NEW YORK STATE OF OPPORTUNITY. Department of Environmental Conservation

Taylor Valley

UNIT MANAGEMENT PLAN

FINAL

Towns of Cincinnatus, Cortlandville, Cuyler, Freetown, Solon, Taylor, Truxton, and Virgil

County of Cortland

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DIVISION OF LANDS AND FORESTS
Bureau of State Land Management, Region 7

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FINAL

TAYLOR VALLEY
UNIT MANAGEMENT PLAN

ADRESSING THE BAKER SCHOOL HOUSE, DONAHUE WOODS, GEE BROOK, HOXIE GORGE, AND TAYLOR VALLEY STATE FORESTS ALONG WITH THE PAPISH POND MULTIPLE USE AREA

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PREFACE

Article 9, Titles 5 and 7, of the Environmental Conservation Law, authorize the Department of Environmental Conservation (DEC) to manage lands acquired outside the Adirondack and Catskill Parks. Management, as defined by these laws, includes: **watershed *** protection, the production of timber and other forest products, recreation, and kindred purposes. The statewide Strategic Plan for State Forest Management (SPSFM) available at http://www.dec.ny.gov/lands/64567.html provides direction and a framework for meeting this legal mandate. The Taylor Valley UMP conforms to the objectives, guidelines, and policies found in the SPSFM.

It is the policy of the DEC to manage State lands for multiple benefits to serve the people of New York State. The first step in carrying out this policy is the development of Unit Management Plans (UMP) for State lands. The DEC conducts management planning on State lands to maintain ecosystems and provide multiple benefits for current and future generations.

The Taylor Valley UMP addresses management of Taylor Valley, Donahue Woods, Baker School House, Hoxie Gorge, and Gee Brook State Forests and Papish Pond **Multiple Use Area**. This plan is the basis for supporting a **Multiple Use** goal through the implementation of specific objectives and management strategies. The implementation of these objectives and management strategies ensure the sustainability, biological diversity, and protection of the Unit's ecosystems and optimize the many benefits that these State lands provide. The Unit will continue to provide **ecosystem services** such as clean water and air, carbon storage, nutrient cycling, fish and wildlife **habitat**, sustainable forest products, and a wide array of recreational opportunities.

Using a long-range vision, the principles of **ecosystem management**, and public input and current use, the Taylor Valley UMP has been developed to address management activities on this Unit for the next twenty years, with an update due in ten years. Factors such as forest health conditions, budget and staffing constraints, and wood product markets may necessitate deviations from the scheduled management activities.

*** Bold text words are defined in the glossary.**

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Forest Certification of State Forests

In 2000, New York State DEC-Bureau of State Land Management received Forest Stewardship Council® (FSC®) certification under an independent audit conducted by the National Wildlife Federation - SmartWood Program. This certification included 720,000 acres of State Forests in DEC Regions 3 through 9 managed for water quality protection, recreation, wildlife habitat, timber and mineral resources (multiple-use). To become certified, the Department had to meet more than 75 rigorous criteria established by FSC. Meeting these criteria established a benchmark for forests managed for long-term ecological, social and economic health. The original certification and contract was for five years.

By 2005 the original audit contract with the SmartWood Program expired. Recognizing the importance and the value of dual certification, the Bureau sought bids from prospective auditing firms to reassess the Bureaus State Forest management system to the two most internationally accepted standards - FSC and the Sustainable Forestry Initiative® (SFI®) program. However, contract delays and funding shortfalls slowed the Departments ability to award a new agreement until early 2007.

Following the signed contract with NSF-International Strategic Registrations and Scientific Certification Systems, the Department was again audited for dual certification against FSC and additionally the SFI program standards on over 762,000 acres of State Forests in Regions 3 through 9. This independent audit of State Forests was conducted by these auditing firms from May until July 2007 with dual certification awarded in January 2008.

State Forests continue to maintain certification under the most current FSC and SFI standards. Forest products derived from wood harvested off State Forests from this point forward may now be labeled as "certified" through chain-of-custody certificates. Forest certified labeling on wood products may assure consumers that the raw material was harvested from well-managed forests.

The Department is part of a growing number of public, industrial and private forest land owners throughout the United States and the world whose forests are certified as sustainably managed. The Department's State Forests can also be counted as part a growing number of working forest land in New York that is *third-party certified* as well managed to protect habitat, cultural resources, water, recreation, and economic values now and for future generations.

The mark of responsible forestry

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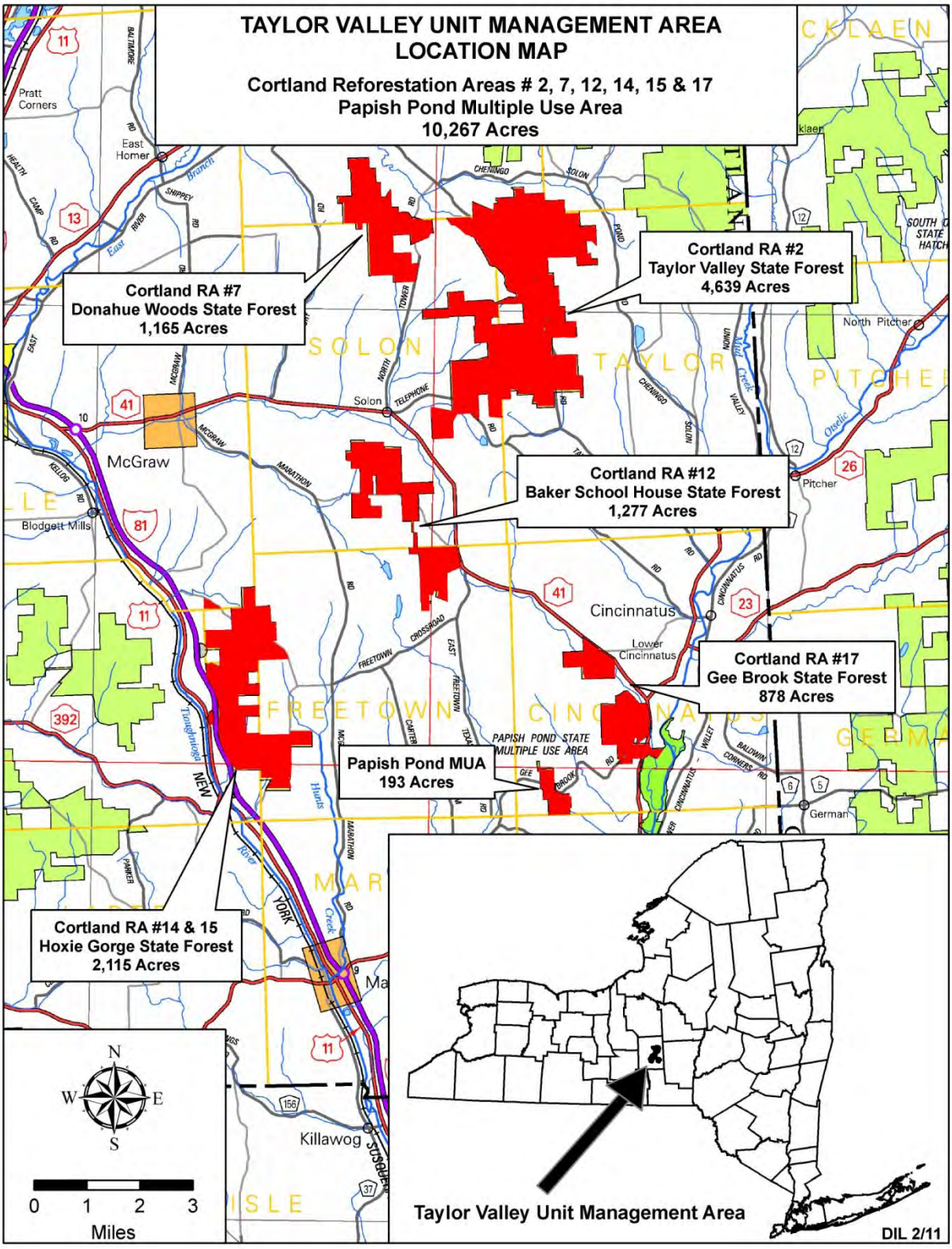
LOCATION MAP OF THE UNIT



INFORMATION ON UNIT

A. History

Settlement of central New York is linked with the final retreat of the Wisconsin Ice Sheet nearly 12,000 years ago. Groups of Paleo-Indian hunters arrived from points south by following the channels and tributaries of the Susquehanna and Allegheny Rivers. Their movements and temporary encampments were almost entirely dependent on the migration of wildlife **species** upon which they depended for survival. More permanent settlements were established during the early Woodland Period nearly three thousand years ago. The late Woodland Period is notable for the establishment of longhouse villages, a developed agricultural economy and the unification of the Mohawk, Oneida, Cayuga, Onondaga, Seneca and Tuscarora people into the Iroquois Confederacy. The Onondaga inhabited what is now Cortland County.

During the Revolutionary War the Onondaga were allied with the British in their war against the colonists. A treaty signed at Fort Stanwix in 1784 ceded much of the land occupied by Onondagas and the larger Iroquois Confederacy to the United States. At the same time, in compensation for service during the war, soldiers were guaranteed 600 acre parcels within the Military tract, which encompassed nearly two million acres of land in central New York. Cayuga and Onondaga Indian Reservations were also included in the Tract, but subsequent treaties and land deals negotiated with New York State and private individuals resulted in significant loss of reservation land. These treaties have since been challenged under the Indian Trade and Intercourse Act of 1796. The Act grants the United States and not New York State, land companies or private individuals, the exclusive right to negotiate treaties with Native Americans.

The intensity with which the New York "frontier" was transformed following Euro-American settlement was dramatic. Within a period of fifty years the wilderness of central New York, which one European observer had described as "a vast dome of vegetation where thousands of species are intertwined in a sort of chaos" had vanished (Taylor, 1995). Trees were felled, girdled and burned and farms were quickly producing goods for home use and market. By 1870, seventy three percent or 231,875 acres of Cortland County was in an "improved" condition (DOI, 1872). During this time New York led the nation in potash production fueled primarily by European demand for its use in manufacturing soap, glass and dyes. Alan Taylor suggests that the robust potash trade in central New York provided farmers with the most profitable return on their labor, and perhaps more importantly, accelerated the clearing and burning of native forests. He also argues that forest clearing diminished nature's wild diversity and that the wholesale substitution of native flora and fauna with cultivated plants and livestock resulted in a domesticated **ecosystem** capable of supporting larger human populations. Land cleared of forest not only bolstered farm productivity but provided settlers with the opportunity to accumulate capital. In 19th century America, forest land would rise in value two to three times over a ten year period while cleared land increased in value five to twenty times (Taylor, 1995).

In 1870 a charter was granted to the Utica, Chenango and Cortland Railroad Company to build a line between Cortland and Cincinnatus, passing through what is today Gee Brook State Forest. Bonds were sold to towns through which the railroad would extend but these funds were quickly

exhausted and the project remained idle for 25 years. The Erie and Central Railroad Company resumed work in 1891 and soon trains were carrying passengers, milk, coal and other freight. In 1961, the Delaware, Lackawanna and Western Railroad, that had previously merged with the Erie and Central, was granted permission to abandon the line (Ventresca, 2000). Concrete abutments adjacent to Gee Brook and the elevated railroad grade are still visible today.

By the late 19th century, urbanization, westward expansion and increasing demand for industrial labor reconfigured the rural landscape of central New York. Factories, mills and sweatshops offered an alternative to farming and the opening of America's western frontier encouraged migration out of the region. Throughout the late 19th and early 20th century, Cortland County experienced a steady increase in population, but rural towns such as Taylor, Freetown and Solon lost nearly fifty percent of their population (Matzen, 1939). In the absence of mowing, plowing and grazing livestock, much of the wide open landscape began a slow but steady transition back to forest. A study of the changing rural landscape conducted by Cornell University found that "uninhabited houses in various stages of disintegration are seen from all roads and dwellings and barns are in many cases reduced to heaps of fallen material which are rapidly disappearing under a vigorous growth of weeds and trash" (LaMont, 1939)

By 1929, a declining rural population coupled with economic depression, poverty and property tax delinquency was topic of serious debate within the State legislature. Charles J. Hewitt of Cortland, chairman of the State Senate's powerful Finance Committee, together with Governor Franklin Roosevelt undertook an ambitious program to reclaim former agricultural land through **reforestation** and scientific forest management (Patton, 1994). They successfully campaigned for the passage of the State Reforestation Act and the Hewitt Amendment which authorized acquisition of **state reforestation areas** "to be forever devoted to the planting, growth and harvesting of trees." Approximately 25,000 acres of reforestation areas would eventually be established in Cortland County including the Hewitt State Forest in Scott.

In 1931, with the United States two years into the Great Depression, Governor Roosevelt created the Temporary Emergency Relief Administration (TERA) to undertake relief and public work for unemployed men. Approximately 10,000 men were eventually employed in **forestry** projects including **release** cutting, construction of fire lines and demolition and disposal of building located on reforestation areas (SNY, 1932). As president, Roosevelt drew on the experience gained from TERA and in 1932 pledged to put one million men to work in a national reforestation program. He eventually signed legislation authorizing the Civilian Conservation Corp (CCC) to employ young men left jobless by the Depression. Under the supervision of US Army personnel, men between the ages of 18 and 26 were employed in a variety of conservation projects including road construction, flood control and reforestation. Camp S-118 was located on Taylor Valley State Forest and, together with recruits from Camp S-103 in DeRuyter, were responsible for local reforestation and other conservation work on the newly acquired state lands. By 1940 there was greater emphasis on national defense projects and when war was declared the following year, many CCC recruits were moved to military bases to assist in the war effort. The CCC was disbanded on June 30, 1942 when Congress voted to eliminate funding for the program.

Funds generated by New York State from the sale of bonds sold pursuant to the 1960 and 1962 Park and Recreation Land Bond Acts were used to acquire Multiple Use Areas (MUA). These properties were to "provide additional opportunities for outdoor recreation including public camping, fishing, hunting, boating, winter sports, and, wherever possible to also serve multiple purposes involving the conservation and development of natural resources, including the preservation of scenic areas, watershed protection, forestry and reforestation (NYSDEC,2009). Gee Brook State Forest, Papish Pond MUA, and most of Hoxie Gorge State Forest were acquired using Bond Act funds.

In January 2008, all State Forests in New York were independently certified by the Forest Stewardship Council (FSC) and the Sustainable Forestry Initiative (SFI). This certification indicates that State Forests are in compliance with internationally-recognized standards for practicing **sustainable forestry**. The certification label provides consumers with the option of purchasing goods tracked through a chain of custody system that connects responsible forest management with finished wood products (NYSDEC, 2008).

B. Geography

The Taylor Valley Unit consists of six separate land properties between the Otselic and Tioughnioga Rivers in the Cortland County towns of Cuyler, Cincinnatus, Cortlandville, Freetown, Solon, Taylor, Truxton, and Virgil.

Table 1. State Forests within the Unit.

State Land	Reforestation Area	Acres[1]	Town
Taylor Valley SF	Cortland RA#2	4,639	Cuyler, Solon, Taylor, Truxton
Hoxie Gorge SF	Cortland RA#14, 15	2,115	Cortlandville, Freetown, Virgil
Baker School House SF	Cortland RA#12	1,277	Freetown, Solon
Donahue Woods SF	Cortland RA#7	1,165	Solon, Truxton
Gee Brook SF	Cortland RA#17	878	Cincinnatus
Papish Pond MUA	Papish Pond MUA	193	Cincinnatus
Total		**10,267**	

[1] State Forest acres within this plan are based on survey/deed acres. There is a slight discrepancy (0.5%) between survey/deed acres and digitized acres as drawn using Geographic Information Systems.

The previously mentioned seven townships are part of the landscape area of the Taylor Valley Unit Management Area. Upland areas of the landscape have flat hilltops with steep side slopes, regrown and planted forest and deep cut tributary stream channels. Lower elevations are open and flat with wide stream and river channels, farms and low intensity residential development. Based on analysis using US Environmental Protection Agency digital imagery of multi-resolution land characteristics, approximately 73% of the seven town area is forested and 27% is in an open condition. Interstate 81 and State Routes 13 and 41 are the area's primary highway **corridors**. The City of Cortland is the region's principle urban area and McGraw, Cincinnatus and Truxton are local population centers.

The 2000 census data reports that 7,996 people live in the seven town area within which the unit is located. Of those employed, 24% work in education, health and social services; 23% in manufacturing and construction; 13% in wholesale and retail trade; and 8% in agriculture, forestry and mining. Median household income is $38,478 and 10% of the population lives in poverty. The unit is located within the Cincinnatus, Homer, Marathon and McGraw school districts with a total combined enrollment of 4,410 students. Total assessed value of the 10,267 acre unit is $7,454,900.00 and a total of $209,844.00 was paid in real property taxes in 2009 (includes properties that were acquired using money from the sale of Park and Recreation Lands Bond Acts, which are exempt from property taxes). See Appendix I for a description of real property assessments and taxes by State forests and Towns.

Agriculture is an important sector of the Cortland County economy with approximately 40% of its land area in farms. Market value of agriculture products sold in 2007 was $54.8 million, a 28% increase since 2002. During the same period the amount of farmland and number of milk cows decreased by 33% and 15% respectively. Beef cattle and horse numbers increased 11% and 19% respectively and the amount of grain corn and silage produced in the county increased 48% and 30% respectively (USDA,2009).

C. Geological Information

Surface Geology

Most surface geology in the Finger Lakes region and Allegheny Plateau of the 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 about ten thousand (10,000) years ago. Glacial activity left behind numerous sedimentary deposits and surficial features. These included elongate scour features. Weathering and erosion by streams and rivers has continued to sculpt the surface geology of the Allegheny Plateau to present day, resulting in the hills and valleys prevalent throughout the region. Some features filled with water creating numerous lakes, small and large. A number of these lakes to the west and northwest of this area are now called 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, siltstone, sandstone, and minor limestone that were deposited in shallow seas that existed in this region during the Devonian Period of the Paleozoic Era, about 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. The resulting surface geology of the State lands included in this unit management plan is similar due to their close proximity.

Surficial deposits overlying bedrock in the UMP area are predominantly glacial till with occasional bedrock outcrops located intermittently on the flanks and crests of ridges and hills, most likely due to erosion of overlying glacial till causing the exposure of the bedrock. Recent

alluvial and glacial outwash and **kame** deposits occur in the stream valleys in the UMP area. The alluvial deposits are generally confined to floodplains within stream and river valleys and consist of sand, gravel and silt deposits. The outwash and kame sand and gravel deposits are associated with glacial meltwater fluvial systems and deposition adjacent to the ice.

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

Bedrock Geology
Bedrock underlying the Finger Lakes region and Allegheny Plateau of the 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.

Rock units (bedrock) outcropping or subcropping beneath the unconsolidated surficial deposits throughout most of the UMP area are shales and siltstones of the Upper Devonian age Genesee Group. Shale and siltstones of the Upper Devonian age Sonyea Group comprise the bedrock on some of the hilltops in the southern portion of the UMP area.

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

Geologic Structure
Subsurface rock formations dip (become deeper) to the south-southwest at an average dip angle of about 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.

Geologic structural features in the region generally trend in a northeast to southwest direction. North-south trending faults have also been identified in the region. Structural reference is available at the *Preliminary Brittle Structures Map of New York, New York State Museum-Map and Chart Series No.31E, 1974*.

D. Soils
Soils on the unit and within the larger eight town area are of the Mardin-Lordstown-Volusia association. These soils were formed in glacial till derived from shale and sandstone within a

landscape of rolling uplands dissected by narrow valleys. Mardins are moderately well drained and deep with a firm and brittle subsoil at a depth of 14 to 26 inches. They are located on hilltops, hillsides and knolls. Lordstown soils are well drained and moderately deep with bedrock at a depth of 20 to 40 inches. They occupy benched hilltops, hillsides and ridges at higher elevations than Mardin soils. Volusia soils are poorly drained with a seasonal high water table in the upper part of the subsoil during winter and spring. These soils are predominately in low areas, in slight depressions and on foot slopes.

The Middlebury-Chenango, Scio-Wallington, and Lobdell-Howard soil associations also occur in this area, primarily within the valley floors and tributary channels of the Tioughnioga and Otselic Rivers. These soils are well drained, to somewhat excessively drained, and formed in sandy and gravelly outwash deposits.

The Unit consists of 42% well drained, 7% moderately well drained, 32% somewhat poorly drained, 4% poorly drained, and 2% very poorly drained soils.

While soil survey descriptions provide information about physical characteristics, ground-level conditions reveal much about land use history and ecological complexity. The relatively smooth ground surface condition in most **plantations** is due to repeated plowing and cropping during the 19th and early 20th centuries. These soils typically have a well-defined plow layer and soil properties such as porosity and availability of nutrients have been altered from pre-settlement conditions. Stones and other impediments to plowing have been removed resulting in a relatively uniform soil texture. Unplowed soils in contrast, have an undulating surface condition with a well-developed hummock and hollow micro topography. The hollows are created when trees are wind thrown, while the hummocks are the decayed and toppled remains of the tree's root system. Decaying logs, stumps and other **coarse woody material** (CWM) that have accumulated in **mature** forests contribute to both structural diversity and ecological complexity on the forest floor.

E. Land Classification within the Unit and Surrounding Landscape

State Forest Assessment
A detailed forest inventory was conducted for the unit during the winters of 2008 and 2009. The inventory was conducted at the **stand** level. There are nearly 700 stands within the unit. Some of the information collected for each stand includes:

- Species Type
- Forest Density
- Tree Diameter
- Tree Height
- Soil Drainage
- Topography/Slope
- Management Class
- Year Last Managed
- Forest Type
- Stand Age Structure
- Treatment Recommendations
- Treatment Interval/Priority
- Hydrologic Resources
- Wildlife Observations
- Herbaceous Plant Observations
- Forest Health Observations
- Existing Recreation Use
- **Regeneration** Observations
- Interfering Vegetation Observations
- Archeological Resources

Analysis of the collected data shows that about 95% of the unit is in a forested condition of which nearly 2% is in a **seedling/sapling** stage, 41% is in a **poletimber** stage, and 56% is in a **sawtimber** stage. The remaining 5% of the unit consists of shrubland/**grassland** (3%), open wetlands/ ponds (1%), and developed areas (1%) which include roads, shale pits, intensive recreation areas, and some utility Rights Of Way (ROW). See the following table for a more detailed assessment of the land classification within the unit.

Table 2. Land Classification within the Unit

Land Class[1]	Total Acres	Water	Herb	Shrub	Apple	Acres by Diameter Class (inches)						Percent of Total
						1-5	6-8	9-11	12-14	15-17	>18	
W	460	58	94	177	0	0	0	92	39	0	0	4.5%
ES	381		46	78	62	195	0					3.7%
NC	149							78	71	0	0	1.5%
CP	2,499							1,125	1,174	200	0	24.3%
CP/NH	776							370	382	24	0	7.6%
NH/NC	1,035							317	608	110	0	10.1%
HP	45							3	42	0	0	0.4%
NH	4,765							1,987	2,406	350	22	46.4%
DA	157											1.5%
Total	10,267	58	140	255	62	195	0	3,972	4,722	684	22	100%

[1]Land Class symbols are as follows:

W = Wetland (open water, emergent herbaceous, shrub, & forested)
ES = Early Successional (grasslands, shrub land, apple orchards, & seedling/sapling forests)
CP = Conifer Plantation
CP/NH = Conifer Plantation with a significant Native Hardwood component
NH/NC = Native Hardwoods and Native Conifer mixed
HP = Hardwood Plantation
NH = Native Hardwoods
DA = Developed Areas (Roads, shale pits, recreation areas, etc…)

Landscape Assessment

To assess the land classification of the landscape surrounding the unit, a landscape analysis was conducted using the 2001 National Land Cover Database (NLCD). The analysis, of the NLCD, was conducted at the watershed level (twelve-digit Hydrologic Unit Coverage) and included the following watersheds: Cheningo Creek, Lower and Middle Otselic River, Merrill Creek, Trout Brook, Lower East Branch, Middle, and Upper Tioghnioga River. There are approximately 210,000 acres located within the previously listed watersheds. The watersheds are about 60%

forested, 30% agriculture, 3% water, 2% shrubland/grassland), and about 5% developed. Table 3 shows a more specific land classification breakdown at the landscape level. See Appendix XIX for a map showing the land classification at the landscape level.

Table 3. Land Classification of the Surrounding Landscape

Land Classification	Acres	Percent
Open Water	2,071	1.0%
Forested Wetlands	2,662	1.3%
Emergent Herbaceous Wetlands	531	0.3%
Deciduous Forest	97,255	46.4%
Conifer Forest	11,521	5.5%
Deciduous/ConiferMixed Forest	17,593	8.4%
Shrub/Scrub (includes seedling/sapling areas)	2,887	1.4%
Grassland/Herbaceous	1,042	0.5%
Pasture/Hay	48,073	22.9%
Cultivated Crops	16,248	7.8%
Developed	9,748	4.7%
	209,631	100.0%

The State Forests within the unit cover approximately 5% of the land area within the watersheds listed above. The State forests account for about 5% of landscape's forests. The State forests account for about 5% of the landscape's **deciduous** forest, 23% of the evergreen forests, and 11% of the mixed forests. The State Forests, within the Taylor Valley Management Unit, account for less than 0.5% of the landscape's shrubland/grassland type. The Unit accounts for over 8% of the landscape's water cover type. The State Forests account for about 11% of the woody wetlands within the landscape, about 18% of the emergent herbaceous wetlands, and about 3% of the open water.

F. Forest Resources

Cover Types

The forested portions of the unit are dominated by four broad **cover types**; **northern hardwoods**, **conifer** plantations, northern hardwood-native conifer, and native conifers. The broad cover types, previously mentioned, occupy the following area within the unit:

- Northern hardwoods occupy 5,075 acres or 52% of the area in a forested condition (includes approximately 30 acres of classified **forested wetlands**, 62 acres of wild apple/hawthorn, and 23 acres of native hardwood plantations).
- Conifer plantations occupy 3,275 acres or 34% of the area in a forested condition (includes 776 acres of the cover type conifer plantations-northern hardwoods, which are conifer plantations with a high component of northern hardwoods).
- Northern hardwood-native conifer occupies 1,062 acres or 11% of the area in a forested condition (includes about 27 acres of classified forested wetlands).

- Native conifers occupy 223 acres or 2% of the area in a forested condition (includes approximately 74 acres of classified forested wetlands).

The **northern hardwood** cover type can be broken down into more specific cover types such as sugar maple, sugar maple-beech-yellow birch, sugar maple-basswood, black cherry-maple, beech-sugar maple, and red maple (Eyre, ed., 1980). All of the specific northern hardwood cover types can be found to some degree within the unit although the sugar maple-beech-yellow birch type is most abundant. These specific cover types are named after the most prevalent (based on density) tree species. Trees within the unit that are associated with the northern hardwood cover type include: sugar maple, American beech, yellow birch, red maple, Eastern hemlock, white ash, black cherry, basswood, sweet birch, northern red oak, white pine, American elm, butternut, bitternut hickory, pin cherry, quaking aspen, and big-tooth aspen . Some common **understory** trees, shrubs, groundcovers, and vines associated with northern hardwoods include: striped maple, American hornbeam, eastern hop hornbeam, serviceberry, spicebush, flowering dogwood, witch-hazel, hobblebush, hawthorn, elderberries, blueberries, black berries, raspberries, viburnums, and grapes (Eyre, ed., 1980).

Conifer plantations were established after the State acquired the properties within the unit. Conifer plantations were located on former agricultural lands to help stabilize soils, improve water quality, and provide timber for future generations. According to DEC planting records about 4.6 million conifer tree seedlings were planted on the unit. The tree seedlings were planted by CCC camp recruits (S-103 & S-118), correctional facility inmates (Camps Georgetown & Pharsalia), social services' program participants, and DEC crews. Many species were planted including: balsam fir, Douglas fir, European larch, Japanese larch, Norway spruce, red pine, Scots pine, white cedar, white pine, and white spruce. The majority of seedlings planted were Norway spruce followed by red pine. Many plantations were planted with only one species while others were planted with two or more species. Understory layers are usually sparse until a silvicultural or natural **disturbance** takes place.

The northern hardwood-native conifer cover type on the unit consists of mostly northern hardwood-hemlock types although there are a few scattered northern hardwood-white pine stands. The northern hardwood-native conifer type consists of at least 10% northern hardwoods and at least a 10% conifer component.

The native conifer cover type within the unit consists of a hemlock type and a white pine-hemlock type. The hemlock type consists of over 90% hemlock while the white pine-hemlock type consists of a majority of white pine and hemlock.

Age Structure

The forested stands within the unit are currently dominated by an age-structure known as **even-aged**. Trees within an even-aged forest are about the same age and are established at about the same time usually after a disturbance (natural or silvicultural) or through **succession** (i.e. an open field that has reverted to forest). Other age structures present within forested stands of the unit include **uneven-aged** (three or more distinct age classes) and **two-aged** (two distinct age-

classes). The current age structures of stands within the unit, in a forested condition are as follows:

- Even-aged stands make-up about 76% or 7,385 acres of the forested area within the unit.
- Two-aged stands make-up about 12% or 1,212 acres of the forested area within the unit.
- Uneven-aged stands make-up about 12% or 1,155 acres of the forested area within the unit.

G. Wetlands and Water Resources

The unit lies within the upper reaches of the Susquehanna River drainage basin with tributary streams feeding the Tioughnioga and Otselic Rivers. These two rivers converge below the Whitney Point Reservoir, flow south into the Chenango River and eventually into the Susquehanna River in Binghamton. The Susquehanna River flows south through Pennsylvania and Maryland before discharging into the Chesapeake Bay.

Wetlands

Wetlands vary widely across the landscape because of differences in characteristics such as: hydrology (temporarily/seasonally flooded to permanently flooded), soils, topography, and vegetation (submergent aquatic plants to forested tree cover). Common freshwater wetlands include marshes, bogs, fens, swamps, vernal pools, and spring seeps. Wetlands perform many functions that provide numerous benefits to people, fish, and wildlife. Wetlands provide flood protection and abatement; control erosion and sedimentation; maintain water quality; recharge groundwater supplies; maintain surface water flows; provide fish and wildlife habitat; produce and recycle nutrients; provide recreation; provide open space; provide biological diversity.

There are regulations in place to protect wetlands and the numerous functions and benefits that they provide. Wetlands are protected pursuant section 404 of the Federal Clean Water Act. The Army Corps of Engineers regulates activities that may impact wetlands, such as placement of fill, by a permit review process. Most designated wetlands have been classified by the U.S. Fish & Wildlife Service and are listed in the National Wetlands Inventory. In New York State, all freshwater wetlands are protected pursuant to the New York State Freshwater Wetlands Act, if they are at least 12.4 acres in size and meet criteria specified in section 24-0107 of the Act. Certain wetlands that are smaller than 12.4 acres may also be protected by the Act. Title 6, Part 664, of the New York State Environmental Conservation Rules and Regulations establishes a classification system of freshwater wetlands. This system creates four classifications for freshwater wetlands (class I, class II, class III, and class IV). The classification of a freshwater wetland, regulated under the New York State Freshwater Wetland Act, is based on the ability of the wetland to perform functions and provide benefits. Class I wetlands perform the most functions, while Class IV wetlands perform the least amount of functions.

Portions of five Classified Freshwater Wetlands are located on the unit. Three are part of a large wetland complex associated with Cheningo Creek on Taylor Valley State Forest (CN-1, CY-3 and CY-4), one is located on Bakers School House State Forest (MG-2), and one on Donahue Woods State Forest (TR-4). See Appendix II for additional information about classified wetlands found on the unit.

There are other wetlands on the Taylor Valley Management Unit that are not classified under Federal or State Laws. These non-classified wetlands include spring seeps, riparian wetlands, and other types of wetlands.

Streams

All **perennial streams** within the Taylor Valley Unit Management Unit have one or more of the following **water quality classifications:** C(ts), C(t), or C. Class C, class C(t), class C(ts) streams are capable of supporting fisheries, more specifically, class C(t) and C(ts) streams are capable of supporting a trout population. **Intermittent streams** on the Unit are not classified. There are about 23-miles of streams, with classification of class C or higher, on the Unit.

Appendix III provides information about the perennial streams on the Unit. This information includes: location by State Forest; stream name; stream classification; and length of stream.

Ponds

There are three constructed ponds on the unit totaling 64 acres. Papish Pond, also known as Glover Pond or High Lake, is located within the Papish Pond Multiple Use Area in the Town of Cincinnatus, Cortland County. Papish Pond can be accessed by taking NYS Route 41 and 26 to Gee Brook Road which runs along the northern edge of Papish Pond. Papish Pond falls under the jurisdiction of the "Bureau" of Fisheries within the Division of Fish Wildlife and Marine Resources. Parking at Papish Pond is provided along the shoulder of Gee Brook Road and launching of boats without motors is provided at an access site off Gee Brook Road near the western end of the pond. Fishing, including ice fishing, is permitted during the regular open season for all fish species present.

Papish Pond was constructed by John Glover in the mid 1800s to power a mill that he and his son had erected. It was constructed by impounding tributary 26 of the Otselic River. The Department's Protection of Waters Program (ECL Article 15) has classified Papish Pond and its outlet as "C" for waters supporting fish. Since Papish Pond is navigable, it receives additional protection under ECL Article 15.

DEC Dam Safety Section's latest inspection has determined that the dam at Papish Pond is a Class C – High Hazard Dam. The Dam Safety Section in cooperation with Division of Operation's Bureau of Design and Construction are currently addressing this high hazard dam by implementing a remediation plan to lower the hazard. The remediation plan shall begin during the spring of 2014.

Calico Pond is located within Gee Brook State Forest, which is in the Town of Cincinnatus, Cortland County. Calico Pond can be accessed by taking NYS Route 41 to the Calico Pond Public Forest Access Road (PFAR) located directly across from the intersection of Piety Hill Road. There is no vehicular access to Calico Pond. From the parking area at the end of the PFAR to the pond there is a trail, which is about 0.4 mile.

Calico Pond, also known as Lieb Pond was constructed many years ago by impounding a small tributary to Gee Brook. The Department's Protection of Waters Program (ECL Article 15) has

classified Calico Pond and its outlet as “C” for waters supporting fish. Gee Brook has been classified by the Department as “C(t)” for waters supporting trout, which gives the stream additional protection under the provisions of this program.

Raymond Suarez Pond is located within Gee Brook State Forest. It was built prior to state ownership by Raymond Suarez in 1956. There is no vehicular access to this pond. The pond can be accessed by taking NYS Route 41 and 26 to Gee Brook Road and then to the PFAR off of Gee Brook Road to the rock barricade. Past the rock barricade use the haul road and access trails for about 0.8 mile to access the pond.

H. Wildlife Resources

The Taylor Valley Management Unit and the landscape surrounding the Unit contain a variety of wildlife including many species of mammals, birds, amphibians, reptiles, fishes, and invertebrates such as snails, mussels, insects, spiders and worms. Many resources were consulted to assess the variety of wildlife and wildlife habitat in and around the Unit.

Birds

The 2007 New York State Breeding Bird Atlas is a comprehensive, statewide survey that reveals the distribution and protective status of breeding birds in New York State. The most recent data, for the Breeding Bird Atlas, was collected from 2000 to 2005. Nine Breeding Bird Atlas blocks (4070B, 4071D, 4170B, 4170D, 4171A, 4171B, 4171C, 4172C, & 4172D) were assessed to determine the possible, probable, and confirmed breeding bird species found on the Unit and surrounding vicinity. The Breeding Bird Atlas confirmed or predicted that there are 123 bird species breeding on the Unit or the surrounding vicinity. Appendix V shows these species by common name, scientific name, breeding status, and protective status.

Most of the 123 bird species are protected by the New York State Environmental Conservation Law. Two species were identified as threatened in New York State and five species of birds were identified as a species of special concern. The **threatened species** are the bald eagle and the pied billed grebe. The bird species of special concern are all birds of prey--the Cooper’s hawk, Northern goshawk, red-shouldered hawk, sharp-shinned hawk, and osprey are the species of special concern.

Amphibians & Reptiles

The Amphibian and Reptile Atlas Project was a ten-year survey, conducted by the DEC that was designed to document the geographic distribution of New York’s amphibians and reptiles. The survey was conducted from 1990 to 1998. The project predicts 28 species of amphibians and reptiles on or in the vicinity of the Taylor Valley Management Unit. A complete list of the 28 species by common name, scientific name, and protective status is found in Appendix VI.

Mammals

The New York **GAP** Mammal Hexagon Database was used to determine the distribution of mammals on or in the vicinity of the Unit. Other sources were used to determine the protective status of these species. The sources include: the NYS DEC public website, the U.S. Fish and Wildlife Service website, and the New York Natural Heritage Program (NYNHP) website.

The New York State GAP confirmed or predicted 52 mammalian species on or in the vicinity of the Unit. A complete list of mammals that were confirmed or predicted, on the Unit or surrounding area, can be found in Appendix VII.

The analysis revealed one bat species that is endangered. The Indiana Myotis or Indiana bat is predicted on or in the vicinity of the Unit and is listed as endangered by both the State and the Federal government. This bat hibernates in caves or mines and forages near water. While in their summer range, the Indiana bat prefers to roost under the bark of living or dead trees.

Other mammals on or around the Unit are considered unprotected or game species. Information on some of the more popular game species can be found below.

Fishes

There are many fish species found on the Unit including both warmwater and coldwater species. Warmwater species found on the Unit include: largemouth bass, chain pickerel, pumpkinseed sunfish, black crappie, yellow perch, and brown bullhead. Coldwater species found on the Unit include: brook trout, white suckers, fallfish, central stonerollers, blacknose dace, longnose dace, cutlips minnows, creek chubs, matoms, and sculpins. The three constructed ponds on the Unit provide warmwater habitat, while the 23 miles of Class C and higher streams provide coldwater habitat. See Appendix VIII for additional fisheries information, including survey data (type, species, numbers, and size).

Calico Pond has a surface area of about 6 acres and a maximum depth of 8 feet. Papish Pond has a surface area of about 38 acres and a maximum depth of 15 feet. Raymond Suarez pond has a surface area of about 20 acres and a maximum depth of about 8 feet. The ponds have undeveloped, somewhat irregular shorelines and light to moderate aquatic plant growth, which provides good spawning and rearing habitat for the fish species present.

Fishery surveys have been conducted by the Department in the past. The last fisheries survey of Calico Pond was carried out in 1966. The regional fisheries file indicates two fisheries surveys have been carried out on Papish Pond. The first survey was carried out on May 17 and 18, 1961 and the second fisheries survey of Papish Pond was carried out on February 11, 1969. These surveys revealed the presence of fairly diverse warmwater fish communities. Length ranges of the fish collected indicated they were not stunted and were present in the quantities and sizes found desirable by many anglers. Raymond Surez Pond has never been surveyed by the Department, although the fish species should be similar to the species found in Papish and Calico Ponds.

Gee Brook is the only stream on the Unit that has been surveyed by the Department. This survey was conducted in 1983. It revealed a fairly diverse coldwater fish community. Other streams within the Unit most likely contain similar coldwater fish species.

Game Species

There are many game species located on or in the vicinity of the Taylor Valley Management Unit. Game species are protected by regulated hunting/trapping seasons. Game species on or in the vicinity of the Unit include amphibians, birds, and mammals. Game species contribute to the local economy and provide outdoor recreation. More details about some of the major game species can be found below.

- White-tailed Deer - The Department manages deer populations in Wildlife Management Units (WMUs). The majority of the Taylor Valley Management Unit falls within WMU number 7M, although there is a small portion in 7R. A Citizen Task Force (CTF), made-up of local interest groups such as farmers, foresters, hunters, motorists, and the tourism industry, recommend a desired deer population to the Department. Deer populations are controlled with regulated hunting through the use of Deer Management Permits (DMP). DMPs are permits to harvest antlerless deer. Using the recommendations, of the CTF, Department biologists determine the number of DMPs to issue within a WMU.

  Excessive deer populations can be detrimental to forested ecosystems. Deer can alter the forest understory by over-browsing. Over-browsing can completely eliminate certain tree, shrub, and herbaceous species. Over-browsing may eliminate the forest understory layer, which can cause increased nest predation to ground-nesting and shrub-nesting birds, alters food sources for a variety of wildlife, and can impact the future forest composition and structure.

  A deer harvest assessment can be found in Appendix IX. This assessment contains deer harvest numbers by towns within the Taylor Valley Management Unit.

- Turkey - Once extirpated from New York State as a result of over-hunting and habitat loss, the wild turkey currently has a secure population throughout the State. Wild turkeys are protected as a game species and can be hunted during two seasons (Spring and Fall). Turkey harvest records can be found in Appendix X.

- Furbearers - There are many species, on or in the vicinity of the Taylor Valley Management Unit, that are considered furbearers. Furbearers, on or in the vicinity of the Taylor Valley Management Unit that can be hunted and/or trapped include: American beaver, mink, common muskrat, short-tailed weasel, long-tailed weasel, red fox, gray fox, common raccoon, coyote, Virginia opossum, and the striped skunk. Appendix XI shows harvest records for the American beaver and the coyote.

Important Habitat Features

The Taylor Valley Management Unit and the surrounding landscape provide diverse habitats for a variety of wildlife species. The assessments conducted above, along with forest inventories, revealed important habitat features on the Unit. The following habitat features must be considered to ensure a healthy diverse wildlife population:

- Coniferous Forest Cover Type - As stated above, the coniferous (evergreen) forests, within the Unit, account for about 23-percent of the coniferous forests in the landscape. Some birds require a conifer component as part of their habitat. Some of the conifer dependent birds, which are confirmed or predicted to be on or near the Unit, include: pine sisken, purple finch, hermit thrush, yellow-rumped warbler, blackburnian warbler, magnolia warbler, black-throated green warbler, dark-eyed junco, golden-crowned kinglet, winter wren, and the blue-headed vireo.

  There are also mammals that require and/or benefit from coniferous forests. Mammals that require and/or benefit from the coniferous forests, on the Unit, include: the red squirrel, snowshoe hare, deer mouse, Southern red-backed vole, white-tailed deer, and Hoary bat.

- Late Successional Forest Habitat – Late successional forest habitat is lacking within the Unit and across the landscape. The following are late successional forest habitat characteristics that are being considered to ensure a healthy diverse wildlife population:
  - Continuous Mature Forest Canopy - The bald eagle population, in New York State has been increasing since the 1970s, but they are still threatened by habitat loss due to development. The bald eagle prefers relatively undisturbed, forested areas near wetlands or large water bodies that support healthy fish populations. The Cooper's hawk, Northern goshawk, red-shouldered hawk, and sharp-shinned hawk do have variations in their habitat requirements although they all require a continuous mature forest canopy. Other bird species found on or near the Unit that require a continuous mature forest canopy are, pileated woodpecker, common raven, and broad-winged hawk.

    Mammals that require a continuous mature forest canopy include: black bear, bobcat, fisher, and Northern flying squirrel.

    A portion of the Unit (about thirty acres) falls into the Chenengo Highlands Forest Matrix Block. This area is an open wetland with scattered shrubs.

  - Multi-Layered Forest Canopy Structure - There are many bird species on or near the Unit that require a multi-layered forest canopy structure as a habitat requirement. Some of the birds that require a multi-layered forest canopy structure are: the golden-crowned kinglet, hermit thrush, black-throated green warbler, yellow-rumped warbler, ovenbird, red-eyed vireo, warbling vireo, black-and-white warbler, least flycatcher, scarlet tanager, yellow-throated vireo, black-throated blue warbler, Canada warbler, American redstart, veery, and common yellowthroat.

  - Forest Landscape Connectivity – With the continued threat of forest fragmentation (breaking the forest up into islands across the landscape), it important to secure connections between large unfragmented forested landscapes (forest matrix block) to minimize the effect of non-contiguous forest cover on connectivity and the movement and dispersal of animals in the landscape as described in the *Strategic Plan for State*

Forest Management. The *Strategic Plan for State Forest Management* can be accessed by using the following link: http://www.dec.ny.gov/lands/64567.html . Least Cost Path (LCP) corridor locations were predicted and identified in the *Strategic Plan for State Forest Management.* LCP corridors are two miles wide, connect large unfragmented forests and represent the most favorable dispersal path for forested species.

- Cavity Trees/Snags/Course Woody Material - Many wildlife species use **cavity trees**, **snags,** or **Course Woody Material (CWM)** for perching, feeding, nesting, and/or roosting. Some wildlife use live cavity trees while others use dead cavity trees.

  Some of the bird species, on or near the Unit, that use cavity trees include: red-breasted nuthatch, brown creeper, Eastern bluebird, house wren, tree swallow, American kestrel, Eastern screech owl, barred owl, black-capped chickadee, pileated woodpecker, tufted titmouse, downy woodpecker, great-crested flycatcher, Northern flicker, white-breasted nuthatch, hairy woodpecker, Carolina wren, winter wren, common merganser, hooded merganser, and wood duck.

  Mammals in or around the Unit that use cavity trees include: Indiana bat, little brown bat, silver-haired bat, big brown bat, Virginia opossum, gray squirrel, Northern flying squirrel, porcupine, gray fox, raccoon, fisher, short-tailed weasel, and long-tailed weasel.

  Snags may have cavities or they may not. Snags without cavities are used mostly as perches or foraging sites. Birds on or near the Unit that utilize snags include: sharp-shinned hawk, Cooper's hawk, broad-winged hawk, red-tailed hawk, turkey vulture, American kestrel, bald eagle, brown creeper, great blue heron, green heron, great-horned owl, pileated woodpecker, and barred owl.

  Mammalian species that may den in CWM include: the Virginia opossum, Eastern chipmunk, Southern red-backed vole, gray fox, black bear, fisher, short-tailed weasel, and long-tailed weasel, mink, striped skunk, and bobcat. CWM is home to many wood-decaying insects that are used as a food source for many birds, mammals, amphibians, and reptiles. Many species of amphibians and reptiles live in or under the moist, soft, rotting wood of CWM.

- Wetlands/Riparian Areas - Although all wildlife needs water to survive, there are many wildlife species that use water as their primary habitat. Wildlife uses all types of wetlands or **riparian areas** including spring seeps, vernal pools, swamps, bogs, ponds, and streams. The birds on or near the Unit that utilize water as their primary habitat include: the pied billed grebe, Canada goose, common merganser, hooded merganser, great blue heron, green heron, mallard, wood duck, belted kingfisher, spotted sandpiper, swamp sparrow, alder flycatcher, willow flycatcher, bald eagle, Northern waterthrush, bank swallow, cliff swallow, common yellowthroat, and Virginia rail.

Mammals on or in the vicinity of the Unit that use water as part of their primary habitat include: the American beaver, common muskrat, Southern bog lemming, big brown bat, little brown bat, Northern myotis, Indiana myotis, silver-haired bat, star-nosed mole, raccoon, mink, long-tailed weasel, and river otter.

Nearly all the amphibians and reptiles, on or near the Unit, require water for at least part of their life cycles.

- **Early Successional** Habitat- Early successional habitat includes grasslands, shrublands, and seedling/sapling sized forested stands. Early successional habitat,in the area is in decline as a result of change in the amount of agriculture lands and development. Many farms are no longer operating and the open land associated with the farms is reverting to forests and being developed.

  Birds on or in the vicinity of the Unit that require a grassland type habitat are: the savannah sparrow, Eastern meadowlark, bobolink, and Northern rough-winged sparrow.

  If grasslands are not maintained (mowed) as grasslands, they will revert to forest through a process known as succession. Shrubs and **pioneer** tree species will be the first woody residents to become established--these shrubs and seedling/sapling sized trees provide habitat to a variety of wildlife species. This early successional habitat is used by a number of bird species found in and around the Unit. The bird species include: the ruffed grouse, Northern cardinal, yellow-rumped warbler, Nashville warbler, blue-winged warbler, mourning warbler, yellow warbler, prairie warbler, American crow, white-throated sparrow, field sparrow, song sparrow, chipping sparrow, indigo bunting, Eastern bluebird, mourning dove, red-tailed hawk, turkey vulture, American goldfinch, American robin, American woodcock, cedar waxwing, common grackle, Eastern towhee, gray catbird, house wren, Baltimore oriole, and Eastern phoebe.

  Many mammals also depend on early successional habitat for food and cover. Mammals on or in the vicinity of the Unit that utilize early successional habitat include the red fox, gray fox, white-tailed deer, Eastern cottontail, woodland vole, Eastern chipmunk, woodchuck, Southern bog lemming, and meadow jumping mouse.

