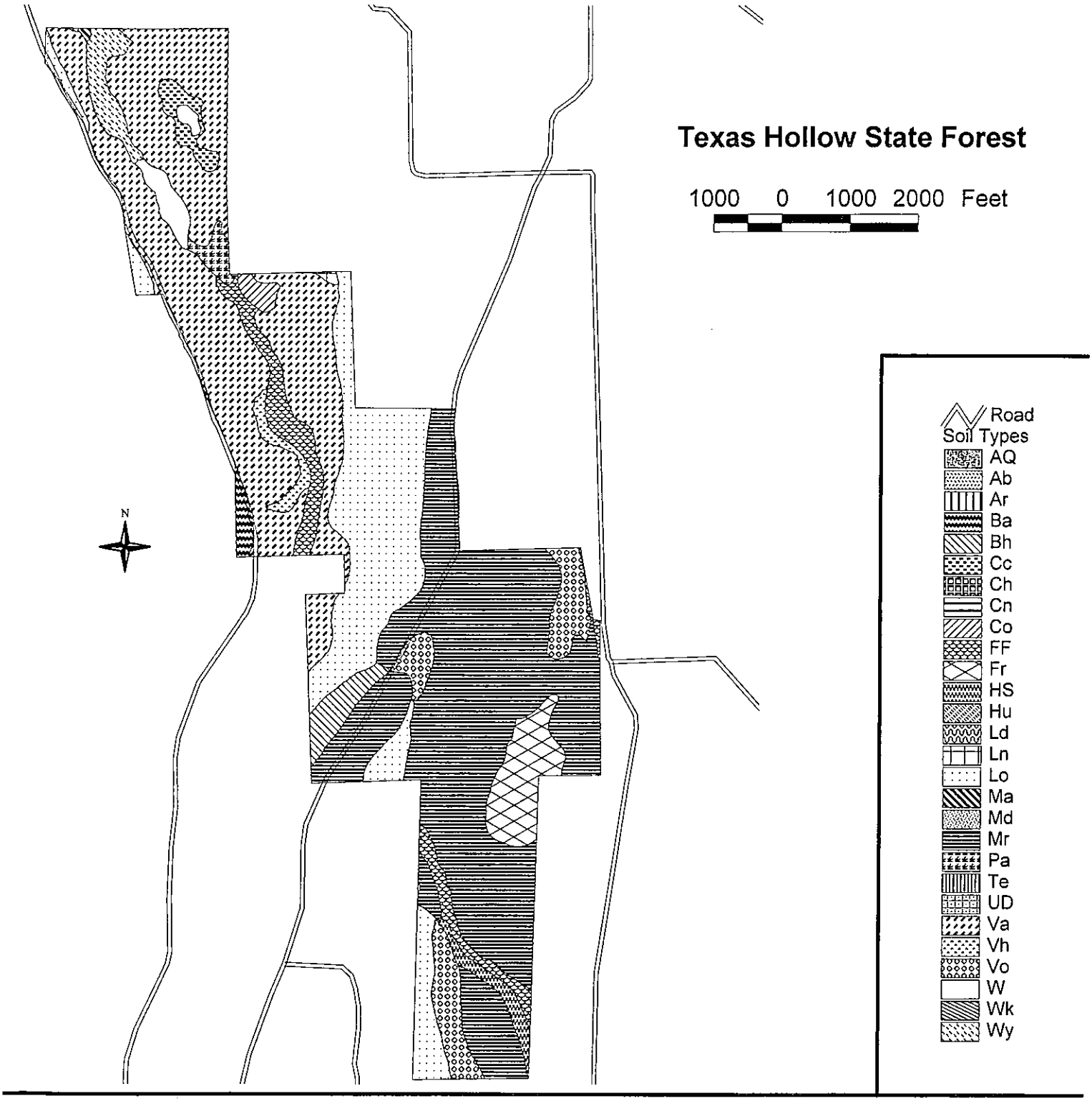
Soil Maps

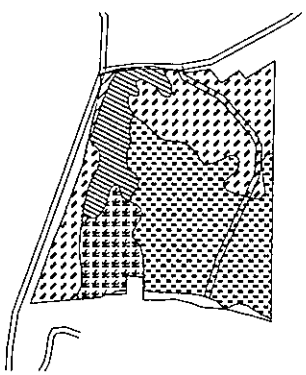
Soil Type Codes

Ab	Alluvial land		complex, frequently flooded	Pa	Palms muck
AQ	Aquepts and Saprists, ponded	Fr	Fremont silt loam	Te	Teel silt loam
Ar	Arnot channery silt loam	Hs	Howard soils	Ud	Udorthents, smoothed
Ba	Bath channery silt loam	Hu	Hudson gravelly silt loam	Va	Valois
Bh	Bath soils	Ld	Lordstown channery silt loam	Vh	Valois and Howard
Cc	Carlisle muck	Ln	Lansing gravelly silt loam	Vo	Volusia channery silt loam
Ch	Chippewa silt loam	Lo	Lordstown-Arnot complex	W	Water
Cn	Chenango gravelly silt loam	Ma	Madalin silt loam, gravelly substratum	Wk	Wallkill silt loam
Cl	Collamer silt loam			Wy	Wayland silt loam
Co	Chenango silt loam	Md	Mardin channery silt loam		
FF	Fluvaquents-Udifluvents	Mr	Mardin channery		

Catharine Creek Wildlife Management Area


Catlin State Forest
N
1000 0 1000 2000 Feet
Road
Soil Types
AQ
Ab
Ar
Ba
Bh
Cc
Ch
Cn
Co
FF
Fr
HS
Hu
Ld
Ln
Lo
Ma
Md
Mr
Pa
Te
UD
Va
Vh
Vo
W
Wk
Wy
Maple Hill State Forest
N
1000 0 1000 2000 Feet