I. Significant Plants, Wildlife and Ecological Communities

The New York Natural Heritage Program has identified the pied-billed grebe and Jacob's ladder on Taylor Valley State Forest. In New York State the pied-billed grebe is classified as a threatened species and Jacob's ladder is classified as a rare plant.

The pied-billed grebe is a diving bird that inhabits quiet marshes, shorelines of ponds, and slow moving streams with sedgy banks or adjacent marshes. Loss of wetland habitat through draining, filling and pollution is currently the greatest threat to this species. The threats lead degradation, isolation, and **fragmentation** of wetlands leaving many marshes that were too small or were not

part of larger marsh complexes, unsuitable for grebes. The pied-billed grebe is protected by the Migratory Bird Treaty Act. (NHP, 2009a)

Jacob's Ladder is a vascular plant found in wet meadows and swamps. Although it tolerates closed canopy conditions, regular flowering only occurs in open areas. Succession of open wetlands is considered a threat to Jacob's ladder but in New York the number of plants and number of sites where the plant occurs is expected to remain stable over time (NHP, 2009b).

Block Data from the New York State Breeding Bird Atlas database indicate that two threatened species and five species of Special Concern have been observed within the seven town area. The threatened species are the pied-billed grebe (mentioned above) a probable breeder and the bald eagle, which is a possible breeder. The five species of Special Concern and their breeding status are: the sharp-shinned hawk and the Cooper's hawk are confirmed breeders; northern goshawk is a probable breeder; and red-shouldered hawk and osprey are possible breeders. Special Concern Species are those **native species** which are not yet recognized as endangered or threatened, but for which documented evidence exists relating to their continued welfare in New York State (NYSDEC, 2007).

According to the New York State Comprehensive Wildlife Conservation Strategy (CWCS), twenty-six species on or in the vicinity of the Unit are classified as **Species of Greatest Conservation Need (SGCN)**. The SGCN on or in the vicinity of the Unit include: birds, reptiles, amphibians, and mammals.

See Appendices V through VII for complete list of birds, reptiles, amphibians, and mammals on the Unit. These appendices provide the common and scientific names, breeding status (birds), whether the mammals are confirmed or predicted on the Unit, protective status, and whether or not the species are a SGCN.

J. Recreational Resources

State Forests offer opportunities for recreational activities that are best enjoyed in remote, relatively undisturbed areas that require minimal facility development or site disturbance (DEC, 2001). Such recreational activities include: hiking, cross-country skiing, hunting (small & big game), fishing, horseback riding, camping, snowshoeing, snowmobiling, picnicking, **geocaching**, nature observation, target shooting, trapping, and orienteering. Many of these activities are occurring on the unit as dispersed forms of recreation while others are occurring at high-use recreation areas and/or trail systems. The following high-use recreation areas and **designated recreational trail** systems currently exist on the unit:

- The Cheningo Day-Use and Camping Areas are located at the former CCC Camp S-118 on Taylor Valley State Forest (Cortland RA #2). There is a pavilion with picnic tables, one of which is accessible for people with disabilities, along with a few grills at the Day-Use Area. Across the road from the Day-Use Area is the Camping Area where there are 12 designated campsites most of which are drive-up sites.

- Calico Pond is located on Gee Brook State Forest (Cortland RA #17). It offers non-motorized boating, fishing, and camping opportunities. There is no vehicular access to the pond. There are three designated campsites which require a permit for use.
- Papish Pond is located on Papish Pond Multiple Use Area. It offers a boat launch for electric motor only boating access and fishing opportunities.
- There are 20.3 miles of designated snowmobile trails that pass through the unit. These trails are maintained by Twin Bridges, Cortland-Chenango Trail Hounds, Truxton and Marathon Snowdusters snowmobile clubs.
- There are 11.1 miles of designated hiking trails that pass through the unit. These trails are part of the long distance Finger Lakes Trail and the North Country National Scenic Trail. These trails are maintained by the Finger Lakes Trail Conference.
- There are two designated ATV routes for people with mobility disabilities and approved DEC permit, located on Hoxie Gorge State Forest (Cortland RA #14). These trails are 0.9 miles in length combined. They offer hunting and nature observation opportunities.

Illegal recreational activities occurring on the unit include: use of all-terrain vehicles, off-road motorized dirt bikes, and other off-road vehicles.

In the past, the intensity of recreational use was relatively low resulting in low environmental impacts and few user conflicts. However, during the 1990s recreational use, demands, and user conflicts increased while DEC budgets and staffing did not (DEC, 2001).

To help meet the increasing demand for recreation, the DEC increasingly depends on groups for maintenance, enhancement, and construction of recreational assets. Partnerships are formalized between groups and the DEC through the Volunteer Stewardship Program (VSP), which is authorized by Section 9-0113 of the Environmental Conservation Law. Volunteerism is the cornerstone of this program. It is a means for completing work that helps preserve, maintain and enhance natural resources at minimum cost to the state. Individuals and groups interested in providing volunteer services are afforded a formal opportunity to propose activities that meet management needs of state-owned natural resources. Such activities may involve remediating vandalism, picking up litter and trash, establishing or maintaining access or nature trails, providing interpretive services for school groups and other citizens, managing fish and wildlife habitats, and otherwise providing positive benefits to the natural resource.

There are currently five VSP agreements between the DEC and recreation-based groups for trails within the unit. The existing agreements are between the DEC and the following recreational groups:

- Twin Bridges Snowmobile Club
- Marathon Snowdusters
- Truxton Snowmobile Club
- Cortland-Chenango Trail Hounds Snowmobile Club
- Finger Lakes Trail Conference

K. Cultural Resources

The term "**cultural resources**" encompasses a number of categories of human created resources including structures, archaeological sites and related resources. The Department is required by the New York State Historic Preservation Act (SHPA) (PRHPL Article 14) and SEQRA (ECL Article 8) to include such resources in the range of environmental values that are managed on public lands.

Archaeological sites are, simply put, any location where materials (artifacts, ecofacts) or modifications to the landscape reveal evidence of past human activity. This includes a wide range of resources ranging from precontact Native American camps and villages to Euroamerican homesteads and industrial sites. Such sites can be entirely sub-surface, or can contain above ground remains such as foundation walls or earthwork features.

As a part of the inventory effort associated with the development of this plan the Department arranged for the archaeological site inventories maintained by the New York State Museum and the Office of Parks, Recreation and Historic Preservation to be searched in order to identify known archaeological resources that might be located within or near the unit. The two inventories overlap to an extent but do not entirely duplicate one another. The purpose of this effort was to identify any known sites that might be affected by actions proposed within the unit and to assist in understanding and characterizing past human use and occupation of the unit.

Although no inventoried resources are located within the unit, the existing Cheningo Day Use Area on Taylor Valley State Forest is located in an area that was part of Civilian Conservation Corp (CCC) Camp S-118. In addition, there are 21 sites with stone foundation, 2 cemeteries and other structures and artifacts that provide evidence about 19th and 20th century settlement on the unit.

L. Mineral Resources

Oil and Gas

Title 11 Section 23-1101 of the Environmental Conservation 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.

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 these areas 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. Some impacts are short term and occur during the siting and drilling phases of a well. However, well pads, roads, and pipelines may become long-term impacts on the Unit.

Pipelines may be constructed on State Forest lands only if a portion of the mineral resources to be transported was extracted from State lands. Pipeline and road development must be in compliance with State Forest tract assessments, the Strategic Plan for State Forest Management, and the Generic Environmental Impact Statement and Supplemental Generic Environmental Impact Statement on the Oil, Gas and Solution Mining Regulatory Program.

Pipelines will be located immediately adjacent to Public Forest Access Roads. The location of the roads and pipelines will be in compliance with tract assessments. Pipelines may be located in stands managed for closed canopy conditions only along pre-existing roads that intersect such area. Additional surface disturbance associated with such construction will be considered only in areas other than stands which are managed for relatively unbroken canopy conditions. Areas managed for unbroken canopy conditions may be referred to using various terms such as "uneven-aged," "uneven-aged variable retention," "all aged," "high canopy," "closed canopy" or others.

Pipeline development on State land will not be permitted if the Department determines that it creates a significant long-term conflict with any management activities or public use of the State Forests, or with other management objectives in this plan. All pipelines will be gated to restrict motorized access, and if necessary hardened crossings or bridges will be installed, to allow heavy equipment access across pipelines. These requirements will be satisfied by the Lessee.

New York State manages the surface estate through the NYS DEC Division of Lands and Forests and the Division of Fish, Wildlife and Marine Resources and the mineral estate through the NYS DEC Division of Mineral Resources and the Office of General Services.

For more information on the procedures of gas leasing, see Appendix XIV.

Historical Drilling & Production

The drilling of the first commercial oil well in the United States occurred in Titusville, Pennsylvania in 1859. The results of this drilling activity carried over into neighboring New York State in 1863. Eventually, this activity extended into western and central New York.

There have been a total of nine gas wells drilled at seven locations near the Unit in the Towns of Cincinatus, Cortlandville, Freetown, Solon, and Taylor, Cortland County. Eight of these wells did not produce gas commercially and were subsequently plugged and abandoned. The Nael Cam Farms well drilled by Anschutz Exploration Corporation targeting the Black River formation in 2009 currently has a "confidential" status meaning that no information is available regarding its production potential. This well was drilled to a total depth of 7,076 feet. General information regarding the remaining wells is provided in the paragraphs below.

The Beckwith #1 was the first well drilled near the Unit by L. Nosbaum in 1901 targeting the Hamilton Shale and drilled to a total depth of 2,470 feet.

The Frink #1 well was drilled by Belden & Blake Corporation in 2003 targeting the Oriskany Sandstone with a total depth of 2,238 feet.

Wells were drilled at three locations near the Unit by Columbia Natural Resources LLC and Berea Oil & Gas Corporation from 1985 through 1999 targeting the Trenton and Black River formations with total depths ranging from approximately 7200 to 7800 feet. At two of the Columbia Natural Resources well locations, sidetrack wells were permitted where the operator

drilled a second borehole directionally from the existing vertical well bore into the Black River formation.

The Clough #1, was drilled in 1965 by Delta Drilling Company targeting the Theresa Sandstone with a total depth of 8,272 feet.

The closest gas production is from two wells drilled during the late 1960s and early 1970s to the south of the Unit in Broome County targeting the Queenston Sandstone at approximate depths of 5,800 to 6,000 feet in the Triangle Field. These wells are located approximately 7-miles southeast of Papish Pond. The Genegantslet Field was discovered in 1964 with production from the Hamilton Shale at approximate depths of 2,000 feet. These wells are located approximately 11-miles southeast of Papish Pond in the Town of Smithville, Chenango County. Although the wells in these fields were reported to be gas producers, none of the wells have been produced commercially.

Recent Drilling and Production

The closest natural gas commercial production is approximately 14 miles east of Taylor Valley State Forest in Madison and northern Chenango Counties where Norse Energy, Inc. has been drilling wells targeting the Oneida, Oswego, and Herkimer Sandstones in the Bradley Brook, Beaver Meadow, and Hawley Brook Fields. Production in the Bradley Brook Field began in 1998 in the Towns of Lebanon and Eaton, Madison County. The Beaver Meadow and Hawley Brook Fields were discovered in 2004 in the Towns of Plymouth and Smyrna, Chenango County. Production in all three fields was originally from the Oneida and Oswego Sandstones; however, drilling from 2007 to present has extended the fields and has focused on horizontal wells drilled in the Herkimer Sandstone.

Recent Leasing Activity

An initial title review indicates New York State owns the mineral estate under all areas covered by this Unit. The above statement is made with the qualification that mineral reservations may exist and no expressed or implied warranty of title is being offered in this document. All of the state lands comprising the Unit are not currently under oil/gas lease contracts.

Future Leasing Activity

Due to recent drilling and production activity in the western New York and the Finger Lakes Region, the State may again receive requests to nominate lands for leasing. For further information on lease procedures, well drilling permitting procedures, historical and statistical information go to the Department's website at http://www.dec.ny.gov/energy/205.html or contact the NYS DEC Mineral Resource staff at (585) 226-5376 or by mail at 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 Resource Development and Reclamation, 3rd Floor, 625 Broadway, Albany, New York 12233 (518) 402-8056.

Mining of Gravel & Hard Rock

The bedrock outcropping or subcropping beneath surficial deposits within and surrounding the Unit consists of shale, and siltstones of the Upper Devonian age Genesee Group. Shale and siltstones of the Upper Devonian age Sonyea Group comprise the bedrock on some of the

hilltops in the southern portion of the Unit and surrounding landscape. Shale can be excavated near the surface where it is weathered and used as a source of aggregate. There is a reclaimed shale pit located near the southeastern boundary of Donahue Woods State Forest. There are currently no shale pits or hard rock quarries on or in the immediate vicinity of the Unit with active permits issued by the DEC Division of Mineral Resources Mined Land Reclamation Program.

There are eight shale pits located on the State Forests within the Unit that will be used intermittently for Public Forest Access Road, parking area, and trail maintenance and/or construction (see Appendices XIII and XIX for more information).

Surficial deposits overlying bedrock in the unit are predominantly glacial till with occasional bedrock outcrops located intermittently on the flanks and crests of ridges and hills and glacial outwash and recent alluvial deposits in the stream valleys. There are also a few intermittent kame deposits in the stream valleys within the Unit and surrounding landscape. The kame and outwash sand and gravel deposits associated with glacial meltwater fluvial systems would provide the best sand and gravel resources for potential mining operations.

There are six active sand and gravel mines near the Unit. The closest active mine is approximately 1.5 miles northwest of Donahue Woods State Forest which is a 65 acre sand and gravel mine (Suit-Kote Corp Truxton Mine) in the Town of Truxton, Cortland County. This mine and other mines in the area are located where the surficial deposits consist of kame and recent alluvial deposits. There are also several reclaimed sand and gravel mines near the unit.

M. Roads

The State Forest transportation system provides for both public and administrative access to the unit. Roads are constructed to standards that will provide reasonably safe travel and to keep maintenance costs at a minimum. There are three types of roads providing different levels of access, depending on the standards to which they are constructed.

Public Forest Access Roads (PFAR) 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. There are 14.6-miles of PFARs on the unit.

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. There are 2.6-miles of haul roads on the unit.

Access Trails are temporary, unpaved roads which do not provide all weather access within the unit. They are not designed for long term and repeated use by heavy equipment. These corridors were originally constructed for the seasonal removal of forest products by skidding to **landings**

or other staging areas. They are constructed according to best management practices, these trails may be used to support other management objectives such as recreational access corridors. There are numerous miles of access trails on the unit.

State, county, and town roads also pass through or border State Forests within the unit. There are about 4.1-miles of roads that are maintained by the Department of Transportation. These roads do not necessarily provide access to forests within the unit. For example, there is no access from Interstate 81 to Hoxie Gorge State Forest since Section 1202j of the Vehicle and Traffic Law prohibits (except in an emergency) stopping, standing, or parking a vehicle on an interstate highway. There are about 4.7-miles of Cortland County roads and about 7.4-miles of town roads that are plowed during the winter. In addition to the 7.4-miles of year-round town roads, there are about 1.8-miles of seasonal-use town roads on the unit.

For a complete list of roads on the unit see Appendix XII.

There are about twenty former town roads or portions of town roads on the unit that are confirmed or presumed to be abandoned. The abandonment status of these former roads was determined using a number of methods including comparing various maps, referencing a Certificate of Abandonment, statements by Town Highway Superintendents, and general knowledge of town maintenance and use by the general public.

A Certificate of Abandonment dated 12/26/1973 and signed by the Town Supervisor, Highway Superintendent and Town Board for the Town of Taylor appears to cover all of these roads or portions of them that lie in Taylor. These roads include portions of McKee Road, Allen Hill Road, Burchesky Road, Townline Road, and what is now known as the Seacord Hill PFAR.

The official status of roads in Truxton is not available from our files. There used to be a road that ran from the Seacord Hill Spur PFAR to Cheningo-Solon Pond Road. This road was located on the "New Century Atlas of Counties of the State of New York" by Everts Publishing Co. dated 1912, but was not located on NYSDOT quadrangle or the 1989 Cortland County highway map.

The official status of most roads in Solon is not available from our files. The only exceptions are statements by the Highway Superintendents for the Town of Solon that the road following the town line (Cortland 2) had been abandoned through non-use and a portion of Wildman Road was abandoned. Roads that were located on the "New Century Atlas of Counties of the State of New York" by Everts Publishing Co. dated 1912, but were not located on NYSDOT quadrangle and/or the 1989 Cortland County highway map include portions of Wildman Road, the road running from Wildman Road to Townline Road, a portion of Bell Road, a portion of Knecht Road, a former road that ran from Harris Road to North Tower Road, a former road that ran from Baker School House Road north into Baker School House State Forest, and the portion of Cadwill Road that was located along the Solon/Freetown boundary.

Other roads that were located on "New Century Atlas of Counties of the State of New York" by Everts Publishing Co. dated 1912, but not on NYSDOT quadrangle maps and/or the 1989 Cortland County highway map include a former road that ran from Hoxie Gorge Road to Hoxie Gorge-Freetown Road, a former road that ran from Hoxie Gorge-Freetown Road to Reagan

Road, a former road that ran from New York State Route 11 to Steve Russell Hill Road, a portion of Reagan Road, and a former road that ran from New York State Route 41 to near the Calico Pond location. Evidence was provided to the Department that the former road that ran from Hoxie Gorge-Freetown Road to Reagan Road (Carr Hill Road) followed two different routes depending upon the time of year and type of use. These locations are depicted on the maps in Appendix XIX.

Roads that were located on "New Century Atlas of Counties of the State of New York" by Everts Publishing Co. dated 1912, but not on NYSDOT quadrangle maps and/or the 1989 Cortland County highway map are assumed to be abandoned. These roads have not been recently maintained by the townships and many of them are impassible due to vegetative growth and/or severe erosion.

N. Facilities Needing Maintenance

There are many facilities on the unit that require maintenance. See Appendix XIII for a complete list of facilities that require maintenance. While the DEC maintains most of these facilities, others are maintained by VSP groups, timber harvesting contractors, hay/mowing contractors, and **Temporary Revocable Permit** holders.

O. Property Use Agreements

The following information was compiled from the files and other information in the Region 7 Real Property Office. Abstracts of title were not examined except to obtain additional information on easements or other items referred to in deeds or other records. The enclosures and proposal maps referenced in this section are on file at both the Syracuse and Cortland DEC Division of Lands and Forests offices.

Cortland Ref. Area 2 (Taylor Valley State Forest)

Outstanding Survey Requests

Survey No. 7-12-30 (1976) Pro. D, F, H, request for the boundary line along the forest access road near the western line of these proposals to be monumented and blazed. The boundary is 33-feet from the road centerline but an adjoining owner had been posting his land as if the road was the boundary. The line was marked by flagging in 1976 and the posted signs were reportedly moved to conform with the flagging. The file was kept open because no monumentation or blazing was done.

(2008) Pro. F, report of an encroachment on the north line of Pro. F west of the Taylor Valley Road. A field inspection found that trees had been cut on state land along with dozing and a wetland violation. No work was done beyond the initial inspection. The adjoining land owner has reported that the work was done by a third party who also trespassed on his land.

Easements, Property Use Agreements, etc.

Pro. B – The atlas shows "School House No. 8" located on a road in the northern portion of Pro. B. Department files have no information on the School House lot or other surviving rights that might affect Pro. B.

Pro. C,E – In 2003 a survey of private lands confirmed reports of an encroachment of gates being placed on State land where the present traveled way left the course of an abandoned road. A report followed that the adjoining private owner had later placed fence posts and wire along the center of the abandoned road. There is nothing further in Department files.

Pro. D – School House and cemetery lots on Taylor Valley Road are excepted from the State's deed. Cortland County tax mapping lists the owner of the School House lot as the Town of Taylor Highway Department and shows the lot size as 100-feet x 270-feet. Map 4175 shows the size of the lot as 115.50-feet x 192.72-feet and on recent aerial photos the cleared area occupied by the lot doesn't appear to exceed the dimensions shown on the map.

Pro. F – Subject to an easement granted to the New York Telephone Company by deed 246/229 dated 8/3/1956. It was for the purpose of communication lines and included the right to remove trees and brush that interfere with or endanger the lines.

Pro. K – Subject to an exception and reservation of a certain spring of water and the right to use the water from a certain spring located near the south corner of the former Garret Pritchard farm. The rights to be as set forth in a deed to Harry B. Wadsworth dated 1/31/1918 and recorded in 129/32. This reference appears to be for a spring in the southern portion of Pro. K.

Pro. S – The atlas shows "School House No. 4" located to the south of and on the opposite side of the road from the School House lot on Pro. D and no School House is shown on Pro. D. Department files have no information about a School House lot on Pro. S.

Pro. V – The State's deed excepts a cemetery and access ROW to the cemetery. Map 6314 shows a ½-acre cemetery in the interior of Pro. V with a ROW leading northeasterly to McKee Road.

Special Issues

1) The only maps for Proposals P, R and S are compiled from deeds and other records and there is no indication in Department files that the boundary lines have been surveyed or marked.

2) Cortland County State Park – Statewide priority open space Project No. 91 in the draft 2009 Open Space Plan is to develop a State Park in Cortland County. At the 4/22/08 Regional Open Space Committee meeting the County representative mentioned that the County was proceeding with planning for the park and had a surveyor preparing a description of State Forest lands in Taylor Valley that would be utilized for it. The County had not coordinated its planning with DEC or OPRHP and was advised to do so before proceeding further. There has been no further discussion between DEC and the County.

3) 571.95 acres of Cortland Ref. Area 2 were conveyed to Intermont, Inc. pursuant to Chapter 345 of the Laws of 1965 for use as a ski center. All of Pro. O and portions of Proposals D, F, H and J were involved. The ski center later went out of business and re-acquisition of those lands plus others was proposed in 1991 when the property was for

sale. No acquisition funding was available for the project and the property remains in private ownership.

Cortland Ref. Area 7 (Donahue Woods State Forest)

Outstanding Survey Requests
None

Easements, Property Use Agreements, etc.
The NYSDOT Truxton quadrangle shows a pipeline running northeasterly across Proposals C and D. Department files have no information on a pipeline in that location. The State's deeds for Proposals D and F are subject to a pipeline easement crossing the State Forest further south. The information in Department files is as follows:

1) Pro. D – Subject to an easement conveyed to the New York Natural Gas Corporation on 12/8/1949 and recorded in 215/58. It is described as a ROW to lay, maintain, operate, change and remove pipelines with necessary drips, gate valves and appliances for the transportation and regulation of water, oil or gas and/or their constituents or products similar thereto. The rights include ingress and egress and the right to construct one or more additional pipelines within 16 feet of the first for the same payment per rod. The pipeline can be up to 24" in diameter and the grantee is to pay for any damages to trees, etc. caused by laying or maintaining the line. No ROW width or route is specified but Map 4676 shows the ROW entering Pro. D just north of Harris Road and running northeasterly to a point near a northwest corner of Pro. F.

2) Pro. F – Subject to an easement conveyed to the New York Natural Gas Corporation on 12/9/1949 and recorded in 214/62. The rights are the same as for Pro. D. A portion of Pro. F was later conveyed to Intermont, Inc. leaving separated northern and southern remainders. The pipeline ROW now only affects the northwestern corner of the southern remainder.

Other Easements and Special Issues

Pro. F – The State's deed is also subject to a pole line easement granted to New York Telephone in 1956 and recorded in 246/229. 66.9-acres of Pro. F were also conveyed to Intermont, Inc. pursuant to Chapter 345 of the Laws of 1965. See the entry for Cortland Ref. Area 2.

Cortland Ref. Area 12 (Baker School House State Forest)

Outstanding Survey Requests
None

Easements, Property Use Agreements, etc.
Pro. D, E – Proposal E was acquired and originally surveyed in 1941. Map 6918 from a resurvey of the proposal in 1969 notes that Stomba Road (aka Stramba Road) had been relocated where it crosses the western portion of Proposal E and that NYS Route 41 had been relocated along the east line of Propsal D. There is no other information in Department files about these road relocations.

Cortland Ref. Area 14 (Hoxie Gorge State Forest, part)

Outstanding Survey Requests
None

Easements, Property Use Agreements, etc.
An electric transmission line ROW crosses Proposals B and D and a cross country telephone line easement crosses Proposals A, C and E. An overgrown clearing follows the possible route of the telephone line easement, but no poles or above ground lines were present (on Cortland 15) in 2006. The information on these lines in Department files is:

Electric Transmission Line ROW

1) Pro. B – An easement conveyed to the Binghamton Light, Heat & Power Company by deed 150/172 dated 5/1/1924. The easement is 125-feet wide and was to follow a route to be selected by the grantee. It includes the right of entry for the purpose of the line and the right to trim, cut and remove any and all trees as necessary in the judgment of the grantee.

2) Pro. D – Easements conveyed to the Binghamton Light, Heat & Power Company by deed 150/171 dated 5/1/1924 (northern portion of Pro. D) and deed 150/169 dated 4/29/1924 (southern portion of Pro. D). The rights conveyed are the same as for Pro. B, but the easement is only 40 feet wide.

Telephone Line Easement

1) Pro. A – A pole line easement conveyed to the American Telephone and Telegraph Company by deed 163/397 dated 9/30/1930. It was for telephone or telegraph lines and included the rights to clear 25-feet from the pole line centerline, to trim trees to keep the lines 36-inches clear, to attach lines of other companies and to install a second line within 8-feet of the first.

2) Pro. C, E – Subject to an easement granted to the American Telephone and Telegraph Company by deed 166/570 dated 3/19/1931. The purpose and rights are the same as for Pro. A.

Other easements and Special Issues

Pro. A – Also subject to a right-of- way conveyed to New York State Electric and Gas Corporation by deed 188/520 dated 7/18/1941. It is for a transmission line and poles and trees can be trimmed to keep the line 10-feet clear. A report of physical inspection at the time of acquisition indicated that a powerline was located along Steve Russell Hill Road.

Pro. A. is also subject to a right-of-way for ingress and egress granted to Sarah Potter by Harland R. Nefsey and Nellie Mauzy by deed 276/589 dated 6/8/1961. The right-of-way followed an existing private road or lane and crosses the northern part of Pro. A west of Steve Russell Hill Road. Its location is shown on Map 6340-B. The right-of-way serves tax map parcel 129-1-8 in the Town of Virgil, now or formerly owned by Gutchess Timberlands, Inc. The grantor reserved the right to place gates at each end of the right of way.

Pro. D – Is subject to an easement granted New York Telephone Company by deed 132/435 dated 10/23/1917. The easement is for a telephone or telegraph line and includes the rights to trim trees to keep wires clear by at least 48-inches, to attach guy wires to trees on the property and to cut down all interfering trees and brush.

Jurisdiction for a portion of Pro. D was transferred to NYSDOT by order signed by the Conservation Dept. in 1968 and finally approved by OGS on 6/2/1976. The TOJ involved 28.546 acres on the west side of Pro. D to be used for Interstate 81. The transfer divided Pro. D and severed access from NYS Route 11 to the remaining eastern portion of the proposal. The correspondence in Department file mentions that a request for construction of a pedestrian overpass over Route 81 was considered by the Conservation Dept. because the acquisition of Pro. D had been intended to create access to the area from Route 11.

Pro. H – This proposal was acquired by transfer of jurisdiction from NYSDOT by order dated 10/10/2001. The order contains the conditions that: 1) the TOJ includes no right of access from Interstate 81 and 2) if DEC "ceases to utilize the aforesaid land for forest preservation purposes, upon an application made by the (NYSDOT), jurisdiction of said land will be transferred back to the (NYSDOT)".

Cortland Ref. Area 15 (Hoxie Gorge State Forest, part)

Outstanding Survey Requests
Survey No. 7-12-506 (1992), Pro. D, a request to survey and mark the northern and western lines of Pro. D, except for the lines adjoining Interstate 81. The request states that the line marking had been missing for 20-years which indicated the lines were probably not marked during the 1971 acquisition survey of the proposal. No work has been done.

Easements, Property Use Agreements, etc.
An electric transmission line ROW crosses Proposals C and E and a cross country telephone line easement crosses Proposals A and B. An overgrown clearing follows the possible route of the telephone line easement, but no poles or above ground lines were present in 2006. The information on these lines in Department files is:

Electric Line Easement
1) Pro. C – An easement conveyed to the Binghamton Light, Heat & Power Company by deed 150/134 dated 4/29/1924. The ROW is 40-feet wide, and includes the right of entry and the right to trim or cut trees that interfere with or endanger lines.

2) Pro, E – The abstract of title does not mention the ROW and no record was found during a search at the County Clerk's Office.

Telephone Line Easement
Pro. A – The abstract of title and accompanying materials mention pole line easements conveyed to the American Telephone and Telegraph Company by deed 163/406 dated 10/6/1930, by deed 163/408 dated 10/7/1930 and by deed 163/409 dated 10/6/1930. In general the easements are for the right to construct and maintain telephone and telegraph lines including the right to trim trees to clear lines by 36-inches, to clear trees and brush up to 25-feet from the centerline of the pole

line, to construct another line within 8-feet of the first and the right to attach wires or cables of other companies to the poles.

Pro. B – An easement conveyed to the American Telephone and Telegraph Company by deed 163/411 dated 10/1/1930. The rights are the same as for Pro.A.

Other easements and Special Issues

Pro. A - The abstract of title and accompanying materials mention two pole line easements conveyed to the New York State Electric & Gas Corporation for lines along Hoxie Gorge Road. The easements were conveyed by deed 195/387 dated 8/30/1944 and by deed 195/388 dated 8/30/1944.

Pro. B – Map 6501 of Pro. B was compiled from deed descriptions and there is no record in Department files of the boundaries being surveyed and marked.

Pro. D - The abstract of title mentions easements conveyed to the New York Telephone Company and Binghamton Light, Heat & Power Company but the easements were conveyed when Pro. D was part of a larger parcel and the lines may not have been constructed on the lands that are now Pro. D. The easement to NY Telephone was by deed 132/434 dated 10/23/1917and was for telephone and telegraph lines, the right to trim trees to keep the lines at least 48-inches clear and for the right to attach guy wires to trees. The easement conveyed to the Binghamton Light, Heat & Power Company was by deed 150/166 dated 4/28/1924. That easement is 65-feet wide.

Cortland Ref. Area 17 (Gee Brook State Forest)

Outstanding Survey Requests

Survey No. 7-12-38 (1976) – A field survey of the lands acquired using compiled maps was requested and that would be all of Proposals A-F, excepting only the parcel acquired as Whitney Point MUA, Pro. 1. In 1987, a second request under this number reported a house trailer thought to be located on State land. Research and a field inspection found that the trailer was on private land and that the State boundary marking in its vicinity was incorrect. No field surveying has been done.

Easements, Property Use Agreements, etc.

Pro. A – The deed into the State includes any rights of the grantor to a spring in the northerly part of the Survey 50 in Lot 37 and refers to deed 237/552 between C. Dawson Kerr and Richard F. Stafford dated 8/22/1955. Map 6524 shows the location of the spring.

Pro. D – The abstract of title for Proposal D contains references to four utility easements, but two of them appear to only affect portions of the grantor's lands that were not conveyed to the State. The two easements that appear to affect Pro. D are: 1) an easement conveyed to the Binghamton Light, Heat & Power Company by deed 150/56 dated 6/26/1924. The easement is 40 feet wide for a pole line for the transmission of electric current. It is to follow the "state road as nearly as possible" and includes the right of entry and the right to trim, cut and remove trees and brush as

necessary in the judgment of the grantee, 2) an easement conveyed to New York State Electric & Gas Corp. by deed 183/487 dated 9/1/1939. The easement is for a pole line, but no width or location is mentioned. It includes the right to trim, cut and remove trees and brush to the extent necessary to maintain 10-feet of clearance around the poles and wires. 0.638-acres of Pro. D adjoining NYS Route 41 was transferred to the jurisdiction of NYSDPW (DOT) for highway purposes by order dated 7/27/1967.

Pro. 1 – A parcel of land on the east side of Pro. A was acquired as Whitney Point Multiple Use Area, Pro. 1, but reportedly has been or will be managed as part of the State Forest. All other acquisitions in the area were identified as "reforestation area" acquisitions rather than MUA. One or more utility lines probably cross this parcel, but there is no information on them in Department files.

Pro. A, B, C, D, E & F – The maps for all of these proposals were compiled from deeds and other records and there is no record in Department files of the boundaries being surveyed and marked. See the entry for outstanding survey requests.

Acreage

In 2008, Forester Henry Dedrick reported a significant discrepancy between the acreage of the area as shown in the land records and as indicated by the **GIS** polygons. An investigation found that part of the problem was due to a discrepancy between the deed and map acreages for Pro. C. The deed stated the acreage to be 301.84-acres, but Map 6527 stated the acreage to be 265.50. The courses and distances for the two records agree and the acreage within the mapped perimeter of Pro. C (which would actually include Pro. E, 10.15-acres) calculates to be 279±acres. The 301.84-acre figure appears to be in error and pending further information or a field survey the land records have been revised to list Pro. C as being 265.50-acres, a reduction of 36.34-acres.

Papish Pond Multiple Use Area

Outstanding Survey Requests

Survey No. 7-12-13 (1976) – State land was reported to be posted by an adjoining landowner. Some deed research was done, but no field work. (1999) The adjoining landowner to the west questioned the location of a poorly marked line where it crossed Gee Brook Road. A field inspection found no significant error in that section of line.

Easements, Property Use Agreements, etc.

Utilities – The area is subject to an easement granted to the New York State Gas and Electric Corp. by deed 210/258 dated 9/1/1948. It includes the right to construct a pole line for the transmission and distribution of electric, telephone or telegraph and the right to trim, cut and remove trees and brush to clear the pole line by "at least 15-feet." A survey map of adjoining lands shows overhead utility lines running along Gee Brook Road.

Tax Map – The tax map for the area disagrees with Map 7001 for the eastern boundary line near Beach Road. The tax map shows a straight line without the jogs in the boundary line shown on Map 7001, but the line as marked in the field follows Map 7001.

Mapping – Map 7001 was compiled from deeds and there is no record in Department files of the lines being surveyed and marked.

A 1912 atlas map labels the pond "Glover Pond" and the project was acquired under the title "High Lake."

The records in the Real Property Office are not complete or comprehensive and research of other sources and field inspection would most likely find additional information.

P. Forest Health

Forest Insects & Diseases
Insects and diseases that affect trees are constant natural forces that shape the forest. While many insects and diseases have negligible or beneficial impacts to forest health some, particularly **invasive exotic** species are especially damaging. Insects and diseases addressed below are those that currently or could potentially have significant impacts on forest health on the Unit.

Asian Long-horned Beetle (*Anoplophora glabripennis*)- This insect from Asia was first detected in New York City in 1996. Potential impacts from it could be devastating since it prefers maple trees. As of 2003, over 6,000 infested trees had been identified in New York City and Long Island. There are no known natural factors which will limit the spread of this insect.

Beech Bark Disease (*Nectria coccinea*)- This disease is a fungus spread by the beech scale insect and is native to Europe. It has been established for several decades on the Unit and can be found in all forested stands that have a beech component. Its impact has resulted in the decline and death of most mature beech trees. Although small beech are common, they usually are not able to grow to their full maturity before dying prematurely from the disease.

Butternut Canker (*Sirococcus clavigignenti-juglandacearum*)- This disease, of unknown origin, has infected nearly all the butternut in New York State. The disease is fatal.

Dutch Elm Disease (*Ophiostoma novo-ulmi*)- This disease is a non-native fungus that is spread by both the European and native elm bark beetles. It was first detected in central New York in 1946 and has since spread throughout New York State. Although elm has historically been a minor component of the forests on the Unit, the disease has killed most of what was there. The disease continues to kill maturing trees that had escaped previous infections.

Eastern Tent Caterpillar (*Malacosoma americanum*)– This native insect builds nests in crotches of tree branches. This insect prefers to defoliate fruit trees including pear, apple, and cherry. It typically is not a major threat to forested areas.

Emerald Ash Borer (*Agrilus planipennis*)- This beetle from Asia was first identified in southeastern Michigan in 2002. It has since spread to New York. It feeds on all native ash trees and kills the trees from feeding larvae girdling the branches. Millions of ash trees in Michigan have been killed by this beetle. There are no known native natural factors which will limit the spread of this insect.

European Pine Shoot Beetle (*Tomicus piniperda*)- This is a non-native beetle that is present and has the potential to impact red pine plantations on the Unit. Cortland county is in a Federal quarantine area which regulates and limits the transportation of pine logs to sawmills out of the area.

European Woodwasp (*Sirex noctilio*)- This woodwasp was discovered near Fulton, New York in 2004. As of November, 2006 this insect had spread to 25 counties in central and western New York, including Cortland County. It is native to Europe, Asia and North Africa and arrived in New York State in solid wood packing material used in cargo ships. Where it is an exotic **invasive species** elsewhere in the world, it attacks pine plantations and can cause up to 80% tree mortality. At low populations, the woodwasp attacks stressed trees for egg laying. The trees are killed by a fungus that is injected with the eggs. Traps have been set in the vicinity of the Unit to monitor for the presence of this insect. Voluntary protocols for the transport and treatment of pine logs have been established to prevent the spread of this insect.

Forest Tent Caterpillar (*Malacosoma disstria*)– This native insect is a major defoliator of northern hardwood tree species with sugar maple and white ash being the most preferred. Healthy trees can usually withstand one or two years of **defoliation** from this pest. Although in combination with other stressors, trees may die or suffer from severe dieback with just one season of defoliation. Since 2005 nearly 450 acres of high-quality ridge top northern hardwood stands have been **salvaged** within the Unit. There is additional acreage that is currently being monitored with hopes that it will recover from past defoliation by the forest tent caterpillar.

Gypsy Moth (*Lymantria dispar*)- Although present, this moth from Europe has not had significant outbreaks on the Unit. This may be due to the scarcity of its preferred oak species on the Unit.

Hemlock Wooly Adelgid (*Adelges tsugae*)- This insect from Asia has been devastating to hemlock in the lower Delaware and Hudson River valleys. The adelgid attacks and kills all sizes of hemlock. In 2002, it was identified in Delaware County. As of 2004, it had spread as far north as Albany County. It has recently been found at various locations in the Finger Lakes region. There are no known populations on the Unit. Hemlock stabilizes the soil on steep slopes and their shade often keeps streams cool in the heat of summer. During winter, they provide thermal cover for deer and other wildlife. Many wildlife species such as red squirrels and black-throated green warblers are strongly associated with hemlock. There are no known natural factors which will limit the spread of this insect. Current control efforts focus on the release of Japanese lady beetles into infested areas. The beetle is a natural predator of the adelgid in Japan. If this biological control approach is not successful, the long-term consequence of this insect may likely be the elimination of eastern hemlock from the landscape.

Peach Bark Beetle (*Phloeotribus liminaris*)- This native insect historically impacted peach trees. It has recently been discovered in black cherry trees. The beetle bores into the trunk of the tree forcing the trees to exude gum in an attempt to expel the insect. Although the insect does not kill the tree, its' boring and resulting gum production can significantly reduce the commercial value of this species.

Viburnum leaf beetle (*Pyrrhalta viburni*)- a non native beetle that first appeared in NYS along Lake Ontario in 1996. It has spread to all counties in central and western New York and most counties in the Adirondack and Catskill regions. Both larvae and adults feed on viburnum shrubs. This insect has had a significant impact on native stands of arrowwood (*Viburnum dentatum*) on the Unit.

Regeneration & Interfering Vegetation

Northern hardwood forests on the Unit consist of high quality stands dominated by sugar maple, red maple, black cherry, and white ash. These species have both ecological and economic value. Some northern hardwood stands have been managed using the **uneven-aged system**, which regenerates mostly **shade tolerant** species such as sugar maple, hemlock and beech.

Vegetation interfering with forest regeneration is a concern because it compromises efforts to sustain the northern hardwood **forest type**. The absence of desirable hardwood regeneration on the Unit will diminish the long term ecological and economic value that these stands provide. Difficulty in regenerating northern hardwood persists throughout the Unit. It appears to be most prevalent in stands managed using the uneven-aged system or in stands with little to no history of silvicultural treatments. In addition to the interfering tree species such as striped maple, hophornbeam and American beech, hay-scented fern and New York fern prevent the establishment of hardwood regeneration. Nearly seventy percent of forested acreage in the Unit has some interfering vegetation present with over thirty percent having more than thirty percent of the understory area covered with American beech and striped maple.

There are a number of contributing factors that have caused this problem including:

- Interfering vegetation is shade tolerant. Decades of dense forest canopy conditions have favored the development of shade tolerant species over **shade intolerant** species.
- Elevated deer populations have produced significant impacts on understory vegetation. Most hardwood stands on the Unit were established after periods of heavy cutting, 70-100 years ago, when populations of deer were relatively low. Research studies suggest that populations of white-tailed deer are now much higher than at historic pre-settlement levels. Sugar maple, red maple, and white ash are all preferred **browse** species for deer. In contrast, beech and hophornbeam are not preferred browse species; striped maple is occasionally browsed. Consequently, deer at high enough populations have the ability to eliminate or significantly reduce the abundance of maple and ash regeneration. Elevated deer populations also have negative impacts on the species diversity of native forest herbs and shrubs. For instance, deer can suppress or eliminate species such as white trillium and witch hazel.
- Traditional uneven-aged management using the selection system results in small canopy gaps that regenerate primarily sugar maple in a patchy distribution across the forest. These patches can be easily targeted by browsing deer. The small canopy gaps also allow a limited amount of light to reach the forest floor. This limits both the abundance and growth rate of the seedlings that develop.

Uneven-aged management is desired in many areas to maintain large blocks of interior forest habitat. Successful implementation of this silvicultural system requires the regeneration and development of desirable species such as sugar maple. However, interfering vegetation and current white tail deer densities are making it increasingly difficult to regenerate desirable

species through uneven-aged management, particularly the single tree selection method. Therefore, alternative management strategies are needed to establish and sustain the northern hardwood forest type.

Exotic Invasive Species
Besides the exotic insects listed above, exotic invasive plants also threaten natural ecosystems. A brief description of exotic invasive plants that currently or could potentially have significant impacts on forest health on the Unit can be found below:

Japanese Knotweed (*Fallopia japonica*)
This shrub-like herbaceous perennial that is native to Asia typically invades disturbed areas, roadsides, and riparian areas. It reproduces by rhizomes, stem fragments, and seeds. It displaces native species by crowding them out.

Bush Honeysuckle (*Lonicera spp.)*
This shrub was introduced into the United States in the late 1850s from Eurasia. This shrub can deter establishment of desirable tree or shrub species especially in fields that are reverting to forest. The seeds are dispersed by birds.

Multi-flora Rose (*Rosa multiflora*)
This shrub was introduced into the United States in the late 1880s from Asia. It prefers disturbed areas, stream banks, forest canopy gaps, and roadsides. This shrub can deter establishment of desirable tree or shrub species. The seeds are dispersed by mice, turkey, and other birds. Seed remain viable in the seed bank for up to twenty years.

Garlic Mustard (*Alliaria petiolata*)
This European herbaceous plant was introduced into the United States in the late 1860s. It prefers shady **mesic** sites. Up to 3,000 seeds are produced per plant, which are dispersed by water or animals. It can deter establishment of desirable tree species and allelopathic impacts have been documented.

Swallowwort *(Cynanchum spp.)*
There are two species of this perennial vine that pose a risk to the Unit. The two species are pale and black swallowwort. Both species were introduced into the United States in the late 1800s. They both are prolific seeders, producing up to 2,000 seeds per square meter. The seeds are primarily distributed by the wind. It can crowd out native plants and can various impacts on native wildlife.

RESOURCE DEMANDS ON UNIT

A. Timber Resources

Timber is a global commodity with market values influenced by, among other factors, housing starts, trade policies and the availability of credit. Beginning in 2008, due to declining demand for a wide range of commodities, there has been a significant drop in the price paid for local timber. Regional hardwood stumpage prices for white ash, sugar maple, black cherry and red maple have declined 28% since 2007 after increasing 29% in the previous eight years (NYSDEC, 2009b).

Hardwood timber production is a primary use of local forests. Within fifty miles of Cortland, there are 22 hardwood sawmills with a total production capacity of 168 million board feet of lumber. An additional 58 secondary firms located within the same area produce hardwood furniture, flooring, pallets and other wood products (NYSDEC, 2009a).

Red pine and Norway spruce represent a small percentage of local timber harvests but supplies are concentrated on State lands. Utility poles, pressure treated lumber and stock for pre-fabricated log homes are the primary uses for red pine timber. The majority of local red pine logs are processed in New York with only a small percentage entering the export market. Norway spruce logs are used for **softwood** dimension lumber and nearly all local supplies are exported to Canada.

Based on recent trends, demand for **pulpwood** and chips is expected to increase in New York. Between 2002-07 pulpwood and chip production increased 100% to 1.6 million green tons. During the same period, New York facilities increased consumption of pulpwood and chips by 69% to 2.2 million green tons (NYSDEC, 2007).

Approximately 16.7% of local households use firewood as the primary home heating fuel (USCB, 2000). The price of home heating oil has increased dramatically in the last two years and anecdotal evidence suggests that firewood consumption and the installation of outdoor wood boilers for home heating have also increased. Demand for firewood is expected to increase.

In *State of the World's Forests*, the Food and Agriculture Organization of the United Nations (FAO, 2009) reports that global demand for products and environmental services is expected to increase in the coming decades and that "energy and climate change policies are increasing the use of wood as a source of energy, although this trend may be affected by the recent economic down-turn". The Report also notes that "reduced demand for wood and wood products as a result of the collapse in the housing sector and the credit crunch are having a severe negative impact on investments in industries and also on forest management.

B. Mineral Resources

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 which issues lease contracts. The procurement of minerals and rocks (inorganic substances), including the solution mining of minerals (such as salt) on these same state lands is administered by the Office of General Services. All activities 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. 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. 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. Any proposal for mineral development other than oil and gas would require SEQR review.

Surface Use for Evaluation of Mineral Resources: Only the lessee, or parties authorized by the lessee, can be issued a TRP to use the surface estate to conduct geophysical (such as a seismic survey), geochemical and/or surface sampling procedures on Department lands.

According to the 2009 New York State Energy Plan, natural gas consumption comprises about 23 percent of the total energy consumption in the United States. New York is the fourth largest gas consuming state, using about 1,200 billion cubic feet or 5% of US demand. Over 95 percent of the natural gas supply required to meet the New York demands is from natural gas supply production regions in other states, principally the Gulf Coast region and Canada. State annual gas demand is expected to grow by about 66 billion cubic feet (five percent) by 2020 to about 1.3 trillion cubic feet. The residential and commercial sectors are expected to increase an average 0.6 percent annually. Consumption in the industrial and electric generation sectors is predicted to remain relatively flat during the forecast period. About 80 percent of the growth in New York gas demand is concentrated in the capacity-constrained New York City and Long Island regions.

The amount of natural gas produced in New York State has been dropping since the 2006 record total of 55.2 billion cubic feet. The total reported State natural gas production for 2008 was 50.3 billion cubic feet; for 2009 was 45.0 billion cubic feet; for 2010 was 35.9 billion cubic feet; and 2011 was 31.1 billion cubic feet. These figures represent an increase since 1998 (16.7 billion cubic feet). The increase in New York natural gas production is driven by prolific wells in the deep (7,000 to 11,800 feet) Trenton-Black River formation in the Finger Lakes region. The largest area of production from this formation is in Chemung and Steuben counties. Annual production from the formation has grown from about 1.6 billion cubic feet in 1998 to over 40 billion cubic feet between 2005 and 2007, dropping to 34.8 billion cubic feet in 2008.

The Marcellus Shale formation is attracting attention as a significant new source of natural gas production in New York. The Marcellus Shale extends from Ohio through West Virginia and into Pennsylvania and New York. Estimated natural gas reserves for the Marcellus Shale formation are very significant and it is expected that the region will become a major natural gas production area in the United States. In New York, the Marcellus Shale is located in much of the Southern Tier stretching from Chautauqua and Erie counties in the west to the counties of Sullivan, Ulster, Greene and Albany in the east. While economically recoverable natural gas reserves for the entire extent of the Marcellus Shale are estimated to be up to 50 trillion cubic feet, it is not yet clear what fraction of that amount will be commercially recoverable in New York. (NYSERDA, 2009)

In December 2014 the Governor along with Commissioners of the Department of Health (DOH) and DEC announced that the DOH had completed its public health review of NYS DEC's SGEIS on the Oil, Gas and Solution Mining Regulatory Program and recommended that high-volume

hydraulic fracturing should not move forward in New York State. At the time of publication of this Plan, the final version of the SGEIS has not yet been finalized.