Cayuta Lake Fishing Access Site

1000 0 1000 2000 Feet

N

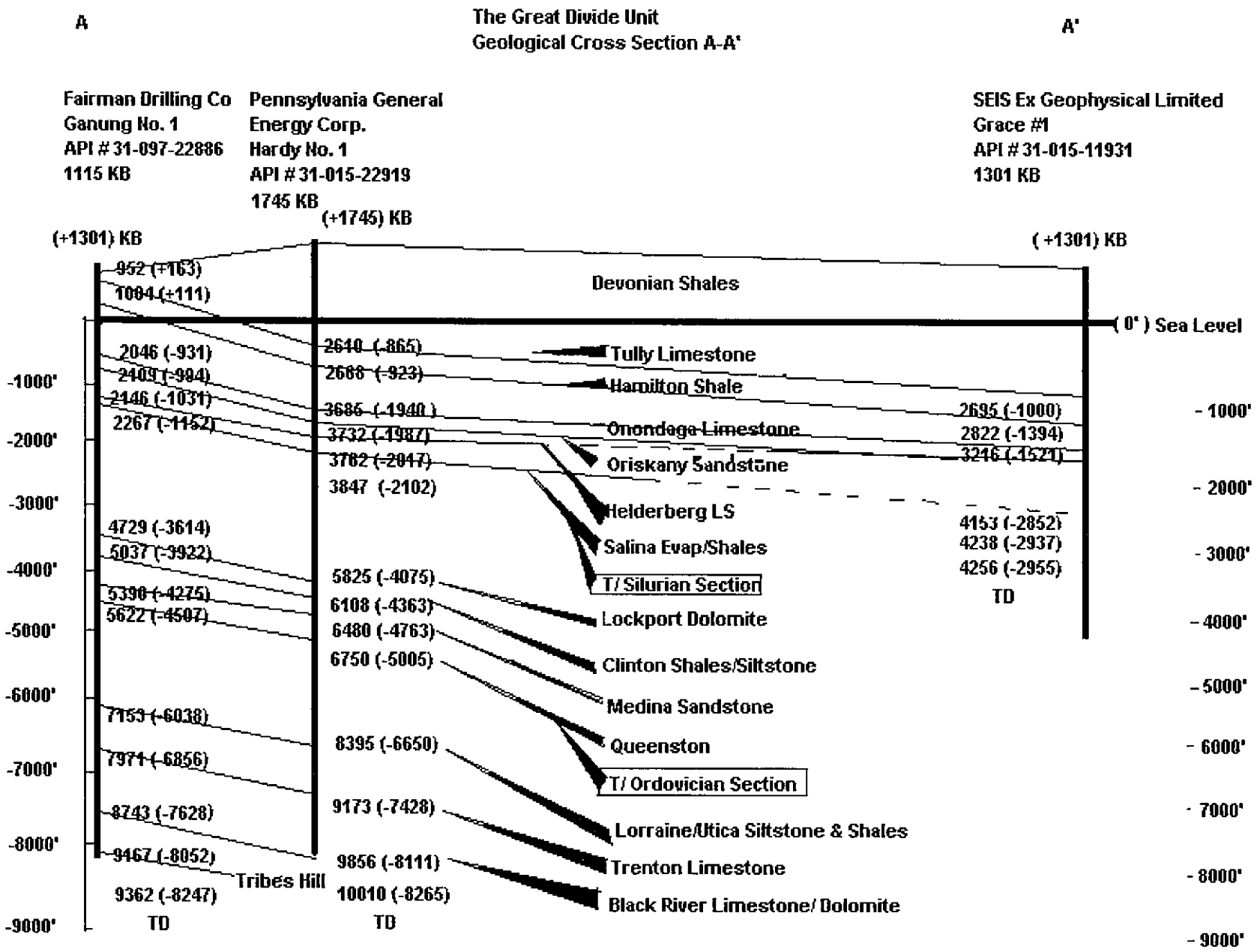
Appendix H: Wildlife Harvest

Calculated Legal Deer Take in the Towns within the Great Divide Unit Management Plan Area (1999 - 2003)

(Catharine, Dix, Hector, Montour, Catlin, and Chemung)

Year	Total Deer
1999	2695
2000	3141
2001	3340
2002	3445
2003	2388

Year	1999	2000	2001	2002	2003	Totals
Catharine	324	321	410	327	259	**1641**
Dix	340	373	486	402	270	**1871**
Hector	1103	1299	1360	1480	873	**6115**
Montour	153	201	222	267	196	**1039**
Catlin	251	361	372	361	323	**1668**
Chemung	524	586	490	608	467	**2675**
	2695	**3141**	**3340**	**3445**	**2388**	**15009**


A
The Great Divide Unit
Geological Cross Section A-A'
A'
Fairman Drilling Co
Ganung No. 1
API # 31-097-22886
1115 KB
Pennsylvania General
Energy Corp.
Hardy No. 1
API # 31-015-22919
1745 KB
SEIS Ex Geophysical Limited
Grace #1
API # 31-015-11931
1301 KB
(+1301) KB
(+1745) KB
(+1301) KB
952 (+163)
1084 (+111)
Devonian Shales
(0') Sea Level
2046 (-931)
2409 (-994)
2446 (-1031)
2267 (-1152)
2640 (-865)
2668 (-923)
3686 (-1940)
3732 (-1987)
3762 (-2017)
3847 (-2102)
Tully Limestone
Hamilton Shale
Onondaga Limestone
Oriskany Sandstone
Helderberg LS
Salina Evap/Shales
T/ Silurian Section
2695 (-1000)
2822 (-1394)
3246 (-1521)
4153 (-2852)
4238 (-2937)
4256 (-2955)
TD
4729 (-3614)
5037 (-3922)
5390 (-4275)
5622 (-4507)
5825 (-4075)
6108 (-4363)
6480 (-4763)
6750 (-5005)
Lockport Dolomite
Clinton Shales/Siltstone
Medina Sandstone