C. Biological Resources

Conservation of biological resources is increasingly a societal demand. There is heightened awareness about biological resources such as **old growth** forests, species diversity, rare or declining plant and animal species, scarce habitats and the ecological implications of a consumer society. Many people also achieve satisfaction just knowing that the full range of native species and habitats are present, even though they will have no direct contact with them.

This increased awareness has come about, in part, through the development of the internet, which has enabled instant access to current research, reports and other information about wildlife, ecosystems, and the environmental impacts of human activities. This has enabled citizens to develop informed opinions about natural resource issues. Public lands have emerged as important places for debating natural resource values. The demand for biological resources and potential conflict over how best to manage them is expected to increase.

D. Recreational Resources

The primary recreational activities on the Unit are hunting, snowmobiling, hiking, pleasure driving, and wildlife/nature observation, as described below. Other recreational activities include trapping and horseback riding. Measuring demand for some activities such as pleasure driving and wildlife/nature observation is difficult since there are no quantitative records of participant numbers. License fees paid by snowmobilers, hunters, anglers and trappers provide some measure of demand though data is often not available on the local scale.

Fishing: A regional angler survey conducted in 1988 and again in 1996 revealed a 24% decline in fishing within the nine county region of DEC Region 7. Although the New York Statistical yearbook indicates that resident fishing license sales have recently been increasing. There were 374,776 resident fishing licenses sold statewide in 2003 and 433,900 sold in 2008. Papish Pond and Calico pond offer fishing opportunities.

Horseback Riding: Although there are no designated horseback riding trails on the Unit, informal horseback riding is still a popular activity especially on Donahue Woods State Forest.

Hiking: Based on the 2003 New York State Comprehensive Outdoor Recreation Plan demand for hiking is expected to increase slightly.

Hunting: Big game deer hunting is the most popular form of hunting on the Unit. Other hunting opportunities available on the Unit include coyote hunting and the pursuit of upland game birds such as turkey, grouse and woodcock. Small game hunting of rabbits and squirrels is not popular on the Unit due to poor habitat. The Unit lacks significant areas of **open lands** for rabbit habitat and also lacks oak trees that are generally associated with grey squirrel habitat. The popularity of deer hunting is declining as the number of hunting licenses sold statewide has declined each year since 1977. The number of resident big game licenses sold statewide in 2002 was less than half the number sold in 1990. Turkey hunting however, is growing in popularity as the number of statewide permit holders has been steadily increasing since the early 1990s.

Snowmobiling: Registration by county of use is one measure of participation in snowmobiling. The following information was obtained from 2002 to 2009 New York State Statistical Yearbooks. From 2000 to 2003 the number of registered snowmobiles increased by about 15% in Cortland County. Since 2003 the number of registered snowmobiles has decreased by about 25% in Cortland County. These percentages are consistent with statewide registration numbers. The decrease most likely is a result of the current state of the economy. Statewide there were 170,122 registered snowmobiles in 2003 and 127,045 in 2007.

Trapping: Based on records of annual statewide resident licenses sold, participation in trapping appears to be increasing. In 2000, there were 7,899 resident trapping licenses sold statewide and in 2008, there were 12,021 sold. Although this is considerably less than the 31,543 resident trapping licenses that were sold in 1980. Overall, participation in trapping is minor in comparison to the hunting and fishing.

Wildlife/Nature Observation: The diversity of forest conditions on the Unit contributes to a wide variety of wildlife species. The softwood plantations provide habitat diversity at the landscape scale and offer habitat for some unusual bird species dependent upon conifers such as white-winged and red crossbills. There are no specific records for local participation in this activity.

However, the 2001 National Survey of Fishing, Hunting and Wildlife-Associated Recreation indicates that there were over 986,000 birders in New York State that travel away from home to enjoy their activity.

MANAGEMENT CONSTRAINTS ON THE UNIT

A. Physical Constraints

The following factors pose physical limitations on the management of the Unit's lands and waters: steep slopes, geologic properties, soil characteristics, recreational trails, density and placement of recreational trails, potential insect and disease infestations, limited access, presence of rare or endangered species, presence of cultural resources, proximity of the Unit's forests, presence of county, town, and state roads, electrical transmission lines, telephone lines, pipelines, buried telecommunication lines, deeded right-of-ways, easements, and exotic (non-native) conifer species planted on incompatible soils.

B. Administrative Constraints

The following factors are administrative limitations on the management of the Unit: limited budgets, decreased staffing, availability of DEC Operations work crews, fluctuations in wood markets and reduced availability of inmate work crews.

C. Societal Influences

Public opinion on the following subjects poses societal limitations on the management of the Unit: trapping, hunting, hydraulic fracturing, **clearcutting**, public ownership, pesticides, oil & gas development, old forest reserves, and recreation. All opinions are considered, but the degree to which they can be satisfied will vary.

D. Department Rules, Regulations, & Laws

Please refer to the Strategic Plan for State Forest Management, Chapter 7, Legal Considerations, Page 317 for a list of Department Rules, Regulations, Environmental Conservation Laws and Policies governing the management activities on the Unit.

VISION STATEMENT

State Forests on this Unit will be managed in a sustainable manner by promoting ecosystem health, enhancing landscape biodiversity, protecting soil productivity and water quality while providing recreational, social, and economic benefits to the people of New York State.

GOALS & OBJECTIVES

A. Provide healthy, sustainable and biologically diverse ecosystems.

Ecosystem health is measured in numerous ways. One is by the degree to which natural processes are able to take place. Another is by the amount of naturally occurring species that are present, and the absence of non-native species. No single measure can reveal the overall health of an ecosystem, but each is an important part of the larger picture. DEC will manage State Forests so they are judged to be in a high degree of health as measured by multiple criteria, including the biodiversity that they support, how connected they are to other forests, and their ecological function.

1. Protect Soil and Water Quality.

Soil and water quality will be protected by preventing erosion, compaction, nutrient depletion, and **soil organic carbon** loss. Protection of soil and water quality is one of the highest management priorities and is the foundation of sustainable management.

a. Protect 1,240 acres of wetlands, ponds, and riparian zones.

- Establish at a minimum a fifty foot protection buffer next to ponds and perennial streams (streams with classification of D or higher). No vehicular, construction or harvesting equipment is allowed in protection buffers unless at designated crossings to access other management areas. Protection buffers shall not be considered for active commercial forest management.
- Establish **Special Management Zones (SMZs)** or areas needing special consideration next to streams, ponds, wetlands, vernal pools and spring seeps (see Appendix XV). SMZs may include protection buffers (see previous action). The widths of SMZs are dependent upon the type of activity that is being conducted:
    - Retain at least seventy-five percent of the pre-harvest density (measured in basal area per acre) during harvesting operations in areas of an SMZ outside of any protection buffers. The width of an SMZ shall be at least 100-feet wide, for spring seeps, wetlands, intermittent streams, perennial streams, and vernal pools and at least 150 feet wide for ponds. No harvesting equipment is allowed in any wetland, vernal pool, or spring seep.

- Avoid new skid trails construction within 100-feet from wetlands and ponds and at least 150 feet when adjoining slopes are greater than ten percent. Main skid trails shall be kept at least 100-feet from vernal pool depressions.
- Avoid haul road construction within 250-feet from wetlands and vernal pool depressions.
- Keep log landings at least 250-feet from all wetlands, streams, vernal pool depressions, and ponds.
- Prohibit any surface disturbance associated with mineral development within 250 feet of any stream, pond, wetland, spring seep, or vernal pool if the properties within the Unit are leased in the future.

Deviations from the previously mentioned SMZ establishment guidelines may be undertaken for habitat improvement, invasive species control, equipment access, buffer restoration, and plantation conversion. A Request for Exemption must be submitted and approved by Central office or regionally depending on the activity prior to any deviations taking place.

- Apply **Best Management Practices (BMPs)** or practices designed for the protection of water quality, which are determined to be the most effective and practical means of controlling water pollution on all projects (maintenance of existing infrastructure and new projects, which can be found in the Management Action Schedule section of this plan) undertaken on the Unit. The following list contains general BMPs that shall be applied to various project types as well as specific BMPs that only pertain to one project type:

  - Walk the project area to identify any water resources and establish SMZs prior to conducting any project activities.
  - Limit the size of improvements to the minimum necessary to meet the intended use.
  - Minimize tree cutting associated with construction projects.
  - Avoid the use of equipment in streams except at designated stream crossings, which shall be minimized.
  - Locate improvements to minimize cut and fill.
  - Locate improvements away from streams, wetlands, and unstable slopes.
  - Plan projects to avoid hydric and highly erodible soils. Where these soils must be traversed consider: construction in dry periods, seasonal closure, use limitations and/or the use of gravel and fabric.
  - Use properly placed drainage devices such as water bars and broad-based dips.
  - Design stream crossings where there are low, stable banks, a firm stream bottom and gentle approach slopes.
  - Construct stream crossings perpendicular to the stream flow.
  - Limit stream crossing construction to periods of low or normal flow.
  - Avoid disrupting or preventing movement of fish and other aquatic species.
  - Stabilize bridge approaches with aggregate or other suitable material.

- Use soil stabilization practices on exposed soil around project areas.
- Construct stream crossings which maintain a continuous natural streambed by using bridges, "D" shaped culverts, or oversize round culverts placed deep enough to provide this attribute.
- Lay out new recreational trails on existing old roads or clear or partially cleared areas, where possible.
- Use natural materials such as rock or wooden timbers for stream bank stabilizing structures as needed.
- Construct new recreational trails on low or moderate side slopes to facilitate effective drainage and avoid flat topography where ponding could develop and drainage could be problematic should the trail surface erode or become compacted to a level below the surrounding area.
- Locate parking lots on flat, stable, well-drained sites.
- Use gravel or other appropriate materials to avoid runoff and erosion problems;
- Use of drainage structures on trails leading to lean-to sites and campsites, to prevent water flowing into site.
- Locate lean-tos and campsites on flat, stable, well-drained sites and properly buffered from streams, wetlands and waterbodies.
- Limit construction to periods of low or normal rainfall.
- Consider limiting harvesting operations on poorly drained soils to dry, frozen, or snow covered conditions where practical.
- Use existing landings if possible. Close existing landings within SMZs unless construction of a new landing would cause greater harm to water quality.
- Locate new landings outside of SMZs and on firm well-drained soils with a slight slope or efficient drainage.
- Stabilize landing entrances using gravel and geotextile fabric where appropriate.
- Require a spill containment and clean-up kit to be on site.
- Use existing skid trails unless a new trail can improve access and environmental impacts.
- Keep new skid trail grades less than 15% where possible. Grades greater than 15% should not exceed 300 feet.
- Repair, smooth, and stabilize skid trails during and after use.
- Restrict harvesting operations during periods when soils are saturated and unable to support harvesting activities.
- Locate skid trails prior to commencement of harvesting activities to avoid sensitive soils and limit impacts on water resources.
- Refer to the "New York State Forestry Best Management Practices for Water Quality BMP Field Guide" for additional information.

- Implement Rutting Guidelines on all operations related to forest product sales, Temporary Revocable Permits, and the State forest road system. For the purposes of these guidelines, a rut is a six inch or greater depression, measured from the immediately adjacent soil surface to the bottom of the depression, created from the passage of a vehicle or equipment.
    - Avoid creating ruts within an SMZ.
    - Avoid creating ruts in a harvest area (the area where forest products are designated for removal not including skid trails).

- Avoid allowing a rut to create channelized flow into a protection buffer, wetland, or water body.
- Avoid creating ruts on a Public Forest Access Road (PFAR) or haul road on slopes greater than 5%.
- Implement BMPs on skid trails that have ruts with depths of 18 inches or greater that extend significantly prior to rain or melting events.
- Address rutting on PFARs that are open to public use within 24-hours.
- Smooth ruts on landings as they develop, if there is significant erosion, if work will be suspended for 14-days or more, or otherwise appropriate (eg. prior to a rain event). Apply BMPs as needed.
- Smooth ruts on haul roads if there is channelized mud or water flow or significant erosion, if work will be suspended for 14-days or more, or otherwise appropriate (eg. prior to completion of TRP). Apply BMPs as needed.
- Smooth ruts on skid trails if there is channelized mud or water flow or significant erosion, if work will be suspended for 14 days or more, or otherwise appropriate (eg. prior to timber sale close-out). Apply BMPs as needed.

b. Protect 182 acres of steep slopes.

- Prohibit harvesting operations on slopes greater than forty percent without existing access trails.
- Prohibit surface disturbance associated with mineral exploration and development on slopes greater than fifteen percent.
- Prohibit new recreational trail development on slopes greater than forty percent.

c. Protect 12 acres that are inaccessible due to potential impacts of establishing access.

2. Maintain or Enhance Diversity of Habitats.

A diversity of habitats will be maintained and enhanced through active forest management. Timber harvesting and other silvicultural practices will be used to establish conditions that support a diversity of species, habitats and structures. Harvests will be scheduled to maintain early, middle and late successional forest habitats. Active forest management will ensure the protection of rare, threatened, and **endangered species** and provide habitat for Species of Greatest Conservation Need (SGCN). For a complete list of confirmed and predicted bird, reptile and amphibian, and mammalian species on the Unit with their protective status and SGCN status, see Appendices V for birds, VI for reptiles and amphibians, and VII for mammals. See the Current and Future Cover Types and the Management Direction maps found in Appendix XIX for current and planned stand level conditions.

a. Increase early successional habitat. Early successional habitat is in decline and is currently lacking within the Unit. Nearly 20 percent of all SGCN on the Unit use early successional habitat. Early successional habitat shall be increased from about 5 percent of the area on the Unit (558 acres) to about 12 percent of the area on the Unit (1,200 acres). This increase shall be accomplished according to the following:

- Maintain 40-acres of grassland by mowing every three years and allow 6 acres of grassland to naturally revert to forest.

- Maintain 37-acres of shrubland by mowing or releasing shrub species every 15 to 20 years and allow 41-acres of shrubland to naturally revert to forest.
- Maintain 117-acres of apple/hawthorne forest by releasing apple/hawthorne trees from woody competition.
- Maintain 280-acres of aspen forest. These areas shall be managed using a short (40 to 60 years) rotation. About 25 percent of these aspen forests will be regenerated throughout the life of this plan to provide dense early successional habitat cover.
- Convert 657-acres of conifer plantation to Northern hardwood or Northern hardwood/natural conifer forest. These conversions will create dense early successional cover.
- Regenerate 243-acres of Northern hardwood forest. These regeneration harvests will create dense early successional cover which will be used by early successional species for about 20 years.
- Maintain 177-acres of shrub wetlands. These wetlands shall be excluded from active forest management activities such as timber harvesting and oil and gas exploration and development.

b. Decrease and enhance mid successional forest habitats. Mid successional forests are pole-sized or larger even-aged forests with relatively open understories. About 75 percent (7, 266 acres) of the area within the Unit can currently be classified as mid successional. Mid successional habitat will be decreased or enhanced by implementing the following strategies:

- Convert 970-acres to early successional habitat. This acreage shall be regenerated by conducting forest product sales and includes conifer plantations, aspen forests, and Northern hardwood forests as previously mentioned in the early successional habitat section.
- Enhance 3,005-acres that will be managed in a mid successional even-aged forest condition.
    - Manage 601-acres of even-aged forest using a patch clearcut strategy. Patch clearcuts are small regeneration harvests (less than five acres) that will create variability in horizontal and vertical structure.
    - Manage 253-acres of even-aged forest using a variable density thinning strategy. This strategy creates horizontal variation and vertical structure throughout the stand being treated.
    - Retain snags (large standing dead trees), cavity trees, coarse woody material (large dead and down trees), reserve trees (trees not removed during regeneration harvests), and hardwood/softwood inclusions as described under objective A.2.g. ("Habitat Structures") during timber harvests to help conserve biodiversity.
- Convert 2,937-acres to an uneven-aged forest structure, which is a structure with 3 or more age-classes that create desirable vertical structure. This conversion process will take multiple entries and may take 50 to 100 years to accomplish.

c. Increase late successional forest habitats from about 12 percent of the area within the Unit to over 55 percent of the area within the Unit. Late successional forest habitat includes habitat components such as snags, cavity trees, coarse woody material (CWM), **biological legacy** trees, vertical structure, and a relatively closed canopy. Late successional forest habitat is currently

lacking within the Unit and across the landscape that surrounds the Unit. Over 30 percent of the SGCN on the Unit use late successional habitat.

- Manage 176-acres in **natural areas** or areas left alone, usually with no human intervention, to attain and sustain a late successional forest habitat condition.
- Manage 952-acres in **protection areas** or areas excluded from most active management to protect sensitive sites. These areas include steep slopes, riparian areas surrounding streams and wetlands, forested wetlands, and other wet areas. Other protection areas not included are emergent and shrub wetlands, open water, and SMZs as described in objective A.1.a. ("Wetlands and Riparian Zones").
- Manage 4, 570-acres in an uneven-aged forest condition. Uneven-aged forests contain many late successional forest habitat characteristics such as multiple age classes (seedlings to very large trees) that create desirable vertical structure, small canopy openings (diameters no larger than 2.5 times the height of surrounding trees), snags, CWM, cavity trees, and biological legacy trees.

d. Maintain 30 percent of the Unit as conifer cover. Conifer cover provides a variety of benefits to numerous wildlife species. Conifer cover moderates temperature extremes and snow depth and provides escape cover year round. Conifer cover within the Unit consists of conifer forests and Northern hardwood-conifer mixed forests. Conifer forests are naturally regenerated forests with at least 90 percent of density being conifers and conifer plantations. Northern hardwood-conifer mixed forests contain at least 10 percent of the density in both Northern hardwoods and conifers. Conifer and Northern hardwood-conifer mixed forests will be decreased from 43 percent of the area within the Unit (4,459-acres) to about 30 percent of the area within the Unit (3,694-acres).

- Increase natural conifer cover. These conifer forests include long-lived species such as native hemlock and white pine as well as naturally regenerated Norway spruce and Douglas fir.
    - Protect 174-acres of existing hemlock and white pine forests. These forests are located within forested wetlands and riparian areas that will be managed as protection areas or are within areas being managed as natural areas.
    - Regenerate 558-acres of conifer plantation to natural conifer cover. These white pine, Norway spruce, and Douglas fir plantations will be naturally regenerated using even and uneven-aged silvicultural systems. The conversion process for uneven-aged systems will take multiple entries and many years to complete.
- Increase Northern hardwood-conifer mixed forests.
    - Retain at least 10 percent of the conifer component within the 1,035-acres of existing Northern hardwood-conifer mixed forests during silvicultural treatments.
    - Convert 507-acres of conifer plantation to Northern hardwood-conifer mixed forests by using even and uneven-aged silvicultural systems. The conversion process for uneven-aged systems will take multiple entries and many years to complete.
- Tend 1,367-acres of conifer plantation using intermediate commercial thinning regimes.
- Maintain 53-acres of conifer seed orchards. These are located on Gee Brook State Forest. Mow the understory every three years to deter the establishment of shrub and tree species.

e. Maintain a diversity of wetland habitats. Past agricultural activities and development have considerably reduced the number of wetlands on the Unit and across the landscape. Wetlands provide many benefits to society and wildlife. Wetland habitats can be considered open water, emergent herbaceous, shrub, and forested wetlands and vernal pools.

- Protect 948-acres of wetland habitat and riparian areas surrounding wetlands including 31 acres of open wetland that is within the Chenango Highlands Forest Matrix Block. There are 441-acres of classified (New York State or Federally) wetlands on the Unit. The remaining 507-acres consists of unclassified wetlands and riparian areas surrounding wetlands.
- Construct at least ten-acres of wetlands including vernal pools. These shall be constructed in protection, natural, areas with an uneven-aged forest management direction, or SMZ areas if possible.
- Maintain three ponds as open water wetlands.
    - Maintain Calico Pond by conducting annual inspections of embankment and spillways, mowing the embankment every three years, and conducting a fisheries surveys.
    - Maintain Raymond Suarez Pond by unplugging the primary and auxiliary spillways, installing beaver resistant water control structures, removing trees and shrubs from the embankment, grading and shaping the embankment, conducting annual inspections of the embankment and spillways, and mowing the embankment every three years.
    - Maintain Papish Pond by addressing the Class C – High Hazard dam, conducting annual inspections of the impoundment and spillways, and mowing the embankment every three years.

f. Enhance and maintain forest landscape connectivity. Determined by the New York State Heritage Program, Least Cost Path (LCP) corridors represent the most favorable dispersal path for forest species based on a combination of percent natural forest cover in a defined area, barriers to movement, and distance traveled. LCP corridors are areas two miles wide that connect large unfragmented forested landscapes. LCP corridors should ideally contain closed canopy and forest interior conditions. There is 2,296-acres of the Unit that is located within an LCP.

- Manage over eighty percent of the area (1, 926-acres) within least cost path (LCP) corridors as late successional habitat. An uneven-aged silvicultural system will be used for 1,502-acres of actively managed area while 424-acres will managed as protection or natural areas. These management strategies create late successional habitat characteristics within the forest.
- Maintain contiguous uneven-aged stand conditions within LCP corridors.
- Utilize **variable density thinning** (a strategy that creates variable stand conditions, both vertically and horizontally) regimes during **intermediate treatments** (a silvicultural treatment conducted after establishment of and before the regeneration of the stand) and patch cuts during regeneration treatments in even-aged stands within LCP corridors.
- Acquire 436-acres, from willing sellers, to enhance the LCP corridor.

g. Maintain a diversity of habitat structures. Forest retention is a strategy for conserving biodiversity in actively managed forests. Retention and recruitment of snags (standing dead trees), cavity trees, CWM (dead wood > 6 inches that is on the ground), Fine Woody Material or

FWM (dead wood ≤ 6 inches that is on the ground), and other features will advance the structural and compositional complexity necessary for conserving biodiversity and maintaining long term ecosystem productivity. The following retention practices should be implemented during forest management treatments:

- Retain two snags 11'' – 17'' **Diameter Breast Height (DBH)** per acre and two ≥ 18'' DBH per acre to provide perching, nesting/denning, and foraging habitat.
- Retain three cavity trees 11'' – 17'' DBH per acre and one ≥ 18'' DBH per acre to provide perching, nesting/denning, and foraging habitat.
- Recruit one tree ≥18" DBH per acre plus any additional trees needed to satisfy deficiencies in snag or cavity trees.
- In even-aged regeneration harvests greater than five acres, reserve at least five percent of the stand area or at least five percent of the pre-harvest **stocking**. These reserve trees help perpetuate living organisms with limited dispersal capabilities such as plants, lichens, mosses, invertebrates, and terrestrial amphibians. The reserve trees also provide protective cover for species recolonizing the site.
- During intermediate treatments in conifer plantations retain ≥ ten percent of pre-harvest **basal area** in hardwoods where possible. These hardwood inclusions provide feeding and nesting areas.
- During treatments in natural hardwood stands, retain ≥ five percent of pre-harvest basal area in conifers where possible. These softwood inclusions provide feeding, nesting, and winter cover areas.
- During treatments in natural conifer stands, retain ≥ five percent of pre-harvest basal area in hardwoods where possible. These hardwood inclusions provide feeding and nesting areas.
- Retain CWM consisting of at least three logs per acre ≥ 10'' in diameter at the small end and at least sixteen feet in length or equivalent volume in other lengths after treatments. Among other things, CWM provides habitat for many wildlife species and helps with nutrient cycling.
- Retain at least twenty percent of FWM after treatments. FWM helps return nutrients to the site and provides wildlife habitat.

3. Protect Special Concern, Rare, Threatened and Endangered Species

Specific management actions will be applied at locations where at-risk plant and animal species have been identified.

a. Protect active nesting sites of bird species listed as threatened or species of special concern (See Appendix V for a list of species). All but one bird species listed as threatened or species of special concern are raptors. The one bird that is not a raptor, is the pied-billed grebe (a small water bird).

- Consult with DEC Bureau of Wildlife staff when at-risk birds are known to be nesting in locations where management activities will cause disturbance. Adaptive management strategies and actions will be developed and applied to minimize disturbance to nesting birds. These strategies may place restrictions on timber harvesting and gas exploration activities and could include: setbacks, no-cut or no disturbance zones, or seasonal

restrictions. For recreational uses, actions may include trail closures or rerouting of trails. When specific management strategies for individual species are developed, they will be incorporated into the management plan.
- Acquire 92-acres, from willing sellers to protect active nesting sites of birds listed as threatened or species of special concern.

b. Protect Jacob's ladder. Maintain the site in a desirable condition for a healthy population of Jacob's ladder. The location of the Jacob's ladder population is within a protection area therefore the area will be excluded from active forest management. The following are actions that should maintain or enhance the current population:
- Manage beaver populations to prevent flooding of site where plants are located.
- Release plants from shading through periodic cutting of competing vegetation.

c. Protect Blue spotted salamanders, Jefferson salamanders, and wood turtles all of which are species of special concern. All three of these species require water for at least part of their life cycles. The blue spotted, Jefferson, and hybridized blue spotted-Jefferson salamanders share many of the same habitat requirements including the need for vernal pools with decaying leaves. Wood turtles water requirement includes good quality streams with gravel or cobble bottoms.
- Comply with SMZ establishment guidelines and implement BMPs as described in objective A.1.a. ("Wetlands and Riparian Zones"). Compliance with the SMZ establishment guidelines and the implementation of BMPs will ensure that the water resources that are needed by these species will be of the highest quality possible.
- Construct vernal pools. Vernal pools or small temporary wetlands are required for the reproduction of salamanders. The construction of vernal pools will ensure that there is habitat available for the salamanders to reproduce. Approximately 50 to 100 vernal pools shall be constructed in protection, natural, uneven-aged forest management direction, or SMZ areas.
- Comply with Retention Standards as described in objective A.2.g ("Habitat Structures"). Coarse woody material (CWM) provides needed cover and foraging sites for salamanders.

4. Protect Forest Health.
Forest health is the condition of the forest based on many factors. Some factors that influence forest health are the structure (horizontal and vertical distribution of forest components such as crown position, diameters, heights, and stems), species composition, function, vigor, unusual levels of insects and diseases, and resilience to disturbance (Helms, 1998). Healthy forests provide more or higher quality benefits to society than unhealthy forests do, for example trees with higher vigor sequester more carbon and release more oxygen.

a. Practice **Silviculture** (the art and science of controlling the establishment, growth, composition, health and quality of a forest) to improve the health of the forest.
- Use forest product sales and silviculture to provide a diversity of species, habitats, and structure to enhance the resiliency of ecological systems and forest sustainability.
- Conduct **improvement thinnings** (a thinning conducted to improve the composition and quality of a stand) to maintain optimal stocking levels, to focus growth on the healthiest

trees, to increase carbon sequestration, and to improve overall vigor of State Forest stands.

- Conduct harvesting activities in order to establish forest communities that are suited to site conditions. For example, convert a red pine plantation that was planted "off site" to a natural Northern hardwood stand.
- Conduct harvesting activities to promote optimal growth and regeneration.

b. Hinder the introduction and spread of exotic-invasive species which can be detrimental to natural ecosystems. Exotic-invasive species can alter biodiversity, hydrology, fire frequency, soil fertility, and other processes.

- Identify and map populations of newly found and/or established invasive species on State Forest lands during the forest inventory and management action process.
- Employ strategies following principles of early detection and rapid response to identify and address newly introduced exotic-invasive species.
- Stem the spread of exotic-invasive species which can cause widespread mortality in a forest, resulting in large carbon emissions when those trees decay.
- Control existing populations where appropriate by using silviculture, mechanical controls and **herbicide** treatments.
- Minimize transport of exotic-invasive species from infested to uninfested areas.
- Follow guidelines outlined in the Department's Emerald Ash Borer Management Response Plan where possible. The Emerald Ash Borer Management Response Plan is available at http:www.dec.ny.gov/animals/7253.htm
- Refer to the Invasive Species section of the SPSFM beginning on page 277.

c. Attempt to control vegetation that interferes with the establishment of desired regeneration. Native plants such as American beech, striped maple, hop hornbeam, New York fern, and hay-scented fern as well as some exotic species can take over forest understories and interfere with the establishment of desirable species, which decreases forest health, biodiversity, and productivity.

- Collect regeneration and interfering vegetation data during forest inventories and stand analyses for treatment prescription development.
- Assess the understory prior to conducting regeneration harvests.
- Control interfering vegetation using mechanical treatments, prescribed fire, and/or herbicide application.

d. Monitor deer impacts on forest regeneration and forest health and act accordingly. The overabundance of deer can be detrimental by altering herbaceous plant species composition, tree species composition, habitat structure, and resource availability to other wildlife species.

- Collect deer density impact information during forest inventories. The amount of browse is assessed during forest inventory to determine if deer density numbers are high.
- Assess deer densities when conducting a regeneration harvest to determine if fences or other actions are necessary to ensure seedling survival.
- Collaborate with DFWMR biologists to identify and employ active deer population control measures, such as Deer Management Assistance Program (DMAP).
- Provide current web-based information, maps, and kiosks about hunting opportunities and access.

e. Prevent and suppress wildfires that may emit large quantities of carbon.

- Protect the natural resources from wildfire by working closely with the Division of Forest Protection and Law Enforcement.
- Require all harvesting equipment to have spark arresters.
- Conduct salvage operations to mitigate the risk of wildfires.
- Encourage the public to use campfires responsibly.

f. Use an adaptive management strategy to ensure healthy ecosystems. There is uncertainty with regards to future risks, such as insect and disease outbreaks (native and exotic), natural disasters, wildfire and the effects of climate change to the ecosystems in the unit. By maintaining a diversity of species and cover types on the unit some of the risks are reduced although not completely eliminated.

- Use the latest and best available information, knowledge and technologies when conducting a treatment.
- Change/adjust treatments or objectives to meet the needs of the changing environment. For example a thinning strategy or regeneration harvest may need to be modified or new species planted.
- Monitor management treatments to determine success and make adjustments to similar future treatments to ensure a greater possibility of success.

B. Provide recreational opportunities for people of all ages and abilities.

State Forests are suitable for a wide variety of outdoor recreational pursuits; some are compatible with one another, while others are best kept apart. Equally varied are the people who undertake these activities, as well as their abilities, and their desire to challenge themselves. While not all people will be able to have the experience they desire on every State Forest, DEC will endeavor to provide compatible recreational opportunities to all who wish to experience the outdoors in a relatively undeveloped setting. This endeavor includes the application of the Americans with Disability Act as described in Appendix XVI. This is consistent with DECs goal of helping citizens maintain a connection with nature. See the Access and Facilities Maps located in Appendix XIX for a visual representation of the existing and planned access opportunities and facilities on the Unit.

1. Maintain and enhance recreational trails on the Unit.

Maintain 32.3-miles of existing trails and construct 5.8-miles of new trails with the assistance of volunteers through the Volunteer Stewardship Program (VSP).

a. Maintain and enhance the hiking/foot trails on the Unit. All hiking/foot trails on the Unit are part of the main Finger Lakes Trail (FLT), which is a long distance trail from Allegany State Park to the Catskills. The FLT that runs through the Unit is also part of the North Country National Scenic Trail, which runs from New York to North Dakota. There is currently a VSP agreement with the Finger Lakes Trail Conference (FLTC) to maintain the hiking/foot trails on the Unit.

- Maintain 11.1-miles of existing trails by working with the FLTC. The Department will provide needed materials whenever possible if budget constraints allow.

- Construct and maintain 5.3-miles of new trail on Hoxie Gorge State Forest by working with the FLTC. The Department will provide needed materials whenever possible if budget constraints allow.
- Consider requests by the FLTC for reroutes of trails on a case-by-case basis.
- Prohibit mountain bike use on the FLT. The FLT was designed and built to standards that cannot sustain use by mountain bikes.
- Prohibit snowmobile use on the FLT except where there is currently or proposed shared use. The FLT was designed and built to standards that cannot sustain use by snowmobiles.

b. Maintain 20.3-miles of existing snowmobile trails on the Unit. All designated snowmobile trails on the Unit are part of the Statewide Trail System as such they are supported through the New York State Snowmobile Trail Fund. There are over 11-miles of corridor trails (high volume primary routes) and over 9-miles of secondary trails (medium volume connecting routes). There are currently three VSP agreements with local snowmobile clubs to maintain the snowmobile trails on the Unit. The four local clubs with VSP agreements to maintain snowmobile trails on the Unit are Twin Bridges, Cortland-Chenango Trail Hounds, Truxton Trail Riders, and the Marathon Snowdusters.

- Maintain trails through VSP agreements with previously mentioned local clubs. The Department will provide needed materials whenever possible if budget constraints allow.
- Consider requests by clubs with an VSP agreement to reroute a trail on a case-by-case basis.

c. Maintain and enhance the All Terrain Vehicle (ATV) routes for people with disabilities on the Unit. All designated ATV routes on the Unit are designed for use by individuals with a DEC-issued Motorized Access Permit for People with Disabilities (MAPPWD).

A 3.5-mile ATV trail was established on Taylor Valley State Forest (Cortland 2) in 1985. In 1991, an assessment of the trails revealed significant environmental impacts. The trail was eroding, badly rutted and contained numerous mud holes. In the short span of 6-years, the trail was in need of either relocation or complete rehabilitation to make it acceptable for use. In addition, many unauthorized or illegal trails had been established by trail users. These unauthorized trails were unacceptable for use due to their environmental impacts. The trail was closed to motor vehicle use in 1991 due to their excessive deterioration from use which caused unacceptable environmental impacts.

- Restrict ATVs to trails designated for ATV use by persons with a Department issued MAPPWD. Barriers and signs will be installed throughout the Unit to restrict ATV use. See below for additional information regarding proposed barriers.
- Maintain 0.9-miles of existing trail on Hoxie Gorge State Forest.
- Construct and maintain 0.5-miles of new trail on Hoxie Gorge State Forest to create hunting/nature observation opportunities within a different cover-type than currently exists.
- Issue a no-fee MAPPWD to qualified individuals for trail use. The MAPPWD allows the individual to ride only on marked and designated routes where public use of motor vehicles is prohibited.

d. Maintain three recreational bridges. There are two foot-bridges, located on Taylor Valley and Gee Brook State Forests and one snowmobile-bridge located on Hoxie Gorge State Forest.

- Maintain the foot-bridge on Taylor Valley State Forest by working with the FLTC through a VSP agreement. Conduct annual inspections of structure and make necessary repairs. The Department will provide needed materials whenever possible if budget constraints allow.
- Maintain the foot-bridge on Gee Brook State Forest by working with the Department's Operation crew. Conduct annual inspections of structures and make necessary repairs.
- Maintain the snowmobile-bridge on Hoxie Gorge State Forest by working with the Marathon Snowdusters through a VSP agreement. Conduct annual inspections of structure and make necessary repairs. The Department will provide needed materials whenever possible if budget constraints allow.

2. Maintain and enhance administrative and public-use access and information.
Assets on the Unit that deal with administrative and public-use access and information include things such as State Forest roads, parking areas, State Forest identification signs, kiosks, and barriers.

a. Maintain 17.2-miles of State Forest roads. State Forest roads provide access for recreation and administrative uses. These roads improve hunting, fishing, trapping, wildlife observation, and camping opportunities on the Unit.

- Maintain 14.6-miles of Public Forest Access Roads (PFAR). PFARs are permanent unpaved roads that provide the primary access for administrative and public use.
    - Conduct routine maintenance such as grading, mowing, and cleaning of culverts and ditches every three years.
    - Maintenance, where possible, shall be accomplished through forest product sale-related work. Maintenance conducted by contractors may include providing material (gravel, shale, stones, etc…), placing material at desired locations, grading, and culvert replacement.
    - Replace the culverts that are installed along the PFARs as needed. There are a total of 129 culverts located along PFARs on the Unit.
    - Replace signs along the PFARs as needed.
    - Implement Best Management Practices (BMPs) as described in objective A.1.a ("Wetlands and Riparian Zones) during all maintenance and construction activities.
    - Maintain eight existing shale pits to supply material for repairs to PFARs.
- Maintain 2.6-miles of haul roads. Haul roads are permanent unpaved roads that provide limited vehicular access primarily during forest product sales.
    - Restrict vehicular access to administrative uses. A majority of the haul roads are currently blocked from public vehicular use by earthen berms or rock barriers.
    - Conduct limited maintenance to stabilize road and restrict erosion.
    - Maintain roads through timber sale-related work.

b. Maintain and enhance parking opportunities on the Unit. Parking areas improve access to recreational opportunities.

- Maintain three existing parking areas. These areas are located on Gee Brook (2) and Taylor Valley State Forests.
- Construct and maintain three new parking areas.
    - Construct a parking area at the Southern end of the Mt. Roderick PFAR on Taylor Valley State Forest to improve access to the snowmobile trail at that location.
    - Construct a parking area to improve hunting and nature observation opportunities at the trailhead of the northern ATV trail, which is for holders of a MAPPWD on Hoxie Gorge State Forest.
    - Construct a parking area to improve fishing opportunities at Papish Pond Multiple Use Area.
- Maintain eight existing shale pits to supply material for new and existing parking areas.
- Implement BMPs during all maintenance and construction activities.
- Block skid trails leaving landings that were used for forest product sales instead of blocking entire landings when possible. This should improve hunting, trapping, and nature observation opportunities by creating additional areas to park.

c. Maintain and enhance informational assets regarding recreational opportunities on the Unit. Informational assets that exist or are proposed include State Forest identification signs, kiosks, and the Department website. There are five existing State Forest identification signs located on the following four State Forests: Taylor Valley, Hoxie Gorge, Baker School House, and Gee Brook (2).

- Install two new State Forest identification signs. One shall be installed on Taylor Valley State Forest and one shall be installed on Hoxie Gorge State Forest.
- Create and install informational kiosks on all forests within the Unit. The kiosks will provide a map and important information about the forest.
- Inspect signs and kiosks annually and make necessary repairs.
- Update signs and kiosks every ten years.
- Review and update every ten years the web pages for each State Forests within the Unit that are located on the Department's website.

d. Maintain and enhance barriers to deter illegal activities and environmental degradation on the Unit. Barriers such as gates, rocks, and earthen berms help deter illegal Off Highway Vehicle (OHV) and ATV use, which can cause environmental degradation such as soil erosion, displacement, and compaction, increased siltation and turbidity, noise, disturbance to wildlife, damage to vegetation, and air pollution. Existing barriers on the Unit include: three gates, which are located on Taylor Valley State Forest, Gee Brook State Forest, and Papish Pond Multiple Use Area; two rock barriers, which are located on Gee Brook State Forest; and numerous earthen berms located throughout the Unit.

- Install four combination gate/rock barriers on Donahue State Forest. The utility pipelines Right of Ways (ROW) are attractive to illegal OHV and ATV usage, which has caused extensive damage. These ROWs shall be blocked by working with Dominion (current owner of the pipeline), as well as the Truxton Snowmobile Club.
- Install two gates at locations where there is known illegal off road use on Taylor Valley and Hoxie Gorge State Forest. These gates are located on designated snowmobile trails therefore the installation should be coordinated with the Truxton Snowmobile and the Marathon Snowdusters.

- Install two rock barriers where there is known illegal off road use on Taylor Valley and Hoxie Gorge State Forests. These barriers will be installed as part of sale related work associated with a forest product sale. They could be earthen berms instead of rock barriers depending on the value of the associated forest product sale.
- Install earthen berms where access trails leave landings to deter illegal off road activities.
- Conduct annual inspections of barriers and make necessary repairs.

e. Acquire property from willing sellers to improve administrative and public use access to Baker School House and Gee Brook State Forests.

3. Maintain and enhance camping and day-use area opportunities.
Most areas throughout the Unit allow dispersed, primitive back-country camping while others only allow camping at designated sites. There are 15 existing designated campsites, which have been neglected in the recent past because of Department budgetary and staffing constraints as well as lack of public interest. As such, to provide a better camping experience the number of designated sites on the Unit is being reduced to 12. Existing designated sites are located at the Cheningo Camping Area (Taylor Valley State Forest) and at Calico Pond (Gee Brook State Forest) while the proposed designated sites are located on Taylor Valley State Forest, Baker School House State Forest, Gee Brook State Forest, and Papish Pond Multiple Use Area. A Forest Ranger issued, no fee permit is required for camping at one location (designated or undesignated site) for longer than three days, for groups larger than ten persons, and for camping at Calico Pond. There is one day use area called the Cheningo Day-Use Area located on Taylor Valley State Forest.

a. Allow dispersed, primitive back-country camping throughout the Unit unless specifically prohibited, provided persons camp at least 150-feet from roads, marked trails, streams, ponds, lakes, and other water bodies.

- Consider, on a case-by-case basis, issuing a Camping Permit to camp on old log landings or other cleared areas during the hunting season.

b. Designate and maintain seven undeveloped drive-up campsites on the Unit. These campsites shall be located on Baker School House State Forest and at the Cheningo Camping Area (Taylor Valley State Forest). The Cheningo Camping Area is located across the road from the Cheningo Day-Use Area. The sites at these locations will have little or no improvements therefore keeping required maintenance to a minimum. Fire rings will be made of rocks found on site except where specified differently below.

- Designate and maintain six undeveloped drive-up campsites at the Cheningo Camping Area. This is a considerable reduction from the currently existing 12 sites that have not been maintained recently.
    - Seek volunteers to establish a VSP agreement to educate the public and assist with maintenance activities at the camping area.
    - Upgrade two sites to provide access for people with disabilities. These sites shall be equipped with accessible fire rings, hardened surfaces, and a tent pad.
    - Designate sites with a number system. Camping at this location will be on a first come first serve basis.

    - Install an accessible pit privy or provide an accessible port-o-potty on high-use weekends such as Memorial Day, Fourth of July, and Labor Day.
    - Mow campsites to deter woody vegetation interference if funding allows.
- Designate and maintain one drive-up campsite on Baker School House State Forest.
- Conduct periodic inspection of campsites and make necessary repairs.

c. Designate and maintain four undeveloped campsites on the Unit. These campsites shall be located on Gee Brook State Forest and Papish Pond Multiple Use Area. These sites are accessed by foot and provide a secluded camping experience.

- Designate and maintain three primitive campsites at Calico Pond on Gee Brook State Forest.
    - Continue to require a Forest Ranger issued no fee permit for overnight camping. This requirement should deter illegal activities and will inform the Ranger of use, which may help in an emergency situation.
    - Designate sites with a number system.
    - Conduct periodic inspection of campsite and make necessary repairs.
- Designate and maintain one undeveloped campsite on Papish Pond Multiple Use Area. This site is currently being used, but is not an official site.
- Conduct periodic inspection of campsite and make necessary repairs.

d. Construct and maintain one **lean-to** (three sided shelter for camping) on the Unit. The lean-to shall be located on Taylor Valley State Forest (see Access & Facilities map). This lean-to will be constructed and maintained by the FLTC through the current VSP agreement.

- Provide milled logs and rough cut boards to the FLTC for lean-to construction.
- Conduct periodic inspection of lean-to and make necessary repairs.

e. Maintain the Cheningo Day-use Area. The day-use area provides an area for picnicking and barbequing. There is no camping allowed at the day-use area.

- Seek volunteers to establish an VSP agreement to educate the public and assist with maintenance activities at the day-use area.
- Mow between May and August to deter natural succession of the area.
- Conduct annual inspections of pavilion, two picnic tables, and three grills and make necessary repairs.

4. Maintain non-motorized and electric motor only boating opportunities on the Unit.
There are three ponds on the Unit that offer non-motorized or electric motor boating opportunities although Papish Pond is the only pond on the Unit that has vehicular access, Calico and Suarez ponds are not accessible by vehicle.

- Allow electric motor and non-motorized boating at Papish Pond.
- Allow carry-in non-motorized boating at Calico and Suarez Pond.
- Maintain the boat launch that is located at Papish Pond Multiple Use Area.
    - Conduct annual inspection of boat launch and make necessary repairs.

5. Enhance Wildlife-Related Recreation Opportunities
Wildlife-related recreation on the Unit includes natural resource viewing (birding, nature photography, and wildlife observation), hunting, trapping, and fishing.

a. Provide a diversity of wildlife habitats as described in objective A.2 (Maintain or Enhance a Diversity of Habitats). Using active forest management, conditions will be created to support a diversity of species.

b. Implement SMZ guidelines and BMPs as described in objective A.1. (Protect Soil and Water Quality) to ensure conditions for a healthy fish population.

- Conduct fisheries surveys of Calico and Papish Ponds to update the Departments knowledge of the resource and to identify any subtle environmental changes.

c. Improve access to wildlife resources as described in objective B.2. (Maintain and enhance administrative and public-use access and information).

d. Construct and maintain a new ATV route for persons with a Department issued MAPPWD on Hoxie Gorge State Forest.

e. Consider, on a case by case basis, issuing a Camping Permit to camp on old log landings or other cleared areas during the hunting season.

f. Permit licensed falconers to remove raptors from the Unit in compliance with ECL Article 11 and 6 NYCRR Part 173. Permits for this activity are issued by the Bureau of Wildlife.

6. Encourage participation in the Volunteer Stewardship Program (VSP).
The VSP program is a program through which individuals or organizations may enter into a stewardship agreement with the Department to perform voluntary activities which help preserve or enhance natural resources on State Forests. Volunteers are very important to protect and maintain the resources on the Unit especially with the budgetary and staffing constraints that the Department is currently facing.

a. Maintain five existing VSP agreements to maintain the hiking and snowmobile trails on the Unit.

b. Develop new VSP agreements with State Forest users. Develop new VSP agreements for things such as the day-use area, camping areas, ponds, stewardship of entire forests, etc…

7. Maintain patrols and enforcement on State Lands.

a. Work closely with the Division of Forest Protection and Law Enforcement to prevent illegal activities from occurring.

b. Encourage VSP partners and users of the forests to report illegal activities.

8. Maintain 84.4-miles of state forest boundary lines.

a. Work with Operation Crews to maintain boundary lines.

- Post signs every 0.1-mile to make State Forests identifiable.

- Paint boundary lines every seven years.
- Encourage Operation crews to report boundary line issues.

b. Work with Real Property to complete new and outstanding survey requests.

c. Reduce the distance of boundary lines by acquiring property from willing sellers.

9. Protect Cultural Resources

a. Map and collect data for stone walls, foundations, cisterns, graves, etc… during forest inventory and **stand analysis** activities.

b. Protect stone walls, foundations, cisterns, graves, etc… from management activities.

- Establish buffers around cultural resources.
- Restore cultural resources impacted by management activities.
- Maintain orchards, ornamental planting, and hedgerows associated with cultural resource sites unless they are invasive species.
- Require a TRP and consultation with the State Museum OPRHP for archeological research on the Unit.

C. Provide Economic Benefits to Local Communities and the State of New York

State forests are managed to conserve, improve, and protect natural resources while enhancing health, safety, and welfare of the people of the State and their overall economic and social well being. State forests provide economic benefit through forest product sales, developing mineral resources, forest-based tourism, and property taxes.

1. Provide forest resources through the Forest Product Sales Program.
Forest product sales provide revenue to the State, supply raw materials to the forest product industry, create local jobs, and supply the local community with fuelwood and other forest products.

a. Treat an average of 423-acres of commercial forest stands annually. See the Land Management Action Schedules under the Management Action Schedules section of this plan for stand by stand treatments.

- Treat an average of 258-acres of natural hardwood stands per year.
- Treat an average of 165-acres of natural and plantation conifer stands per year.

b. Consider selling maple sap from select forest stands to maple syrup producers. Potential stands for maple tapping should be dominated by sugar and red maple; consist of open grown trees or trees not likely to produce high quality lumber or veneer; be reserved from harvesting; have access roads that are well drained and stable during spring thaw; be located on steep slopes, growing in poor soils, or dedicated to other goals such as the development of late-successional habitat.

2. Promote tourism through forest-based recreation.
Recreationists that travel to State Forests often spend money in local communities for things such as gas, food, lodging, supplies, and equipment. As such, forest-based recreational opportunities shall be maintained on the Unit.

a. Maintain 38.1-miles of recreational trails.

b. Maintain day-use and camping facilities.

c. Maintain water-based recreational opportunities such as fishing and boating.

d. Maintain State Forest roads and parking areas.

e. Provide information about State Forest recreational opportunities.

- Maintain the Department's website as it relates to the State Forests within the Unit. The content of the website should be periodically reviewed and updated if necessary.

3. Provide for mineral resource exploration and development while protecting natural resources and quality recreational opportunities.
The leasing and development of mineral resources can provide revenue to the State; create local jobs; and bring money into local economies. Potential mineral activity on the Unit includes oil and gas mining, surface mining of shale, sand, gravel, or other aggregate and underground mining of "hard rock" minerals.

a. Limit geophysical, geochemical, and/or surface sampling procedures for the exploration of mineral resources to properties with an approved lease. Besides an approved lease, a Temporary Revocable Permit (TRP) is also needed to explore State Forest land for mineral resources. For additional information see the Guidelines for Seismic Testing on DEC Administered State Land. These guidelines are available at www.dec.state.ny.gov/docs/lands_forests_pdf/sfseismic.pdf

b. Consider future requests for oil and gas leasing using an open public process while protecting natural and recreational resources. Prior to leasing lands in this Unit, an open public process must be followed. This process includes coordination with the Division of Mineral Resources to determine: areas that can be leased with full rights granted (100% surface entry and no special conditions required for drilling techniques consistent with the Generic Environmental Impact Statement on the Oil, Gas and Solution mining Regulatory Program finalized in 1992 only); areas that may require special environmental and safety conditions; and areas that may be leased with no surface-disturbance/entry conditions (non-drilling clause). The following is a summary of the leasing process of State Forest lands:

- Receive requests to nominate specific lands within the Unit for leasing of mineral rights, from interested parties.
- Conduct tract assessments of nominated properties to determine where lands are able to support or accommodate related surface disturbance associated with oil and gas exploration, development, and extraction techniques consistent with the Generic Environmental Impact Statement on the Oil, Gas and Solution mining Regulatory Program finalized in 1992. Factors considered during the tract assessment process include the proximity to sensitive resources of the Unit. These resources include, but are not limited to 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.
    - Apply a hierarchical approach that classifies areas of each State Forest into four categories as part of a tract assessment to be conducted prior to leasing. The hierarchical approach only applies to leases planning to use drilling techniques consistent with the Generic Environmental Impact Statement on the Oil, Gas and Solution mining Regulatory Program finalized in 1992.
        - Category A - Compatible with well pad, road, and utility development. These areas can be considered the least sensitive to surface disturbance and should be considered first for well pad development to limit the overall impact of development. Examples of Category A areas include open fields, conifer plantations, and even-aged management areas.
        - Category B - Uneven-age Management Areas with one well pad per State Forest. These areas are being managed for species that require large blocks of un-fragmented (diameters of temporary openings in the canopy shall be no larger than 2.5 times the height of surrounding trees) forests.
        - Category C - 250-foot stream and designated recreational trail buffers. Not compatible with well pad development; may be compatible with road and utility development.
        - Category D – Infrastructure Exclusion areas. Not compatible with well pad, road, or utility development. These include: ponds, wetlands, spring seeps, and vernal pools with appropriate 250-foot buffers; slopes greater than 15 percent; archeological and cultural concerns; and areas being managed as Natural Areas.
    - Prohibit surface disturbance associated with high-volume hydraulic fracturing as recommended by the Department of Health and the Governor. See page 39.
- Hold a public meeting 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.
- Work with the Division of Mineral Resources to incorporate special conditions into the proposed lease, if the Department decides to pursue a lease as determined by conducting the tract assessments and public meetings. These conditions will include, but not be limited to, criteria for site selection, mitigation of impacts and land reclamation upon completion of drilling. 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.

- Conduct lease sales through a competitive bidding process, if it is determined that oil and gas exploration and development can proceed on these State minerals. The DEC Division of Mineral Resources is the oil and gas leasing agent for these state lands and will administer leases in accordance with Article 23, Title 11 of the Environmental Conservation Law and State Finance Law.

c. Allow new road development or rehabilitation of existing roads while protecting the resources on the Unit.

- Limit widths of access roads associated with well sites.
    - Restrict access roads to no more than 14-feet in width between ditches.
    - Limit cleared widths to 36-feet on turns and intersections.
    - Design access roads to maintain closed canopy conditions, where appropriate.
    - Locate roads to comply with the tract assessments.
- Construct access roads with gravel over filter fabric to minimize soil disturbance.
- Close access roads, upon completion of drilling, to the public and reclaim them to a condition capable of supporting both vegetation and periodic access to maintain the well site, where appropriate.
- Restore the site with authorization from a Temporary Revocable Permit (TRP).
- Prohibit road development on State land, which is not leased or leased with no surface occupancy, regardless of the spacing unit.

d. Allow development of pipelines on State Forest lands only if a portion of the mineral resources to be transported was extracted from State lands, while protecting the resources on the Unit. The transportation of gas using distribution and collection lines (pipelines), from well sites on State land will be located in areas with the least impact:

- Locate pipelines immediately adjacent to Public Forest Access Roads.
- Locate pipelines and road development to comply with State Forest tract assessments, the Strategic Plan for State Forest Management, and the Generic Environmental Impact Statement and Supplemental Generic Environmental Impact Statement on the Oil, Gas and Solution Mining Regulatory Program.
- Locate pipelines in stands managed for closed canopy conditions only along pre-existing roads that intersect such area. Areas managed for unbroken canopy conditions may be referred to using various terms such as “uneven-aged,” “uneven-aged variable retention,” “all aged,” “high canopy,” “closed canopy” or others.
- Prohibit pipeline development on State land if the Department determines that it creates a significant long-term conflict with any management activities or public use of the State Forests, or with other management objectives in this plan.
- Require Lessee to restrict motorized access by gate and/or boulders, and if necessary harden crossings or install bridges, to allow heavy equipment access across pipelines.

e. Restrict surface mining of shale, sand, gravel, or other aggregate and underground mining of “hard rock” minerals such as metal ores, gem minerals, and salt.

- Prohibit commercial surface and underground mining of shale, sand, gravel, other aggregate, and “hard rock” minerals. The Department’s current policy is to decline any

commercial mining application (s) pertaining to any lands covered by this UMP as these activities are not compatible with the purposes for which State Forests were purchased.
- Maintain eight shale pits across the Unit for infrastructure purposes. These surface mines will occasionally be used for road and parking area maintenance and construction activities.

4. Provide property tax revenue to local towns and schools.
Reforestation Areas are subject to town, school, and fire district taxes, but are exempt from county taxes. These areas are taxed at the same rate as private forest land. Multiple Use Areas are exempt from property taxes. See Appendix I for a table of Real Property Taxes Based on 2009 Assessments.

MANAGEMENT ACTION SCHEDULES

1. Land Management Actions
Maps containing stand numbers, management directions, and proposed and existing cover types can be found in Appendix XIX. The following tables represent a twenty-year schedule of planned management actions. The *Table of Land Management Actions by State Forest* has actions listed in order of State Forest reforestation number and the stand number while the *Table of Land Management Actions by Project Completion Interval* has the actions listed in order of treatment interval and stand number. Definitions of the abbreviations used in the tables can be found below:
a. Table Headings

- Unit – State Forest.
- Stand No. – forest stand identification.
- Ac – acres within the stand.
- CT – cover type classification.
- FT - future cover type.
- Top Four Species – the four most abundant species.
- IS – invasive species
- MD – management direction.
- SC – size class.
- BA – basal area
- Treat – type of treatment. This is subject to change based on stand analyses.
- PC –project completion interval.

b. Cover type (CT)

- APH Apple-Hawthorn
- BR Brush
- DF Douglas Fir
- DC Day-Use and Camping Areas
- GR Grassland
- HEM Hemlock
- L Larch
- NH Northern Hardwoods
- NH-HEM Northern Hardwood-Hemlock
- NH-P Northern Hardwood-Pine
- NS Norway Spruce

- NS-L Norway Spruce-Larch
- NS-NH Norway Spruce-Northern Hardwoods
- OAK-HEM Oak-Hemlock
- OAK-NH Oak-Northern Hardwood
- OW Open Wetland
- PH Pioneer Hardwoods
- POND Pond
- RP Red Pine
- RP-L Red Pine Larch
- RP-NS Red Pine-Norway Spruce
- RP-WP Red Pine-White Pine
- SP Scots Pine
- SP-L Scots Pine-Larch
- SP-NS Scots Pine-Norway Spruce
- SW Shrub Wetland
- WC White Cedar
- WP White Pine
- WP-HEM White Pine-Hemlock
- WP-NS White Pine-Norway Spruce
- WS White Spruce
- WS-NH White Spruce-Northern Hardwood

c. Future cover type (FT)

- APH Apple-Hawthorne
- BR Brush
- C Conifer
- DC Day-Use and Camping Areas
- GR Grassland
- M Northern Hardwood-Conifer Mixed
- OW Open Wetland
- NH Northern Hardwoods
- PH Pioneer Hardwoods
- SW Shrub Wetlands

d. Species

- APL Apple species
- ASP Aspen species
- BB Black Birch
- BBE Blue Beech (muscle wood)
- BC Black Cherry
- BEE American Beech
- BH Bitternut Hickory
- BL Black Locust
- BUT Butternut
- BW Basswood
- DF Douglas Fir
- EL European Larch
- ELM Elm species
- HEM Eastern Hemlock
- HM Hard Maple
- HWT Hawthorn (thorn apple)
- IWD Hop Hornbeam (Ironwood)
- JL Japanese Larch
- NS Norway Spruce
- PC Pin Cherry
- PP Pitch Pine
- RM Red Maple
- RO Northern Red Oak
- RP Red Pine
- SH Shagbark Hickory
- SP Scots Pine
- STM Striped Maple
- TS Tall Shrub species
- WA White Ash
- WC White Cedar
- WP White Pine
- WS White Spruce
- YB Yellow Birch

e. Invasive Species (IS) found in the stand

- B Japanese Barberry
- H Bush Honeysuckle
- K Japanese Knotweed
- M Garlic Mustard
- R Multi-flora Rose
- S Swallowwort

f. Management Direction (MD)

- APH Apple-Hawthorn
  - These stands will be managed to promote apple species and hawthorn.
- ASR Aspen Short **Rotation**
  - These stands will be managed using a 40 to 60 year rotation in order to regenerate aspen species creating dense early successional habitat.
- BR Brush
  - These stands will be managed to retain native shrub species.
- E Even-aged
  - These stands will be managed using a 100 to 120 year rotation and the principles of even-aged silviculture.

- E-L Even-aged
  - These stands are located within a closed canopy habitat corridor. Traditional even-aged silviculture principles will be modified when managing these stands. Regeneration patch sizes shall be no larger than an acre. Variable density **thinning** shall be implemented, especially during intermediate treatments. Plantations shall be aggressively converted to natural cover types using even-aged management regimes.
- GR Grassland
  - These stands will be managed to retain a grassland cover type.
- NA Natural Area
  - These stands will be excluded from most active management activities and allowed to reach a **climax** condition.
- NF Non-forest
  - These stands include day-use and camping areas. Roads, parking areas, and shale pits are not included in these tables.
- P Protection
  - These stands will be excluded from most active management activities to protect sensitive sites and allowed to reach a climax condition.
- SO Seed Orchard
  - These stands will be managed as seed orchards to supply the State Nursery with seeds.
- U Uneven-aged

        - These stands will be managed using a twenty-year cutting cycle and the principles of uneven-aged silviculture. Stands being converted from an even-aged structure will take several harvests to develop uneven-aged characteristics.

g. Size Class (SC)

- A average DBH is less than 5.6 inches
- B average DBH is 5.6 to 8.5 inches
- C average DBH is 8.6 to 11.5 inches
- D average DBH is 11.6 to 14.5 inches
- E average DBH is 14.6 to 17.5 inches
- F average DBH is greater than 17.5 inches

h. Treatment Type (Treat)

- GST Single-tree with Group Selection
    - An uneven-aged treatment where each entry is designed to establish a new age-class. Groups are used to regenerate shade intolerant species such as black cherry. The diameter of the groups should be no larger than 2.5 times the height of surrounding trees.
    - E An even-aged or two-aged stand that is being converted to an uneven-aged structure. Variable density thinnings, patch cuts, and modified shelterwoods may be used to convert even-aged stands to uneven-aged.
- HI Habitat Improvement
    - These treatments are conducted to improve habitat for animals and site conditions for specific plants.

- ICT Intermediate Commercial Thinning
    - An even-aged treatment, beginning with pulpwood size trees and ending before a regeneration harvest is conducted, that improves the health and vigor of the stand.
    - A An objective of this treatment is to establish access within the stand. This is usually the first commercial treatment in the stand.
- M Mow
    - This treatment is used to maintain a specific successional stage for a variety of habitat, recreation, and safety reasons.
    - BR A forestry mower may be used mow woody interference to retain a shrubby condition or trees may be cut with a chainsaw to release shrub species.
    - EI Mow and inspect the embankments of ponds every three years.
    - GR Mow at least every three years to retain a grassy condition.
    - REC Mow recreational areas monthly.

- U Mow seed orchard's understory every three years.

- MTR **Mast**-Tree Release
  - This treatment removes competition from around the **crown** of mast producing trees such as apples and oaks.
- NTS No Treatment Scheduled

- PC Patch Cuts/Small Clearcuts
  - This treatment is a regeneration harvest where essentially all trees are removed from areas less than five acres in size. Dispersed trees or groups of trees may be retained in or outside the patches. Patches are generally located in areas with good advanced regeneration or seed-trees or in areas that consist of mostly unacceptable growing stock. The percentage of area of a stand to regenerate with patch cuts depends on the size of the stand and the management direction. The following table provides the percentage of area to regenerate using patch cuts.

MD	Ac	Percentage
ASR	< 3 acres	100%
ASR	3.1 to 10 acres	50%
ASR	> 10 acres	25%
E-L	n/a	50%
E	n/a	33 to 50%
U	n/a	25 to 33%

- SAL Salvage
  - This treatment consists of removing trees that have been or currently are affected by insects, disease, or unforeseen weather events such as wind or ice storms that cause significant damage and potentially loss of economic value. These treatments will become the highest priority and may occur prior to when a stand is actually scheduled to be treated.
- SCH Convert Conifer Plantation to Hardwoods
  - This treatment converts conifer plantations to a natural hardwood cover type using various silvicultural treatments.
  - C The **conversion** shall be accomplished using a clearcut or **overstory** removal regeneration method.
  - P The conversion shall be accomplished using patch cuts (see description above).
  - S The conversion shall be accomplished using a **seed tree** or **shelterwood** regeneration method (see description below).
- SCM Convert Conifer Plantation to a Hardwood/Conifer Mixed Cover Type
  - This treatment converts conifer plantations to a natural hardwood/conifer cover type using various silvicultural treatments.

- P The conversion shall be accomplished using patch cuts (see description above).
- S The conversion shall be accomplished using a seed tree or shelterwood regeneration method (see description below).

- SS Seed-tree or Shelterwood
  - These treatments are even-aged regeneration methods. Seed tree regeneration methods remove all but a small number of trees, which are left for seed production and to produce a new **age class** in a fully exposed microenvironment. The seed trees may be removed after adequate regeneration becomes established.
  - Shelterwood methods may use two or three cuttings to regenerate an even-aged stand. Most trees are cut, leaving those needed to produce sufficient shade to produce a new age class in a moderated microenvironment.
- TSI **Timber Stand Improvement**
  - This is a noncommercial treatment done to improve the health and vigor of a stand. It may include mechanically cutting of trees or herbicide application.
- VDT Variable Density Thinning
  - A thinning regime that creates horizontal variation in stand density including areas that are not thinned, areas where all trees are removed, and thinned areas that may have different residual densities.
    - A An objective of this treatment is to establish access within a stand.

I. Project Completion Interval (PC)

- A 2011 through 2015
- B 2016 through 2020
- C 2021 through 2025
- D 2026 through 2030
- E No treatment scheduled.
- M Monthly
- T Triennially

Table of Land Management Actions by State Forest

Stand No.	Ac	CT	FT	Top Four Species				IS	MD	SC	BA	Treat	PC
				1	2	3	4						
Taylor Valley State Forest (Cortland 2) – Compartment A													
A-1.1	27.4	NH	NH	HM	WA	RM	BEE	R	U	C	106	GST-E	B
A-1.2	5.4	NH	NH	HM	RM	BW	BEE		P	D	85	NTS	E
A-2	17.7	NH	NH	HM	WA	RM	BEE		U	D	100	GST-E	C
A-3	19.8	NH	NH	RM	HM	WA	BC	R	U	D	106	GST-E	B
A-4	19.5	NS-NH	NH	NS	RM	ASP			E-L	D	166	VDT-A	A
A-5	8.1	NH	NH	HM	WA	BC	BW		E-L	D	110	SS	D
A-6	28.4	NH	NH	HM	WA	BC	RP		U	C	75	GST-E	D
A-7	73.4	RP	NH	RP	WA	BC	RM		U	D	141	SCH-P	A D
A-8.1	112.6	NH	NH	HM	WA	BC	IWD	H	U	D	107	GST	B
A-8.2	18.6	NH-HEM	M	HM	HEM	RM	BC		U	D	118	GST	B
A-8.3	11	NH	NH	BC	HM	WA	RM		E-L	D	150	SS	A
A-9.1	17.5	RP	NH	RP	BC	RM	WA		U	D	189	SCH-P	A D
A-9.2	36.2	RP-WP	M	RP	WP	WA	BC		U	D	164	SCM-P	B
A-9.3	4.5	NH-HEM	M	HEM	BC	RM	BEE		U	D	113	GST-E	D
A-9.4	3.9	RP	NH	RP	WA	YB	RM		P	C	90	NTS	E
A-9.5	2.4	NH-P	M	WP	RM	RP	WA		P	E	160	NTS	E
A-10	7.6	RP-WP	NH	RP	WP	RM	HM		E	D	180	SCH-C	A
A-11	37.9	NH	NH					H	E	A	0	TSI	D
A-12	18.5	NH	NH	HM	BC	RM	WA		U	C	105	ICT	A
A-13	2.0	WP	M	WP	RM				E	D	120	ICT	D
A-14.1	18.6	NH	NH					H	E	A	0	TSI	D
A-14.2	7.6	NS	NH	NS	BC	WA	HM		E	E	140	SCH-S	C
A-14.3	21.2	NH-P	NH	RP	WA	BC	HM		E	C	126	SCH-S	C
A-15.1	28.2	RP	NH	RP	HM	WA	BC	S	U	D	173	SCH-P	A D
A-15.2	1.8	NH	APH	BC	APL	WA			APH	C	75	MTR	A
A-15.3	2	RP	NH	RP	WA	HM			P	D	170	NTS	E
A-16	2.3	NH	NH	WA	RM	RP	TS		P	F	60	NTS	E
A-17	4.3	NH-HEM	M	ASP	HEM	RM			P	C	35	NTS	E
A-18.1	35.1	NH	NH	HM	WA	BC	BEE		U	D	104	GST-E	C
A-18.2	11.8	NH-HEM	M	HM	WA	RM	HEM		U	C	107	GST-E	C

Stand No.	Ac	CT	FT	Top Four Species				IS	MD	SC	BA	Treat	PC
				1	2	3	4						
A-19	20.3	NH	NH	RM					U	A	10	TSI	D
A-20.1	9.7	NH-P	NH	RP	WA	RM	HM		U	C	120	SCH-P	B
A-20.2	4.5	RP	NH	RP	PP				U	D	145	VDT	B
A-21.1	16.2	NH	NH	HM	RM	BC	WA	R	U	C	108	GST-E	C
A-21.2	6.4	NH	NH	BC	RM	HM	WA		U	C	118	GST	A
A-22	34.9	NH-HEM	M	HM	HEM	WA	RM		P	D	123	NTS	E
A-23	5.3	NH	NH	HM	WA	RM	BW		U	D	97	GST-E	B
A-24	7.4	NS	C	NS	BC	WA	ASP	R	U	D	180	VDT	B
A-25	14.4	NH	NH	WA	HM	BEE	RO		P	C	72	NTS	E
A-26	22.6	NH	NH	WA	HM	RM	RP		U	D	78	GST-E	D
A-27.1	4.2	NH-P	NH	RP	WA	HM			U	C	175	SCH-C	C
A-27.2	19.7	NH	NH	HM	WA	BC	IWD		U	D	113	GST-E	A
A-28	44.1	RP	NH	RP	WA	HM	BC		E	D	111	SCH-P	C
A-29.1	34.3	RP-WP	M	RP	WP	WA	HM		E	D	174	ICT	C
A-29.2	11	NH-P	NH	RP	BC	HM	WA		E	D	130	SCH-P	C
A-30	16	NH	NH	BC	WA	HM	BEE		E	A	32	TSI	D
A-31.1	4.2	PH	NH	YB	IWD	RM	RP	H	P	C	105	NTS	E
A-31.2	5.3	NH	NH	WA	HM	RP	RM		P	C	77	NTS	E
A-32.1	133	NH	NH	HM	WA	BC	BW	R	U	E	100	GST-E	B
A-32.2	3.4	OAK-HEM	M	RO	RM	HEM	WA		E	E	140	MTR	B
A-33	9.6	NH	NH	HM	BEE	BC			U	C	80	GST-E	D
A-34	9.3	NH	NH	BC	HM	WA	RM		U	C	87	GST-E	C
A-35.1	37.8	NH	NH	HM	WA	BW	BC		U	D	95	GST-E	B
A-35.2	5.1	NH	NH	WA	HM	YB	HEM		P	D	103	NTS	E
A-36.1	10.5	NH	NH	WA	BC	ASP	RM		E	A	48	TSI	D
A-36.2	11.5	NH	NH	WA	HM	RM	Elm		U	D	100	GST-E	C
A-37	46.9	RP	NH	RP	WA	BC	HM		E	D	137	ICT	B
A-38	7.8	OAK-NH	NH	RO	BC	WA	RM		E	D	112	ICT	A
A-39	10.2	NH	NH	WA	HM	BC	RM		E	D	126	ICT	A
A-40.1	37.8	RP	NH	RP	WA	HM	BC		E	D	164	SCH-P	AD
A-40.2	1.7	NH	NH	HM	WA	BC	IWD		E	C	115	ICT	A
A-40.3	3.4	NH	NH	HM	WA	RM	BC		E	D	120	SAL	A
A-40.4	4.5	NH	NH	HM	WA	BC	RM		U	E	103	GST-E	C
A-41	12.8	NS	C	NS	RM	BC	ASP	R	U	D	200	VDT	B
A-42	18.2	NH-HEM	M	HM	WA	RM	RO		U	E	108	GST	C

Stand No.	Ac	CT	FT	Top Four Species				IS	MD	SC	BA	Treat	PC
				1	2	3	4						
A-43	58	NH-HEM	M	HM	HEM	WA	RM		P	D	98	NTS	E
A-44	15.2	NH-HEM	M	HEM	HM	YB	WA		U	D	91	GST	C
A-46.1	6.5	NH	NH	PC	HM	WA			E	A	43	TSI	D
A-46.2	3.5	RP	NH	RP	WA	RM	HM		P	C	138	NTS	E
A-47.1	4.6	NH	APH	APL	BC	WA	HM		APH	C	80	MTR	C
A-47.2	4.6	NS	C	NS	HM	RM	BC		U	D	117	VDT	A
A-48	15.8	NS-NH	C	NS	RP				U	D	110	VDT	B
A-49	52.7	OAK-NH	NH	HM	RO	WA	RM		U	D	109	GST-E	C
A-50	7.4	NS	C	NS	BC	WA			E	D	200	VDT	A
A-51	7.7	NS-NH	C	NS	BC	RO	RM		U	D	147	VDT	A
A-52	13.7	NH	NH	HM	WA	RO	RM		U	D	138	GST	A
A-53	30.5	NS	C	NS	RM				U	C	206	VDT-A	A
A-54.1	6.3	NH-HEM	C	HEM	HM	RM	WA		P	D	135	NTS	E
A-54.2	20.4	NH	NH	HM	BEE	WA	BC		U	D	105	GST	A
A-55	10.8	L	NH	JL	WA	HM	ASP	R	E	C	110	ICT-A	B
A-56.1	19.4	NH	NH	HM	WA	RM	BC		U	D	81	GST	D
A-56.2	3.8	NH-HEM	C	HEM	HM	BEE	YB		P	C	155	NTS	E
A-56.3	5.1	NH	NH	WA	Elm				P	D	90	NTS	E
A-57	9.8	NH-HEM	M	HM	BEE	HEM	WA		U	D	78	GST	D
A-58	9.1	NS	C	NS	WA				U	C	170	VDT-A	B
A-59.1	11.1	PH	NH	HWT	ASP	HM	APL	R	U	C	60	NTS	E
A-59.2	10.1	NH	NH	RM	HM	WA	ASP		U	C	85	GST-E	B
A-59.3	3.7	NH	NH	HM	RM	WA	BC		U	C	137	GST-E	B
A-59.4	7.3	NH	NH	RM	BEE	HM	BC		U	C	116	GST-E	B
A-60.1	14	NH-HEM	M	HM	RM	BEE	YB		P	E	70	NTS	E
A-60.2	64.5	NH	NH	HM	WA	RM	BEE		U	D	86	GST	D
A-60.3	10.8	NH	NH						E	A	0	TSI	D
A-61.1	10.3	NH	NH	BC	RM	HM	ASP		U	D	90	GST-E	C
A-61.2	3.2	NH-P	NH	SP		BC	RP		E	C	130	SCH-C	B
A-63	41.8	NH	NH	HM	HEM	RM	WA		U	D	91	GST	D
A-66	19.9	RP	NH	RP	SP	NS	Elm		P	C	176	NTS	E
A-67.1	44.6	NH	NH	HM	BW	WA	BC		U	D	96	GST	C
A-67.2	14.7	NH-HEM	M	HM	WA	YB	RM		P	C	105	NTS	E

Stand No.	Ac	CT	FT	Top Four Species				IS	MD	SC	BA	Treat	PC
				1	2	3	4						
A-67.3	4.6	NH	NH	HM	BEE	IWD			E	C	55	NTS	E
A-760	2.7	DC	DC						NF		0	M-REC	M
A-910	0.1	OW	OW						P		0	NTS	E
A-930	33.4	SW	SW						P		0	NTS	E
A-940.1	7.8	GR	GR						GR		0	M-GR	M
A-940.2	1.2	GR	GR						GR		0	M-GR	M
A-940.3	9.8	GR	GR						GR		0	M-GR	M
Taylor Valley State Forest (Cortland 2) – Compartment B													
B-1	54.4	WP-HEM	C	HEM	WP	RM	YB		P	C	86	NTS	E
B-2	11.4	WP-HEM	M	RM	HEM	YB	BC		P	C	93	NTS	E
B-3.1	18.8	NH	NH	HM	WA	BC	RM		U	D	92	GST-E	B
B-3.2	5.9	NH-HEM	M	HM	WA	HEM	YB		P	D	105	NTS	E
B-4.1	24.8	NS	C	NS	BC	ASP			U	D	155	VDT	A
B-4.2	3	NS-NH	C	BC	NS	Elm	WA		U	D	97	VDT	C
B-4.3	3.7	NH	NH	HWT	Elm	APL	BC		P	C	60	NTS	E
B-5.1	4.8	NS	M	NS					U	C	210	VDT	A
B-5.2	13	HEM	C	HEM	YB	RM	WA		P	D	122	NTS	E
B-6	10.1	WP-HEM	C	HEM	WP	RM	YB		P	C	115	NTS	E
B-7	10.5	RP	NH	RP	RO	WA	BC		E	D	76	SCH-S	D
B-8	96.7	NH	NH	WA	HM	BEE	HEM		U	D	93	GST	C
B-9	22.9	NS-NH	C	NS	RO	HM	RM		U	D	140	VDT-A	C
B-10	2.8	NH	APH	APL	Elm	HWT	WA		P	C	85	MTR	A
B-11	11.4	RP	NH	RP	RO	BC	WA		E	D	120	VDT	C
B-12	12.7	OAK-NH	NH	RO	BC	WP	ASP		E	D	110	ICT	A
B-13	8.4	WP-HEM	C	WP	HEM	RM	BF		P	D	100	NTS	E
B-14	16.2	NH	NH	HM	BC	WA	BEE		U	C	73	GST	D
B-15	70.8	NH	NH	HM	WA	BEE	BW		U	C	93	GST-E	D
B-16	33.2	NH	NH	RM	WA	BC	HM		U	C	95	GST-E	D
B-17.1	33.6	NS	C	NS					U	C	168	VDT-A	A
B-17.2	5.2	NS	C	NS					U	C	220	VDT-A	A
B-18	4.3	NH	NH	WA	BC	HM			E	C	103	ICT	D
B-19.1	10.4	L	NH	EL					E	C	87	ICT	B
B-19.2	2.8	SP-NS	M	RM	NS	BC	SP		E	C	100	ICT	B
B-20	14.9	NH	NH	BC	RM	WA	HEM		E	D	83	ICT	C

Stand No.	Ac	CT	FT	Top Four Species				IS	MD	SC	BA	Treat	PC
				1	2	3	4						
B-21.1	33.9	NH	NH	HM	RM	BEE	WA		U	D	76	GST-E	D
B-21.2	25	NH-HEM	M	HEM	RM	HM	YB		U	C	89	GST-E	C
B-21.3	15.3	NH	NH	HM	WA	BC	BEE		E	D	133	SS	C
B-22	26	NS	M	NS	BC				U	C	131	VDT	A
B-23.1	154.2	NH	NH	HM	WA	YB	BW		U	D	93	GST-E	D
B-23.2	10.8	NH	NH	HM	WA	YB	Elm		P	C	75	NTS	E
B-24	15.8	L	NH	EL	APL				E	D	130	ICT-A	A
B-25.1	10.9	RP-NS	C	NS	RP	BC			U	C	100	NTS	E
B-25.2	1.9	BR	BR						BR		0	NTS	E
B-26	5.6	L	NH	JL					E	C	135	ICT	B
B-27	35.3	NH	NH	WA	HM	BC			U	C	67	GST-E	D
B-28	2.8	NH	NH	WA	BC	HM			E	C	110	ICT	C
B-29	2.7	L	NH	EL	RM	ASP	WA		E	C	225	SCH-C	A
B-30	5.4	NH	NH	RM	HM	BC	WA		E	C	137	ICT	B
B-31	5.5	L	NH	EL	WA				E	C	137	ICT-A	C
B-32	11.5	L	NH	EL					E	D	93	ICT-A	B
B-33	8.2	L	NH	EL	ASP	RM	HM		E	C	97	ICT-A	B
B-34	33.5	NH	NH	HM	WA	HWT	BW		E	C	94	ICT	C
B-35.1	95.1	NS	M	NS	ASP	WA	BC		E	C	161	ICT-A	A
B-35.2	9.3	NS	M	NS	WA	ASP	Elm		P	D	73	NTS	E
B-36	9.9	NS	M	NS	BC	WA	RS		E	C	220	ICT-A	A
B-37	1.3	NH	NH	HM	BC	BEE	RM		P	C	125	NTS	E
B-38	9.9	NH	PH	ASP	WA	HM	HWT		ASR	D	47	PC	D
B-39	10.1	NH	NH	HM	WA	RM	ASP		E	C	93	ICT	C
B-40	61.2	NH	NH	HM	WA	BC	BEE		E	D	96	ICT	C
B-41	32.4	NH	NH	WA	RM	HM	BC		E	D	112	ICT	B
B-42	21.6	NH	NH	WA	RM	ASP	HM		E	D	93	ICT	B
B-43	9.9	NS	M	NS	ASP	WA			E	C	123	ICT-A	A
B-44	21.4	RP	NH	RP	WA	Elm	RM		E	C	133	SCH-C	C
B-45	6.5	L	NH	EL	BC	WA	Elm		E	C	137	ICT-A	A
B-47.1	11	NH	NH	WA	RM	HWT	BC		E	C	32	ICT	D
B-47.2	8.9	NH	NH	RM	WA	HM	ASP		P	C	100	NTS	E
B-48	9.3	NH-P	M	RP	WA	SP	NS		E	C	35	NTS	E
B-49	4.5	NS	M	NS	WA	HWT			E	C	103	ICT-A	A
B-50	21.1	NS	M	NS	EL	WA	RM		E	C	153	ICT-A	A
B-51	21.4	NH	NH	WA	HM	RM	HWT		E	D	110	PC	B
B-52.1	22	NH	NH	WA	HM	RM	BC		NA	D	127	NTS	E

Stand No.	Ac	CT	FT	Top Four Species				IS	MD	SC	BA	Treat	PC
				1	2	3	4						
B-52.2	14.1	NH	NH	HM	WA	HWT	BC		P	C	110	NTS	E
B-760	8.9	DC	DC						NF		0	M-REC	M
B-930	220.6	SW	SW						P		0	HI	HI
B-940	3.7	GR	GR						GR		0	M-GR	T
Taylor Valley State Forest (Cortland 2) – Compartment C													
C-1	20.9	NH	NH	HM	WA	BW	YB		E	D	87	ICT	C
C-2	10.5	NH	NH	HM	WA	BC	YB		E	D	70	ICT	D
C-3	15.7	NS	M	NS	WA	BC	RM		E	D	202	ICT	A
C-4	5.4	NH	NH	BC	HM				E	D	100	ICT	C
C-5.1	75.2	NS-L	M	NS	JL	BC	WA		E	D	163	SCM-P	A
C-5.2	25.3	NS	M	NS	BC	SP	RP		E	D	139	SCM-P	C
C-5.3	1.2	NH	NH	PC	RM	ASP	WA		E	A	35	NTS	E
C-6	8.1	NS	M	NS					E	D	167	ICT	A
C-7	9.8	NH	NH	HM	WA	BC	BEE		E	E	97	ICT	C
C-8	29.5	NS	M	NS	BC	HM	ASP		E	E	143	SCM-S	C
C-9.1	25.3	NH	NH	WA	HM	BC	RM		E	D	147	ICT	A
C-9.2	8.7	NS-NH	M	NS	HM	BC	WA		E	D	173	ICT	A
C-10.1	4.6	NH	NH	ASP	BC	APL	WA		E	D	47	MTR	B
C-10.2	2.6	NH	NH	RM	HM	TS	WA		E	C	93	ICT	B
C-11.1	35	NH	NH	HM	WA	YB	BC		E	C	66	ICT	D
C-11.2	4.9	NH	NH	HM	WA	YB	BW		E	C	110	ICT	D
C-11.3	32	NH	NH	RM	YB	HM	WA		P	C	110	NTS	E
C-12.1	12.3	NS	M	NS	WA				E	E	140	SCM-S	D
C-12.2	6.2	NS	M	NS	HM	YB	RM		P	D	115	NTS	E
C-12.3	4	NS-NH	M	BEE	RM	HM	BC		P	D	140	NTS	E
C-13.1	29.5	NS-L	M	NS	EL	RP	WA		E	D	146	ICT	A
C-13.2	18.7	NS-L	M	NS	EL	RP	BC		E	E	128	ICT	A
C-14	4.5	DF	C	DF	BC	HM	RM		E	C	147	ICT	A
C-15.1	14.3	NH	NH	RM	WA	HM	ASP		U	C	84	GST-E	C
C-15.2	3.7	NH	NH	WA	HM				P	C	90	NTS	E
C-16.1	16.4	NH	NH	HM	WA	BW	BEE		U	D	93	GST-E	D
C-16.2	3.5	NH	NH	RM	HM	BW	YB		P	D	80	NTS	E
C-17.1	37.8	NH	NH	HM	RM	BC	WA		E	D	106	ICT	B
C-17.2	7.7	HEM	C	HEM	HM	RM	BC		P	D	135	NTS	E
C-17.3	6.4	NH-HEM	M	HM	HEM	BC	RM		P	D	117	NTS	E
C-18.1	11.1	NH	NH	WA	HM	RM	YB		P	D	98	NTS	E
C-18.2	20.7	NH	NH	WA	HM	YB	RM		U	C	119	GST-E	A

Stand No.	Ac	CT	FT	Top Four Species				IS	MD	SC	BA	Treat	PC
				1	2	3	4						
C-19	30.3	NH	NH	HM	RM	WA	BC		U	C	125	GST-E	B
C-20.1	47.2	WS-NH	PH	ASP	WS	BC	RM		ASR	C	117	SCH-P	AD
C-20.2	8.6	DF	C	DF	RM	WA	BC		E	D	185	SCM-S	A
C-21	7.5	NH	NH	RM	WA	BC			E	D	127	ICT	A
C-22.1	13.6	RP	NH	RP	WA	BC	RM		E	D	148	ICT	A
C-22.2	14	NH	NH	RM					E	A	10	TSI	D
C-23.1	37.2	NS-NH	C	NS	BC	RM	WA	B	U	D	114	GST-E	C
C-23.2	15.2	NS-NH	M	NS	WA	RM	BC		P	D	120	NTS	E
C-23.3	23	NS-NH	C	NS	WA	RP	RM		U	D	128	GST-E	C
C-23.4	56.6	RP-NS	C	NS	WA	RP	BC		U	D	109	GST-E	C
C-24	10.4	NH	NH	WA	HM	RM	BC		U	C	105	GST-E	B
C-25	4.1	L	NH	JL					E	C	170	SCH-S	A
C-26.1	19.3	NH	NH	HM	WA	RM	BC		U	C	119	GST-E	A
C-26.2	13.6	NH	NH	HM	YB	RM	WA		P	C	120	NTS	E
C-26.3	16.4	NH	NH	HM	RM	WA	BC	H	U	C	113	GST	B
C-27.1	2.8	APH	APH	APL	HWT	RO	WA		APH	C	75	MTR	D
C-27.2	2.5	OAK-NH	NH	RO					E	C	115	MTR	A
C-28	10.1	NS	C	NS	WA	HM	BC		U	E	196	VDT	A
C-29	8	NH	APH	WA	HM	Elm	BC	H	APH	D	100	MTR	A
C-30	20.7	SP-L	NH	JL	SP	WA	RP		E	E	145	ICT	A
C-31	37.6	RP-NS	M	NS	RP	RM	BC		E	C	165	ICT	D
C-32.1	3	NH	NH	ASP	RM	APL	HWT		E	C	93	ICT	B
C-32.2	16.9	NH	NH	HM	ASP	HWT	Elm		P	C	84	NTS	E
C-33	6.6	WC	C	WC	BC	APL	ASP		E	C	203	ICT	A
C-34.1	11.1	NH	NH	HM	RM	BC	WA		E	D	104	ICT	C
C-34.2	1.2	NH	NH	HM	WA	BC			P	D	115	NTS	E
C-35.1	9.8	NH	NH	WA	ASP	BC	RM		E	C	103	TSI	B
C-35.2	3.2	NH	NH	WA	BC	HM	SP		P	D	85	NTS	E
C-36.1	8.9	NS	M	NS	BC	RM			E	E	155	SCM-P	C
C-36.2	2.4	NH	NH	HM	RM	WA	YB		E	C	80	ICT	B
C-37	29	WS-NH	PH	WS	ASP	WA	BC		ASR	C	124	SCH-P	D
C-38.1	6.6	NH-HEM	M	YB	HEM	WA	HM		U	C	128	GST	C
C-38.2	34.1	NH	NH	HM	WA	YB	BC		U	D	86	GST-E	C
C-39	13.3	NH	NH	HM	BEE	WA	YB		U	D	103	GST	C
C-40	4.4	NS	M	NS	WA	HM			E	D	143	ICT	C
C-41	52.7	NH	NH	HM	BC	WA	BEE		U	D	98	GST-E	C

Stand No.	Ac	CT	FT	Top Four Species				IS	MD	SC	BA	Treat	PC
				1	2	3	4						
C-42.1	7.7	NH	NH	HM	RM	BEE			U	C	110	GST-E	C
C-42.2	8.5	NH	NH	BEE	RM	HM	WA		P	C	110	NTS	E
C-43.1	4.8	NH	NH	HM	BC	YB	BEE		U	C	135	GST-E	C
C-43.2	11.6	NH	NH	WA	HM	RM	BEE		E	D	98	GST-E	C
C-44.1	4.6	NS	M	NS	RM				E	D	170	ICT	C
C-44.2	2.1	NS	M	NS	RM				P	D	170	NTS	E
Donahue Woods State Forest (Cortland 7) – Compartment A													
A-1.1	51.4	NH	NH	HM	WA	YB	BW		U	D	109	GST-E	B
A-1.2	25.5	NS-NH	C	HM	NS	WA	YB		U	D	145	VDT	A
A-1.3	17.9	NH	NH	HM	WA	BC			U	D	111	GST-E	B
A-2	5.5	NH-P	M	WP	RM	BC	WA		E	D	117	ICT	A
A-3	92.2	NH-P	M	WP	RM	SP	BC		E-L	C	175	VDT	A
A-4.1	5.1	WS-NH	NH	WS	WA	BC	HM		E	D	107	ICT	B
A-4.2	6	WS-NH	NH	WS	NS	WA	BC		E	D	153	ICT	A
A-5.1	8.9	NS-NH	NH	NS	WA	BC	HM		E	E	170	SCH-P	AD
A-5.2	7.2	WS-NH	NH	WS	WA	APL	BC		E-L	D	120	SCH-P	AD
A-6.1	26.2	NH-HEM	M	HEM	HM	WA	BEE		U	D	128	GST	A
A-6.2	18.7	NH-HEM	M	NS	HM	HEM	BW		P	D	143	NTS	E
A-6.3	11.5	NH	NH	HM	WA	Elm	BW		P	D	97	NTS	E
A-7.1	15.8	NH	NH						E	A	0	TSI	D
A-7.2	39.5	NH	NH	HM	BC	WA	BEE		U	D	79	GST-E	D
A-8	42.6	NH-P	NH	SP	HM	WA	BC		E	D	87	SCH-S	D
A-9	4.9	NH	NH	WA	HM	RM	BC		E	D	88	ICT	C
A-10.1	12.2	WS-NH	NH	WS	WA	EL	NS		E-L	D	142	VDT	B
A-10.2	3.2	WS	NH	WS					E-L	D	170	VDT	A
A-11	27.8	WS	NH	NS	HM	ASP	BC		E-L	D	209	VDT	B
A-12.1	10.4	NH	NH	HM	RM	BC	WA		E-L	D	128	PC	A
A-12.2	9.3	NH-HEM	M	HM	HEM	BC	WA		U	D	108	GST-E	B
A-13	29.4	NS	M	NS	BC	RM	HM		U	E	210	GST-E	B
A-14	19.3	NH-HEM	M	HM	HEM	WA	BUT	B	U	D	100	GST-E	B
A-15	48.1	NH	NH	HM	WA	BEE	BW		U	D	109	GST-E	A
A-16.1	11.8	NH-HEM	M	RM	HEM	BC	YB		U	D	145	GST	B
A-16.2	4.8	NH-HEM	M	RM	HEM	BC			P		0	NTS	E

Stand No.	Ac	CT	FT	Top Four Species				IS	MD	SC	BA	Treat	PC
				1	2	3	4						
A-17.11	15.5	NH	NH	HM	WA	BC	BW		U	E	101	GST-E	B
A-17.12	4.8	NH	NH	HM	BC				E-L	E	65	SS	B
A-17.2	10.2	NH	NH	HM	WA	HEM	BC		U	D	83	GST-E	C
A-17.3	12.3	NH-HEM	M	HEM	HM	BEE	BC		U	D	94	GST	C
A-17.4	8.5	NH-HEM	M	HEM	WA	HM	YB		P	E	117	NTS	E
A-18	9.5	DF	M	DF	WA	HM	RP		E-L	C	148	SCM-S	A
A-19.1	26.4	NS-NH	M	RP	NS	RM	WA		U	C	190	SCM-P	A
A-19.2	9.1	NH-P	NH	HM	BC	RP	WA		U	D	134	SCH-S	A
A-20.1	9.5	SP	NH	SP	JL	WA	HM		E-L	D	155	SCH-P	AD
A-20.2	13.4	NS-L	M	EL	RP	NS	WA		E-L	D	163	VDT-A	A
A-21.1	2	NH-HEM	M	HEM	HM				U	D	210	GST	A
A-21.2	35.8	NH	NH	HM	BC	WA	BEE		U	D	105	GST	B
A-22.1	4.1	NS-NH	M	NS	RM		BC		U	C	160	VDT	A
A-22.2	2.5	NH	NH	HM	WA	BC	BF		E-L	D	117	ICT	C
A-22.3	3.4	WS-NH	NH	WS	RM	ASP	WA		E-L	C	137	SCH-P	A
A-23	7.3	NS	M	NS	RM				U	C	157	VDT-A	A
A-24	10.7	NH	NH	HM	RM	Elm	WA		U	D	78	GST-E	D
A-25.11	34.6	NH-HEM	M	HM	WA	BC	RM		U	E	101	GST-E	B
A-25.12	5.1	NH-HEM	M	HEM	WA	BW	RM		P	D	100	NTS	E
A-25.21	38.4	NH	NH	HM	BC	WA	BEE		U	D	69	GST-E	D
A-25.22	13.3	NH	NH	HM	WA	BW			U	F	87	GST-E	B
A-25.31	17	NH	NH	HM	BC	WA	BEE		U	E	74	GST-E	D
A-25.32	15.2	NH	NH	HM	WA	BC	BW		U	E	86	GST-E	B
A-25.41	62.1	NH	NH	HM	WA	BW	BEE		U	E	89	GST-E	D
A-25.42	6.6	NH	NH	BC	HM	BEE			E-L	F	68	SS	B
A-25.5	2.8	NH	NH	BC	HM	WA	BW		E-L	E	117	SS	B
A-25.6	39	NH	NH	HM	WA	BW	YB		U	E	98	GST-E	B
A-26	15.1	NH	NH	WA	HM	HWT	RM		U	C	87	GST-E	B
A-27	18.6	NH	NH	RM	HM	YB	ASP		P	C	60	NTS	E
A-28.1	16.3	NS	M	NS	WA	RM	BC		U	C	181	VDT-A	A
A-28.2	3.5	NS	M	NS	RM				U	C	135	VDT-A	A
A-29.1	13.1	NH-P	NH	WA	SP	BC	HM		E-L	C	85	SCH-C	A
A-29.2	3.5	RP	NH	RP	HM				E-L	C	190	VDT-A	A
A-30.1	5.3	NH	APH	WA	HWT	HM	BUT		APH	C	80	MTR	A

Stand No.	Ac	CT	FT	Top Four Species				IS	MD	SC	BA	Treat	PC
				1	2	3	4						
A-30.2	6.2	NH	NH	WA	HM	BW	ASP	K	U	C	108	GST-E	A
A-31	31.3	NH	NH	HM	WA	RM	YB		U	D	72	GST-E	D
A-32	37.6	NH	NH	WA	HM	RM	ASP		U	C	82	GST-E	D
A-33	12.7	NH	NH	HM	WA	BC	RM		U	D	98	GST-E	B
A-34	7	NH	NH	HM	WA	RM	BEE		U	D	115	GST-E	B
Baker School House State Forest (Cortland 12) – Compartment A													
A-1	30.3	NH	NH	HM	WA	RM	BW		U	D	119	GST-E	A
A-2	9.4	NS-NH	M	NS	BC	HM	WA		E	D	188	ICT	B
A-3	12.6	NH	NH	HM	WA	BC	BEE		U	C	129	GST	C
A-4	17.6	NS-L	C	EL	RM	NS	BC		U	E	156	GST-E	C
A-5	15.4	NS-NH	C	NS	RM	WA	WS		U	D	113	VDT	C
A-6	4.4	NH	NH	WA	HM	RM			U	D	130	SAL	A
A-7	9.8	NS-NH	C	HM	WA	NS	RM		U	C	170	VDT	B
A-8	35.5	NH	NH	HM	WA	BEE	BC		U	D	116	GST-E	A
A-9	10.6	HEM	C	HEM	RM	WA	YB		P	D	160	NTS	E
A-10.1	10.6	NH-HEM	M	HEM	BEE	RM	BC		U	C	138	GST	B
A-10.2	5.9	HEM	C	RM	HEM	YB	HM		P	D	183	NTS	E
A-11.1	15	NH-HEM	M	HEM	RM	HM	BW		P	D	170	NTS	E
A-11.2	2.7	NH-HEM	M	BC	WA	HEM	RM		P	E	140	NTS	E
A-12	6.3	NH	NH	HM	RM	BC	WA		E	C	125	ICT	A
A-13.1	36.7	NS	C	NS	RP	WA	ASP		U	D	135	VDT	C
A-13.2	15.4	RP-NS	NH	RP	WA	NS	HM		E	D	150	SCH-S	C
A-14	13.8	L	NH	EL	HM	BC	PC		E	D	180	ICT	B
A-15	17.5	L	NH	EL	WA	HM	RM		E	D	133	SCH-S	B
A-16	11.9	NS	M	NS	WA	HM	BW		E	E	158	ICT	B
A-17	5.8	NH	NH	BC	WA	RM	HM		E	D	100	SS	A
A-18	13.9	RP-NS	M	NS	RP	RM	BC		E	D	108	ICT	B
A-19.1	28.9	NH	NH	RM	YB	WA	HM		E	C	94	ICT	B
A-19.2	14.1	NH	NH	RM	HM	BW	BC		E	C	107	ICT	A
A-20	53.2	NS-NH	M	NS	WA	BC	RM		E	D	99	ICT	B
A-21.1	37.5	RP-L	NH	EL	RP	WA	BC		E	D	150	ICT	C
A-21.2	29.3	RP-L	NH	EL	RP	WA	RM		E	D	126	ICT	B
A-21.3	17.4	NH	NH	WA	ASP	PC	RM		E	A	61	TSI	D
A-21.4	1.6	RP-L	NH	RP	WA	EL	APL		P	D	90	NTS	E
A-22	31.5	NH	NH	HM	WA	BC	BW		U	D	135	GST-E	D
A-23	24.3	L	NH	EL	WA	HM	BC		E	D	190	ICT	C