Queenston
T/ Ordovician Section
7153 (-6038)
7971 (-6856)
8743 (-7628)
9467 (-8052)
Tribes Hill
9362 (-8247)
TD
8395 (-6650)
9173 (-7428)
9856 (-8111)
10010 (-8265)
TD
Lorraine/Utica Siltstone & Shales
Trenton Limestone
Black River Limestone/ Dolomite
-1000'
-2000'
-3000'
-4000'
-5000'
-6000'
-7000'
-8000'
-9000'
- 1000'
- 2000'
- 3000'
- 4000'
- 5000'
- 6000'
- 7000'
- 8000'
- 9000'

Appendix J: SEQR

Appendix I
State Environmental Quality Review
NEGATIVE DECLARATION
Notice of Determination of Non-Significance

Identifying # 2006-SLM-8-176

Date December 28, 2005

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

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

Name of Action: Adoption of the Great Divide Unit Management Plan

SEQR Status: **Type 1** X
Unlisted ___

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

Description of Action:
The Great Divide Unit Management Plan sets forth the proposed goals, objectives, management actions and associated costs for the management of 2,956 acres on five parcels of state land in Chemung and Schuyler Counties. It includes Texas Hollow, Catlin and Maple Hill State Forests, Catharine Creek Wildlife Management Area and Cayuta Lake Fishing Access Site. The plan details management activities for a 10-year period, from 2006 - 2016. Public participation has been sought via mailings and a public meeting on September 7, 2005. Full consideration for public input has been sought prior to completion of the final draft.