Stand No.	Ac	CT	FT	Top Four Species				IS	MD	SC	BA	Treat	PC
				1	2	3	4						
A-24	7.1	NH	NH	HM	WA	BC	BW		U	D	115	GST-E	A
A-25	32.5	L	NH	WA	EL	PC	HM		E	C	89	SCH-P	C
A-26	42.3	RP-L	NH	EL	RP	WA	HM		E	D	163	ICT	B
A-27	4.4	NH	NH	BC	WA	HM	RM		E	C	78	ICT	C
Baker School House State Forest (Cortland 12) – Compartment B													
B-1	13	NS-NH	M	NS	SP	BC	BW		P	E	146	NTS	E
B-2	12.5	NS-NH	M	NS	SP	WA	YB		E	D	109	ICT	A
B-3	15.4	NH	NH	PC	RM	WA	HWT		E	A	38	TSI	D
B-4	13.4	NH	NH	HM	WA	RM	BEE		U	D	95	GST-E	A
B-5	51.6	NS-L	M	EL	NS	HM	BC		E	D	171	SCH-P	B
B-6	24.5	NH	NH	HM	WA	BW	YB		U	D	112	GST-E	A
B-7	12.6	NS-L	M	NS	EL	BC	RM		E	E	197	ICT	B
B-8	18.4	L	NH	EL	WA	RM	APL		E	D	85	SCH-S	C
B-9.1	30.2	NH	NH	WA	YB	HM	RM		E	C	140	ICT	A
B-9.2	9.6	NH	NH	YB	ASP	WA	HM		P	C	80	NTS	E
B-10	3.6	NH	NH	HM	WA	IWD	BEE		E	C	125	ICT	A
B-11.1	9.9	NS-NH	NH	HM	WA	RM	BL		NA	D	136	NTS	E
B-11.2	1.5	NH	NH	ASP	RM				P	C	40	NTS	E
B-12	10	NH-HEM	M	HEM	RM	YB	HM		P	C	140	NTS	E
B-13	21.3	NS-NH	M	NS	RM	WA	HM		E	C	174	ICT-A	B
B-14	23.6	NS	M	NS	WA	BC	HM		E	D	132	ICT	B
B-15.1	17.1	RP-NS	NH	RP	NS	BC	HWT		E	D	143	ICT	B
B-15.2	27.3	NS	M	NS	WA	RM	BC		E	D	160	ICT	B
B-16.1	21.1	NH-HEM	M	RM	WA	HEM	HM		U	C	121	GST-E	C
B-16.2	6.5	NH-HEM	M	HEM	BC	RM	RM		U	D	107	GST	C
B-16.3	9.3	NH-HEM	M	YB	HEM	RM	WA		P	D	147	NTS	E
B-17	12.5	NH	NH	RM	WA	BW	HM		U	C	104	GST	C
B-18	48.7	APH	NH	HWT	ASP	NS	APL		P	C	69	MTR	A
B-19	23.3	NH	NH	YB	WA	RM	HM		U	C	106	GST-E	C
B-20.1	46.3	NH	NH	BC	HM	WA	YB		U	D	122	GST-E	A
B-20.2	23.2	NH	NH	HM	BEE	WA	BW		U	D	98	GST-E	C
B-20.3	9.6	NH	NH	YB	BEE	WA	BC		E	C	133	ICT	A
B-21	8.7	NH	NH	HM	WA	BC			U	D	123	GST-E	A
B-22.1	29.1	L	NH	JL	WA	RM	APL		E	D	131	SCH-S	B
B-22.2	6.3	L	NH	JL	APL	WA	HM		E	D	74	SCH-S	B

Stand No.	Ac	CT	FT	Top Four Species				IS	MD	SC	BA	Treat	PC
				1	2	3	4						
B-23	15.6	NH	NH	WA	RM	HM	BC		U	D	99	GST	C
B-24.1	23.7	NS-NH	M	NS	RM	BC	WA		E	C	153	ICT	B
B-24.2	3.5	NH	NH	WA	RM	HM	TS		E	C	123	ICT	D
B-25	9.1	NS	M	NS	WA	APL	DL		E	C	136	ICT	B
B-26	17.5	NH	NH	HM	WA	BC	RM		E	D	122	ICT	A
B-27	7.4	NH	NH	BC	WA	BEE	HM		E	C	133	ICT	A
Hoxie Gorge State Forest (Cortland 14) – Compartment A													
A-1	3	NH-HEM	M	HEM	HM	BW	WA		P	D	95	NTS	E
A-2	8.2	NH-HEM	M	RM	HM	HEM	ASP		U	C	115	GST-E	A D
A-3	19	OAK-NH	NH	WA	HM	RO	RM		E	C	109	SS	D
A-4	10.2	NH	PH	WA	ASP	RM	HM		ASR	C	110	PC	C
A-5	18.9	NH-HEM	M	HM	WA	RM	HEM		U	C	129	GST-E	B
A-6.1	4.6	BR	NH					RHM	NA		0	NTS	E
A-6.2	9.1	NH	NH	WA	HM	BC	BW		P	C	105	NTS	E
A-7	8.2	PH	NH	WA	HM	ASP	RM		U	C	68	GST-E	D
A-8.1	10.5	NH	NH	WA	HM	RO	BH		U	C	83	GST-E	C
A-8.2	2	NH	NH	WA	ASP	RM	BW		P	C	80	NTS	E
A-8.3	4	NH	NH	WA	BW	Elm	RO		P	C	115	NTS	E
A-9	5.6	RP	NH	RP	WA				U	C	97	NTS	E
A-10.1	43	NS	C	NS	WA	RM	BC		U	C	188	VDT-A	A
A-10.2	2.2	NS	M	NS	WA	ASP			U	C	185	VDT-A	A
A-10.3	12.3	NS	C	NS	RM	WA			U	C	195	VDT-A	A
A-10.4	36.7	NS	C	NS	WA	BC	ASP		U	C	187	VDT-A	A
A-11.1	6	PH	NH	WA	ASP	RO	BB		E	C	90	ICT	B
A-11.2	8.5	NH	NH	WA	ASP	HM	RM	H	E	D	85	ICT	B
A-12.1	5	NH-HEM	M	YB	BW	WA	HEM		U	D	77	GST-E	D
A-12.2	3.5	NH-HEM	M	HM	YB	WA	BW		P	D	80	NTS	E
A-13	13.2	NH-HEM	M	HM	HEM	WA	YB		U	D	88	GST-E	C
A-14	9.8	NH-HEM	M	HM	BEE	RM	HEM		U	D	123	GST-E	D
A-15.1	4.3	NH	NH	WA	RM	BC	BEE	M	E	C	90	ICT	B
A-15.2	0.7	APH	NH	HWT	WA	ASP			P	C	50	NTS	E
A-16	37.6	NH	NH	HM	WA	RM	HEM	MR	E	E	106	SS	B
A-17	5.3	NS	NH	NS					E	C	163	ICT	A

Stand No.	Ac	CT	FT	Top Four Species				IS	MD	SC	BA	Treat	PC
				1	2	3	4						
A-18.1	13.9	APH	NH	HWT	WA	RM	APL		E	C	54	ICT	D
A-18.2	2.1	APH	APH	TS					APH		10	MTR	D
A-19	5.4	NH	NH	RM	BEE	HM	WA		E	C	65	TSI	B
A-20	8.9	NH-HEM	M	HM	RM	HEM	WA		U	D	95	GST-E	D
A-21	28	NH-HEM	M	HM	HEM	RM	ASP	MR	P	C	128	NTS	E
A-22.1	7.6	NH-HEM	M	HM	WA	RM	BW		U	D	120	GST-E	C
A-22.2	7.5	NH	NH	RM	WA	HM	BW		U	D	150	GST-E	A
A-23	9.7	NH-HEM	M	RM	WA	HEM	ASP		P	D	110	NTS	E
A-24	12.7	NH-HEM	M	HEM	RM	BEE	WA		U	E	107	GST	C
A-25.11	17.8	NH	NH	HM	WA	BW	RM		U	D	83	GST	D
A-25.12	13.4	NH-HEM	M	RM	BEE	HM	HEM		U	D	100	GST-E	D
A-25.2	16.7	NH	NH	HM	HEM	WA	BEE	HR	U	D	100	GST-E	B
A-26	19.2	NH-HEM	M	WA	RM	HEM	HM		U	D	108	GST	C
A-27	2.6	NH-HEM	M	HM	HEM	RM	BEE		P	E	100	NTS	E
A-28	6.9	NH	NH	RM	WA	ASP	RO		E	C	98	ICT	C
A-29.1	18.7	NS	M	NS	WA	HM	WP		E	C	167	ICT-A	C
A-29.2	3.7	NS-NH	NH	NS	WA	RP			E	C	96	SCH-P	B
A-29.3	21.7	NS	M	NS	ASP	APL	WA		E	C	142	ICT-A	C
A-29.4	3	PH	PH	ASP				R	ASR	C	25	PC	D
A-29.5	7.3	NS	M	NS	ASP	WA	WP		E	C	140	ICT-A	C
A-30	11.3	NH	NH	WA	RM	HM	BH		U	C	97	GST-E	AD
A-31	15.9	NH-P	NH	WA	RP	ASP		H	E	C	87	SCH-C	A
A-32.1	4.6	NH	NH	WA	BC	SH	HM		E	D	83	ICT	C
A-32.2	4.8	NH	NH	WA	RM	BH	RO	K	E	C	78	ICT	C
A-33.1	0.8	NH	NH	HM	RO	BW	BH		P	D	95	NTS	E
A-33.2	6	NH	NH	HM	WA	BC	YB	K	U	D	73	GST	C
A-34.1	6.5	NS	M	NS	HM				E	C	170	ICT-A	A
A-34.2	23.2	NS	M	NS	ASP				E	C	155	ICT-A	A
A-35.1	3.7	BR	NH	WA	Elm	ASP	BUT		P		25	NTS	E
A-35.2	3.8	NH	NH	RM	HWT	BC	Elm		P	C	48	NTS	E
A-35.3	2.2	NS	M	NS					E	C	90	ICT-A	C
A-36	2	NH	NH	RM	ASP	JL	BEE		U	C	110	GST-E	A
A-37	1.3	WP	C	WP	WA	BC			E	C	175	ICT-A	B

Stand No.	Ac	CT	FT	Top Four Species				IS	MD	SC	BA	Treat	PC
				1	2	3	4						
A-38	3.3	L	NH	JL	WA	RM			E	C	165	ICT-A	A
A-39	3.1	NH	NH	RM	WA	BC	HM		U	C	97	GST	C
A-40	64.7	PH	PH	RM	WA	ASP	HWT	RH	ASR	C	90	PC	AD
A-41.1	10.2	OAK-NH	NH	WA	RM	ASP	HM		E	C	99	MTR	A
A-41.2	8.7	PH	NH	ASP	RM	RO	BB		E	C	115	ICT	B
A-41.3	12.9	NH	NH	RM	ASP	WA	BB		E	C	107	ICT	B
A-42.1	4.4	NH	NH	RM	WA	ASP	RO		E	C	98	ICT	B
A-42.2	3.3	NH	NH	RM	WA	BEE	ASP		E	C	115	ICT	C
A-43	6.9	L	NH	EL	WA	RM		H	E	C	143	SCH-C	C
A-44	9.2	NH	NH	RM	WA	WP			E	C	110	ICT	B
A-45.11	16.2	NH-HEM	M	HEM	HM	RM	WA	H	U	C	108	GST-E	C
A-45.12	19	NH-HEM	M	WA	HM	BEE	YB		U	C	96	GST-E	C
A-45.21	8.7	NH-HEM	C	HEM	BW	HM	IWD		P	C	140	NTS	E
A-45.22	7.9	NH	NH	HM	ASP	BW			P	D	80	NTS	E
A-46	16.6	NH	NH	BW	WA	HM	YB		U	C	103	GST-E	B
A-47	9.9	PH	PH	ASP	WA	RM	HM		ASR	C	88	PC	AD
A-48	12	NH	PH	WA	RM	ASP	HM		ASR	C	110	PC	B
A-49.1	5.3	NH	NH	WA	BH	SH	HM	R	E	C	85	ICT	C
A-49.2	8.1	NH	NH	WA	SH	YB	HM	R	E	C	125	ICT	AD
A-49.3	6.4	NH	NH	WA	BC	RM	RO		E	C	78	ICT	C
A-50	4.8	OAK-NH	NH	RO	BW	HM	BH		E	D	125	ICT	A
A-51.1	25.4	NH	PH	WA	RM	ASP	HM		ASR	C	93	PC	C
A-51.2	8.8	NH	NH	RM	ASP	WA	BC		E	C	90	ICT	C
A-52	34.2	NH	NH	RM	WA	RO	BC		E	C	95	ICT	C
A-53	14.4	NH	NH	RM	WA	ASP	RO		E	C	112	ICT	C
A-54	6.9	NH-HEM	M	HM	HEM	RM	BEE		NA	E	93	NTS	E
A-910	0.4	OW	OW						NF		0	NTS	E
Hoxie Gorge State Forest (Cortland 15) – Compartment A													
A-1	6.7	NH-HEM	M	HM	HEM	RM	WA		U	E	78	GST-E	D
A-2.1	10	NH	NH	RM	WA	HM	RO		U	D	73	GST-E	D
A-2.2	3.2	NS	M	NS	RM				U	C	90	VDT	A
A-3	4.3	NH	NH	HM	BC				U	E	80	GST-E	D

Stand No.	Ac	CT	FT	Top Four Species				IS	MD	SC	BA	Treat	PC
				1	2	3	4						
A-4	7.6	NH-HEM	M	HM	HEM	RM	BEE		P	C	120	NTS	E
A-5	19.5	NH-HEM	C	RM	HEM	HM	BB		NA	D	138	NTS	E
A-6	16.4	L	NH	JL				RH	NA	C	140	NTS	E
A-7.1	3.9	RP	NH	RP					NA	C	90	NTS	E
A-7.2	1.3	RP	NH	RP					NA	C	205	NTS	E
A-8.1	6.1	NS	M	NS	RP				NA	C	133	NTS	E
A-8.2	3.2	RP-NS	NH	RP	NS	WP			NA	C	177	NTS	E
A-9	5	SW	SW	TS					P		10	NTS	E
A-10.1	6.2	NH	NH	WA	HM	BC	ASP	H	NA	D	57	NTS	E
A-10.2	8.8	NH-HEM	M	HEM	RM	BC	HM		NA	C	113	NTS	E
A-11	16.7	HEM	C	HEM	WP	RM	YB		P	C	118	NTS	E
A-12	11	NH-HEM	M	HEM	RM	HM	BB		U	D	136	GST-E	B
A-13	12.1	NH-HEM	M	HEM	PC	RM	HM		U	D	110	GST-E	D
A-14	4.2	NH	NH	HM	RM	WA	BC		U	C	110	GST-E	B
A-15.1	7.1	NH	NH	HM	BC	HEM	WA		U	D	115	GST-E	A
A-15.2	4.5	NH	NH	HM	BEE	RM	BW		U	E	123	GST-E	A
A-16	19.1	NH	NH	RM	BB	WA	HM		E-L	C	100	VDT	B
A-17.1	11.9	SW	M	ASP	WP	Elm	WA	R	P	D	50	NTS	E
A-17.2	8.7	NH-HEM	C	HEM	WP	RM	YB		P	C	85	NTS	E
A-17.3	4.2	NH	NH	WA	APL	HM	BC		P	D	85	NTS	E
A-18.1	7.7	NH	APH	WA	BC	ASP	HM		NA	D	90	MTR	A
A-18.2	4.2	NH	APH	WA	BC	APL	ASP		NA	C	83	MTR	A
A-19	15.6	NS	M	NS	ASP				U	C	205	VDT	B
A-20	21.6	SW	SW	TS					P		10	NTS	E
A-21.1	16.7	NH	NH	WA	RM	BC	HM		E-L	C	70	VDT	D
A-21.2	7.8	BR	BR	TS					BR		10	M-BR	D
A-22	6.8	NS	NH	NS	WA				E	C	158	ICT-A	B
A-23	5.1	L	NH	JL					E	C	165	ICT-A	B
A-24	14.6	NH-HEM	M	HEM	HM	BH	BW		U	D	92	GST-E	D
A-25	5.2	RP	NH	RP					E	C	130	ICT-A	B
Hoxie Gorge State Forest (Cortland 15) – Compartment B													
B-1	15	NH	NH	WA	HM	ASP	RM		U	D	90	GST-E	B
B-2	15.4	NH	NH	RM	HM	RO	BH		U	D	98	GST-E	B
B-3	8.8	NH	NH	WA	RM	BB			U	C	83	GST-E	C

Stand No.	Ac	CT	FT	Top Four Species				IS	MD	SC	BA	Treat	PC
				1	2	3	4						
B-4.1	8.7	L	NH	JL	RM	NS			U	C	73	VDT-A	D
B-4.2	1.2	BR	NH	TS					U		10	NTS	E
B-5	15.5	NH	NH	HM	WA	RO	BW		U	D	104	GST-E	C
B-6	4.3	NH	NH	RM	WA	BC			E-L	C	75	VDT	D
B-7.1	25.4	L	NH	JL	WA	RM			U	C	103	VDT-A	B
B-7.2	3	NH	NH	WA	BL	BC	APL	RH	U	C	80	MTR	B
B-8	17.5	NS	C	NS					U	C	112	VDT	A
B-9	10.7	NH	NH	RM	WA	RO			E-L	C	80	VDT	B
B-10	7	NH	NH	WA					U	A	10	NTS	E
B-11	8.4	NS	M	NS					U	C	160	VDT	B
B-12.1	18.2	NH	NH	WA	HM	ASP	APL		P	C	114	NTS	E
B-12.2	44	NH	NH	RM	WA	HM	ASP		E	C	102	ICT	B
B-13	28.6	NS	M	NS					E	C	190	ICT-A	B
B-14	3.6	NS	M	NS	WA				E	C	225	ICT-A	B
B-15	14.7	RP	NH	RP	RM				E	C	174	SCH-C	A
B-16	5.5	NH	NH	WA	HM	BC	PC		E	D	117	ICT	A
B-17	7.3	NH	NH	WA	BC	HM	Elm		E	C	95	ICT	C
B-18	6.6	RP	NH	RP					U	C	183	ICT-A	A
B-19	26.2	L	NH	JL					E	C	174	ICT	B
B-20	13.4	L	NH	JL					E	C	148	ICT-A	B
B-21	26.3	NH	NH	HM	BC	WA	BEE		U	D	85	GST-E	C
B-22.1	14.9	RP	NH	RP	RM	HM	ASP		U	C	107	SCH-C	D
B-22.2	1.7	BR	NH						U		0	NTS	E
B-23	10.8	NS	M	NS					U	C	163	VDT-A	A
B-24	21.1	L	NH	JL					E	C	181	ICT-A	B
B-25	15.2	RP	NH	RP	RM				E	C	224	SCH-C	A
B-26	6.7	NH	NH	RM	WA	BC	ASP		E	C	96	ICT	B
B-27	8.4	NS	M	NS					E	C	177	ICT-A	B
B-28	2.8	RP	NH	RP	RM				E	C	205	ICT-A	B
B-29	9.2	NH	NH	RM	WA	BC			E	C	113	ICT-A	A
B-30	2	BR	NH	TS				H	E		0	NTS	E
B-31	19.4	PH	PH	ASP	WA	Elm	RM		ASR	C	69	PC	D
B-32	6.5	PH	NH	TS	ASP	PC	WA	H	E	A	35	NTS	E
B-33	19.2	SW	SW	ASP					P		45	NTS	E
B-34	20.4	BR	BR	TS				H	BR		0	M-BR	D
Hoxie Gorge State Forest (Cortland 15) – Compartment C													
C-1	1.2	BR	BR	TS					BR		10	M-BR	D

Stand No.	Ac	CT	FT	Top Four Species				IS	MD	SC	BA	Treat	PC
				1	2	3	4						
C-2.1	69.8	NH	NH	WA	HM	RM	BH		U	C	98	GST-E	C
C-2.2	17	NH-HEM	M	HM	HEM	RM	YB		U	D	120	GST	C
C-3.1	5.2	NH	NH	RM	WA	ASP			E-L	C	103	VDT	C
C-3.2	13.2	L	NH	EL	RM	WA			U	C	118	VDT-A	A
C-4	4.4	NH-P	NH	RM	RP				U	C	140	VDT-A	B
C-5	6.5	NH	NH	RM	WA	ASP	BC		E-L	C	87	VDT-A	C
C-6	10.3	NS	M	NS					U	C	127	VDT-A	A
C-7	9.7	NH	NH	RM	HM	RO			E	C	123	ICT	B
C-8	7.4	NH	NH	RM	WS	BC	ASP		E	D	120	ICT	A
C-9	43.4	NH	NH	WA	RM	HM	BH		U	C	95	GST-E	C
C-10	1.5	L	NH	EL	WA				U	C	175	VDT	A
C-11	19.6	NH-HEM	M	WA	RM	BW	HEM		U	D	135	GST-E	B
C-12	31.4	NH-HEM	M	RM	WA	HEM	ASP		U	D	125	GST	B
C-13	34.9	NH-HEM	M	RM	HEM	ASP	WA		P	D	140	NTS	E
C-14	12.9	NH-HEM	M	WA	HM	BW	BEE		U	D	115	GST-E	B
C-15	50.9	NH	NH	WA	HM	RM	BW		U	D	134	GST-E	D
Gee Brook State Forest (Cortland 17) – Compartment A													
A-1	10.4	PH	PH	ASP	APL	BC	Elm		ASR	C	57	PC	AD
A-2	24.5	RP	NH	RP	BC				E	C	167	ICT-A	A
A-3	2.7	NS	M	NS					E	C	110	ICT-A	A
A-4.1	9.8	L	C	JL					SO	E	67	M-U	T
A-4.2	3.1	L	C	JL					SO	E	85	M-U	T
A-5.1	6.7	NH	NH	HM	BC	RM	BBE		P	C	93	NTS	E
A-5.2	1.1	BR	BR	SP					BR	C	10	NTS	E
A-6.1	2.5	NH	NH	BBE	BC	RM	IWD	H	E	C	145	TSI	A
A-6.2	13.2	NH	NH	BC	HM	BBE	RM		E	C	70	NTS	E
A-7	30.6	NH	NH	HM	WA	BEE	BC		U	D	126	GST-E	C
A-8	26.5	NH-HEM	M	HM	RM	BC	WA		U	D	113	GST-E	C
A-9.1	3.5	NH	NH	BBE	HM	HWT	YB		U	C	85	GST-E	C
A-9.2	8.4	NH-HEM	M	BC	RM	HEM	HM		U	D	85	GST-E	C
A-10.1	40	NH	M	HEM	HM	Elm	YB		P	C	103	NTS	E
A-10.2	5.5	NH	NH	HM	BC				P	D	65	NTS	E
A-11	4.1	NS	M	NS					E	C	60	ICT-A	D

Stand No.	Ac	CT	FT	Top Four Species				IS	MD	SC	BA	Treat	PC
				1	2	3	4						
A-12	13.7	L	NH	JL	HWT				E	D	90	ICT	D
A-13	9.1	NH	NH	RM	HM	WA	BC		U	C	115	GST-E	C
A-14	3.9	NH	NH	HM	WA	BW	IWD		U	D	140	GST-E	C
A-15	5.7	SW	SW	HEM	Elm	WA			P	C	15	NTS	E
A-16.1	3.1	PH	APH	BC	YB				APH	C	50	MTR	C
A-16.2	3.1	DC	DC	HM	RM				NF		20	NTS	E
A-17.1	19.3	NS	M	NS					E	C	158	ICT-A	D
A-17.2	3.3	NS	M	NS					E	C	195	ICT-A	A
A-17.4	7	NS	M	NS					E	C	180	ICT-A	A
A-18	5.4	NH	M	HEM	RM	HM	YB		U	D	93	GST-E	C
A-910	6	POND	POND						P		0	M-EI	T
A-940	2.6	GR	GR						GR		0	M-GR	T
Gee Brook State Forest (Cortland 17) – Compartment B													
B-1	6.7	NH-HEM	M	HEM	YB	HM	RM		P	D	138	NTS	E
B-2.1	105.6	NH	NH	HM	RM	BC	WA		U	D	79	GST-E	D
B-2.2	6.2	NH	NH	RM	HM	BW	WA		U	D	93	GST-E	C
B-3	39.2	NH	NH	HM	RM	WA			U	C	80	GST-E	C
B-4	3.2	NH-HEM	M	HEM	RM	ASP	YB		P	D	177	NTS	E
B-5	18.6	APH	APH	APL	BC	WA	HM		P	C	103	MTR	C
B-6	3.1	NH	NH	BC	BBE	RM	ASP		E	C	105	ICT	B
B-7	3.5	NH	NH	RM	HM	ASP	APL		E	D	123	ICT	B
B-8	10.6	NH	NH	RM	HM	BC	BBE		P	C	85	NTS	E
B-9	15.6	NH	NH	RM	BC	HEM	WA		E	C	73	ICT	C
B-10	5.2	L	NH	RM	EL	BC	BBE		E	C	100	ICT	B
B-11.1	17.3	NH-HEM	M	HM	HEM	RM	BW		U	C	110	GST-E	C
B-11.2	11	NH-HEM	M	HEM	RM	BC	WP		U	D	128	GST	C
B-11.3	16.2	NH-HEM	M	HEM	RM	WA	YB		U	C	100	GST	C
B-11.4	25.1	NH-HEM	M	HEM	RM	YB	HM		P	C	115	NTS	E
B-12	21.3	NH	NH	HM	BC	WA	HEM		E	D	80	SS	D
B-13	15.5	NH	NH	HM	BC	RM	WA		E	D	90	SS	D
B-14	24.4	NH-HEM	M	HEM	RM	HM	BC		U	C	135	GST-E	B
B-15	17.7	NH	NH	HM	WA	RM	BC		U	C	66	GST-E	C
B-16	8.7	L	NH	EL	BC	APL	WA		E	C	170	ICT-A	B

Stand No.	Ac	CT	FT	Top Four Species				IS	MD	SC	BA	Treat	PC
				1	2	3	4						
B-17	6.3	NH	NH	WA	BC	RM	ASP	RM	P	C	113	NTS	E
B-18	6.2	NH	NH	APL	WA	BC	EL	R	APH	C	90	MTR	A
B-19	11.3	NS	M	NS	JL	HM	RM		E	C	176	ICT-A	B
B-20.1	11	NH	NH	BC	RM	HM	WA		E	C	74	ICT	C
B-20.2	6.2	NH-HEM	M	RM	WA	YB	ASP		P	C	58	NTS	E
B-21	7.4	NH	NH	RM	BC	ASP			E	C	63	ICT	D
B-22	21.4	NH-HEM	M	HEM	RM	YB	BEE		U	D	140	GST-E	B
B-23	3.7	WP	C	WP					SO	E	85	M-U	T
B-24	15.7	WP	C	WP	WA				SO	D	56	M-U	T
B-25	27.2	NH	NH	WA	HWT	BC	Elm	RH	E	C	53	NTS	E
B-26	2	NH	APH	SP	WA	ASP	Elm		APH	C	55	SCH-S	BD
B-27	5.7	NS	CP	WS	WA	ASP			SO	D	45	M-U	T
B-28	3.6	L	C	JL				MH	SO	E	63	M-U	T
B-29	11.5	WS	C	WS	WA	Elm		H	SO	C	95	M-U	T
B-30	2.1	BR	BR	TS	HWT			RH	BR		20	M-BR	C
B-31	12.4	NH	APH	WA	APL	HWT	BC	R	APH	C	108	MTR	B
B-32	6	WP-NS	M	WP	BC	NS	WA	H	E	C	123	ICT	B
B-33	1.9	NH	NH	ASP				H	E	A	40	NTS	E
B-910	19.7	POND	POND						P		0	M-EI	T
B-920.1	18.4	OW	OW	TS	HWT				P		20	HI	HI
B-920.2	9.1	OW	OW	TS					P		20	HI	HI
B-930	0.7	SW	SW						P		0	NTS	E
B-940	7.1	GR	GR						GR		0	M-GR	T
Papish Pond Multiple Use Area													
A-1	2.1	NH	NH	WA	RM	HM			E	A	20	NTS	E
A-2	6.4	NH-P	NH	ASP	BC	RP	WA		ASR	C	80	SCH-P	B
A-3	29.8	PH	PH	ASP	RM	WA	SP		ASR	C	63	PC	B
A-4	17.4	NH-P	NH	SP	NS	WA	BC		E	C	140	SCH-S	A
A-5	4.8	SW	SW	WA	BW				P	E	10	NTS	E
A-6	17.5	NH-HEM	M	HEM	BEE	HM	BC		P	C	112	NTS	E
A-7	2.4	PH	PH	ASP	WS	WA	SP		ASR	C	105	PC	B
A-8	12.5	NH-P	NH	SP	RM	ASP	WP	RH	E	C	113	SCH-S	A
A-9	11.7	NH-HEM	M	HEM	HM	WA	RO		NA	C	157	NTS	E
A-10	31.8	NH	NH	WA	RM	RO	HM	H	NA	C	112	NTS	E

Stand No.	Ac	CT	FT	Top Four Species				IS	MD	SC	BA	Treat	PC
				1	2	3	4						
A-11	4.9	NH	NH	BC	BL	WA		H	P	C	95	NTS	E
A-12	2.7	NH	NH	WA	ASP			H	E	C	135	ICT	C
A-13	4.8	WS-NH	NH	WS	HM	RM	WA		NA	C	143	NTS	E
A-910	39.9	POND	POND						P		0	M-EI	T

Table of Land Management Actions by Project Completion Interval

Forest	Stand No.	Ac	CT	MD	SC	BA	Treat	PC
Cortland 2	A-4	19.5	NS-NH	E-L	D	166	VDT-A	A
Cortland 2	A-7	73.4	RP	U	D	141	SCH-P	A
Cortland 2	A-8.3	11.0	NH	E-L	D	150	SS	A
Cortland 2	A-9.1	17.5	RP	U	D	189	SCH-P	A
Cortland 2	A-10	7.6	RP-WP	E	D	180	SCH-C	A
Cortland 2	A-12	25.6	NH	E	C	105	ICT	A
Cortland 2	A-15.1	28.2	RP	U	D	173	SCH-P	A
Cortland 2	A-15.2	1.8	NH	APH	C	75	MTR	A
Cortland 2	A-21.2	6.4	NH	U	C	118	GST	A
Cortland 2	A-27.2	19.7	NH	U	D	113	GST-E	A
Cortland 2	A-38	7.8	OAK-NH	E	D	112	ICT	A
Cortland 2	A-39	10.2	NH	E	D	126	ICT	A
Cortland 2	A-40.1	37.8	RP	E	D	164	SCH-P	A
Cortland 2	A-40.2	1.7	NH	E	C	115	ICT	A
Cortland 2	A-40.3	3.4	NH	E	D	120	SAL	A
Cortland 2	A-47.2	4.6	NS	U	D	117	VDT	A
Cortland 2	A-50	7.4	NS	E	D	200	VDT	A
Cortland 2	A-51	7.7	NS-NH	U	D	147	VDT	A
Cortland 2	A-52	13.7	NH	U	D	138	GST	A
Cortland 2	A-53	30.5	NS	U	C	206	VDT-A	A
Cortland 2	A-54.2	20.4	NH	U	D	105	GST	A
Cortland 2	B-4.1	24.8	NS	U	D	155	VDT	A
Cortland 2	B-5.1	4.8	NS	U	C	210	VDT	A
Cortland 2	B-10	2.8	NH	P	C	85	MTR	A
Cortland 2	B-12	12.7	OAK-NH	E	D	110	ICT	A
Cortland 2	B-17.1	33.6	NS	U	C	168	VDT-A	A
Cortland 2	B-17.2	5.2	NS	U	C	220	VDT-A	A
Cortland 2	B-22	26.0	NS	U	C	131	VDT	A

Forest	Stand No.	Ac	CT	MD	SC	BA	Treat	PC
Cortland 2	B-24	15.8	L	E	D	130	ICT-A	A
Cortland 2	B-29	2.7	L	E	C	225	SCH-C	A
Cortland 2	B-35.1	95.1	NS	E	C	161	ICT-A	A
Cortland 2	B-36	9.9	NS	E	C	220	ICT-A	A
Cortland 2	B-43	9.9	NS	E	C	123	ICT-A	A
Cortland 2	B-45	6.5	L	E	C	137	ICT-A	A
Cortland 2	B-49	4.5	NS	E	C	103	ICT-A	A
Cortland 2	B-50	21.1	NS	E	C	153	ICT-A	A
Cortland 2	C-3	15.7	NS	E	D	202	ICT	A
Cortland 2	C-5.1	75.2	NS-L	E	D	163	SCM-P	A
Cortland 2	C-6	8.1	NS	E	D	167	ICT	A
Cortland 2	C-9.1	25.3	NH	E	D	147	ICT	A
Cortland 2	C-9.2	8.7	NS-NH	E	D	173	ICT	A
Cortland 2	C-13.1	29.5	NS-L	E	D	146	ICT	A
Cortland 2	C-13.2	18.7	NS-L	E	E	128	ICT	A
Cortland 2	C-14	4.5	DF	E	C	147	ICT	A
Cortland 2	C-18.2	20.7	NH	U	C	119	GST-E	A
Cortland 2	C-20.1	47.2	WS-NH	ASR	C	117	SCH-P	A
Cortland 2	C-20.2	8.6	DF	E	D	185	SCM-S	A
Cortland 2	C-21	7.5	NH	E	D	127	ICT	A
Cortland 2	C-22.1	13.6	RP	E	D	148	ICT	A
Cortland 2	C-25	4.1	L	E	C	170	SCH-S	A
Cortland 2	C-26.1	19.3	NH	U	C	119	GST-E	A
Cortland 2	C-27.2	2.5	OAK-NH	E	C	115	MTR	A
Cortland 2	C-28	10.1	NS	U	E	196	VDT	A
Cortland 2	C-29	8.0	NH	APH	D	100	MTR	A
Cortland 2	C-30	20.7	SP-L	E	E	145	ICT	A
Cortland 2	C-33	6.6	WC	E	C	203	ICT	A
Cortland 7	A-1.2	25.5	NS-NH	U	D	145	VDT	A
Cortland 7	A-2	5.5	NH-PINE	E	D	117	ICT	A
Cortland 7	A-3	92.2	NH-PINE	E-L	C	175	VDT	A
Cortland 7	A-4.2	6.0	WS-NH	E	D	153	ICT	A
Cortland 7	A-5.1	8.9	NS-NH	E	E	170	SCH-P	A
Cortland 7	A-5.2	7.2	WS-NH	E-L	D	120	SCH-P	A
Cortland 7	A-6.1	26.2	NH-HEM	U	D	128	GST	A
Cortland 7	A-10.2	3.2	WS	E-L	D	170	VDT	A
Cortland 7	A-12.1	10.4	NH	E-L	D	128	PC	A

Forest	Stand No.	Ac	CT	MD	SC	BA	Treat	PC
Cortland 7	A-15	48.1	NH	U	D	109	GST-E	A
Cortland 7	A-18	9.5	DF	E-L	C	148	SCM-S	A
Cortland 7	A-19.1	26.4	NS-NH	U	C	190	SCM-P	A
Cortland 7	A-19.2	9.1	NH-PINE	U	D	134	SCH-S	A
Cortland 7	A-20.1	9.5	SP	E-L	D	155	SCH-P	A
Cortland 7	A-20.2	13.4	NS-L	E-L	D	163	VDT-A	A
Cortland 7	A-21.1	2.0	NH-HEM	U	D	210	GST	A
Cortland 7	A-22.1	4.1	NS-NH	U	C	160	VDT	A
Cortland 7	A-22.3	3.4	WS-NH	E-L	C	137	SCH-P	A
Cortland 7	A-23	7.3	NS	U	C	157	VDT-A	A
Cortland 7	A-28.1	16.3	NS	U	C	181	VDT-A	A
Cortland 7	A-28.2	3.5	NS	U	C	135	VDT-A	A
Cortland 7	A-29.1	13.1	NH-PINE	E-L	C	85	SCH-C	A
Cortland 7	A-29.2	3.5	RP	E-L	C	190	VDT-A	A
Cortland 7	A-30.1	5.3	NH	APH	C	80	MTR	A
Cortland 7	A-30.2	6.2	NH	U	C	108	GST-E	A
Cortland 12	A-1	30.3	NH	U	D	119	GST-E	A
Cortland 12	A-6	4.4	NH	U	D	130	SAL	A
Cortland 12	A-8	35.5	NH	U	D	116	GST-E	A
Cortland 12	A-12	6.3	NH	E	C	125	ICT	A
Cortland 12	A-17	5.8	NH	E	D	100	SS	A
Cortland 12	A-19.2	14.1	NH	E	C	107	ICT	A
Cortland 12	A-24	7.1	NH	U	D	115	GST-E	A
Cortland 12	B-2	12.5	NS-NH	E	D	109	ICT	A
Cortland 12	B-4	13.4	NH	U	D	95	GST-E	A
Cortland 12	B-6	24.5	NH	U	D	112	GST-E	A
Cortland 12	B-9.1	30.2	NH	E	C	140	ICT	A
Cortland 12	B-10	3.6	NH	E	C	125	ICT	A
Cortland 12	B-18	48.7	APH	P	C	69	MTR	A
Cortland 12	B-20.1	46.3	NH	U	D	122	GST-E	A
Cortland 12	B-20.3	9.6	NH	E	C	133	ICT	A
Cortland 12	B-21	8.7	NH	U	D	123	GST-E	A
Cortland 12	B-26	17.5	NH	E	D	122	ICT	A
Cortland 12	B-27	7.4	NH	E	C	133	ICT	A
Cortland 14	A-2	8.2	NH-HEM	U	C	115	GST-E	A
Cortland 14	A-49.2	8.1	NH	E	C	125	ICT	A
Cortland 14	A-10.1	43.0	NS	U	C	188	VDT-A	A

Forest	Stand No.	Ac	CT	MD	SC	BA	Treat	PC
Cortland 14	A-10.2	2.2	NS	U	C	185	VDT-A	A
Cortland 14	A-10.3	12.3	NS	U	C	195	VDT-A	A
Cortland 14	A-10.4	36.7	NS	U	C	187	VDT-A	A
Cortland 14	A-17	5.3	NS	E	C	163	ICT	A
Cortland 14	A-22.2	7.5	NH	U	D	150	GST-E	A
Cortland 14	A-30	11.3	NH	U	C	97	GST-E	A
Cortland 14	A-31	15.9	NH-PINE	E	C	87	SCH-C	A
Cortland 14	A-34.1	6.5	NS	E	C	170	ICT-A	A
Cortland 14	A-34.2	23.2	NS	E	C	155	ICT-A	A
Cortland 14	A-36	2.0	NH	U	C	110	GST-E	A
Cortland 14	A-38	3.3	L	E	C	165	ICT-A	A
Cortland 14	A-40	64.7	PH	ASR	C	90	PC	A
Cortland 14	A-41.1	10.2	OAK-NH	E	C	99	MTR	A
Cortland 14	A-47	9.9	PH	ASR	C	88	PC	A
Cortland 14	A-50	4.8	OAK-NH	E	D	125	ICT	A
Cortland 15	A-2.2	3.2	NS	U	C	90	VDT	A
Cortland 15	A-15.1	7.1	NH	U	D	115	GST-E	A
Cortland 15	A-15.2	4.5	NH	U	E	123	GST-E	A
Cortland 15	A-18.1	7.7	NH	NA	D	90	MTR	A
Cortland 15	A-18.2	4.2	NH	NA	C	83	MTR	A
Cortland 15	B-8	17.5	NS	U	C	112	VDT	A
Cortland 15	B-15	14.7	RP	E	C	174	SCH-C	A
Cortland 15	B-16	5.5	NH	E	D	117	ICT	A
Cortland 15	B-18	6.6	RP	U	C	183	ICT-A	A
Cortland 15	B-23	10.8	NS	U	C	163	VDT-A	A
Cortland 15	B-25	15.2	RP	E	C	224	SCH-C	A
Cortland 15	B-29	9.2	NH	E	C	113	ICT-A	A
Cortland 15	C-3.2	13.2	L	U	C	118	VDT-A	A
Cortland 15	C-6	10.3	NS	U	C	127	VDT-A	A
Cortland 15	C-8	7.4	NH	E	D	120	ICT	A
Cortland 15	C-10	1.5	L	U	C	175	VDT	A
Cortland 17	A-1	10.4	PH	ASR	C	57	PC	A
Cortland 17	A-2	24.5	RP	E	C	167	ICT-A	A
Cortland 17	A-3	2.7	NS	E	C	110	ICT-A	A
Cortland 17	A-6.1	2.5	NH	E	C	145	TSI	A
Cortland 17	A-17.2	3.3	NS	E	C	195	ICT-A	A
Cortland 17	A-17.4	7.0	NS	E	C	180	ICT-A	A

Forest	Stand No.	Ac	CT	MD	SC	BA	Treat	PC
Cortland 17	B-18	6.2	NH	APH	C	90	MTR	A
Papish Pond MUA	A-4	17.4	NH-PINE	E	C	140	SCH-S	A
Papish Pond MUA	A-8	12.5	NH-PINE	E	C	113	SCH-S	A
Total Project Completion Interval A		2,177.8						
Cortland 2	A-1.1	27.4	NH	U	C	106	GST-E	B
Cortland 2	A-3	19.8	NH	U	D	106	GST-E	B
Cortland 2	A-8.1	112.6	NH	U	D	107	GST	B
Cortland 2	A-8.2	18.6	NH-HEM	U	D	118	GST	B
Cortland 2	A-9.2	36.2	RP-WP	U	D	164	SCM-P	B
Cortland 2	A-20.1	9.7	NH-PINE	U	C	120	SCH-P	B
Cortland 2	A-20.2	4.5	RP	U	D	145	VDT	B
Cortland 2	A-23	5.3	NH	U	D	97	GST-E	B
Cortland 2	A-24	7.4	NS	U	D	180	VDT	B
Cortland 2	A-32.1	133.0	NH	U	E	100	GST-E	B
Cortland 2	A-32.2	3.4	OAK-HEM	E	E	140	MTR	B
Cortland 2	A-35.1	37.8	NH	U	D	95	GST-E	B
Cortland 2	A-37	46.9	RP	E	D	137	ICT	B
Cortland 2	A-41	12.8	NS	U	D	200	VDT	B
Cortland 2	A-48	15.8	NS-NH	U	D	110	VDT	B
Cortland 2	A-55	10.8	L	E	C	110	ICT-A	B
Cortland 2	A-58	9.1	NS	U	C	170	VDT-A	B
Cortland 2	A-59.2	10.1	NH	U	C	85	GST-E	B
Cortland 2	A-59.3	3.7	NH	U	C	137	GST-E	B
Cortland 2	A-59.4	7.3	NH	U	C	116	GST-E	B
Cortland 2	A-61.2	3.2	NH-PINE	E	C	130	SCH-C	B
Cortland 2	B-3.1	18.8	NH	U	D	92	GST-E	B
Cortland 2	B-19.1	10.4	L	E	C	87	ICT	B
Cortland 2	B-19.2	2.8	SP-NS	E	C	100	ICT	B
Cortland 2	B-26	5.6	L	E	C	135	ICT	B
Cortland 2	B-30	5.4	NH	E	C	137	ICT	B
Cortland 2	B-32	11.5	L	E	D	93	ICT-A	B
Cortland 2	B-33	8.2	L	E	C	97	ICT-A	B
Cortland 2	B-41	32.4	NH	E	D	112	ICT	B
Cortland 2	B-42	21.6	NH	E	D	93	ICT	B
Cortland 2	B-51	21.4	NH	E	D	110	PC	B

Forest	Stand No.	Ac	CT	MD	SC	BA	Treat	PC
Cortland 2	C-10.1	4.6	NH	E	D	47	MTR	B
Cortland 2	C-10.2	2.6	NH	E	C	93	ICT	B
Cortland 2	C-17.1	37.8	NH	E	D	106	ICT	B
Cortland 2	C-19	30.3	NH	U	C	125	GST-E	B
Cortland 2	C-24	10.4	NH	U	C	105	GST-E	B
Cortland 2	C-26.3	16.4	NH	U	C	113	GST	B
Cortland 2	C-32.1	3.0	NH	E	C	93	ICT	B
Cortland 2	C-35.1	9.8	NH	E	C	103	TSI	B
Cortland 2	C-36.2	2.4	NH	E	C	80	ICT	B
Cortland 7	A-1.1	51.4	NH	U	D	109	GST-E	B
Cortland 7	A-1.3	17.9	NH	U	D	111	GST-E	B
Cortland 7	A-4.1	5.1	WS-NH	E	D	107	ICT	B
Cortland 7	A-10.1	12.2	WS-NH	E-L	D	142	VDT	B
Cortland 7	A-11	27.8	WS	E-L	D	209	VDT	B
Cortland 7	A-12.2	9.3	NH-HEM	U	D	108	GST-E	B
Cortland 7	A-13	29.4	NS	U	E	210	GST-E	B
Cortland 7	A-14	19.3	NH-HEM	U	D	100	GST-E	B
Cortland 7	A-16.1	11.8	NH-HEM	U	D	145	GST	B
Cortland 7	A-17.11	15.5	NH	U	E	101	GST-E	B
Cortland 7	A-17.12	4.8	NH	E-L	E	65	SS	B
Cortland 7	A-21.2	35.8	NH	U	D	105	GST	B
Cortland 7	A-25.11	34.6	NH-HEM	U	E	101	GST-E	B
Cortland 7	A-25.22	13.3	NH	U	F	87	GST-E	B
Cortland 7	A-25.32	15.2	NH	U	E	86	GST-E	B
Cortland 7	A-25.42	6.6	NH	E-L	F	68	SS	B
Cortland 7	A-25.5	2.8	NH	E-L	E	117	SS	B
Cortland 7	A-25.6	39.0	NH	U	E	98	GST-E	B
Cortland 7	A-26	15.1	NH	U	C	87	GST-E	B
Cortland 7	A-33	12.7	NH	U	D	98	GST-E	B
Cortland 7	A-34	7.0	NH	U	D	115	GST-E	B
Cortland 12	A-2	9.4	NS-NH	E	D	188	ICT	B
Cortland 12	A-7	9.8	NS-NH	U	C	170	VDT	B
Cortland 12	A-10.1	10.6	NH-HEM	U	C	138	GST	B
Cortland 12	A-14	13.8	L	E	D	180	ICT	B
Cortland 12	A-15	17.5	L	E	D	133	SCH-S	B
Cortland 12	A-16	11.9	NS	E	E	158	ICT	B
Cortland 12	A-18	13.9	RP-NS	E	D	108	ICT	B

Forest	Stand No.	Ac	CT	MD	SC	BA	Treat	PC
Cortland 12	A-19.1	28.9	NH	E	C	94	ICT	B
Cortland 12	A-20	53.2	NS-NH	E	D	99	ICT	B
Cortland 12	A-21.2	29.3	RP-L	E	D	126	ICT	B
Cortland 12	A-26	42.3	RP-L	E	D	163	ICT	B
Cortland 12	B-5	51.6	NS-L	E	D	171	SCH-P	B
Cortland 12	B-7	12.6	NS-L	E	E	197	ICT	B
Cortland 12	B-13	21.3	NS-NH	E	C	174	ICT-A	B
Cortland 12	B-14	23.6	NS	E	D	132	ICT	B
Cortland 12	B-15.1	17.1	RP-NS	E	D	143	ICT	B
Cortland 12	B-15.2	27.3	NS	E	D	160	ICT	B
Cortland 12	B-22.1	29.1	L	E	D	131	SCH-S	B
Cortland 12	B-22.2	6.3	L	E	D	74	SCH-S	B
Cortland 12	B-24.1	23.7	NS-NH	E	C	153	ICT	B
Cortland 12	B-25	9.1	NS	E	C	136	ICT	B
Cortland 14	A-5	18.9	NH-HEM	U	C	129	GST-E	B
Cortland 14	A-11.1	6.0	PH	E	C	90	ICT	B
Cortland 14	A-11.2	8.5	NH	E	D	85	ICT	B
Cortland 14	A-15.1	4.3	NH	E	C	90	ICT	B
Cortland 14	A-16	37.6	NH	E	E	106	SS	B
Cortland 14	A-19	5.4	NH	E	C	65	TSI	B
Cortland 14	A-25.2	16.7	NH	U	D	100	GST-E	B
Cortland 14	A-29.2	3.7	NS-NH	E	C	96	SCH-P	B
Cortland 14	A-37	1.3	WP	E	C	175	ICT-A	B
Cortland 14	A-41.2	8.7	PH	E	C	115	ICT	B
Cortland 14	A-41.3	12.9	NH	E	C	107	ICT	B
Cortland 14	A-42.1	4.4	NH	E	C	98	ICT	B
Cortland 14	A-44	9.2	NH	E	C	110	ICT	B
Cortland 14	A-46	16.6	NH	U	C	103	GST-E	B
Cortland 14	A-48	12.0	NH	ASR	C	110	PC	B
Cortland 15	A-12	11.0	NH-HEM	U	D	136	GST-E	B
Cortland 15	A-14	4.2	NH	U	C	110	GST-E	B
Cortland 15	A-16	19.1	NH	E-L	C	100	VDT	B
Cortland 15	A-19	15.6	NS	U	C	205	VDT	B
Cortland 15	A-22	6.8	NS	E	C	158	ICT-A	B
Cortland 15	A-23	5.1	L	E	C	165	ICT-A	B
Cortland 15	A-25	5.2	RP	E	C	130	ICT-A	B
Cortland 15	B-1	15.0	NH	U	D	90	GST-E	B

Forest	Stand No.	Ac	CT	MD	SC	BA	Treat	PC
Cortland 15	B-2	15.4	NH	U	D	98	GST-E	B
Cortland 15	B-7.1	25.4	L	U	C	103	VDT-A	B
Cortland 15	B-7.2	3.0	NH	U	C	80	MTR	B
Cortland 15	B-9	10.7	NH	E-L	C	80	VDT	B
Cortland 15	B-11	8.4	NS	U	C	160	VDT	B
Cortland 15	B-12.2	44.0	NH	E	C	102	ICT	B
Cortland 15	B-13	28.6	NS	E	C	190	ICT-A	B
Cortland 15	B-14	3.6	NS	E	C	225	ICT-A	B
Cortland 15	B-19	26.2	L	E	C	174	ICT	B
Cortland 15	B-20	13.4	L	E	C	148	ICT-A	B
Cortland 15	B-24	21.1	L	E	C	181	ICT-A	B
Cortland 15	B-26	6.7	NH	E	C	96	ICT	B
Cortland 15	B-27	8.4	NS	E	C	177	ICT-A	B
Cortland 15	B-28	2.8	RP	E	C	205	ICT-A	B
Cortland 15	C-4	4.4	NH-PINE	U	C	140	VDT-A	B
Cortland 15	C-7	9.7	NH	E	C	123	ICT	B
Cortland 15	C-11	19.6	NH-HEM	U	D	135	GST-E	B
Cortland 15	C-12	31.4	NH-HEM	U	D	125	GST	B
Cortland 15	C-14	12.9	NH-HEM	U	D	115	GST-E	B
Cortland 17	B-6	3.1	NH	E	C	105	ICT	B
Cortland 17	B-7	3.5	NH	E	D	123	ICT	B
Cortland 17	B-10	5.2	L	E	C	100	ICT	B
Cortland 17	B-14	24.4	NH-HEM	U	C	135	GST-E	B
Cortland 17	B-16	8.7	L	E	C	170	ICT-A	B
Cortland 17	B-19	11.3	NS	E	C	176	ICT-A	B
Cortland 17	B-22	21.4	NH-HEM	U	D	140	GST-E	B
Cortland 17	B-31	12.4	NH	APH	C	108	MTR	B
Cortland 17	B-32	6.0	WP-NS	E	C	123	ICT	B
Papish Pond MUA	A-2	6.4	NH-PINE	ASR	C	80	SCH-P	B
Papish Pond MUA	A-3	29.8	PH	ASR	C	63	PC	B
Papish Pond MUA	A-7	2.4	PH	ASR	C	105	PC	B
Cortland 17	B-26	2.0	NH	APH	C	55	SCH-S	B
Total Project Completion Interval B		2,320.2						
Cortland 2	A-2	17.7	NH	U	D	100	GST-E	C
Cortland 2	A-14.2	7.6	NS	E	E	140	SCH-S	C

Forest	Stand No.	Ac	CT	MD	SC	BA	Treat	PC
Cortland 2	A-14.3	21.2	NH-PINE	E	C	126	SCH-S	C
Cortland 2	A-18.1	35.1	NH	U	D	104	GST-E	C
Cortland 2	A-18.2	11.8	NH-HEM	U	C	107	GST-E	C
Cortland 2	A-21.1	16.2	NH	U	C	108	GST-E	C
Cortland 2	A-27.1	4.2	NH-PINE	U	C	175	SCH-C	C
Cortland 2	A-28	44.1	RP	E	D	111	SCH-P	C
Cortland 2	A-29.1	34.3	RP-WP	E	D	174	ICT	C
Cortland 2	A-29.2	11.0	NH-PINE	E	D	130	SCH-P	C
Cortland 2	A-34	9.3	NH	U	C	87	GST-E	C
Cortland 2	A-36.2	11.5	NH	U	D	100	GST-E	C
Cortland 2	A-40.4	4.5	NH	U	E	103	GST-E	C
Cortland 2	A-42	18.2	NH-HEM	U	E	108	GST	C
Cortland 2	A-44	15.2	NH-HEM	U	D	91	GST	C
Cortland 2	A-47.1	4.6	NH	APH	C	80	MTR	C
Cortland 2	A-49	52.7	OAK-NH	U	D	109	GST-E	C
Cortland 2	A-61.1	10.3	NH	U	D	90	GST-E	C
Cortland 2	A-67.1	44.6	NH	U	D	96	GST	C
Cortland 2	B-4.2	3.0	NS-NH	U	D	97	VDT	C
Cortland 2	B-8	96.7	NH	U	D	93	GST	C
Cortland 2	B-9	22.9	NS-NH	U	D	140	VDT-A	C
Cortland 2	B-11	11.4	RP	E	D	120	VDT	C
Cortland 2	B-20	14.9	NH	E	D	83	ICT	C
Cortland 2	B-21.2	25.0	NH-HEM	U	C	89	GST-E	C
Cortland 2	B-21.3	15.3	NH	E	D	133	SS	C
Cortland 2	B-28	2.8	NH	E	C	110	ICT	C
Cortland 2	B-31	5.5	L	E	C	137	ICT-A	C
Cortland 2	B-34	33.5	NH	E	C	94	ICT	C
Cortland 2	B-39	10.1	NH	E	C	93	ICT	C
Cortland 2	B-40	61.2	NH	E	D	96	ICT	C
Cortland 2	B-44	21.4	RP	E	C	133	SCH-C	C
Cortland 2	C-1	20.9	NH	E	D	87	ICT	C
Cortland 2	C-4	5.4	NH	E	D	100	ICT	C
Cortland 2	C-5.2	25.3	NS	E	D	139	SCM-P	C
Cortland 2	C-7	9.8	NH	E	E	97	ICT	C
Cortland 2	C-8	29.5	NS	E	E	143	SCM-S	C
Cortland 2	C-15.1	14.3	NH	U	C	84	GST-E	C
Cortland 2	C-23.1	37.2	NS-NH	U	D	114	GST-E	C

Forest	Stand No.	Ac	CT	MD	SC	BA	Treat	PC
Cortland 2	C-23.3	23.0	NS-NH	U	D	128	GST-E	C
Cortland 2	C-23.4	56.6	RP-NS	U	D	109	GST-E	C
Cortland 2	C-34.1	11.1	NH	E	D	104	ICT	C
Cortland 2	C-36.1	8.9	NS	E	E	155	SCM-P	C
Cortland 2	C-38.1	6.6	NH-HEM	U	C	128	GST	C
Cortland 2	C-38.2	34.1	NH	U	D	86	GST-E	C
Cortland 2	C-39	13.3	NH	U	D	103	GST	C
Cortland 2	C-40	4.4	NS	E	D	143	ICT	C
Cortland 2	C-41	52.7	NH	U	D	98	GST-E	C
Cortland 2	C-42.1	7.7	NH	U	C	110	GST-E	C
Cortland 2	C-43.1	4.8	NH	U	C	135	GST-E	C
Cortland 2	C-43.2	11.6	NH	E	D	98	GST-E	C
Cortland 2	C-44.1	4.6	NS	E	D	170	ICT	C
Cortland 7	A-9	4.9	NH	E	D	88	ICT	C
Cortland 7	A-17.2	10.2	NH	U	D	83	GST-E	C
Cortland 7	A-17.3	12.3	NH-HEM	U	D	94	GST	C
Cortland 7	A-22.2	2.5	NH	E-L	D	117	ICT	C
Cortland 12	A-3	12.6	NH	U	C	129	GST	C
Cortland 12	A-4	17.6	NS-L	U	E	156	GST-E	C
Cortland 12	A-5	15.4	NS-NH	U	D	113	VDT	C
Cortland 12	A-13.1	36.7	NS	U	D	135	VDT	C
Cortland 12	A-13.2	15.4	RP-NS	E	D	150	SCH-S	C
Cortland 12	A-21.1	37.5	RP-L	E	D	150	ICT	C
Cortland 12	A-23	24.3	L	E	D	190	ICT	C
Cortland 12	A-25	32.5	L	E	C	89	SCH-P	C
Cortland 12	A-27	4.4	NH	E	C	78	ICT	C
Cortland 12	B-8	18.4	L	E	D	85	SCH-S	C
Cortland 12	B-16.1	21.1	NH-HEM	U	C	121	GST-E	C
Cortland 12	B-16.2	6.5	NH-HEM	U	D	107	GST	C
Cortland 12	B-17	12.5	NH	U	C	104	GST	C
Cortland 12	B-19	23.3	NH	U	C	106	GST-E	C
Cortland 12	B-20.2	23.2	NH	U	D	98	GST-E	C
Cortland 12	B-23	15.6	NH	U	D	99	GST	C
Cortland 14	A-4	10.2	NH	ASR	C	110	PC	C
Cortland 14	A-8.1	10.5	NH	U	C	83	GST-E	C
Cortland 14	A-13	13.2	NH-HEM	U	D	88	GST-E	C
Cortland 14	A-22.1	7.6	NH-HEM	U	D	120	GST-E	C

Forest	Stand No.	Ac	CT	MD	SC	BA	Treat	PC
Cortland 14	A-24	12.7	NH-HEM	U	E	107	GST	C
Cortland 14	A-26	19.2	NH-HEM	U	D	108	GST	C
Cortland 14	A-28	6.9	NH	E	C	98	ICT	C
Cortland 14	A-29.1	18.7	NS	E	C	167	ICT-A	C
Cortland 14	A-29.3	21.7	NS	E	C	142	ICT-A	C
Cortland 14	A-29.5	7.3	NS	E	C	140	ICT-A	C
Cortland 14	A-32.1	4.6	NH	E	D	83	ICT	C
Cortland 14	A-32.2	4.8	NH	E	C	78	ICT	C
Cortland 14	A-33.2	6.0	NH	U	D	73	GST	C
Cortland 14	A-35.3	2.2	NS	E	C	90	ICT-A	C
Cortland 14	A-39	3.1	NH	U	C	97	GST	C
Cortland 14	A-42.2	3.3	NH	E	C	115	ICT	C
Cortland 14	A-43	6.9	L	E	C	143	SCH-C	C
Cortland 14	A-45.11	16.2	NH-HEM	U	C	108	GST-E	C
Cortland 14	A-45.12	19.0	NH-HEM	U	C	96	GST-E	C
Cortland 14	A-49.1	5.3	NH	E	C	85	ICT	C
Cortland 14	A-49.3	6.4	NH	E	C	78	ICT	C
Cortland 14	A-51.1	25.4	NH	ASR	C	93	PC	C
Cortland 14	A-51.2	8.8	NH	E	C	90	ICT	C
Cortland 14	A-52	34.2	NH	E	C	95	ICT	C
Cortland 14	A-53	14.4	NH	E	C	112	ICT	C
Cortland 15	B-3	8.8	NH	U	C	83	GST-E	C
Cortland 15	B-5	15.5	NH	U	D	104	GST-E	C
Cortland 15	B-17	7.3	NH	E	C	95	ICT	C
Cortland 15	B-21	26.3	NH	U	D	85	GST-E	C
Cortland 15	C-2.1	69.8	NH	U	C	98	GST-E	C
Cortland 15	C-2.2	17.0	NH-HEM	U	D	120	GST	C
Cortland 15	C-3.1	5.2	NH	E-L	C	103	VDT	C
Cortland 15	C-5	6.5	NH	E-L	C	87	VDT-A	C
Cortland 15	C-9	43.4	NH	U	C	95	GST-E	C
Cortland 17	A-7	30.6	NH	U	D	126	GST-E	C
Cortland 17	A-8	26.5	NH-HEM	U	D	113	GST-E	C
Cortland 17	A-9.1	3.5	NH	U	C	85	GST-E	C
Cortland 17	A-9.2	8.4	NH-HEM	U	D	85	GST-E	C
Cortland 17	A-13	9.1	NH	U	C	115	GST-E	C
Cortland 17	A-14	3.9	NH	U	D	140	GST-E	C
Cortland 17	A-16.1	3.1	PH	APH	C	50	MTR	C

Forest	Stand No.	Ac	CT	MD	SC	BA	Treat	PC
Cortland 17	A-18	5.4	NH	U	D	93	GST-E	C
Cortland 17	B-2.2	6.2	NH	U	D	93	GST-E	C
Cortland 17	B-3	39.2	NH	U	C	80	GST-E	C
Cortland 17	B-5	18.6	APH	P	C	103	MTR	C
Cortland 17	B-9	15.6	NH	E	C	73	ICT	C
Cortland 17	B-11.1	17.3	NH-HEM	U	C	110	GST-E	C
Cortland 17	B-11.2	11.0	NH-HEM	U	D	128	GST	C
Cortland 17	B-11.3	16.2	NH-HEM	U	C	100	GST	C
Cortland 17	B-15	17.7	NH	U	C	66	GST-E	C
Cortland 17	B-20.1	11.0	NH	E	C	74	ICT	C
Papish Pond MUA	A-12	2.7	NH	E	C	135	ICT	C
Total Project Completion Interval C		2,160.9						
Cortland 2	A-5	8.1	NH	E-L	D	110	SS	D
Cortland 2	A-6	28.4	NH	U	C	75	GST-E	D
Cortland 2	A-7	73.4	RP	U	D	141	SCH-P	D
Cortland 2	A-9.1	17.5	RP	U	D	189	SCH-P	D
Cortland 2	A-9.3	4.5	NH-HEM	U	D	113	GST-E	D
Cortland 2	A-11	31.0	NH	E	A	0	TSI	D
Cortland 2	A-13	2.9	WP	E	D	120	ICT	D
Cortland 2	A-14.1	18.6	NH	E	A	0	TSI	D
Cortland 2	A-15.1	28.2	RP	U	D	173	SCH-P	D
Cortland 2	A-19	20.3	NH	U	A	10	TSI	D
Cortland 2	A-26	22.6	NH	U	D	78	GST-E	D
Cortland 2	A-30	16.0	NH	E	A	32	TSI	D
Cortland 2	A-33	9.6	NH	U	C	80	GST-E	D
Cortland 2	A-36.1	10.5	NH	E	A	48	TSI	D
Cortland 2	A-40.1	37.8	RP	E	D	164	SCH-P	D
Cortland 2	A-46.1	6.5	NH	E	A	43	TSI	D
Cortland 2	A-56.1	19.4	NH	U	D	81	GST	D
Cortland 2	A-57	9.8	NH-HEM	U	D	78	GST	D
Cortland 2	A-60.2	64.5	NH	U	D	86	GST	D
Cortland 2	A-60.3	10.8	NH	E	A	0	TSI	D
Cortland 2	A-63	41.8	NH	U	D	91	GST	D
Cortland 2	B-7	10.5	RP	E	D	76	SCH-S	D
Cortland 2	B-14	16.2	NH	U	C	73	GST	D
Cortland 2	B-15	70.8	NH	U	C	93	GST-E	D

Forest	Stand No.	Ac	CT	MD	SC	BA	Treat	PC
Cortland 2	B-16	33.2	NH	U	C	95	GST-E	D
Cortland 2	B-18	4.3	NH	E	C	103	ICT	D
Cortland 2	B-21.1	33.9	NH	U	D	76	GST-E	D
Cortland 2	B-23.1	154.2	NH	U	D	93	GST-E	D
Cortland 2	B-27	35.3	NH	U	C	67	GST-E	D
Cortland 2	B-38	9.9	NH	ASR	D	47	PC	D
Cortland 2	B-47.1	11.0	NH	E	C	32	ICT	D
Cortland 2	C-2	10.5	NH	E	D	70	ICT	D
Cortland 2	C-11.1	35.0	NH	E	C	66	ICT	D
Cortland 2	C-11.2	4.9	NH	E	C	110	ICT	D
Cortland 2	C-12.1	12.3	NS	E	E	140	SCM-S	D
Cortland 2	C-16.1	16.4	NH	U	D	93	GST-E	D
Cortland 2	C-20.1	47.2	WS-NH	ASR	C	117	SCH-P	D
Cortland 2	C-22.2	14.0	NH	E	A	10	TSI	D
Cortland 2	C-27.1	2.8	APH	APH	C	75	MTR	D
Cortland 2	C-31	37.6	RP-NS	E	C	165	ICT	D
Cortland 2	C-37	29.0	WS-NH	ASR	C	124	SCH-P	D
Cortland 7	A-5.1	8.9	NS-NH	E	E	170	SCH-P	D
Cortland 7	A-5.2	7.2	WS-NH	E-L	D	120	SCH-P	D
Cortland 7	A-7.1	15.8	NH	E	A	0	TSI	D
Cortland 7	A-7.2	39.5	NH	U	D	79	GST-E	D
Cortland 7	A-8	42.6	NH-PINE	E	D	87	SCH-S	D
Cortland 7	A-20.1	9.5	SP	E-L	D	155	SCH-P	D
Cortland 7	A-24	10.7	NH	U	D	78	GST-E	D
Cortland 7	A-25.21	38.4	NH	U	D	69	GST-E	D
Cortland 7	A-25.31	17.0	NH	U	E	74	GST-E	D
Cortland 7	A-25.41	62.1	NH	U	E	89	GST-E	D
Cortland 7	A-31	31.3	NH	U	D	72	GST-E	D
Cortland 7	A-32	37.6	NH	U	C	82	GST-E	D
Cortland 12	A-21.3	17.4	NH	E	A	61	TSI	D
Cortland 12	A-22	31.5	NH	U	D	135	GST-E	D
Cortland 12	B-3	15.4	NH	E	A	38	TSI	D
Cortland 12	B-24.2	3.5	NH	E	C	123	ICT	D
Cortland 14	A-2	8.2	NH-HEM	U	C	115	GST-E	D
Cortland 14	A-3	19.0	OAK-NH	E	C	109	SS	D
Cortland 14	A-7	8.2	PH	U	C	68	GST-E	D
Cortland 14	A-12.1	5.0	NH-HEM	U	D	77	GST-E	D

Forest	Stand No.	Ac	CT	MD	SC	BA	Treat	PC
Cortland 14	A-14	9.8	NH-HEM	U	D	123	GST-E	D
Cortland 14	A-18.1	13.8	APH	E	C	54	ICT	D
Cortland 14	A-18.2	2.1	APH	APH		10	MTR	D
Cortland 14	A-20	8.9	NH-HEM	U	D	95	GST-E	D
Cortland 14	A-25.11	17.8	NH	U	D	83	GST	D
Cortland 14	A-25.12	13.4	NH-HEM	U	D	100	GST-E	D
Cortland 14	A-29.4	3.0	PH	ASR	C	25	PC	D
Cortland 14	A-30	11.3	NH	U	C	97	GST-E	D
Cortland 14	A-40	64.7	PH	ASR	C	90	PC	D
Cortland 14	A-47	9.9	PH	ASR	C	88	PC	D
Cortland 14	A-49.2	8.1	NH	E	C	125	ICT	D
Cortland 15	A-1	6.7	NH-HEM	U	E	78	GST-E	D
Cortland 15	A-2.1	10.0	NH	U	D	73	GST-E	D
Cortland 15	A-3	4.3	NH	U	E	80	GST-E	D
Cortland 15	A-13	12.1	NH-HEM	U	D	110	GST-E	D
Cortland 15	A-21.1	16.7	NH	E-L	C	70	VDT	D
Cortland 15	A-24	14.6	NH-HEM	U	D	92	GST-E	D
Cortland 15	B-4.1	8.7	L	U	C	73	VDT-A	D
Cortland 15	B-6	4.3	NH	E-L	C	75	VDT	D
Cortland 15	B-22.1	14.9	RP	U	C	107	SCH-C	D
Cortland 15	B-31	19.4	PH	ASR	C	69	PC	D
Cortland 15	C-15	50.9	NH	U	D	134	GST-E	D
Cortland 17	A-1	10.4	PH	ASR	C	57	PC	D
Cortland 17	A-11	4.1	NS	E	C	60	ICT-A	D
Cortland 17	A-12	13.7	L	E	D	90	ICT	D
Cortland 17	A-17.1	19.3	NS	E	C	158	ICT-A	D
Cortland 17	B-2.1	105.6	NH	U	D	79	GST-E	D
Cortland 17	B-12	21.3	NH	E	D	80	SS	D
Cortland 17	B-13	15.5	NH	E	D	90	SS	D
Cortland 17	B-21	7.4	NH	E	C	63	ICT	D
Cortland 17	B-26	2.0	NH	APH	C	55	SCH-S	D
Total Project Completion Interval D		2,024.7						
Grand Total		8,654.2						

3. Mowing Actions
(Does not include pond or road mowing requirements.)

Forest	Stand No.	Ac	CT	MD	How Accomplished	Treat	PC
Cortland 2	A-760	2.7	DC	NF	NYSDEC	M-REC	M
Cortland 2	A-940.1	7.8	GR	GR	Hay Sale	M-GR	T
Cortland 2	A-940.2	1.2	GR	GR	Hay Sale	M-GR	T
Cortland 2	A-940.3	9.8	GR	GR	Hay Sale	M-GR	T
Cortland 2	B-760	8.9	DC	NF	NYSDEC	M-REC	M
Cortland 2	B-940	3.7	GR	GR	Hay Sale	M-GR	T
Cortland 15	A-21.2	7.8	BR	BR	VSPA	M-BR	D
Cortland 15	B-34	20.4	BR	BR	VSPA	M-BR	D
Cortland 15	C-1	1.2	BR	BR	VSPA	M-BR	D
Cortland 17	A-4.1	9.8	L	SO	NYSDEC	M-U	T
Cortland 17	A-4.2	3.1	L	SO	NYSDEC	M-U	T
Cortland 17	B-23	3.7	P	SO	NYSDEC	M-U	T
Cortland 17	B-24	15.7	WP	SO	NYSDEC	M-U	T
Cortland 17	B-27	5.7	NS	SO	NYSDEC	M-U	T
Cortland 17	B-28	3.6	L	SO	NYSDEC	M-U	T
Cortland 17	B-29	11.5	WS	SO	NYSDEC	M-U	T
Cortland 17	B-30	2.1	BR	BR	VSPA	M-BR	C
Cortland 17	B-940	7.1	GR	GR	NYSDEC	M-GR	T
Total		125.8					

4. Pond Maintenance Actions
Pond embankments and spillways shall be inspected annually. Pond embankments and spillways shall be mowed triennially beginning in 2012. The following table identifies additional maintenance needs for ponds within the Unit:

Forest	Project Description	How Accomplished	PC
Papish Pond MUA	Address Class C – High Hazard dam classification.	NYSDEC	A
Cortland 17	Unplug spillways, install beaver barrier, and remove trees, mow, and grade and shape embankment of Raymond Suarez Pond.	NYSDEC	A
Papish Pond MUA	Conduct fisheries survey of Papish Pond.	NYSDEC	A
Cortland 17	Conduct fisheries survey of Calico Pond.	NYSDEC	A

5. Public Forest Access Road (PFARs) Maintenance

All PFARs within the Unit shall be graded and brushed every three years beginning in 2013. Culverts and ditches will be inspected annually and repaired or replaced as necessary. Where possible, resurfacing of PFARs will be accomplished as forest product sale-related work or as requirements of TRPs.

6. New Project Action Schedule

Forest	Project Description	How Accomplished	PC
Cortland 2	Construct lean-to along the Finger Lakes Hiking trail in stand A-50.	VSPA	A
Cortland 2	Construct parking area near the southern end of Mt. Roderick PFAR.	Sale-Related Work	A
Cortland 2	Install one gate barrier at the end of the Seacord Hill PFAR.	VSPA/NYSDEC	A
Cortland 2	Install one rock barrier at the end of Mckee Road.	Sale Related Work	A
Cortland 2	Designate & sign six campsites at the Cheningo Camping Area.	NYSDEC	A
Cortland 7	Install four combination gate/rock barriers where the gas pipelines cross the PFAR.	Multiple Sources	A&B
Cortland 12	Designate and sign one campsite near the end of the PFAR	NYSDEC	A
Cortland 14	Construct 0.5 miles of new ATV route for the mobility impaired in stands A-3 and 10.4.	Sale-Related Work	A
Cortland 14	Construct parking area at the northern ATV route head.	Sale-Related Work	A
Cortland 14 & 15	Construct 5.3 miles of new hiking trail through the entire forest.	VSPA	A
Cortland 15	Install one rock barrier or earthen berm along the old Carr Hill Road.	Sale Related Work	A
Cortland 17	Designate & sign three campsites at Calico Pond.	NYSDEC	A
Papish Pond MUA	Construct parking area across the road from the boat launch.	Sale-Related Work	A
Papish Pond MUA	Designate and sign one campsite near the southwest end of Papish Pond.	NYSDEC	A

Forest	Project Description	How Accomplished	PC
Cortland 2	Upgrade two campsites to provide access for people with disabilities at the Cheningo Camping Area.	NYSDEC	B
Cortland 2	Install an accessible pit privy at the day-use/camping area.	NYSDEC	B
Cortland 2	Install Forest identification sign at a near new parking area at the south end of Mt. Roderick PFAR.	NYSDEC	B
Cortland 2	Design, construct, & install an informational kiosk at the Cheningo Day-Use and Camping Area.	NYSDEC	B
Cortland 14	Install Facility I.D. sign at the beginning of the PFAR.	NYSDEC	B
Cortland 15	Install one gate barrier along the snowmobile trail north of Freetown-Hoxie Gorge Road.	VSPA/NYSDEC	B
Papish Pond MUA	Design, construct, & install an informational kiosk near the new parking area, across from the boat launch.	NYSDEC	B
Cortland 12	Design, construct, & install an informational kiosk at the beginning of the PFAR.	NYSDEC	C
Cortland 17	Design, construct, & install an informational kiosk at the parking area for Calico Pond.	NYSDEC	C
Cortland 7	Design, construct, & install an informational kiosk at the northern end of the PFAR.	NYSDEC	D
Cortland 14	Design, construct, & install an informational kiosk at the beginning of the PFAR.	NYSDEC	D
Unit Wide	Acquire private property from willing sellers.	NYSDEC	Periodically

7. Boundary Line Action Schedule

During routine boundary line maintenance, all established boundary lines shall be painted and signed. Survey requests (new and outstanding) shall be prioritized every five years to aid Real Property staff with choosing projects to complete.

Forest	Description	Miles	PC or Year
Cortland 2	Routine boundary line maintenance.	28.9	2016, 2023 & 2030
Cortland 7	Routine boundary line maintenance.	10.2	2012, 2019, & 2026
Cortland 12	Routine boundary line maintenance.	14.5	2017 & 2024
Cortland 14	Routine boundary line maintenance.	8.7	2014, 2021 & 2028
Cortland 15	Routine boundary line maintenance.	9.2	2014, 2021 & 2028
Cortland 17	Routine boundary line maintenance.	10.3	2014, 2021 & 2028
Papish Pond MUA	Routine boundary line maintenance.	3.2	2014, 2021 & 2028
Cortland 2	Submit survey request for the north line of Proposal F.		A
Cortland 2	Submit survey request for the schoolhouse and cemetery exception within Proposal D.		A
Cortland 2	Submit survey request for the cemetery and ROW exception within Proposal V.		A
Cortland 2	Submit survey request for the inholding located within Proposal T.		A
Cortland 2	Submit survey request for the inholding located within Proposal W.		A
Cortland 15	Submit survey request for newly acquired Rau property.		A
Cortland 17	Submit survey request for Proposal 1.		A

8. Forest Inventory Data Collection Schedule

All forests within the Unit will be inventoried during 2018 and 2019 and again in 2028 and 2029. Stands that have some sort of cutting treatment will be inventoried after the treatment is complete.

GLOSSARY

Adaptive management – a dynamic approach to forest management in which the effects of treatments and decisions are continually monitored and used, along with research results, to modify management on a continuing basis to ensure that objectives are being met. (E)

Aesthetics - forest value, rooted in beauty and visual appreciation, providing a distinct visual quality.(G)

Age class - trees of a similar size and/or age originating from a single natural event or regeneration activity. *see* **cohort**.(E)

Basal area - the cross sectional area, measured in square feet, of a single stem, including the bark, measured at breast height (4.5 ft above the ground).(E)

Basal area/acre - a measure of forest density, the sum total of the basal areas of all trees on one acre.(G)

Best Management Practices (BMPs) - a practice or a combination of practices that are designed for the protection of water quality of water bodies and riparian areas, and determined to be the most effective and practicable means of controlling water pollutants.(E)

Biological diversity (Biodiversity) - the variety, abundance, and interactions of life forms found in areas ranging in size from local through regional to global. Biodiversity also encompasses processes - both ecological and evolutionary that allow organisms to keep adapting and evolving. Includes genetic diversity (unique combinations of genes found within and among organisms), species diversity (number of species in an area), ecological diversity (organization of species into natural communities and the interplay of these communities with the physical environment - interactions among organisms and between organisms and their environment is the key here), landscape diversity (refers to the geography of different ecosystems across large areas and the connections between them).(M)

Biological Legacy – an organism, living or dead, inherited from a previous ecosystem – note: biological legacies often include large trees, snags, and down logs left after timber harvesting. (E)

Browse - portions of woody plants including twigs, shoots, and leaves consumed by animals such as deer. (G)

Buffer - a vegetation strip or management zone of varying size, shape, and character maintained along a stream, lake, road, recreation site, or other vegetative zone to mitigate the impacts of actions on adjacent lands, to enhance aesthetic values, or as a best management practice.(E)

Cavity tree - a tree containing an excavation sufficiently large for nesting, dens or shelter; tree may be alive or dead.(G)

Clearcut - a harvesting and regeneration technique that essentially removes all the trees, regardless of size, on an area in one operation. This practice is done in preparation of the re-establishment of a new forest through reforestation, stump sprouting, or changing habitats, i.e., from forest to brush or grass cover.(A) (G)

Climax forest - an ecological community that represents the culminating stage of a natural forest succession for its locality / environment.(E)

Coarse Woody Material (CWM) - any piece(s) of dead woody material on the ground in forest stands or in streams.(E)

Community - an assemblage of plants and animals interacting with one another, occupying a habitat, and often modifying the habitat; a variable assemblage of plant and animal populations sharing a common environment and occurring repeatedly in the landscape.(H)

Conifer - a cone-bearing tree, also referred to as softwood; *note*: the term often refers to gymnosperms in general.(E)

Conversion - a change from one silvicultural system to another or from one tree species to another.(E)

Corridor - a linear strip of land identified for the present or future location of a designed use within its' boundaries. *Examples*: recreational trails, transportation or utility rights-of-way. When referring to wildlife, a corridor may be a defined tract of land connecting two or more areas of similar management or habitat type through which a species can travel from one area to another to fulfill any variety of life-sustaining needs.(E)

Cover type - the plant species forming a majority of composition across a given area.(E)

Crown - the part of a tree or woody plant bearing live branches and foliage.(E)

Crown class - a category of tree based on its crown position relative to those of adjacent trees. Examples: *dominant*: a tree whose crown extends above the general level of the main canopy and receives full light from above and partial to full light from the sides. *co-dominant*: a tree whose crown helps to form the general level of the main canopy and receives full light from above and comparatively little from the sides. *intermediate*: a tree whose crown extends into the lower portion of the main canopy and receives little direct light from above and none from the sides. *suppressed / overtopped*: a tree whose crown is completely overtopped by the crowns of one or more neighboring trees and receives little or no direct sunlight.(E)

Crown closure - the stage in the development of a forest stand at which the branches of adjacent trees touch.(G)

Cultural resources - significant historical or archaeological assets on sites as a result of past human activity which are distinguishable from natural resources.(G)

Deciduous - tree and shrub species that lose their leaves or needles in autumn.(G)

Defoliation - the partial or complete loss of leaves or needles, usually caused by an insect, disease, or drought.(G)

Designated recreational trail - a Department authorized recreational trail that is signed and/or mapped. (G)

Diameter (at) Breast Height (DBH) - the diameter of the stem of a tree (outside bark) measured at breast height (4.5 ft) from the ground.(E)

Disturbance - a natural or human-induced environmental change that alters one or more of the floral, faunal, and microbial communities within an ecosystem. Timber harvesting is the most common human disturbance. Wind or ice storms are examples of natural disturbance.(A)

Early successional - early vegetative stages such as grass, shrubs or aspen forests; the animals that require these early vegetative stages.(G)

Ecosystem - a spatially explicit, relatively homogeneous unit of the earth that includes all interacting organisms and components of the abiotic environment within its boundaries - *note*: an ecosystem can be of any size, e.g., a log, pond, field, forest or the earth's biosphere.(E)

Ecosystem management - the appropriate integration of ecological, economic, and social factors in order to maintain and enhance the quality of the environment to best meet our current and future needs. Involves management at the landscape level, prompting the biodiversity of natural communities of plants, animals, and seeking to maintain healthy and productive environments.(D)

Ecosystem Services - benefits people obtain from ecosystems such as food, fresh water, fiber, fuel, soil formation, nutrient cycling, carbon storage, clean air, educational values, aesthetic values, recreational values, and tourism.

Endangered species - any species of plant or animal defined through the Endangered Species Act of 1976 as being in danger of extinction throughout all or a significant portion of its range, and published in the Federal Register.(E)

Even-aged - a class of forest or stand composed of trees of about the same age. The maximum age difference is generally 10-20 years.(J)

Exotic - any species introduced from another country or geographic region outside its natural range.(E)

Forestry - the profession embracing the science, art, and practice of creating, managing, using, and conserving forests and associated resources for human benefit and in a sustainable manner to meet desired goals, needs, and values.(E)

Forested wetland - an area characterized by woody vegetation where soil is periodically saturated with or covered by water.(G)

Fragmentation - 1.) the condition by which a landscape is broken into small islands of forest within a mosaic of other forms of land use or ownership. 2.) islands of a particular age class that remain in areas of younger-aged forest.(E)

Gaps - communities, habitats, successional stages, or organisms which have been identified as lacking in the landscape.(G)

Geocaching - a high-tech hide and seek, outdoor activity for utilizing the Global Positioning System (GPS).(G)

Geographic Information System (GIS) - an organized collection of computer hardware, software, geographic and descriptive data, personnel, knowledge, and procedures designed to efficiently capture, store, update, manipulate, analyze, report, and display the forms of geographically referenced information and descriptive information.(E)

Grassland - land on which the vegetation is dominated by grasses, grasslike plants, or forbs.(E)

Habitat - the geographically defined area where environmental conditions (e.g., climate, topography, etc.) meet the life needs (e.g., food, shelter, etc.) of an organism, population, or community.(A)

Hardwoods - broad-leafed, deciduous trees belonging to the botanical group Angiospermae.(E)

Herbicide - a chemical used for killing or controlling the growth of plants.(E)

Improvement thinning - the removal of less desirable trees of any species in a stand of poles or larger trees, primarily to improve composition and quality.(E)

Indicator species - species with such specialized ecological needs that they can be used for assessing the quality, condition, or extent of an ecosystem on the basis of their presence and density, or the accumulation and effect of materials in their tissues.(A)

Intermediate treatment - any silvicultural treatment designed to enhance growth, quality, vigor, and composition of the stand after establishment or regeneration and prior to final harvest.(E)

Intermittent Stream - a naturally occurring watercourse that is greater than 12 inches wide, greater than 4 inches deep, and periodically goes dry.(G)

Invasive species - species that have become established outside their natural range which spread prolifically, displacing other species, and sometimes causing environmental damage. *see* **exotic**(G)

Kame - a short ridge, hill, or mound of stratified drift deposited by glacial meltwater.(K)

Lean-to - a small, open fronted log shelter used for overnight camping.(G)

Log landing (Log deck) - a cleared area to which logs are skidded and are temporarily stored before being loaded onto trucks for transport.(G)

Mast - all fruits of trees and shrubs used as food for wildlife. Hard mast includes nut-like fruits such as acorns, beechnuts, and chestnuts. Soft mast includes the fleshy fruits of black cherry, dogwood and serviceberry.(A)

Mature - pertaining to an even-aged stand that has attained most of its potential height growth, or has reached merchantability standards -*note* within uneven-aged stands, individual trees may become mature but the stand itself consists of trees of diverse ages and stages of development.(E)

Mesic - of sites or habitats characterized by intermediate moisture conditions, i.e., neither decidedly wet nor dry.(E)

Multiple Use - a strategy of land management fulfilling two or more objectives, e.g. forest products removal and recreation.(G)

Multiple Use Area - Lands acquired pursuant to Article 15, Section 15.01 (b) of the Parks and Recreation Land Acquisition Bond Act. Multiple Use Areas are acquired to provide additional opportunities for outdoor recreation, including public camping, fishing, hunting, boating, winter sports, and, wherever possible, to also serve multiple purposes involving the conservation and development of natural resources, including the preservation of scenic areas, watershed protection, forestry and reforestation.(G)

Native species - an indigenous species that is normally found as part of a particular ecosystem.(E)

Natural area - an area left in a natural condition, usually without direct human intervention, to attain and sustain a climax condition, the final stage of succession. By management direction, these areas are not managed for the production of wood products or mineral resources.(G)

Natural regeneration - the establishment of a forest stand from natural seeding, sprouting, suckering or layering.(E)

Northern hardwood - a forest type usually made up of sugar and red maple, American beech, yellow birch, and to a lesser extent black cherry and white ash. This type represents about 70 percent of all forests in New York State.(A)

Old growth - an abundance of late successional tree species, at least 180 - 200 years of age in a contiguous forested landscape that has evolved and reproduced itself naturally, with the capacity for self perpetuation, arranged in a stratified forest structure consisting of multiple growth layers throughout the canopy and forest floor, featuring canopy gaps formed by natural disturbances creating an uneven canopy, and a conspicuous absence of multiple stemmed trees. Old growth forest sites typically are characterized by an irregular forest floor containing an abundance of coarse woody materials which are often covered by mosses and lichens; show limited signs of artificial disturbance and have distinct soil horizons. The understory displays well developed and diverse surface herbaceous layers. Single, isolated trees may be considered as old growth if they meet some of the above criteria.(G)

Overstory - that portion of the trees in a forest forming the upper or uppermost canopy layer.(E)

Perennial Stream - any fresh surface watercourse for which the DEC has adopted the following classifications or standards: AA, AA(t), AA(ts), A, A(t), A(ts), B, B(t), B(ts), C(t), C(ts), or C. (G)

Pioneer - a plant capable of invading bare sites (newly exposed soil) and persisting there or colonizing them until supplanted by successional species.(E)

Plantation - a stand composed primarily of trees established by planting or artificial seeding - a plantation may have tree or understory components that have resulted from natural regeneration. (E)

Poletimber - trees that are generally 6-11 inches diameter at breast height. (G)

Protection area - forest land excluded from most active management to protect sensitive sites. Exclusions include: wood product management, oil and gas exploration and development, and some recreational activities. These sites most often include steep slopes, wet woodlands and riparian zones along stream corridors.(G)

Protection Buffer - a vegetative strip or management zone that is a minimum of fifty feet wide maintained to mitigate the impacts of actions on adjacent lands, to enhance aesthetic values, or as

a best management practice. No vehicular, construction or harvesting equipment will be allowed to operate within protection buffers unless at designated crossings to access other management areas. Protection buffers will not be considered for active commercial forest management or salvage and should be generally allowed to develop naturally. Exceptions may be considered to protect forest health (e.g. fire or invasive plant or animal control), to protect, restore or enhance significant habitats, to develop recreational opportunity and public access and to mitigate erosion potential. Protection buffers may be part of a special management zone. (G)

Public Forest Access Roads (PFAR)- 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 one 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.(L) (N)

Pulpwood - low grade or small diameter logs used to make paper products, wood chips, etc.(G)

Reforestation - the re-establishment of forest cover by natural or artificial means.(A)

Regeneration - seedlings or saplings of any origin.(M)

Release - 1.) a treatment designed to free trees from undesirable, usually overtopping, competing vegetation.(E) 2.) a treatment designed to free young trees not past the sapling stage from undesirable competing vegetation that overtops or closely surrounds them.(F)

Riparian area/zone - areas of transition between terrestrial and aquatic ecological systems. They are characterized as having soils and vegetation analogous to floodplains, or areas transitional to upland zones. These areas help protect the water by removing or buffering the effects of excessive nutrients, sediments, organic matter, pesticides, or pollutants.(A)

Rotation - the period of years between stand establishment and timber harvest as designated by management decisions.(M)

Salvage - the removal of dead trees or trees damaged or dying because of injurious agents other than competition, to recover economic value that would otherwise be lost.(E)

Sapling - a small tree, usually defined as being between 1 and 5 inches diameter at breast height.(G)

Sawtimber - trees that are generally 12-inches and larger diameter at breast height.(G)

Seedling - a young tree originating from seed that is less than one inch in diameter.(A)

Seedling/sapling - trees less than six inches diameter at breast height.(G)

Seed tree cut/method - the removal of the mature timber in one cutting, except for a small number of trees left singly, or in small groups, as a source of seed for natural regeneration.(I)

Selection cut/method/system - the removal of trees over the entire range of size classes either singly or in groups at regular intervals, resulting in multiple age-classes of reproduction. Individual trees are chosen for removal due to their maturity, because they are of poor quality or thinning is needed to improve the growth rate of the remaining trees.(G)

Shade tolerance - the ability of a tree species to germinate and grow at various levels of shade. *Shade tolerant*: having the capacity to compete for survival under shaded conditions. *Shade intolerant*: having the capacity to compete for survival only under direct sunlight conditions; light demanding species.(E) (G)

Shelterwood cut/method - a regeneration action designed to stimulate reproduction by implementing a series of cuts over several years that will gradually remove the overstory trees. Gradual reduction of stand density protects understory trees and provides a seed source for stand regeneration.(A)

Silviculture - the art and science of controlling the establishment, growth, composition, health, and quality of forests and woodlands to meet the diverse needs and values of landowners and society on a sustainable basis.(E)

Snags - standing, dead trees, with or without cavities; function as perches, foraging sites and/or a source of cavities for dens, roosting and/or nesting for wildlife.(G)

Softwoods - generally refers to needle and/or cone bearing trees (conifers) belonging to the botanical group Gymnospermae.(G)

Soil organic carbon - carbon in the form of organic matter such as roots, leaves and twigs, collects in the soil.

Special Management Zone - a vegetation strip or management zone extending from wetland boundaries, high-water marks on perennial and intermittent streams, vernal pool depressions, spring seeps, ponds and lakes, recreational trails, camp grounds and other land features requiring special consideration. Portions of a special management zone may include protection buffers.(G)

Species - the main category of taxonomic classification into which genera are subdivided, comprising a group of similar interbreeding individuals sharing a common morphology, physiology, and reproductive process.(E)

Species of Greatest Conservation Need (SGCN) – A designation given to wildlife species by DEC's Division of Fish Wildlife & Marine Resources in the New York State Comprehensive Wildlife Conservation Strategy (CWCS). The SGCN designation takes into account species abundance and downward trends in population levels.

Stand - a contiguous group of trees sufficiently uniform in age-class distribution, composition, and structure, and growing on a site of sufficiently uniform quality, to be a distinguishable unit.(E)

Stand analysis - a systematic method of evaluating stands to determine the need for treatment.(G)

Stand structure - the horizontal and vertical distribution of components of a forest stand including the height, diameter, crown layers, and stems of trees, shrubs, herbaceous understory, snags, and down woody material.(E)

Stand treatment - work done in a stand to achieve a management direction.(G)

State Forest / State Reforestation Area - lands owned by the State of New York, administered by the Department of Environmental Conservation Division of Lands & Forests, and authorized by Environmental Conservation Law to be devoted to the establishment and maintenance of forests for watershed protection, the production of timber and other forest products, and for recreation and kindred purposes. These forests shall be forever devoted to the planting, growth, and harvesting of such trees (Title 3 Article 9-0303 ECL).(G)

Stocking - the number of trees per unit area in relation to the desired number for optimum growth and management. Guides and tables have been developed that illustrate the optimum number of trees per acre based on the average diameter.(G)

Succession - the natural series of replacements of one plant community (and the associated fauna) by another over time and in the absence of disturbance.(A)

Sustainable forestry - management that maintains and enhances the long-term health of forest ecosystems for the benefit of all living things, while providing environmental, economic, social and cultural opportunities for present and future generations.(A)

Temporary revocable permit (TRP)- a Department permit which authorizes the use of State land for a specific purpose for a prescribed length of time.(G)

Thinning - a silvicultural treatment made to reduce stand density of trees primarily to improve growth of remaining trees, enhance forest health, or recover potential mortality.(E)

Threatened species - a species likely to become endangered in the foreseeable Future, throughout all or a significant portion of its range, unless protected.(A)

Timber Stand Improvement (TSI) - pre-commercial silvicultural treatments, intended to regulate stand density and species composition while improving wood product quality and fostering individual tree health and vigor, through the removal of undesirable trees.(G)

Understory - the smaller vegetation (shrubs, seedlings, saplings, small trees) within a forest stand, occupying the vertical zone between the overstory and the herbaceous plants of the forest floor.(A)

Uneven-aged system - a planned sequence of treatments designed to maintain and regenerate a stand with three or more age classes.(E)

Uneven-aged stand/forest - a stand with trees of three or more distinct age classes, either intimately mixed or in small groups.(E)

Variable density thinning - A thinning regime that creates horizontal variation in stand density including areas that are not thinned, areas where all trees are removed, and thinned areas that may have different residual densities. (P)

Watershed - a region or area defined by a network of stream drainage. A watershed includes all the land from which a particular stream or river is supplied.(G)

Water quality classification - a system of classification in ECL Article 17 which presents a ranked listing of the State's surface waters by the letters AA, A, B, C or D according to certain quality standards and specifications. AA is the highest quality rank and has the greatest suitability for human usage.(G)

Wetland - a transitional area between aquatic and terrestrial ecosystems that is inundated or saturated for periods long enough to produce hydric soils and support hydrophytic vegetation.(E)

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APPENDICES

APPENDIX I Real Property Taxes Based on 2009 Assessments

State Forest	Town	Total Acres[1]	Assessed Acres	Assessed Value	Town Tax	School Tax	Fire District Tax	Total Tax
Cort-2	Cuyler	59	59	$108,900	$1,031	$2,688	$279	$3,998
Cort-2	Solon	1,416	1,415	$915,000	$8,436	$19,234	$979	$28,649
Cort-2	Taylor	2,880	1,956	$2,553,600	$22,650	$39,794	$3,166	$65,610
Cort-2	Truxton	284	303	$335,700	$2,343	$6,520	$436	$9,299
Total Cort-2		4,639	3,734	**$3,913,200**	**$34,460**	**$68,236**	**$4,860**	**$107,556**
Cort-7	Solon	605	420	$866,100	$7,985	$18,777	$927	$27,689
Cort-7	Truxton	560	574	$806,000	$5,626	$17,262	$1,048	$23,936
Total Cort-7		1,165	994	**$1,672,100**	**$13,611**	**$36,039**	**$1,975**	**$51,625**
Cort-12	Freetown	432	432	$432,900	$3,654	$8,313	$528	$12,495
Cort-12	Solon	845	845	$688,300	$6,346	$14,413	$736	$21,495
Total Cort-12		1,277	1,277	**$1,121,200**	**$10,000**	**$22,726**	**$1,264**	**$33,990**
Cort-14	Virgil	534	91	$117,500	$314	$2,015	$163	$2,492
Cort-14	Freetown	424	0	$0	$0	$0	$0	$0
Total Cort-14		958	91	**$117,500**	**$314**	**$2,015**	**$163**	**$2,492**
Cort-15	Freetown	642	218	$83,100	$701	$1,760	$101	$2,562
Cort-15	Virgil	359	359	$547,800	$1,463	$9,395	$761	$11,619
Cort-15	Cortlandville	83	0	$0	$0	$0	$0	$0
Total Cort-15		1,084	577	**$630,900**	**$2,164**	**$11,155**	**$862**	**$14,181**
Cort-17	Cincinnatus	878	0	**$0**	**$0**	**$0**	**$0**	**$0**
Papish Pond MUA	Cincinnatus	193	0	**$0**	**$0**	**$0**	**$0**	**$0**
Grand Total		**10,194**	**6,672**	**$7,454,900**	**$60,549**	**$140,171**	**$9,124**	**$209,844**

[1]Total acres - does not include 73 acres of Cortland 15 that was acquired in December 2010.