Management activities planned for this unit include: The general maintenance and improvement of the facilities, public access to the state land, and managing the vegetation and wildlife, including the creation and maintenance of open fields and logging an average of 20 acres per year. Other activities include the construction of parking lots on Catlin State Forest and improving parking along Texas Hollow Road on Texas Hollow State Forest, improving parking as needed along the shoulders of existing roads and assisting the OPRHP in maintaining the Catharine Valley Trail. In addition, on Maple Hill State Forest, the Sutton trail will be converted from a dead end to a CP3 loop trail to accommodate people with disabilities. Small water hole amphibian activity centers will be created and maintained and trails will be designated for recreational use. The boat launch ramp on Cayuta Lake Fishing Access Site will be rehabilitated and a new dock built if feasible. Best management practices for the control of erosion, and integrated pest management for the control of insects will be followed. Acquisition of adjoining land from willing sellers will be sought, when possible. All silvicultural, gas or other mineral activity will be monitored. Endangered and

threatened species will be protected as well as historical and archaeological resources.

Location:
Great Divide Unit: Texas Hollow State Forest, Towns of Hector and Catharine in Schuyler County; Catlin State Forest, Town of Catlin, Chemung County; Maple Hill State Forest, Town of Chemung, Chemung County; Catharine Creek Wildlife Management Area, Towns of Montour and Dix in Schuyler County; and Cayuta Lake Fishing Access Site, Town of Catharine in Schuyler County.

Reasons Supporting This Determination:
(See 617.7(a)-(c) for requirements of this determination; see 617.7(d) for Conditioned Negative Declaration)

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

> State Forest Commercial Products Sales Program, Habitat Management Activities, Wildlife Habitat Management on State Forest Land, Red Pine Plantation Clearcut Program, New York State Open Space Plan, and the State Forest Recreation Management Program, Generic Environmental Impact Statement On the Oil, Gas and Solution Mining Regulatory Program (Final,1992)

Activities which would require a site specific environmental review under the State Environmental Quality Review Act (SEQRA) include: prescribed fire, site preparation with herbicide, and clearcuts larger than 40 acres. In addition, if after the public review process, activities are added to the plan to provide better management of the unit and are not covered by this Negative Declaration or cited Programmatic/Generic Environmental Impact Statements, DEC will undertake a site specific environmental review for such activities. Activities relating to oil and gas exploration would also require a site specific environmental review and permit.

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

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

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

Construction of new facilities shall include the construction of two parking lots and improving parking as needed along the shoulders of existing roads. These projects with be placed so as to minimize short and long term impacts by constructing the lots on level ground with reasonable slope. These projects will entail: clearing of brush and some trees, grading and applying gravel and the installation of culverts and ditches used to control drainage and erosion as necessary. This will improve public access and safety.

The aesthetic resources will be protected by law enforcement activities, screening of logging activities, and by limiting disturbance in sensitive areas. Scenic views will be preserved by the removal of screening vegetation. There will be a favorable impact on energy resources, since timber management will produce fuelwood. The noise impact of construction and logging will occur so briefly as to be inconsequential.

Small water hole amphibian activity centers are constructed by scooping out soil in a suitable location, such as near a spring or on soil that will hold water. They are at least 6 foot deep, and vary in size and shape from 10 feet up to 40 feet. They are left to fill naturally with water and animals such as salamanders and frogs. Construction will take place during periods of dry weather. Best management practices will be followed to minimize any potential erosion or sedimentation problems to surrounding water bodies.

The conversion of the trail on the Maple Hill State Forest will require some minor tree cutting, the application of some gravel and the use of filter fabric to minimize any erosion as necessary.

The fishing access site and dock construction will involve minimal impact. Disturbance to the site will be temporary in nature. Construction will be done when there is no harm to spawning fish.

Archaeological and historical impacts will be minimized by disturbing the ground as little as possible. Any construction, forestry or minerals activities will incorporate the use of best management practices, including but not limited to such considerations as: locating improvements to minimize necessary cut and fill; locating improvements away from streams, wetlands, and unstable slopes; use of proper drainage devices such as water bars and broad-based dips; locating trails to minimize grade; laying out trails on existing old roads or cleared or partially cleared areas; using stream crossings with low, stable banks, firm stream bottom and gentle approach slopes; constructing stream crossings at right angles to the stream; limiting stream crossing construction to periods of low or normal flow; avoiding areas where habitats of threatened and endangered species are known to exist; and using natural materials to blend the structure into the natural surroundings. Parking lots or other structures will be located on flat, stable, well-drained sites in areas that require a minimum amount of tree cutting. Construction will be limited to periods of low or normal rainfall. The size of the parking lots will be the minimum necessary for the intended use. Wherever possible, wooded buffers will be used to screen parking lots from roads. These actions will not have significant impacts on the environment.

If Conditioned Negative Declaration, provide on attachment the specific mitigation measures imposed, and identify comment period (not less than 30 days from date of publication in the ENB)

For Further Information:

Contact Person: Gretchen Cicora

Address: NYS DEC
7291 Coon Road
Bath, NY 14810

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

For Type 1 Actions and Conditioned Negative Declarations, a Copy of this Notice is sent to:

Appropriate Regional Office of the Department of Environmental Conservation

Chief Executive Officer, Town/City/Village of

Other involved agencies (if any)

Applicant (if any)

Environmental Notice Bulletin - NYS DEC - 625 Broadway - Albany, NY 12233-1750 (Type One Actions Only)

Appendix K: Soils

Aquepts and Saprists

Aquepts and Saprists are commonly called fresh water marsh. These soils are covered by shallow water nearly the year around. Aquepts are in areas of varying mineral soil deposits, and Saprists are in areas of organic muck deposits. Some areas have both of these soils. Cattails and other water-tolerant plants are the principal vegetation. These soils are level and are on broad flats adjacent to open bodies of water.

Wallkill silt loam

This deep, very poorly drained, nearly level soil is in areas on flood plains. Slope ranges from 0 to 3 percent but is mostly less than 2 percent.

Typically, the surface layer of this soil is very dark grayish brown silt loam 5 inches thick. The subsoil is mottled, dark gray silt loam 11 inches thick. The next layer is mottled, black silt loam 2 inches thick. This is underlain by black, well decomposed organic material 20 inches thick. The substratum is very dark gray silt loam to a depth of 60 inches or more.

Wayland silt loam

This deep, poorly drained and very poorly drained, nearly level soil is on low-lying flood plains of major streams and in old oxbows and slackwater areas at the outer edge of higher flood plains. Slope ranges from 0 to 3 percent but is mostly less than 2 percent.

Typically, the surface layer of this soil is very dark grayish brown silt loam 6 inches thick. The upper part of the subsoil is mottled, friable, dark gray heavy silt loam 7 inches thick. The lower part of the subsoil is mottled, friable, dark grayish brown, light silty clay loam 7 inches thick. The substratum is firm, gray silty clay loam to a depth of 60 inches or more.

Teel silt loam

This deep, moderately well drained to somewhat poorly drained, nearly level soil is on flood plains of the larger meandering creeks in the county. Slope ranges from 0 to 3 percent.

Typically, the surface layer is dark grayish brown silt loam 10 inches thick. The upper part of the subsoil is friable, dark brown silt loam 6 inches thick. The lower part of the subsoil is friable, brown silt loam 16 inches thick and is mottled in the lower part. Next is an older, grayish brown silt loam in the upper part and mottled, very dark brown silt loam in the lower part. The substratum is olive gray loam to a depth of 60 inches or more.

Lordstown-Arnot complex, steep

This complex consists of steep, moderately deep, well drained Lordstown soils and steep, shallow, well drained Arnot soils. The soils are in long, narrow areas on upper valley walls. In most areas, bedrock forms a series of wide steps that are covered with soil material to form a smooth slope. A thin covering of Arnot soils is at the edge of each bedrock step, and the moderately deep soil between the steps is mainly Lordstown soils. Slope ranges from 25 to 35 percent. The Lordstown soils make up about 45 percent of this complex, the Arnot soils about 40 percent, and included soils about 15 percent.

Typically, the surface layer of the Lordstown soils is dark grayish brown channery silt loam 2 inches thick. The

subsoil is friable, channery silt loam 20 inches thick. It is yellowish brown in the upper part and brownish yellow in the lower part. The substratum is pale brown very channery silt loam 2 inches thick. Fine-grained sandstone bedrock is at a depth of 24 inches.