APPENDIX II Classified Wetlands on the Unit

All wetlands listed are federally classified and are also New York State classified if I.D. code and legal status are present in the following table. Does not contain unclassified wetlands.

Forest	Stand	Acres	Cover Type	Vegetation Type	NYS Classified Wetland	
					I.D. Code	Legal Status
Cort-2	A-67.2	1.9	Scrub/Shrub	Deciduous		
Cort-2	A-930	22.4	Scrub/Shrub	Deciduous	CN-1	III
Cort-2	B-1	42.5	Forested	Evergreen	CY-3	II
Cort-2	B-1	5.9	Emergent Herbaceous	Persistent	CY-3	II
Cort-2	B-13	5.6	Forested	Evergreen	CY-4	II
Cort-2	B-2	3.5	Forested	Deciduous	CY-3	II
Cort-2	B-21.2	1.9	Forested	Evergreen		
Cort-2	B-4.1	0.2	Forested	Deciduous	CY-3	II
Cort-2	B-5.2	11.4	Forested	Evergreen		
Cort-2	B-6	6.4	Forested	Evergreen	CY-3	II
Cort-2	B-6	3.1	Scrub/Shrub	Deciduous	CY-3	II
Cort-2	B-930	3.4	Forested	Deciduous	CY-3	II
Cort-2	B-930	97.1	Scrub/Shrub	Deciduous	CY-3	II
Cort-2	B-930	67.2	Emergent Herbaceous	Persistent	CY-4	II
Cort-2	B-930	1.9	Forested	Evergreen	CY-4	II
Cort-2	C-17.3	3.3	Forested	Deciduous		
Cort-2	C-32.1	0.1	Forested	Evergreen		
Cort-2	C-32.2	2.2	Scrub/Shrub	Deciduous		
Cort-2	C-32.2	0.5	Forested	Evergreen		
Cort-2	C-32.2	7.1	Forested	Deciduous		
Cort-2	C-33	1.6	Forested	Deciduous		
Cort-2	C-35.2	2.8	Forested	Deciduous		
Cort-7	A-16.2	3.3	Forested	Evergreen	TR-4	II
Cort-7	A-25.41	0.2	Forested	Deciduous		
Cort-12	A-9	3.8	Forested	Evergreen	MG-2	III
Cort-12	B-12	2.3	Forested	Evergreen		
Cort-12	B-18	5.8	Forested	Deciduous		
Cort-12	B-18	16.9	Scrub/Shrub	Deciduous		
Cort-14	A-23	2.3	Forested	Evergreen		
Cort-14	A-26	2.7	Forested	Evergreen		
Cort-14	A-34.2	0.4	Scrub/Shrub	Deciduous		

Forest	Stand	Acres	Cover Type	Vegetation Type	NYS Classified Wetland	
					I.D. Code	Legal Status
Cort-14	A-35.1	0.5	Scrub/Shrub	Deciduous		
Cort-15	A-11	8.4	Forested	Evergreen		
Cort-15	A-11 & 721.1	0.4	Emergent Herbaceous	Persistent		
Cort-15	A-20	0.6	Emergent Herbaceous	Persistent		
Cort-17	A-910	6.3	Open Water			
Cort-17	B-11.2	0.8	Forested	Deciduous		
Cort-17	B-11.4	5.8	Forested	Evergreen		
Cort-17	B-14	1.7	Forested	Evergreen		
Cort-17	B-20.2	2.8	Scrub/Shrub	Deciduous		
Cort-17	B-22	3.4	Forested	Evergreen		
Cort-17	B-5	1.7	Cobble-Gravel			
Cort-17	B-910	1.3	Forested	Deciduous		
Cort-17	B-910	9.4	Open Water			
Cort-17	B-910	1.5	Scrub/Shrub	Deciduous		
Cort-17	B-920.1	1.8	Scrub/Shrub	Deciduous		
Cort-17	B-920.1	13.7	Emergent Herbaceous	Persistent		
Cort-17	B-920.2	1.8	Forested	Deciduous		
Cort-17	B-920.2	6.3	Emergent Herbaceous	Persistent		
Cort-17	B-920.2	1.0	Scrub/Shrub	Deciduous		
Cort-17	B-930	0.8	Scrub/Shrub	Deciduous		
Papish MUA	A-5	0.8	Scrub/Shrub	Deciduous		
Papish MUA	A-6	0.4	Scrub/Shrub	Deciduous		
Papish MUA	A-8	0.5	Scrub/Shrub	Deciduous		
Papish MUA	A-910	39.7	Open Water			
TOTAL		441.4				

APPENDIX III Classified Streams on the Unit

State Forest	Stream Name	Standard	Length (miles)
Cort-2	Unnamed Tributary to Trout Brook	C(TS)	0.95
Cort-2	Unnamed Tributary to Cheningo Creek	C	0.08
Cort-2	Unnamed Tributary to Cheningo Creek	C	0.17
Cort-2	Cheningo Creek	C	1.42
Cort-2	Pritchard Brook	C(TS)	0.22
Cort-2	Unnamed Tributary to Cheningo Creek	C	0.40
Cort-2	Unnamed Tributary to Cheningo Creek	C	0.81
Cort-2	Unnamed Tributary to Pritchard Brook	C(TS)	0.81
Cort-2	Unnamed Tributary to Cheningo Creek	C	0.11
Cort-2	Unnamed Tributary to Pritchard Brook	C	0.65
Cort-2	Unnamed Tributary to Cheningo Creek	C	0.41
Cort-2	Unnamed Tributary to Trout Brook	C	0.17
Cort-2	Cheningo Creek	C(T)	3.10
Cort-2	Unnamed Tributary to Trout Brook	C(TS)	0.08
Cort-2	Unnamed Tributary to Cheningo Creek	C	1.47
Cort-2	Unnamed Tributary to Cheningo Creek	C	1.20
Cort-7	Unnamed Tributary to Cheningo Creek	C	0.59
Cort-7	Unnamed Tributary to Cheningo Creek	C	0.00
Cort-7	Unnamed Tributary to Trout Brook	C	0.44
Cort-12	Unnamed Tributary to Smith Brook	C	0.32
Cort-12	Unnamed Tributary to Smith Brook	C(T)	0.38
Cort-12	Unnamed Tributary to Gee Brook	C	0.65
Cort-12	Smith Brook	C	0.35
Cort-12	Unnamed Tributary to Trout Brook	C(TS)	0.12
Cort-12	Gee Brook	C	0.49
Cort-14	Unnamed Tributary to Tioghnioga River	C	0.87
Cort-14	Unnamed Tributary to Tioghnioga River	C	0.28
Cort-15	Unnamed Tributary to Tioghnioga River	C	0.74
Cort-15	Unnamed Tributary to Tioghnioga River	C	0.18
Cort-15	Unnamed Tributary to Tioghnioga River	C(T)	0.73
Cort-15	Unnamed Tributary to Tioghnioga River	C(T)	0.44
Cort-15	Unnamed Tributary to Tioghnioga River	C(T)	0.31
Cort-17	Unnamed Tributary to Gee Brook	C	0.20
Cort-17	Unnamed Tributary to Gee Brook	C	0.46
Cort-17	Unnamed Tributary to Place Brook	C	0.23
Cort-17	Unnamed Tributary to Gee Brook	C	0.28
Cort-17	Unnamed Tributary to Gee Brook	C	0.13

State Forest	Stream Name	Standard	Length (miles)
Cort-17	Unnamed Tributary to Gee Brook	C	0.19
Cort-17	Gee Brook	C(T)	1.05
Cort-17	Unnamed Tributary to Gee Brook	C	0.11
Cort-17	Gee Brook	C	0.43
Cort-17	Unnamed Tributary to Gee Brook	C	0.14
Cort-18	Unnamed Tributary to Otselic River	C	0.51
		Total (miles)	22.67

APPENDIX IV Definitions for Protective Status of Wildlife on the Unit

The protective status of species listed in Appendices V, VI, and VII are based on Federal and State regulations. Following column entries for common and scientific names, a "protective status" category appears. The following definitions are adopted for the terms as used in The Checklist of Amphibians, Reptiles, Birds, and Mammals of New York State, Including their Protective Status.

Code	Federal Definitions
E	*Endangered Species* are determined by the U. S. Department of the Interior to be in danger of extinction throughout all or a significant portion of their range. All such species are fully protected, including their habitat.
T	*Threatened Species* are determined by the U. S. Department of the Interior as likely to become endangered within the foreseeable future throughout all or a significant portion of their range. All such species are fully protected.
UN	*"Unprotected"* under Federal Law.
Code	State Definitions
P	*Protected* wildlife means "wild game, protected wild birds, and endangered species of wildlife" as defined in the Environmental Conservation Law.
E	*Endangered Species* are determined by the DEC to be in imminent danger of extinction or extirpation in New York State, or are federally listed as endangered. All such species are fully protected under New York State Environmental Conservation Law.
T	*Threatened Species* are determined by the DEC as likely to become endangered within the foreseeable future in New York State, or are Federally listed as threatened. All such species are fully protected under the New York State Environmental Conservation Law.

SC	*Special Concern Species* are those native species that are not yet recognized as endangered or threatened, but for which documented evidence exists relating to their continued welfare in New York State. The Special Concern category exists within DEC rules and regulations, but such designation does not in itself provide any additional protection. However, Special Concern species may be protected under other laws.
GS	*Game species* are defined as "big game", "small game", or "game bird" species as stated in the Environmental Conservation Law; many normally have an open season for at least part of the year, and are protected at other times.
UN	*Unprotected* means that the species may be taken at any time without limit. However, a license to take may be required.

APPENDIX V Breeding Species of Birds In The Vicinity of the Unit

Common Name	Scientific Name	Breeding Status	Protective Status New York	SGCN[1]
Alder Flycatcher	*Empidonax alnorum*	PROBABLE	P	N
American Crow	*Corvus brachyrhynchos*	CONFIRMED	GS	N
American Goldfinch	*Carduelis tristis*	PROBABLE	P	N
American Kestrel	*Falco sparverius*	CONFIRMED	P	N
American Redstart	*Setophaga ruticilla*	CONFIRMED	P	N
American Robin	*Turdus migratorius*	CONFIRMED	P	N
American Woodcock	*Scolopax minor*	PROBABLE	GS	Y
Bald Eagle	*Haliaeetus leucocephalus*	POSSIBLE	T	Y
Baltimore Oriole	*Icterus galbula*	CONFIRMED	P	N
Bank Swallow	*Riparia riparia*	CONFIRMED	P	N
Barn Swallow	*Hirundo rustica*	CONFIRMED	P	N
Barred Owl	*Strix varia*	POSSIBLE	P	N
Belted Kingfisher	*Megaceryle alcyon*	PROBABLE	P	N
Black-and-white Warbler	*Mniotilta varia*	PROBABLE	P	N
Black-billed Cuckoo	*Coccyzus erythropthalmus*	PROBABLE	P	N
Blackburnian Warbler	*Dendroica fusca*	PROBABLE	P	N
Black-capped Chickadee	*Poecile atricapillus*	CONFIRMED	P	N
Black-throated Blue Warbler	*Dendroica caerulescens*	PROBABLE	P	Y
Black-throated Green Warbler	*Dendroica virens*	PROBABLE	P	N
Blue Jay	*Cyanocitta cristata*	CONFIRMED	P	N
Blue-gray Gnatcatcher	*Polioptila caerulea*	CONFIRMED	P	N
Blue-headed Vireo	*Vireo solitarius*	PROBABLE	P	N
Blue-winged Warbler	*Vermivora pinus*	CONFIRMED	P	Y
Bobolink	*Dolichonyx oryzivorus*	CONFIRMED	P	Y
Broad-winged Hawk	*Buteo platypterus*	CONFIRMED	P	N
Brown Creeper	*Certhia americana*	CONFIRMED	P	N

Common Name	Scientific Name	Breeding Status	Protective Status New York	SGCN[1]
Brown Thrasher	*Toxostoma rufum*	POSSIBLE	P	N
Brown-headed Cowbird	*Molothrus ater*	CONFIRMED	P	N
Canada Goose	*Branta canadensis*	CONFIRMED	GS	N
Canada Warbler	*Wilsonia canadensis*	CONFIRMED	P	Y
Carolina Wren	*Thryothorus ludovicianus*	POSSIBLE	P	N
Cedar Waxwing	*Bombycilla cedrorum*	CONFIRMED	P	N
Chestnut-sided Warbler	*Dendroica pensylvanica*	CONFIRMED	P	N
Chimney Swift	*Chaetura pelagica*	PROBABLE	P	N
Chipping Sparrow	*Spizella passerina*	CONFIRMED	P	N
Cliff Swallow	*Petrochelidon pyrrhonota*	CONFIRMED	P	N
Common Grackle	*Quiscalus quiscula*	CONFIRMED	P	N
Common Merganser	*Mergus merganser*	CONFIRMED	GS	N
Common Raven	*Corvus corax*	POSSIBLE	P	N
Common Yellowthroat	*Geothlypis trichas*	CONFIRMED	P	N
Cooper's Hawk	*Accipiter cooperii*	CONFIRMED	SC	Y
Dark-eyed Junco	*Junco hyemalis*	CONFIRMED	P	N
Downy Woodpecker	*Picoides pubescens*	CONFIRMED	P	N
Eastern Bluebird	*Sialia sialis*	CONFIRMED	P	N
Eastern Kingbird	*Tyrannus tyrannus*	CONFIRMED	P	N
Eastern Meadowlark	*Sturnella magna*	PROBABLE	P	Y
Eastern Phoebe	*Sayornis phoebe*	CONFIRMED	P	N
Eastern Screech-Owl	*Megascops asio*	POSSIBLE	P	N
Eastern Towhee	*Pipilo erythrophthalmus*	PROBABLE	P	N
Eastern Wood-Pewee	*Contopus virens*	PROBABLE	P	N
European Starling	*Sturnus vulgaris*	CONFIRMED	UN	N
Evening Grosbeak	*Coccothraustes vespertinus*	POSSIBLE	P	N
Field Sparrow	*Spizella pusilla*	CONFIRMED	P	N
Golden-crowned Kinglet	*Regulus satrapa*	PROBABLE	P	N
Gray Catbird	*Dumetella carolinensis*	CONFIRMED	P	N
Great Blue Heron	*Ardea herodias*	CONFIRMED	P	N
Great Crested Flycatcher	*Myiarchus crinitus*	PROBABLE	P	N
Great Egret	*Ardea alba*	POSSIBLE	P	Y
Great Horned Owl	*Bubo virginianus*	CONFIRMED	P	N
Green Heron	*Butorides virescens*	CONFIRMED	P	N
Hairy Woodpecker	*Picoides villosus*	PROBABLE	P	N
Hermit Thrush	*Catharus guttatus*	CONFIRMED	P	N
Hooded Merganser	*Lophodytes cucullatus*	POSSIBLE	GS	N
Hooded Warbler	*Wilsonia citrina*	POSSIBLE	P	N
House Finch	*Carpodacus mexicanus*	CONFIRMED	P	N
House Sparrow	*Passer domesticus*	CONFIRMED	UN	N

Common Name	Scientific Name	Breeding Status	Protective Status New York	SGCN[1]
House Wren	*Troglodytes aedon*	CONFIRMED	P	N
Indigo Bunting	*Passerina cyanea*	CONFIRMED	P	N
Killdeer	*Charadrius vociferus*	CONFIRMED	P	N
Least Flycatcher	*Empidonax minimus*	CONFIRMED	P	N
Louisiana Waterthrush	*Seiurus motacilla*	PROBABLE	P	Y
Magnolia Warbler	*Dendroica magnolia*	CONFIRMED	P	N
Mallard	*Anas platyrhynchos*	CONFIRMED	GS	N
Mourning Dove	*Zenaida macroura*	CONFIRMED	P	N
Mourning Warbler	*Oporornis philadelphia*	CONFIRMED	P	N
Nashville Warbler	*Vermivora ruficapilla*	PROBABLE	P	N
Northern Cardinal	*Cardinalis cardinalis*	PROBABLE	P	N
Northern Flicker	*Colaptes auratus*	CONFIRMED	P	N
Northern Goshawk	*Accipiter gentilis*	PROBABLE	SC	Y
Northern Rough-winged Swallow	*Stelgidopteryx serripennis*	CONFIRMED	P	N
Northern Waterthrush	*Seiurus noveboracensis*	PROBABLE	P	N
Orchard Oriole	*Icterus spurius*	POSSIBLE	P	N
Osprey	*Pandion haliaetus*	POSSIBLE	SC	Y
Ovenbird	*Seiurus aurocapilla*	CONFIRMED	P	N
Pied-billed Grebe	*Podilymbus podiceps*	PROBABLE	T	Y
Pileated Woodpecker	*Dryocopus pileatus*	PROBABLE	P	N
Pine Siskin	*Carduelis pinus*	CONFIRMED	P	N
Prairie Warbler	*Dendroica discolor*	POSSIBLE	P	N
Purple Finch	*Carpodacus purpureus*	CONFIRMED	P	N
Purple Martin	*Progne subis*	PROBABLE	P	N
Red-breasted Nuthatch	*Sitta canadensis*	PROBABLE	P	N
Red-eyed Vireo	*Vireo olivaceus*	CONFIRMED	P	N
Red-shouldered Hawk	*Buteo lineatus*	POSSIBLE	SC	Y
Red-tailed Hawk	*Buteo jamaicensis*	CONFIRMED	P	N
Red-winged Blackbird	*Agelaius phoeniceus*	CONFIRMED	P	N
Ring-necked Pheasant	*Phasianus colchicus*	POSSIBLE	GS	N
Rock Pigeon	*Columba livia*	CONFIRMED	UN	N
Rose-breasted Grosbeak	*Pheucticus ludovicianus*	CONFIRMED	P	N
Ruby-throated Hummingbird	*Archilochus colubris*	CONFIRMED	P	N
Ruffed Grouse	*Bonasa umbellus*	CONFIRMED	GS	Y
Savannah Sparrow	*Passerculus sandwichensis*	PROBABLE	P	N
Scarlet Tanager	*Piranga olivacea*	CONFIRMED	P	Y
Sharp-shinned Hawk	*Accipiter striatus*	CONFIRMED	SC	Y
Song Sparrow	*Melospiza melodia*	CONFIRMED	P	N
Spotted Sandpiper	*Actitis macularius*	POSSIBLE	P	N

Common Name	Scientific Name	Breeding Status	Protective Status New York	SGCN[1]
Swamp Sparrow	*Melospiza georgiana*	PROBABLE	P	N
Tree Swallow	*Tachycineta bicolor*	CONFIRMED	P	N
Tufted Titmouse	*Baeolophus bicolor*	CONFIRMED	P	N
Turkey Vulture	*Cathartes aura*	PROBABLE	P	N
Veery	*Catharus fuscescens*	CONFIRMED	P	N
Virginia Rail	*Rallus limicola*	PROBABLE	GS	N
Warbling Vireo	*Vireo gilvus*	PROBABLE	P	N
White-breasted Nuthatch	*Sitta carolinensis*	CONFIRMED	P	N
White-throated Sparrow	*Zonotrichia albicollis*	PROBABLE	P	N
Wild Turkey	*Meleagris gallopavo*	CONFIRMED	GS	N
Willow Flycatcher	*Empidonax traillii*	PROBABLE	P	N
Winter Wren	*Troglodytes troglodytes*	PROBABLE	P	N
Wood Duck	*Aix sponsa*	CONFIRMED	GS	N
Yellow Warbler	*Dendroica petechia*	CONFIRMED	P	N
Yellow-bellied Sapsucker	*Sphyrapicus varius*	CONFIRMED	P	N
Yellow-billed Cuckoo	*Coccyzus americanus*	POSSIBLE	P	N
Yellow-rumped Warbler	*Dendroica coronata*	CONFIRMED	P	N
Yellow-throated Vireo	*Vireo flavifrons*	CONFIRMED	P	N
Alder Flycatcher	*Empidonax alnorum*	PROBABLE	P	N
American Crow	*Corvus brachyrhynchos*	CONFIRMED	GS	N
American Goldfinch	*Carduelis tristis*	PROBABLE	P	N
American Kestrel	*Falco sparverius*	CONFIRMED	P	N

[1] SGCN – Species of Greatest Conservation Need (See Glossary).

APPENDIX VI Reptiles and Amphibians of the Unit and Vicinity

Common Name	Scientific Name	Protective Status		SGCN[1]
		State	Federal	
Spotted Salamander	Ambystoma maculatum	UN	UN	N
American Toad	Bufo americanus	UN	UN	N
Common Snapping Turtle	Chelydra serpentina	UN	UN	Y
Painted Turtle	Chrysemys picta	UN	UN	N
Jefferson Salamander	Ambystoma jeffesonianum	SC	UN	Y
Blue Spotted Salamander	Ambystoma laterale	SC	UN	Y
Northern Dusky Salamander	Desmognathus fuscus	UN	UN	N
Allegheny Dusky Salamander	Desmognathus ochrophaeus	UN	UN	N
Dusky Salamander	Desmognathus spp.	UN	UN	N
Ringneck Snake	Diadophis punctatus	UN	UN	N
Northern Two-lined Salamander	Eurycea bislineata	UN	UN	N
Northern Slimy Salamander	Plethodon glutinosus	UN	UN	N
Wood Turtle	Glyptemys insculpta	SC	UN	Y

Common Name	Scientific Name	Protective Status		SGCN[1]
		State	Federal	
Spring Salamander	Gyrinophilus porphyriticus	UN	UN	N
Gray Treefrog	Hyla versicolor	UN	UN	N
Milk Snake	Lampropeltis triangulum	UN	UN	N
Red-spotted Newt	Notophthalmus viridescens	UN	UN	N
Smooth Green Snake	Opheodrys vernalis	UN	UN	Y
Northern Redback Salamander	Plethodon cinereus	UN	UN	N
Spring Peeper	Pseudacris crucifer	UN	UN	N
Bullfrog	Rana catesbeiana	GS	UN	N
Green Frog	Rana clamitans	GS	UN	N
Pickerel Frog	Rana palustris	GS	UN	N
Northern Leopard Frog	Rana pipiens	GS	UN	N
Wood Frog	Rana sylvatica	GS	UN	N
Brown Snake	Storeria dekayi	UN	UN	N
Northern Water Snake	Nerodia sipedon	UN	UN	N
Common Garter Snake	Thamnophis sirtalis	UN	UN	N

[1] SGCN – Species of Greatest Conservation Need (See Glossary).

APPENDIX VII Mammals of the Unit and Vicinity

Common Name	Scientific Name	Confirmed / Predicted	Protective Status		SGCN[1]
			Federal	State	
American Beaver	Castor canadensis	C	UN	GS	N
Big Brown Bat	Eptesicus fuscus	C	UN	UN	N
Black Bear	Ursus americanus	P	UN	GS	N
Bobcat	Lynx rufus	C	UN	GS	N
Common Muskrat	Ondatra zibethicus	C	UN	GS	N
Common Raccoon	Procyon lotor	P	UN	GS	N
Coyote	Canis latrans	C	UN	GS	N
Deer Mouse	Peromyscus maniculatus	C	UN	UN	N
E. small-footed Myotis	Myotis leibii	P	UN	SC	N
Eastern Chipmunk	Tamias striatus	C	UN	UN	N
Eastern Cottontail	Sylvilagus floridanus	P	UN	GS	N
Eastern Gray Squirrel	Sciurus carolinensis	C	UN	GS	N
Eastern Pipistrelle	Pipistrellus subflavus	P	UN	UN	N
Eastern Red Bat	Lasiurus borealis	P	UN	UN	N
Fisher	Martes pennanti	P	UN	GS	N
Fox Squirrel	Sciurus niger	P	UN	GS	N
Gray Fox	Urocyon cinereoargentus	C	UN	GS	N
Hairy-tailed Mole	Parascalops breweri	C	UN	UN	N
Hoary Bat	Lasiurus cinereus	C	UN	UN	Y

Common Name	Scientific Name	Confirmed / Predicted	Protective Status		SGCN[1]
			Federal	State	
House Mouse	Mus musculus	C	UN	UN	N
Indiana Myotis	Myotis sodalis	P	E	E	Y
Least Shrew	Cryptotis parva	P	UN	UN	N
Little Brown Myotis	Myotis lucifugus	C	UN	UN	N
Long-tailed Weasel	Mustela frenata	P	UN	GS	N
Masked Shrew	Sorex cinereus	C	UN	UN	N
Meadow Jumping Mouse	Zapus hudsonius	C	UN	UN	N
Meadow Vole	Microtus pennsylvanicus	C	UN	UN	N
Mink	Mustela vison	P	UN	GS	N
N. Short-tailed Shrew	Blarina brevicauda	C	UN	UN	N
Northern Flying Squirrel	Glaucomys sabrinus	C	UN	UN	N
Northern Myotis (Keen's Myotis)	Myotis septentrionalis	C	UN	UN	N
Norway Rat	Rattus norvegicus	P	UN	UN	N
Porcupine	Erethizon dorsatum	P	UN	UN	N
Pygmy Shrew	Sorex hoyi	C	UN	UN	N
Red Fox	Vulpes vulpes	C	UN	GS	N
Red Squirrel	Tamiasciurus hudsonicus	C	UN	UN	N
River Otter	Lutra canadensis	C	UN	GS	Y
Short-tailed Weasel (Ermine)	Mustela erminea	C	UN	UN	N
Silver-haired Bat	Lasionycteris noctivagans	P	UN	UN	Y
Smoky Shrew	Sorex fumeus	C	UN	UN	N
Snowshoe Hare	Lepus americanus	P	UN	GS	N
Southern Bog Lemming	Synaptomys cooperi	C	UN	UN	N
Southern Flying Squirrel	Glaucomys volans	C	UN	UN	N
Southern Red-backed Vole	Clethrionomys gapperi	C	UN	UN	N
Star-nosed Mole	Condylura cristata	C	UN	UN	N
Striped Skunk	Mephitis mephitis	P	UN	GS	N
Virginia Opossum	Didelphis virginiana	P	UN	GS	N
White-footed Mouse	Peromyscus leucopus	C	UN	UN	N
White-tailed Deer	Odocoileus virginianus	C	UN	GS	N
Woodchuck	Marmota monax	P	UN	UN	N
Woodland Jumping Mouse	Napaeozapus insignis	C	UN	UN	N
Woodland Vole	Microtus pinetorum	C	UN	UN	N

[1] SGCN – Species of Greatest Conservation Need (See Glossary).

Source: Adapted from The New York Gap Program, U.S. EPA EMAP Hexagons 377, 381, 411, 414, and 443.

APPENDIX VIII Fishery Information

Calico Pond (P5639)

The last fisheries survey of Calico Pond was carried out in 1966. Beach seining, trap netting and angling were used to sample the pond's fish populations. The number and length range of each fish species collected are listed below:

Species	Number Collected	Length Range (inches)
largemouth bass	15	6.5 - 15
chain pickerel	1	18.3
black crappie (calico bass)	136	5.0 - 7.9
yellow perch	27	5.8 - 7.0
brown bullhead	30	8.0 - 11.5

Overall, the number of fish species collected in the 1966 survey revealed the presence of a fairly diverse warmwater fish community. Length ranges of the fish collected indicated they were not stunted and were present in the quantities and sizes found desirable by many anglers.

Fish stocking is not mentioned in the Region 7 Calico Pond fisheries survey file therefore, the origin of these fish is unknown. The fish collected in the 1966 survey are common in Central New York State and their populations were probably established through a combination of Department trap and transfer projects and private bait bucket introductions.

Papish Pond (P40)

The regional fisheries unit file indicates two fisheries surveys have been carried out on Papish Pond. The first survey was carried out on May 17, 18, 1961 and consisted of trap netting and fishing as methods of sampling the pond's fish populations. The number and length range of each fish species collected are listed below:

Species	Number Collected	Length Range (inches)
largemouth bass	4	10.0-12.0
chain pickerel	13	8.0-15.0
pumpkinseed sunfish	5	5.0
yellow perch	12	5.0-8.0
brown bullhead	120	-
creek chubsucker	60	11.0-12.0

The second fisheries survey of Papish Pond was carried out on February 11, 1969 and consisted of ice fishing with tip-ups and jigs as the method of sampling the pond's fish populations. The number and length range of each fish species collected are listed on the following page:

Species	Number Collected	Length Range (inches)
chain pickerel	32	9.1-20.3
yellow perch	2	6.2-7.2
brown bullhead	6	6.5-8.7

Overall, the number of fish species collected in the 1961 and 1969 surveys revealed the presence of a fairly diverse warmwater fish community. Length ranges of the fish collected indicated they were modest in size but present in quantities found desirable by many anglers.

The regional fisheries unit file indicates Papish Pond was stocked with yellow perch during the mid 1920s and early 1930s. No other stocking information is contained in the regional file. The fish species collected in the 1961 and 1969 surveys are common in Central New York State and their populations were probably established through a combination of Department trap and transfer projects similar to the yellow perch stockings and private bait bucket introductions.

Gee Brook

A general electrofishing survey of Gee Brook was carried out on August 31, 1983. Three sites were electrofished, of which one was located within Gee Brook State Forest. The location of this site was at an old railroad trestle approximately 1,000 feet upstream from where NY Route 41 and 26 crosses Gee Brook. A 200 foot long section was electrofished at the old trestle and a representative sample of the fish species present were collected, processed and released. Following are the fish species collected at the old railroad trestle site: brook trout, white suckers, fallfish, central stonerollers, blacknose dace, longnose dace, cutlips minnows, creek chubs, madtoms and sculpins. Brook trout were common at this site and ranged up to 11.7 inches in length.

APPENDIX IX Deer Harvest Records for Towns within the Unit

Deer Kill By Town										
Towns	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Cincinnatus	191	147	115	141	52	75	136	136	205	217
Cortlandville	366	308	311	270	166	189	189	270	252	266
Cuyler	291	248	151	195	82	74	192	190	207	233
Freetown	172	164	97	96	83	82	84	127	126	126
Solon	198	119	95	93	70	54	98	104	118	116
Taylor	165	130	80	69	56	53	64	80	105	57
Truxton	307	242	168	115	106	118	160	229	213	188
Virgil	416	478	571	521	398	283	274	303	364	353

Source: 2009 New York State 20 Yr. Deer Book

Deer Killed Per Square Mile										
Towns	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Cincinnatus	7.46	5.74	4.49	5.51	2.03	2.93	5.31	5.31	8.01	8.48
Cortlandville	7.31	6.15	6.21	5.39	3.31	3.77	3.77	5.39	5.03	5.31
Cuyler	6.64	5.66	3.45	4.45	1.87	1.69	4.38	4.34	4.73	5.32
Freetown	6.67	6.36	3.76	3.72	3.22	3.18	3.26	4.92	4.88	4.88
Solon	6.60	3.97	3.17	3.10	2.33	1.80	3.27	3.47	3.93	3.87
Taylor	5.50	4.33	2.67	2.30	1.87	1.77	2.13	2.67	3.50	1.90
Truxton	6.84	5.39	3.74	2.56	2.36	2.63	3.56	5.10	4.74	4.19
Virgil	8.68	9.98	11.92	10.88	8.31	5.91	5.72	6.33	7.60	7.37

Source: 2009 New York State 20 Yr. Deer Book

APPENDIX X Reported Turkey Harvest 2003-2009 for Towns within the Unit

Fall Season

	2003	2004	2005	2006	2007	2008	2009
Cincinnatus	0	5	1	2	4	1	3
Cortlandville	0	7	11	5	15	6	14
Cuyler	2	3	2	0	0	2	7
Freetown	5	2	2	1	3	12	1
Solon	1	4	2	2	4	2	0
Taylor	1	4	7	4	7	0	2
Truxton	4	0	5	4	3	7	2
Virgil	10	8	9	5	10	5	9

Spring Season

	2003	2004	2005	2006	2007	2008	2009
Cincinnatus	5	6	8	5	8	6	4
Cortlandville	13	11	18	13	17	17	21
Cuyler	13	7	18	14	13	15	12
Freetown	2	5	3	7	5	10	6
Solon	3	6	2	3	4	4	7
Taylor	2	2	9	9	6	9	8
Truxton	1	10	6	10	5	8	12
Virgil	14	9	16	18	26	21	32

Source: Lance Clark, Biologist, NYS DEC

APPENDIX XI Pelt Sealed Beaver 1999-2008 for Towns within the Unit

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Cincinnatus	3	0	41	0	6	15	32	32	2	4
Cortlandville	9	6	10	9	0	9	12	12	7	2
Cuyler	12	4	35	3	13	12	23	23	23	9
Freetown	5	13	12	1	11	11	53	53	33	25
Solon	5	3	5	5	11	9	23	23	30	0
Taylor	15	2	77	16	41	21	59	59	38	20
Truxton	21	16	38	28	7	19	53	53	34	33
Virgil	5	2	9	15	30	0	18	18	17	17

Source: Lance Clark, Biologist, NYS DEC

Pelt Sealed Coyote 1994-2003[1] for Towns within Unit

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Cincinnatus	4	0	1	3	0	0	0	1	1	1
Cortlandville	20	21	37	17	11	5	19	22	11	22
Cuyler	0	0	6	0	6	1	0	14	1	11
Freetown	2	1	1	2	0	1	0	0	0	0
Solon	0	0	2	1	0	3	0	1	0	0
Taylor	2	0	1	2	4	0	2	3	1	0
Truxton	1	0	12	3	4	2	6	2	4	13
Virgil	1	2	2	0	9	15	21	10	15	12

[1]2003 was the last year that a pelt seal was required for coyotes.

Source: Lance Clark, Biologist, NYS DEC

APPENDIX XII Roads on the Unit

FOREST	ROAD NAME	LENGTH (miles)
PUBLIC FOREST ACCESS ROADS (PFAR) ON THE UNIT		
Cortland 2 (Taylor Valley SF)	Mount Roderick PFAR	4.3
Cortland 2 (Taylor Valley SF)	Seacord Hill Spur PFAR	0.9
Cortland 2 (Taylor Valley SF)	Cheningo Day-Use PFAR West	0.3
Cortland 2 (Taylor Valley SF)	Cheningo Day-Use PFAR East	0.2
Cortland 2 (Taylor Valley SF)	Seacord Hill PFAR	2.1
Cortland 7 (Donahue Woods SF)	Bell PFAR	2.0
Cortland 12 (Baker School House SF)	Baker School House PFAR	1.8
Cortland 14 (Hoxie Gorge SF)	Russell Hill PFAR	2.1
Cortland 15 (Hoxie Gorge SF)	Russell Hill PFAR	0.5
Cortland 17 (Gee Brook SF)	Ace of Spades PFAR	0.2
Cortland 17 (Gee Brook SF)	Calico Pond PFAR	0.2
TOTAL MILES OF PFAR		14.6
HAUL ROADS (HR) ON THE UNIT		
Cortland 2 (Taylor Valley SF)	TOWNLINE HR	0.2
Cortland 2 (Taylor Valley SF)	Seacord Hill South HR	0.3
Cortland 2 (Taylor Valley SF)	Seacord Hill North HR	0.2
Cortland 2 (Taylor Valley SF)	Cheningo Day-Use HR Spur	0.2
Cortland 2 (Taylor Valley SF)	Cheningo Swamp HR	0.2
Cortland 14 (Hoxie Gorge SF)	Russell Hill HR NORTH	0.2
Cortland 14 (Hoxie Gorge SF)	Russell Hill HR CENTRAL	0.1
Cortland 14 (Hoxie Gorge SF)	Russell Hill HR SOUTH	0.1
Cortland 17 (Gee Brook SF)	Ace of Spades HR	0.5
Cortland 17 (Gee Brook SF)	Calico Pond HR Spur	0.1
Cortland 17 (Gee Brook SF)	Calico Pond HR	0.5
TOTAL MILES OF HAUL ROADS		2.6
PLOWED TOWN ROADS ON THE UNIT		
Cortland 2 (Taylor Valley SF)	Kiwanis Road	0.5
Cortland 7 (Donahue Woods SF)	Tower Road	0.2
Cortland 12 (Baker School House SF)	Baker School House	1.3
Cortland 12 (Baker School House SF)	Stramba Road	0.5
Cortland 14 (Hoxie Gorge SF)	Steve Russell Hill Road	1.0
Cortland 14 (Hoxie Gorge SF)	Merihew Road	0.3
Cortland 15 (Hoxie Gorge SF)	Hoxie Gorge-Freetown Road	1.7
Cortland 17 (Gee Brook SF)	Dutch Hill Road	0.3
Cortland 17 (Gee Brook SF)	Gee Brook Road	0.8

FOREST	ROAD NAME	LENGTH (miles)
Papish Pond MUA	Gee Brook Road	0.4
Papish Pond MUA	Beach Road	0.4
TOTAL MILES OF PLOWED TOWN ROADS (2011)		7.4
SEASONAL TOWN ROADS ON THE UNIT		
Cortland 2 (Taylor Valley SF)	McKee Road	0.5
Cortland 2 (Taylor Valley SF)	Kiwanis Road	0.2
Cortland 7 (Donahue Woods SF)	Harris Road	0.2
Cortland 7 (Donahue Woods SF)	Tower Road	0.7
Cortland 14 (Hoxie Gorge SF)	Steve Russell Hill Road	0.2
TOTAL MILES OF SEASONAL TOWN ROADS		1.8
COUNTY ROADS ON THE UNIT		
Cortland 2 (Taylor Valley SF)	Telephone Road	0.7
Cortland 2 (Taylor Valley SF)	Taylor Valley Road	4.0
TOTAL MILES OF COUNTY ROADS		4.7
STATE ROADS ON THE UNIT MAINTAINED BY DOT		
Cortland 12 (Baker School House SF)	NYS Rte 41	0.3
Cortland 14 (Hoxie Gorge SF)	NYS Rte 11	0.1
Cortland 14 (Hoxie Gorge SF)	Interstate 81	1.7
Cortland 15 (Hoxie Gorge SF)	Interstate 81	0.5
Cortland 17 (Gee Brook SF)	NYS Rte 41	1.2
Cortland 17 (Gee Brook SF)	NYS Rte 26/41	0.3
TOTAL MILES OF STATE ROADS MAINTAINED BY DOT		4.1
TOTAL MILES OF ALL ROADS ON THE UNIT		35.2

Roads listed above do not necessarily provide access to State Forests within the unit.

APPENDIX XIII Facilities on the Unit That Require Maintenance

State Forest	Type of Facility	Status	Size	Quantity
Day Use Areas/Designated Campsites				
Cortland 2	Picnic Pavilion	Existing		1
Cortland 2	Picnic Table	Existing		1
Cortland 2	Accessible Picnic Table	Existing		1
Cortland 2	Grills	Existing		3
Cortland 2	Accessible Fire Rings	Proposed		2
Cortland 2	Accessible Campsites	Proposed		2
Foot Trails			Miles	
Cortland 2	Finger Lakes Trail	Existing	8.6	

State Forest	Type of Facility	Status	Size	Quantity
Cortland 12	Finger Lakes Trail	Existing	2.0	
Cortland 14	Finger Lakes Trail	Proposed	2.6	
Cortland 15	Finger Lakes Trail	Existing	0.5	
Cortland 15	Finger Lakes Trail	Proposed	2.7	
Total			16.4	
Snowmobile Trails			Miles	Quantity
Cortland 2	Snowmobile Trail	Existing	9.1	3
Cortland 7	Snowmobile Trail	Existing	4.2	3
Cortland 14	Snowmobile Trail	Existing	3.0	1
Cortland 15	Snowmobile Trail	Existing	2.8	1
Cortland 17	Snowmobile Trail	Existing	1.2	1
Total			20.3	
ATV Access route for Disabled Persons with DEC Permit			Miles	Quantity
Cortland 14	ATV Trail	Existing	0.9	2
Cortland 14	ATV Trail	Proposed	0.5	1
Recreational Bridges				Quantity
Cortland 2	Foot Bridge	Existing		1
Cortland 15	Snowmobile Bridge	Existing		2
Cortland 17	Foot Bridge	Existing		1
Total				3
Parking Areas				
Cortland 2	Parking Area	Existing		1
Cortland 2	Parking Area	Proposed		1
Cortland 14	Parking Area	Proposed		1
Cortland 17	Parking Area	Existing		2
Papish Pond MUA	Parking Area	Proposed		1
Total				6
Roads			Miles	Quantity
Cortland 2	Roads (PFARS/Haul Roads)	Existing	8.9	10
Cortland 7	Roads (PFARS/Haul Roads)	Existing	2.0	1
Cortland 12	Roads (PFARS/Haul Roads)	Existing	1.8	1
Cortland 14	Roads (PFARS/Haul Roads)	Existing	2.5	3
Cortland 15	Roads (PFARS/Haul Roads)	Existing	0.5	1
Cortland 17	Roads (PFARS/Haul Roads)	Existing	1.5	5
Total			17.2	21
Shale Pits			Acres	Quantity
Cortland 2	Shale Pit	Existing	1.9	3

State Forest	Type of Facility	Status	Size	Quantity
Cortland 7	Shale Pit	Existing	0.1	1
Cortland 12	Shale Pit	Existing	0.1	1
Cortland 14	Shale Pit	Existing	2.5	3
Total		Existing	4.6	8
Signs				Quantity
Cortland 2	Forest Identification Sign	Existing		1
Cortland 2	Forest Identification Sign	Proposed		1
Cortland 12	Forest Identification Sign	Existing		2
Cortland 14	Forest Identification Sign	Proposed		1
Cortland 15	Forest Identification Sign	Existing		1
Cortland 17	Forest Identification Sign	Existing		1
Papish Pond	Misc. Signs	Existing		2
Total				9
Kiosks				
Cortland 2	Informational Kiosk	Proposed	2 Panel	1
Cortland 7	Informational Kiosk	Proposed	1 Panel	1
Cortland 12	Informational Kiosk	Proposed	1 Panel	1
Cortland 14	Informational Kiosk	Proposed	1 Panel	1
Cortland 17	Informational Kiosk	Proposed	1 Panel	1
Papish Pond	Informational Kiosk	Proposed	2 Panel	1
Total				6
Boundary Lines (desired acquisitions are not listed)			Miles	
Cortland 2	Boundary Line	Existing	28.9	
Cortland 7	Boundary Line	Existing	10.2	
Cortland 12	Boundary Line	Existing	14.5	
Cortland 14	Boundary Line	Existing	8.3	
Cortland 15	Boundary Line	Existing	9.0	
Cortland 17	Boundary Line	Existing	10.3	
Papish Pond	Boundary Line	Existing	3.2	
Total			84.4	
Barriers			Size	Quantity
Cortland 2	Metal Gate	Existing	14'	1
Cortland 2	Metal Gate	Proposed	14'	1
Cortland 2	Boulders	Proposed	8 rocks	1
Cortland 7	Metal Gate/Boulders	Proposed	14'/ 8 rocks	4
Cortland 15	Metal Gate	Proposed	14'	1
Cortland 15	Boulders	Proposed	8 rocks	1

State Forest	Type of Facility	Status	Size	Quantity
Cortland 17	Metal Gate	Existing	14'	1
Cortland 17	Boulders	Existing	8 rocks	2
Papish Pond	Metal Gate	Existing	14'	1
Total				13
Ponds				
Cortland 17	Embankment	Existing		2
Cortland 17	Spillway (primary & auxiliary)	Existing		3
Cortland 17	Water Body	Existing	25.7 acres	2
Papish Pond	Embankment	Existing		1
Papish Pond	Spillway (primary & auxiliary)	Existing		2
Papish Pond	Water Body	Existing	39.9 acres	1
Papish Pond	Boat Launch	Existing	55'x20'	
Mowing Needs (excluding roads)			Acres	
Cortland 2	Grassland Bird Habitat	Existing	22.5	
Cortland 2	Cheningo Day Use/Camping Area	Existing	11.6	
Cortland 17	Seed Orchards	Existing	53.1	
Cortland 17	Grassland Bird Habitat	Existing	7.1	
Cortland 17	Embankment/Spillway	Existing	3.1	
Papish Pond	Embankment/Spillway	Existing	1.3	
Total			98.7	

APPENDIX XIV Supplemental Mineral Resources Information

Oil & Gas Exploration and Development Authorization

DEC is authorized under Environmental Conservation Law, Article 23, Title 11 to lease State lands for oil and gas exploration and development and underground gas storage. DEC is not authorized to lease State park lands including the Adirondack and Catskill Preserves. DEC does not regulate leases on private land. Leasing of State lands has occurred since the 1930's.

The Division of Mineral Resources acts as the leasing agent for State lands, working with the Division of Lands and Forests to identify areas suitable for leasing and develop area-specific special conditions and stipulations to provide for exploration and development in a safe, environmentally sound manner consistent with surface management goals.

Detailed information on leasing processes can be found on the DEC Division of Mineral Resources web site, www.dec.state.ny.us/website/dmn/index.html.

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) 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 and Forests 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. 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.

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 Generic Environmental Impact Statement On the Oil, Gas and Solution Mining Regulatory Program (Draft, 1988) 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 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 (TRP) issued by the Division of Lands and Forests. 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 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. Mining operations are regulated by the Division of Mineral Resources.

There are no mining contracts, permits or operations on any areas in this UMP. 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 UMP.

APPENDIX XV Rules for Establishment of Special Management Zones

DEC Division of Lands and Forests Management Rules for Establishment of Special Management Zones on State Forests Version: June 2008

Streams, Wetlands, Ponds, Lakes & Spring Seeps	
Streams include naturally occurring perennial[2] and intermittent[1] drainages having defined channels. **Special management zone[4]** widths are from the edge of high water channels or, for wetlands[6], the edge of seasonally saturated soils. A spring seep is a permanent spring where water emerges from the ground and flows across the soil surface without defined bed and banks. The limits of the seep are demarked by the extent of surface water. All distances are in horizontal feet.	
Activity	**Guidelines**
Mineral Exploration and Development	• Mineral Exploration: Refer to *Guidelines for Seismic Testing on DEC Administered State Land* Draft 12/20/07 • Development Surface disturbance prohibited within 250'.
Silviculture	• Spring Seeps and DEC Classified, Federally Classified, and Unclassified Wetlands[6]: No timber harvesting equipment allowed in any wetland or spring seep. Any trees cut within any wetland or spring seep must be winched out. Maintain at least 75% of pre-harvest basal area evenly spread throughout both the wetland or spring seep and a 100' **Special Management Zone**[4] surrounding wetland or spring seep. • Ponds & Lakes: 50' **Protection Buffer**[3]***** next to water body & additional 100' **Special Management Zone** retaining at least 75% of pre-harvest basal area. • Perennial Streams[2]: 100' **Special Management Zone** on each side of stream. First 50' next to stream is a **Protection Buffer***. The next 50' - maintain at least 75% of pre-harvest basal area. • Intermittent Streams[1]: 100' **Special Management Zone** on each side of naturally occurring intermittent streams. Maintain at least 75% of pre-harvest basal area within **Special Management Zone**.