Typically, the surface layer of the Arnot soils is dark gray channery silt loam 2 inches thick. The subsoil is 13 inches thick. It is strong brown channery silt loam in the upper 3 inches and yellowish brown very channery silt loam in the lower 10 inches. Sandstone bedrock is at a depth of 15 inches.

Mardin channery silt loam, 15 to 25 percent slopes

This deep, moderately well drained, moderately steep soil is in narrow, oblong areas on side slopes of a dissected plateau. The areas receive runoff from higher adjacent soils.

Typically, the surface layer is dark grayish brown channery silt loam 4 inches thick. The subsoil is 42 inches thick. The upper 10 inches of the subsoil is yellowish brown, friable channery silt loam and light olive brown channery loam; the middle 3 inches is mottled, light brownish gray channery silt loam/ the lower 29 inches is a very firm fragipan of olive brown channery silt loam. The substratum is very firm, olive brown very gravelly loam to a depth of more than 60 inches.

Volusia channery silt loam, 8 to 15 percent slopes

This deep, somewhat poorly drained, sloping soil is on lower hillsides and toe slopes that receive runoff from higher adjacent soils.

Typically, the surface layer is grayish brown channery silt loam 4 inches thick. The subsoil is mottled, friable, pale brown channery silt loam 5 inches thick. The next layer is mottled, firm, light grayish brown channery silt loam 3 inches thick. This is underlain by a very firm fragipan of mottled, dark grayish brown channery silt loam 36 inches thick. The substratum is dark grayish brown channery silt loam to a depth of 60 inches or more.

Valois gravelly silt loam, 15 to 25 percent

This deep, well drained, moderately steep soil is on lower valley side slopes and hilly areas near valley bottoms. Some areas receive runoff from higher adjacent soils.

Typically, the surface layer is dark brown gravelly silt loam 4 inches thick. The subsoil is 38 inches thick. In sequence from the top, it is 8 inches of very friable, dark yellowish brown gravelly silt loam; 13 inches of friable, yellowish brown gravelly loam; 8 inches of friable, yellowish brown gravelly sandy loam; and 9 inches of brown very gravelly sandy loam. The substratum is brown very gravelly sandy loam to a depth of 60 inches or more.

Carlisle muck

This deep, very poorly drained soil is in bogs and swamps in the lowest parts of the landscape. Most areas are adjacent to lakes.

Typically, this soil is black and very dark gray, well decomposed organic material to a depth of more than 60 inches.

Palms muck

This deep, very poorly drained, nearly level soil is in small, undrained closed depressions throughout the county.

The areas commonly border areas of deeper muck deposits. Slope is mostly less than 2 percent but ranges to as much as 3 percent.

Typically, the top layer is black, well decomposed organic material 21 inches thick. The underlying material is light gray light silty clay loam to a depth of 60 inches or more.

GLOSSARY

Access Trails - May be permanent, 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. These trails are constructed according to Best Management Practices.

Allegheny Hardwoods - Composed of primarily of black cherry, white ash, and tulip poplar. May contain lesser amounts of sugar maple, beech, red maple, red oak and basswood.

Allowable cut - The amount of wood fiber that may be harvested annually or periodically for a specified area over a stated period in accordance with the objectives of management.

Alluvium - Clay, silt, sand, gravel or similar material deposited by running water.

Anticlinal - Rock layers that are folded so that the layers are inclined away from each other (like the legs of a capital A).

Basel Area - The cross sectional area of a tree at breast height, measured in square feet. (Forestry Handbook, 2nd Edition, 1984, p.287) For a stand: the total basal area per unit of area, usually expressed as square feet per acre. ("Silvicultural Systems For The Major Forest Types of The United States", USDA Ag. Hndbk. #445, 1973, p.103)

Bedrock - Hard lithified or consolidated rock units that underlie the unconsolidated or partially-consolidated surface (geology) sediments and soils deposited during recent sedimentation and glacial sedimentation.

Best Management Practices (BMP's) - Practices and techniques that control erosion of soil or other contaminants from the site.

Board Foot - A piece of lumber 1 inch thick, 12 inches wide and 1 foot long, or its equivalent.

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

Canadian Shield - the stable portion or nucleus of the North American continent, primarily igneous and metamorphic rocks, located primarily in northeastern Canada, Michigan, Wisconsin and Minnesota.

Clast - A fragment of rock

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

Clearcut - The removal of a forest overstory. This practice is done in preparation of the reestablishment of a new forest through regeneration. One form of even aged management.

Conifer - Needle bearing trees.

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

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

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

Defoliated - Complete, or almost complete removal of leaves from a living tree.

Dip - The angle that strata (rock layers) or planar features deviate from horizontal.

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

Early Successional Forest - Trees and brush that grow after disturbance such as plowing, fire or clearcut. Common species include grass, raspberries/black berries, white pine, aspen, red maple, black cherry, birch etc.

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

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

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

Ecosystem - A complex of living organisms and their environment.

Endangered - Native plants (and animals) in danger of extinction throughout all or a significant portion of their ranges within the state and requiring remedial action to prevent such extinction (NYCRR Title 9 Part 193.3)

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

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

Faulting - a fracture or crack that has had movement parallel to the fracture's surface

Fluvial - pertaining to sediments deposited by stream or river actions

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

Glacier / Glacial - a large mass of ice and snow that is moving on the land's surface

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

Hardwoods - Broadleafed trees.

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. Public motor vehicle use is not allowed, but pedestrian travel is encouraged. All administrative roads are gated and warning signs are posted. The standards for these roads are those of Class C roads as provided for in the Forest Road Handbook.

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

Homocline - geologic structure that is dipping or inclined in one direction and at the same angle of inclination

Kame - a short ridge, hill, or mound of stratified glacial deposits

Lacustrine - sediments deposited in association with the processes within a lake

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

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

Linements - linear trends of weakness or fractures in the earth's crust

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

MCFGPD - thousand cubic feet of gas per day

Moraine - sediment that is accumulated due to the actions of a glacier

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

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

Natural Forest - A forest established by natural regeneration.

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

Northern Hardwoods - Largely composed of sugar maple, American beech, yellow birch, and hemlock. These species are generally long-lived and may adapt to uneven-aged management.

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

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

Pioneer Hardwood - Early Successional trees that are hardwood, such as black cherry, white birch, red maple and aspen.

Plantation - A forest established by planting.

Pole Sized - A young tree with a D.B.H. of 6 to 11 inches.

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

Prescribed Fire - The intentional setting of forest or grass land on fire under carefully controlled conditions to achieve a vegetative or wildlife management goal adhering to a written and approved prescribed fire burn plan.

Protection Management - An area which required special management considerations. (Special cutting regimen, short rotation, long rotation, or no treatment.)

Public access roads - Are constructed and maintained to accommodate motor vehicle traffic, they are permanent, unpaved roads. They may be designed for all-weather use depending on their location and surfacing. These roads provide primary access within a Unit. The standards for these roads are those of the Class A and Class B access roads as provided for in the Forest Road Handbook.

Rare - Native plants that have from 20 to 35 extant sites or 3,000 to 5,000 individuals statewide. (NYCRR Title 9 Part 193.3)

Regeneration - To reestablish a forest stand.

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

Sawtimber Sized - A tree with a D.B.H. of 12 inches or greater.

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

Selective Harvesting - Removal of the mature timber, usually the oldest or largest trees.

Shade Intolerant - Tree species that require full sunlight to survive past the seedling stage.

Shade Tolerant - Tree species that can survive in the shade cast by older trees.

Sidetrack Well - An inclined well that is drilled from a predetermined depth within an existing well

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

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

Softwoods - Needle bearing trees, conifers

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

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

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

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

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

Stratigraphic - The layering and sequence of mapable rock units.

Succession - The gradual supplanting of one community of plants and animals by another.

Surficial - Of, or relating to, the surface

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

Synclinal - Rock layers that are folded so that the layers are inclined towards each other (like the letter V)

Till - Unstratified glacial deposits consisting of clay, sand, gravel, and boulders

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

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

Trail Head - The intersection of a trail with a ro trail head ad.

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

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

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

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

Vernal Pool - A small body of water that is present in the spring, but dries up by mid-summer.

Vertical Well - a well that is straight into the ground or is 90 degrees from horizontal.

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

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

Wetland - Land or area saturated and sometimes partially or intermittently covered with water.
Class I, II, III or IV - The designation placed upon a mapped wetland by NYS DEC as required by 6NYCRR. The four classes rank wetlands according to their ability to perform wetland functions and provide wetland benefits. Class I is the most critical.

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