Streams, Wetlands, Ponds, Lakes & Spring Seeps	
Skid Trails	• Keep skid trails at least 100' from wetlands and water bodies and at least 150' away when adjoining slopes are greater than 10%. • No skidding through spring seep origin. Where roads and trails must cross spring seeps, locate them as far from the origin as possible and ensure that crossings are at right angles to the spring seep. • Must follow guidelines presented in *New York State Forestry BMPs for Water Quality Field Guide* (BMP Field Guide) and stream crossing permit procedures.
Haul Roads**	• Avoid construction within 250' of wetlands. Must follow BMP Field Guide.
Log decks and Landings	• Must follow BMP Field Guide. • Keep log decks and landings at least 250' from all wetlands, streams and ponds.

Vernal Pools[7]	
The Vernal Pool **Depression*** consists of the area fully covered by water at maximum capacity (usually during spring thaw), which may not always be wet during the period when timber is being harvested. During the dry season, the high-water mark can often be determined by the presence of blackened, water- or silt-stained leaves, aquatic debris along the edges, or a clear change in topography from the pool depression to the adjacent upland. (Phillip G. deMaynadier and Jeffry E. Houlahan, "Conserving Vernal Pool Amphibians in Managed Forests," *Science and Conservation of Vernal Pools in Northeastern North America*, CRC Press, Boca Raton, FL, 2008, p. 269)	
Mineral Exploration and Development	• Mineral Exploration: Refer to *Guidelines for Seismic Testing on DEC Administered State Land* Draft 12/20/07 • Development Surface disturbance prohibited within 250' of the vernal pool depression.

Vernal Pools[7]	
Silviculture	• No disturbance, including tree cutting and use of timber harvesting equipment, is allowed within the **Vernal Pool** depression*. • Establish **Special Management Zone** at least 100' wide (if possible, wider is better) around perimeter of **vernal pool** depression*. Maintain at least 75% crown cover and minimize disturbance of leaf litter and soil. In **Special Management Zone**, avoid using heavy machinery when possible and restrict logging to frozen or dry ground conditions if necessary. Do not create ruts deeper than 6 inches. If rutting begins, immediately suspend operations. Any ruts must be leveled.
Main Skid Trails	• Keep main trails out of the 100' wide **Special Management Zone**.
Haul Roads** and Landings	• Avoid construction within 250' of **Vernal Pool** depression*.

Recreational Trails	
Mineral Exploration and Development	• Mineral Exploration: Refer to *Guidelines for Seismic Testing on DEC Administered State Land* Draft 12/20/07 • Development Surface disturbance prohibited within 250' of trails.
Silviculture	• Where possible, avoid clear cutting over and across any recreational trail. • Whenever harvesting close to or over a recreational trail, contact must be made with representatives of known trail adopter or trail user groups to explain the rationale for the harvest. Additionally, educational or interpretive signs explaining the rationale for the harvest must be installed on site. Tops & slash must be kept at least 25' back from the edge of trails.

*All perimeters of **Protection Buffers** and **Vernal Pool** depressions will be designated on the ground with flagging or paint. For Harvests, buffers and depressions will be identified on sale maps and equipment restrictions will be listed in the *Notice of Sale*.

** Haul roads refer to permanent, unpaved roads which are not designed for all weather travel, but may have hardened or improved surfaces with artificial drainage. ["Unpaved Forest Road Handbook." NYS DEC Bureau of State Land Management. 30 August 2004.]

POSSIBLE SILVICULTURAL EXEMPTION CONSIDERATIONS

(*All Exemptions must be approved by Central Office and documented in the Stand Prescription*)

1. Habitat Improvement: Deviations from any guidelines may be undertaken to improve habitat for specific species.
2. Control of Invasive Species: Deviations from any guidelines may be undertaken in order to control or eradicate invasive species.
3. Equipment Access: Equipment may be allowed in otherwise restricted areas when:
    - Ground is frozen and can support equipment without breaking ice and disturbing the soil and vegetation.
    - Ground is dry and can support equipment without creating mud, ruts or significantly*** disturbing the vegetation.
    - BMPs can be used - only if the BMPs can support equipment without significantly*** disturbing the soil and vegetation. On temporary routes, BMPs must be removed, leaving behind minimal evidence of access.
    - Using existing roads which are in stable condition or may be improved to a condition with less site impact than if the road where to be relocated.
4. Buffer Restoration and Plantation Conversion: Deviations from any guidelines may be undertaken when (in addition to **Possible Exemption Considerations** #1 & 2) equipment can be used according to Exemption #3 and:
    - A weather event has occurred which has jeopardized the health and integrity of the forest. Trees may be removed if it is determined their mortality may:
        a) Negatively impact the ecological function of the wetland, **Protection Buffer**, and **Special Management Zone** or hinder natural stand regeneration. Consultation with DEC biologists and/or ecologists is recommended prior to making management decisions.
        b) Negatively impact the safety of the site, creating hazardous conditions during public recreation and administrative activities.
    - A regeneration inventory is completed with adequate natural regeneration established (with documentation) and over 25% of the existing basal area of trees 6" DBH and larger are made up of plantation softwood species which are:
        a) Mature or over-mature and in decline or
        b) At risk from wind-throw or
        c) At risk of mortality due to insect or disease

5. Other: Any other activity proposed to be undertaken within a **Vernal Pool** or **Special Management Zone** must be approved by Central Office on a case-by-case basis.

*** *The DEC Regional Forester or his designee (Supervising Forester, Senior Forester, Forester Trainee or Forestry Technician) will determine what is or is not significant, and may consult with other DEC staff within the Region and Central Office when necessary*.

DEFINITIONS

1. Intermittent Stream - A naturally occurring watercourse that periodically goes dry or that has a stream flow of less than 0.1 cubic feet per second, as estimated using a method or methods generally accepted and in common use and practice at the relevant time. **Intermittent Streams**

should have definable banks and bed with widths between banks greater than 12" and a depth from high water mark to the bed greater than 4".

2. Perennial Stream - That portion of any fresh surface watercourse for which the New York State Department of Environmental Conservation (DEC) has adopted or may hereafter adopt pursuant to applicable law or regulation, the following classifications or standards: AA, AA (T), AA (TS), A, A (T), A (TS), B, B (T), B (TS), C (T), C (TS), or D and appearing on maps (USGS or otherwise) maintained and on file with the DEC, or portions of such streams if the classification is verified in the field, or by similar method, by the DEC.

3. Protection Buffer - A vegetation strip or management zone a minimum of fifty feet wide maintained to mitigate the impacts of actions on adjacent lands, to enhance aesthetic values, or as a best management practice. No vehicular, construction or harvesting equipment will be allowed to operate within **Protection Buffers** unless at designated crossings to access other management areas. **Protection Buffers** will not be considered for active commercial forest management or salvage and should be generally allowed to develop naturally. Any vegetation to be removed or disturbed within **Protection Buffers** for any purpose must have appropriate justification with documentation in an approved *Conceptual Approval Form*. Intervention will be considered to protect forest health (e.g. fire or invasive plant or animal control), to protect, restore or enhance significant habitats, to develop recreational opportunity and public access and to mitigate erosion potential. **Protection Buffers** will be installed around designated streams, wetlands, ponds and lakes as described by the *DEC Division of Lands and Forests Management Rules for Establishment of Special Management Zones on State Lands*, and any other land feature requiring protection. The external boundary of **Protection Buffers**, defining the border with adjacent land, will be designated with flagging or paint that can be discernable from other markings during active management. Widths will be measured to the accuracy of a pace and may vary based on terrain and other limiting factors. **Protection Buffers** may be part of a **Special Management Zones**.

4. Special Management Zone - A vegetation strip or management zone extending from wetland boundaries, high-water marks on perennial and intermittent streams, **Vernal Pool** depression, spring seeps, ponds and lakes, recreational trails, camp grounds and other land features requiring special consideration. Portions of a **Special Management Zone** may include **Protection Buffers** where applicable as described in the *DEC Division of Lands and Forests Management Rules for Establishment of Special Management Zones on State Lands*.

5. Riparian Area – The area of land and water forming a transition from aquatic to terrestrial ecosystems along streams, lakes, ponds, wetlands and **Vernal Pools**.

6. Wetland – (*Federal*) Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adopted for life in saturated soil conditions (40 CFR 230.3[t]). Wetlands generally include swamps, marshes, bogs, sloughs, flats and similar areas. Three features must be present for an area to be declared a wetland: 1) hydrology; 2) wetland-

dependent vegetation; and 3) soil types associated with water saturated conditions (US EPA Clean Water Act).
DEC classified wetlands or "freshwater wetlands" are a) lands and submerged lands… supporting aquatic or semi-aquatic vegetation; b) containing the remnants of any vegetation that is not aquatic or semi-aquatic that has died because of wet conditions over a sufficiently long period, provided that such wet conditions do not exceed a maximum seasonal water depth of six feet and that such conditions can be expected to persist indefinitely barring human intervention; c) lands and water substantially enclosed by aquatic or semi-aquatic vegetation as per a) and b); and d) the waters overlying the areas set forth in a) and b) and the lands underlying c) [N.Y. Environmental Conservation Law Section 24-0107(1)]. DEC classified wetlands generally are 12.4 acres (5 hectares) or larger in size or, if deemed to be of unusual local importance, wetlands smaller than 12.4 acres.

7. Vernal Pool – A seasonal body of standing water that typically forms in the spring from melting snow and other runoff, usually dries in the hotter months of summer, and often refills in the autumn. They normally are free of fish and provide important breeding habitat for many terrestrial or semi-aquatic species such as frogs, salamanders, and turtles ["Vernal Pool." The American Heritage Science Dictionary. Houghton Mifflin Company. 03 Jun. 2007.] **Vernal Pools** capable of sustaining populations of **indicator species** generally have a water depth of 18-inches or more at the deepest point within the depression when at full capacity (usually during the spring thaw). Current science on amphibian use of **Vernal Pools** has identified zones in an attempt to help managers make decisions while protecting the different components of the vernal pool system (shading, species development, breeding, foraging, etc.). Although each zone contains valuable components for the life-cycle of amphibians using vernal pools, land managers have to incorporate these components into the many other uses on the land (under multiple use management and landscape ecology) and rate or prioritize these values against one another. Beyond the **Special Management Zone** surrounding vernal pools, staff may wish to establish further protection of the terrestrial non-breeding habitat utilized by amphibians depending on the relative value of the **Vernal Pool** compared to the other demands on the landscape. [For further guidance on management recommendations beyond the Special Management Zone, see Table 13.2 (page 270) in "Conserving Vernal Pool Amphibians in Managed Forests," by Phillip G. deMaynadier and Jeffry E. Houlahan found in *Science and Conservation of Vernal Pools in Northeastern North America*, 2008.]

APPENDIX XVI The Americans with Disabilities Act

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 requires, in part, that reasonable modifications must be made to the services and programs of public entities, 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.

Consistent with ADA requirements, the Department incorporates accessibility for people with disabilities into the planning, construction and alteration of recreational facilities and assets supporting them. This UMP incorporates an inventory of all the recreational facilities or assets supporting the programs and services available on the unit, and an assessment of the programs, services and facilities on the unit to determine the level of accessibility provided. In conducting this assessment, DEC employs guidelines which ensure that programs are accessible, including buildings, facilities, and vehicles, in terms of architecture and design, transportation and communication to individuals with disabilities. A federal agency known as the Access Board has issued the ADA Accessibility Guidelines (ADAAG) for this purpose.

An assessment was conducted, in the development of this UMP, to determine appropriate accessibility enhancements which may include developing new or upgrading of existing facilities or assets. The Department is not required to make each of its existing facilities and assets accessible so long as the Department's programs, taken as a whole, are accessible. New facilities, assets and accessibility improvements to existing facilities or assets proposed in this UMP are identified in the Proposed Management Actions section.

For copies of any of the above mentioned laws or guidelines relating to accessibility, contact Carole Fraser, DEC Universal Access Program Coordinator at 518-402-9428 or cafraser@gw.dec.state.ny.us

APPENDIX XVII Generic Environmental Impact Statement for State Forest Management

This Unit Management Plan (UMP) does not propose pesticide applications of more than 40 acres, any clearcuts of 40 acres or larger, or prescribed burns in excess of 100 acres. Therefore the actions in the plan **do not exceed the thresholds** set forth in the Strategic Plan/Generic Environmental Impact Statement for State Forest Management**.**

This Unit Management Plan also does not include any of the following:

- Forest management activities occurring on acreage occupied by protected species ranked S1, S2, G1, G2 or G3
- Pesticide applications adjacent to plants ranked S1, S2, G1, G2 or G3
- Aerial pesticide spraying by airplane or helicopter
- Any development of facilities with potable water supplies, septic system supported restrooms, camping areas with more than 10 sites or development in excess of other limits established in this plan.
- Well drilling plans
- Well pad densities of greater than one well pad in 320 acres or which does not comply with the limitations identified through a tract assessment
- Carbon injection and storage or waste water disposal

Therefore the actions proposed in this UMP do not require any separate site specific environmental review.

Any action taken by the Department on this unit that is not addressed in this Unit Management Plan and is not addressed in the Strategic Plan/Generic Environmental Impact Statement may need a separate site specific environmental review.

APPENDIX XVIII Summary of Public Comments with Department Responses

A public meeting was held March 11, 2013 at the Hartnett Elementary School located in Truxton, to gather public input on the Draft Taylor Valley and Draft Hill and Hollow Unit Management Plans (UMP). The meeting was advertised through a press release and a notice in the DEC's Environmental Notice Bulletin. Additionally, public meeting notices were sent by email or postcard, to various stakeholders including people that attended the scoping meetings for the UMPs (Taylor Valley scoping meeting was held at the McGraw Central School during February 2010), DEC DEC Adopt-A-Natural Resource/Volunteer Stewardship Program partners, other interested persons/groups and local libraries.

About 85 people attended the public meeting. The meeting allowed attendees the opportunity to meet informally with DEC staff; provide written comments via comment cards that were provided by the DEC and also on easels that were located throughout the gymnasium; listen to a short presentation about the UMPs; and provide verbal comments with use of a microphone.

A total of 71 public comments were received from 44 people for the Draft Taylor Valley UMP. Twenty-seven people spoke at the meeting during the verbal comment session. Of those, 23 were

directed towards the Taylor Valley UMP or both UMPs. The remaining five speakers were specific to the Hill and Hollow UMP. In addition to the previously mentioned 23 people that provided verbal comments, 27 people provided written comments directed towards the Taylor Valley UMP or both UMPs (six people provided duplicate comments by verbal and written means). These comments came in the form of easels (at the meeting), comment cards (provided at the meeting), emails and letters. Comments, whether verbal or written that were specific to the Hill and Hollow UMP are not included in this UMP.

The check boxes on the 15 comment cards, that were received, indicate that the people that provided comment cards were interested in the following: minerals (80%), hiking (60%), wildlife habitat (47%), ecosystem management (47%), biodiversity (40%), history (33%), hunting/trapping (27%), mountain biking (27%), fishing (20%), cross country skiing (20%), other uses (20%) camping (13%), homeowner firewood (13%), snowmobiling (13%), forest products(7%), geocaching (7%), and horseback riding (7%).

Verbal and written comments that were received for the Taylor Valley UMP were similar. The following table contains broad comment subjects that were received by number of occurrences and percentage of occurrences based on people that provided comments.

Broad Comment Subject	Occurrences	%
Opposed to Oil & Gas or High Volume Hydraulic Fracturing	24	65
Support Hiking Use/Trails on the Unit	8	22
Support Mountain Bike Use or Inclusive Use of Trails on the Unit	5	14
Support Hunting and/or Trapping on the Unit	4	11
Support Timber Harvesting on the Unit	4	11
Opposed to All Terrain and/or Off-Highway Vehicles on the Unit	4	11
Opposed to Hunting and/or Trapping on the Unit	3	8
Support Oil & Gas or High Volume Hydraulic Fracturing	3	8
Support Early Successional Habitat Creation on the Unit	2	5
Support a Working Forest That Contributes to The Local Economy	2	5
Concerned with Climate Change and How the UMP Addresses it	1	3
Concerned with Access During the Winter	1	3
Overall Support for the Entire UMP	1	3

The following table contains verbal and written comments that were received at the public meeting (March 11, 2013) or during the public comment period (March 11, 2013 to April 11, 2013) and responses to those comments. The comments found below have, in some cases, been edited for length and clarity. Comments with the same viewpoints have been combined to save space.

General	
Please focus on retaining the natural state of these lands and allow us to enjoy it without overdevelopment.	The focus of the plan is to retain the natural state of these lands by conducting sustainable forest management activities, limiting developed recreational facilities and prohibiting surface

We urge the DEC continue their work as responsible stewards and protect these valuable public lands for watershed protection, public recreation, wildlife habitat and open space conservation.	disturbance associated with high volume hydraulic fracturing.
The plan is educational, informational, substantial and balanced. The plan includes an exhaustive review of plant and animal species, habitat types, water, soil, and mineral resources, natural and cultural history as well as recreational opportunities and management plans for all of the above. DEC personnel are to be commended for this thorough study and for it presentation. A balanced approach is important, but there is room for a variety of different activities.	The plan takes an ecosystem management approach to balance the many values and services that the forests provide such as clean air and water, biodiversity, recreational opportunities, and sustainable forest products.
There should be a more adequate question and answer session in your presentation; after all we are here to find out what is being done. Ambiguous presentation at best.	The purpose of the meeting was to gather input from the public regarding the Draft Taylor Valley UMP. Therefore, the majority of time, at the meeting was dedicated to the verbal comment period. The presentation was not meant to inform the public of everything in the plan. The draft UMP was released prior to the meeting, so the public had time to review it.
Involve DEC professional, technical, and legal staff (including ECOs) in proposed UMP development on adjacent lands to or in close proximity to state owned lands.	DEC professional, technical and legal staff (Forest Rangers) was included in the development of this UMP. The plan does not include assessments of privately owned property except for desired acquisitions and land-use at a landscape level.
With climate change, there will be more droughts, extreme weather, erosion and changes to species present on these forests. What are the plans for climate change?	The plan mentions reducing carbon loss and increasing carbon sequestration both of which reduce the amount of green house gasses released into the atmosphere. An adaptive management objective was created under Objective A.4.f to address things such as species migration.
Mineral Resources (Responses to comments using the term “fracking” assumed that said comments have to do with high-volume hydraulic fracturing and not the type of “fracking” used to stimulate 1992 GEIS consistent wells)	

The proposed UMP is predominately positive. The lone exception is the guidelines for oil and gas exploration and development. The Division of Mineral Recourses has different goals than the rest of the DEC.	DEC's stated mission is "To conserve, improve and protect New York's natural resources and environment and to prevent, abate and control water, land and air pollution, in order to enhance the health, safety and welfare of the people of the state and their overall economic and social well-being." The Division of Minerals Resources is responsible for ensuring the environmentally sound, economic development of New York's non-renewable energy and mineral resources for the benefit of current and future generations in such a manner to prevent waste, to obtain a greater ultimate recovery of oil and gas and protect the correlative rights of all persons.
ADK is deeply concerned about the potential for hydro-fracking on DEC managed state forests. ADK will oppose by all legal means available any effort by the state to grant new or expanded leases to private entities for natural gas exploration and exploitation in and beneath our state forests. DEC managed public forests deserve the same level of legal protection as our state parks managed by the Office of Parks, Recreation and Historic Preservation (OPRHP).	There are currently no plans to allow high-volume hydraulic fracturing on state lands as detailed in Chapter 7, section 7.4.4 of the September 2011 revised draft "Supplemental Generic Environmental Impact Statement on the Oil, Gas and Solution Mining Regulatory Program" (SGEIS) related to well permit issuance for horizontal drilling and high-volume hydraulic fracturing in the Marcellus Shale and other low-permeability gas reservoirs. This document may be accessed at: http://www.dec.ny.gov/energy/75370.html . 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.
Why is the state proposing gas drilling on state lands when it is not approved in New York State? Where is this directive coming from? Oil and gas drilling should be prohibited on all state lands including those in this plan. Oil and gas leasing should be prohibited within the unit and removed from the plan.	Gas drilling is allowed in the State and has been done on state land for many decades. High-volume hydraulic fracturing has not yet been approved to proceed. 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. DEC does not lease the oil and gas rights under state parks.

The DEC and the Governor should not lease the oil and gas rights *under* DEC managed public lands and state parks, leasing in the immediate area will undoubtedly have a negative impact on the environment and the tourism economy supported by recreationists. The introduction of gas drilling, which is by nature is a large scale industrial process, would run directly contrary to the other purposes of the State Forests such as habitat protection and recreation. The ATV restrictions in this plan make perfect sense, but they should also be applied to oil and gas. Oil and gas development and high-volume hydraulic fracturing should be banned for the same reasons that ATVs are restricted (surface disturbance and noise will effect neighbors).	Assessments and decisions regarding the leasing of oil and gas resources other than high-volume hydraulic fracturing would be based on the most current technologies, public policies, regulations, public feedback and the potential for environmental impacts. Assessments and decisions would not be made until the Unit is nominated. . The leasing process is a public process described in detail at: http://www.dec.ny.gov/energy/1577.html . Possible future outcomes include: no leasing, non-surface occupancy leasing or surface occupancy leasing with significant safeguards and restrictions. No nominations have been received nor has the State proposed or planned any state land lease sales. Any proposed lease sale would include notice of public meetings and an opportunity for public comment.
There seems to be contradicting messages with what is in the plan and what is being said at the meeting regarding hydraulic fracturing and these state lands. I am confused on the position of hydraulic fracturing in the plan. It says that surface disturbance will be prohibited, but also talks about leasing with surface rights, areas compatible with wells, etc…	Objective C.3 *(Provide for mineral resource exploration and development while protecting natural resources and quality recreational opportunities)* addresses both high volume hydraulic fracturing types of oil and gas development and extraction and those consistent with the Generic Environmental Impact Statement on the Oil, Gas and Solution Mining Regulatory Program (GEIS) finalized in 1992. Objective C.3 has been clarified by referencing oil and gas development and extraction consistent with the 1992 GEIS where appropriate. Surface disturbance associated with high-volume hydraulic fracturing will not be allowed on State Forests (see below).
I urge the DEC to prohibit hydrofracking on and under state land. If subsurface mining can be prohibited, then hydraulic fracturing should be able to be prohibited.	The Revised Draft of the Supplemental Generic Environmental Impact Statement (SGEIS) on the Oil, Gas and Solution Mining Regulatory Program, completed in September, 2011, has studied hydraulic fracturing extensively and will be used to

It is our responsibility to make sure that hydrofracking does not happen to ensure our children have the same opportunities that we currently have on state forests. All the positive proposals in the plan such as forest management, habitat creation, water protection and recreational opportunities will all be ruined if hydraulic fracturing is allowed. Do not allow hydraulic fracturing. Since most state forest and wildlife management areas were established to protect groundwater supplies and aquifers, it is a violation of both the letter and spirit of the state constitution and state law to lease gas exploitation rights underneath state lands. Drilling, specifically hydrofracking would put the State land in danger of spills, smog from truck traffic, water degradation, introduction of toxic chemicals and radioactive materials into the environment, clearcutting, habitat destruction, and noise and light pollution. It is unacceptable to risk the land, air, wetlands, water, and human health by allowing hydraulic fracturing in the Taylor Valley Unit. Industrialization is incompatible with many of the objectives of the state forests such as maintaining and improving air and water quality, preserving wildlife habitat, reducing invasive plant and animal species, preventing storm-water runoff and soil erosion and preserving cultural resources. The forests provide	make decisions regarding high volume hydraulic fracturing for the unit. The revised draft SGEIS is available at: http://www.dec.ny.gov/energy/75370.html Section 1.7.14 of the revised draft SGEIS states that surface disturbance associated with high-volume hydraulic fracturing will not be allowed on State Forests because it is inconsistent with the suite of purposes for which those lands were acquired. This surface disturbance prohibition does not include accessing subsurface resources located within these areas from adjacent private lands. With the surface disturbance restriction in place, the Department concludes that impacts to the specified state-owned lands from high-volume hydraulic fracturing would be minimized and accessing mineral resources underneath State lands from adjacent private lands is consistent with the purposes for which these State lands were acquired.

recreational, timber, hunting, fishing and wildlife viewing that would be degraded by industrialization. The surface disturbance done just outside of state forests will not only have a negative impact on air and water quality, tourism will decline and the value of that ecosystem will be greatly diminished. I am concerned with the deforestation that comes with gas drilling. These trees hold water. If deforested, the risk of flooding would increase. High-volume hydraulic fracturing on or adjacent to NYS land/forests is totally incompatible w/ recreational use of the forests and with good forest management practices. Allowing subsurface drilling simply enables pollution and land disturbance nearby, which will equally devalue the quality of the forest and its uses. Think: truck traffic; noise, dust, and light pollution, diesel exhaust, spills, erosion, fragmentation, etc… I am very upset to see the wiggle room for high-volume hydraulic fracturing put into this document. State Forests should be off the table for both surface and subsurface disturbance, but at least for surface disturbance as promised at SGEIS meetings.	
If the DEC leases mineral rights under these state forests the network of infrastructure in the vicinity of the designated foot trails will undoubtedly increase the likelihood of motorized trespass on these trails which will diminish the resource greatly for other recreationist.	Tract assessments performed by the surface managers of the state forest will ensure appropriate buffers between trails and oil and gas activity. Access roads will be gated and locked. There would be no reason to assume an increase in the likelihood of motorized trespass. DEC experience with existing wells drilled on state land supports this assumption.

How is it possible that the DEC believes that it can permit natural gas drilling, enforce the regulations they have imposed for this practice while also having adequate enforcement to prevent the increased risk of motorized trespass on recreation trails?	The Divisions of Mineral Resources and Lands and Forests are responsible for enforcement of oil and gas activities and lease conditions. There is no reason to assume any increased risk of motorized trespass and enforcement of this restriction is delegated to the Forest Rangers and ECOs which will not detract from the responsibilities of the programs overseeing oil and gas activity.
Visual impacts of natural gas drilling are neither minor nor short term. Many small towns and businesses rely on seasonal tourists who visit state forests and support local economies. Disruption of these areas is extremely undesirable in lands that are revered for their natural character and outdoor recreation opportunities. Hunting, fishing and tourism will all be at risk if gas drilling is allowed on these forests.	Visual impacts associated with oil and gas well drilling operations that are consistent with the 1992 GEIS were evaluated in accordance with SEQRA and are minor and short term as detailed in Chapter VIII, pages 8-6 and 8-7 of the GEIS. The 2011 revised draft SGEIS assess visual impacts associated with HVHF in Chapter 6, section 6.9. However, this activity will not be permitted on state land. SEQR requirements for drilling individual gas have been fulfilled by 1992 GEIS. There are no significant impacts from these operations identified with respect to hunting, fishing and tourism. In accordance with the "New York State Leasing of State Lands for Oil and Gas Development 2011 Report" (http://www.dec.ny.gov/energy/1579.html), there are 242 oil and gas wells located on or unitized with state lands. We are unaware of any long-term negative impacts to hunting, fishing or tourism associated with drilling operations that have occurred on or near state lands.
Health concerns from air pollution from ground level ozone and noxious chemical can have serious health impacts. Methane, the principal component of natural gas is as much as 25 times as potent as CO2. Experts say that during the transport 3-5% of the methane escapes from pipelines and compressor as fugitive emissions.	The potential impacts to air from high-volume hydraulic fracturing have been described in detail in the 2011 revised draft SGEIS and impacts from other drilling operations have been addressed in the 1992 GEIS in accordance with SEQRA. This comment is related to general impacts associated with gas well drilling and natural gas transportation which are not being addressed through the UMP process and are not specifically related to this UMP.
Increases in Traffic - the DEC estimates between 3850 and 8905 truck trips for	Truck traffic estimations from DEC are related to high-volume hydraulic fracturing which will not be

each well pad. Increases in traffic lead to more traffic accidents, noise, congestion and chemical spills. People wanting to enjoy the scenic beauty, wineries, fishing, hunting, will not want to drive on busy country roads following diesel frack rigs to vacation in our state forests.	allowed on these state forests. This appears to be a general comment regarding high-volume hydraulic fracturing and the UMP process is not the mechanism to address these comments.
Will the gas leases allow for hunting on leased land? Is it safe to fire a gun in a gas field? – What happens if there's a lease and a gun is fired? What happens if a bullet hits a well-head or pipeline? Will drilling put all people involved at risk? Will gas well drillers wear hunter orange and will they remain in a designated area during deer season for protection? How vulnerable is game to the pollution that inevitably comes with this heavy industry - spills, blow-outs, mechanical failures, human error, waste pits, air pollution? How will animals, particularly deer, be protected from consuming poisonous materials at the drill site? Will it be safe to consume the meat from any wild game if the animal drinks from waste pits or spills? Will testing for pollutants of venison be required to be done? And paid for by whom? Who will decide if hunter-harvested game can be consumed if the game is exposed to hydro-fracking	Leasing has no requirements or restrictions with respect to hunting on state lands. There is no risk from stray bullets to the integrity of the well or well head. There have been more than 75,000 wells drilled in NY and we are not aware of any incidents that have been associated with bullets impacting a gas well or other well head equipment. Many wells currently exist on state lands with no disruption to hunting. Impacts to wildlife are addressed in Chapter 6, section 6.4 of the 2011 revised draft SGEIS, Chapter VIII, section J of the GEIS which fulfill the SEQR requirements for oil and gas well operations and potential impact to wildlife. Special conditions to each lease agreement allows for limited surface disturbance during certain times of the year when there may be high recreation use which would include hunting. Limitations and consideration with respect to hunting would be enforced through conditions on the Temporary Revocable Permit that an operator is required to obtain from the DEC prior to any work commencing on state land to drill a gas well.

operations? The DEC? The Department of Health? The Individual?	
Drilling for gas is contrary to the State's goal of reducing greenhouse gas emissions and slowing down the warming of the planet. Natural gas emits methane into the atmosphere, something that is far worse than CO^2 as a greenhouse gas. Methane escapes at every stage from drilling to consumption.	The State also has a goal with respect to drilling for natural gas is detailed in ECL Article 23, Title 3, § 23-0301 which allows for the environmentally sound development, production, and utilization of oil and gas in the state . Drilling for natural gas would not be contrary to the state's goal to reduce greenhouse gas emissions since it would require evaluation of impacts associated with greenhouse gas emissions and the need to reduce them as part of the regulatory process. The state's goals also include preventing the waste of natural gas which would ensure regulation to reduce natural gas emissions to the greatest extent possible.
If it is too risky in the New York City and Skaneateles watersheds, why is hydraulic fracturing not risky just 30 miles to the east on these state lands?	Setbacks are proposed to the watersheds containing the New York City and Syracuse (Skaneateles Lake) unfiltered surface drinking water supplies that have a USEPA Filtration Avoidance determination. Justification as to why these setbacks are being imposed are described in detail in Chapter 6, section 6.1.5.1 and Chapter 7, section 7.1.5 of the revised draft SGEIS. These setbacks only apply to proposed high-volume hydraulic fracturing in the watersheds. Wells consistent with the 1992 GEIS have been drilled in the Skaneateles Lake watershed.
I am not only concerned with the short term negative impacts of hydraulic fracturing, I am concerned with after these wells stop producing and the industry moves on. These well casings rot away along with improper concrete work creating entry points for all kinds of problems.	The DEC Division of Mineral Resources regulatory program ensures that wells are properly constructed in accordance with the regulatory requirements and that any wells that develop problems in the future are repaired or plugged.
I am concerned that pressure associated with hydraulic fracturing could increase the already high levels of radon in the area.	Naturally occurring radioactivity in the Marcellus Shale and other formations that exist in the subsurface in the state and potential for release and exposure to the public is addressed in detail in the revised draft SGEIS in Chapter 6, section 6.7
Hydraulic fracturing should not be allowed, it will cause the value of adjacent property to be diminished.	Economic impacts associated with high-volume hydraulic fracturing are addressed in detail in the revised draft SGEIS in Chapter 6 with property values specifically addressed in section 6.8.3.4.

I am against hydraulic fracturing, which is an industrial process. I am also concerned that the gas industry would not follow water withdrawal protocols (has been done in other states) and would completely drain ponds and streams. The major concern is gas activities draw heavily on fresh water reserves-consuming, diminishing and spoiling aquifers. Reduced oxygen levels, high levels of dissolved solids and pollutants negatively affect aquatic life, including fish.	Protection of surface water bodies is addressed in detail in the revised draft SGEIS on high-volume hydraulic fracturing in Chapter 7, section 7.1. DEC Division of Water requires permits for withdrawals of water that exceed specific thresholds detailed at: http://www.dec.ny.gov/lands/313.html. Additionally, in both of the UMP areas, the Susquehanna River Basin Commission has authority to regulate water withdrawals and consumptive use for industries in the basin which includes water withdrawals associated with oil and gas operations.
The economics of gas drilling do not make sense. Over the last two years, unemployment has risen in every county except two in Pennsylvania.	Economic impacts associated with high-volume hydraulic fracturing are addressed in detail in the revised draft SGEIS in Chapter 6 and employment is specifically detailed in section 6.8.1. State land leasing reports from 2005 through 2011 detail the economics associated with drilling on state land that can be accessed at: http://www.dec.ny.gov/energy/1579.html .
Please prohibit gas pipeline networks, access roads associated with oil and gas development and compressor stations on state lands. Low frequency noise can be heard for several miles. Leasing the state-owned gas rights may encourage the routing of pipelines over state lands and promote more intensive gas drilling on adjacent private land. State lands were not purchased for the purpose of industrial drilling, compressor stations, or pipelines. All must be excluded; they fragment the forest, pollute the water and air and devalue the property of neighbors. Although I am opposed to gas drilling on these state lands. If the need for pipelines is absolutely necessary, they should be located on existing right of	For wells proposed to be drilled consistent with the 1992 GEIS, impacts associated with pipelines and access roads will be evaluated. Assessments and decisions regarding the leasing of oil and gas resources other than high-volume hydraulic fracturing would be based on the most current technologies, public policies, regulations, public feedback and the potential for environmental impacts. Assessments and decisions would not be made until the Unit is nominated. Possible future outcomes include: no leasing, non-surface occupancy leasing or surface occupancy leasing with significant safeguards and restrictions. Siting of pipelines that are greater than 1000 feet in length and have operating pressures exceeding 125 pounds per square inch are regulated by the New York State Public Service Commission (PSC). Under Public Service Law Article VII, the PSC would review on a case-by-case basis the potential environmental impacts associated with creating and maintaining a gas pipeline right-of-way. The PSC

ways instead of creating new openings in the forest. While we would hope that no new gas drilling takes place in this Unit, we feel that 250 feet is not a sufficient buffer between well pads and trails and that 250 feet should be the *minimum* buffer between access roads & utility development and trails.	has the authority to dictate the location of a right-of-way, and to condition how construction, site closure and right-of-way maintenance are conducted to ensure the least practical adverse impacts to the environment. This includes potential adverse impacts that may cause forest fragmentation and loss of grassland and forest habitat. These must necessarily be addressed on a case-by-case basis because the PSC has jurisdiction over where a pipeline would be located and, thus, the environmental resources that are affected.
We should be drilling for gas like other states. Upstate is losing population due to loss of economic viability. There is room to develop our resources and provide jobs up here. The Marcellus Shale could help save upstate.	Comments noted.
If the DEC were to lease its mineral rights it could force adjoining landowners, even unwillingly, into natural gas leases as well. The surface destruction done just outside of state forests will not only have a negative impact on air and water quality, tourism will decline, and the value of that ecosystem will be greatly diminished.	Natural gas leases are private agreements between a company and mineral rights owners. No government entity has jurisdiction regarding these leases. A landowner cannot be forced to enter into a lease agreement. Adjacent landowners may undergo compulsory integration in accordance with state Environmental Conservation Law (ECL) Article 23, Title 9. Impacts associated with oil and gas well drilling operations that can be conducted on state lands are addressed in detail in the "Generic Environmental Impact Statement on the Oil, Gas and Solution Mining Regulatory Program" (GEIS) finalized in 1992 and the findings concluded that there would be no significant impact to the environment from drilling individual gas wells with the mitigation measures defined in the GEIS. The GEIS may be accessed at: http://www.dec.ny.gov/energy/45912.html . Impacts associated with high-volume hydraulic fracturing are addressed in the September 2011 revised draft SGEIS; however, these activities will not be permitted on state land.
I am opposed to oil and gas drilling on state land and the compulsory	Compulsory integration law in ECL Article 23, Title 9, cannot be addressed as part of the UMP

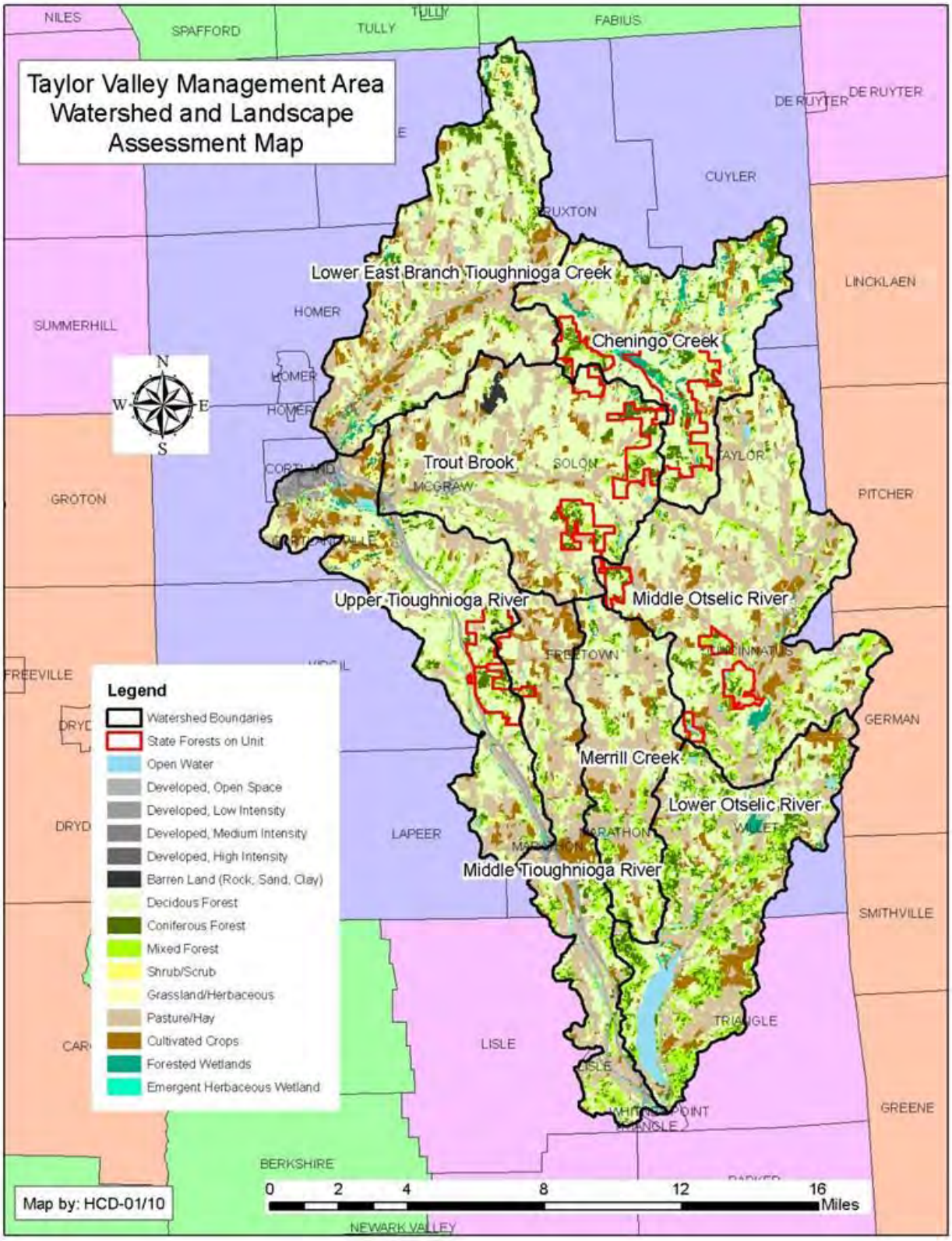
integration laws that could force me to frack my property if these lands are leased. I am very concerned with the possibility of being compulsory integrated. This is not fair. We have done our homework and decided that leasing was not for us, now we are in danger of having our mineral rights seized. This would be an extreme conflict of interest since the DEC would be the landowner to force the integration and also would be the agency to explain the three choices, none of which are no, to an integrated landowner. Drilling on State Forest land along with compulsory integration would reduce my property value and my quality of life.	process. To change the laws would require an act of the New York State Legislature. The New York State Legislature expressly declared in ECL Article 23 that: "It is hereby declared to be in the public interest to regulate the development, production and utilization of natural resources of oil and gas in this state in such a manner as will prevent waste; to authorize and to provide for the operation and development of oil and gas properties in such a manner that a greater ultimate recovery of oil and gas may be had, and that the correlative rights of all owners and the rights of all persons including landowners and the general public may be fully protected. . ." ECL 23-0301. The compulsory integration process is the means by which the Department protects correlative rights. The revised draft SGEIS in Section 6.8 describes the general impacts of mineral rights on property values and the impact of well development on adjacent properties.
Surprised by the over the top exaggerated fracking comments.	Comment noted.
Recreation	
Trapping should be outlawed. It is inhumane.	Recreational trapping is a legal and valuable tool in nuisance wildlife population control. It will continue to be allowed on the unit to control beaver populations as well as other species of wildlife.
I am opposed to new trail development because it will limit trapping opportunities. You are not allowed to set traps within 100 feet of a public trail. I concerned with the plans to expand "established" hiking trails and other trails. I do not begrudge outdoor enthusiasts, but as a trapper these trails remove large tracts of land from the area allowing trapping. We are not allowed to set traps within 300 feet of an established trail, as a license purchasing and trained trapper it feels like I am losing an opportunity to peruse game on a considerable amount	The New York State Trapping Regulations only restrict the use of body gripping traps in proximity to public trails. Body gripping traps cannot legally be set on land within 100 feet of a public trail. There is no restriction on the distance that foot-encapsulating, foothold and cage or box traps must be set from public trails. There is also no restriction for body gripping traps that are set in water. The recreational trails will remain open during trapping season. There are regulations in place to ensure that trapper's rights are respected. These include the following: No one may disturb a trap lawfully set by another person; No one may remove a lawfully trapped animal from another person's trap; and No

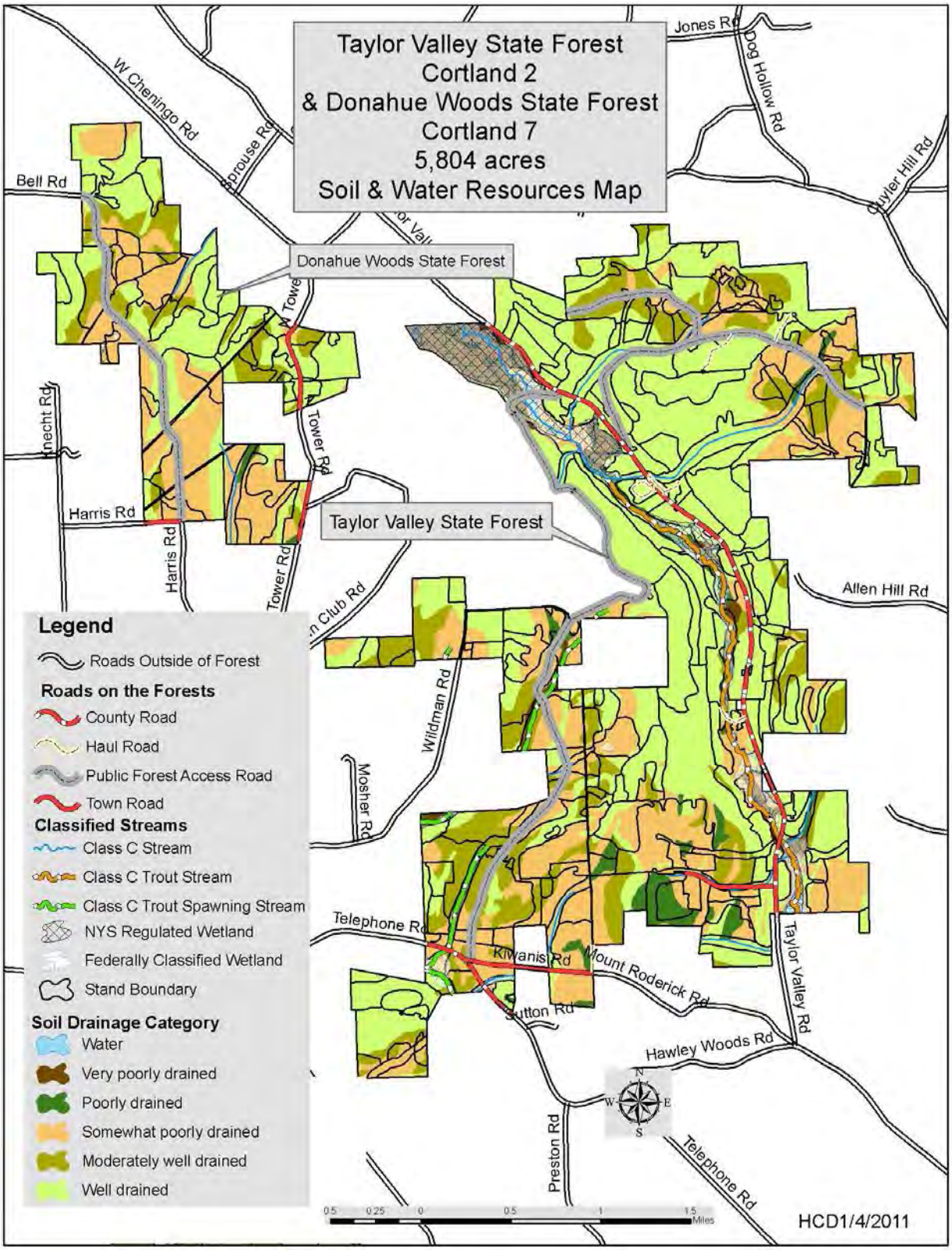
of state land. Could these trails be closed during open trapping season, or could the hiking, biking, dog walking etc. public be required to purchase a use stamp and respect my right trap? For every mile of additional trail, 24.2 acres are lost to the use of humane, efficient body gripping traps on land. This UMP currently has 32.3 miles of public trails excluding 781 acres from this activity. The proposed additional 5.3 miles will remove an additional 128 acres. While other kinds of traps would still be allowed near these trails, the captured animals would be alive, and potentially dangerous to curious hikers and their pets.	one may harass a trapper while he or she is trapping. The New York State Trapping Regulations defines a "trail" as a designated, marked and maintained path or way designed for non-motorized recreational use. This UMP has 13.7 miles of existing or proposed trails that meet this definition. These trails reduce the amount of land available, for using body gripping traps, by about 332-acres. Ninety-six percent of the land within the Unit or nearly 9,500-acres (excluding open water), is available for trappers to use body gripping traps.
Minimize use of ATVs and other motorized devises.	Upon evaluation of past efforts to accommodate ATV use on Taylor Valley State Forest and in other areas of the State and the many impacts and constraints associated with off road vehicles, within the context of ecosystem management, the DEC has made a final determination to prohibit ATV use on the unit; except for those specific routes designated for use by DEC-issued Motorized Access Permit for People with Disabilities (MAPPWD).
Limit hunting to a minimum necessary.	Recreational hunting is a legal and valuable tool in controlling wildlife populations.
I suggest that trail usage signage be installed on the Finger Lakes Trail ASAP to inform and educate all recreational users and assist ranger enforcement.	Comment noted.
I support the VSP program and its replacement stewardship program that permits volunteers to maintain the trail, relocate it when necessary and obtain TRPs for major projects like bridges, puncheons, lean-tos etc.	The DEC would be unable to accomplish many of the goals in this UMP without the tireless effort of the many volunteers who maintain recreational facilities, pick up trash and improve habitat through the VSP program. DEC will continue to seek assistance in management of this unit from volunteers through volunteer programs.
It should be noted on UMP trail and facility maps that the FLT Main Trail is concurrently the 4600 mile North Country National Scenic Trail. Map	Maps have been changed to include the North Country National Scenic Trail designation.

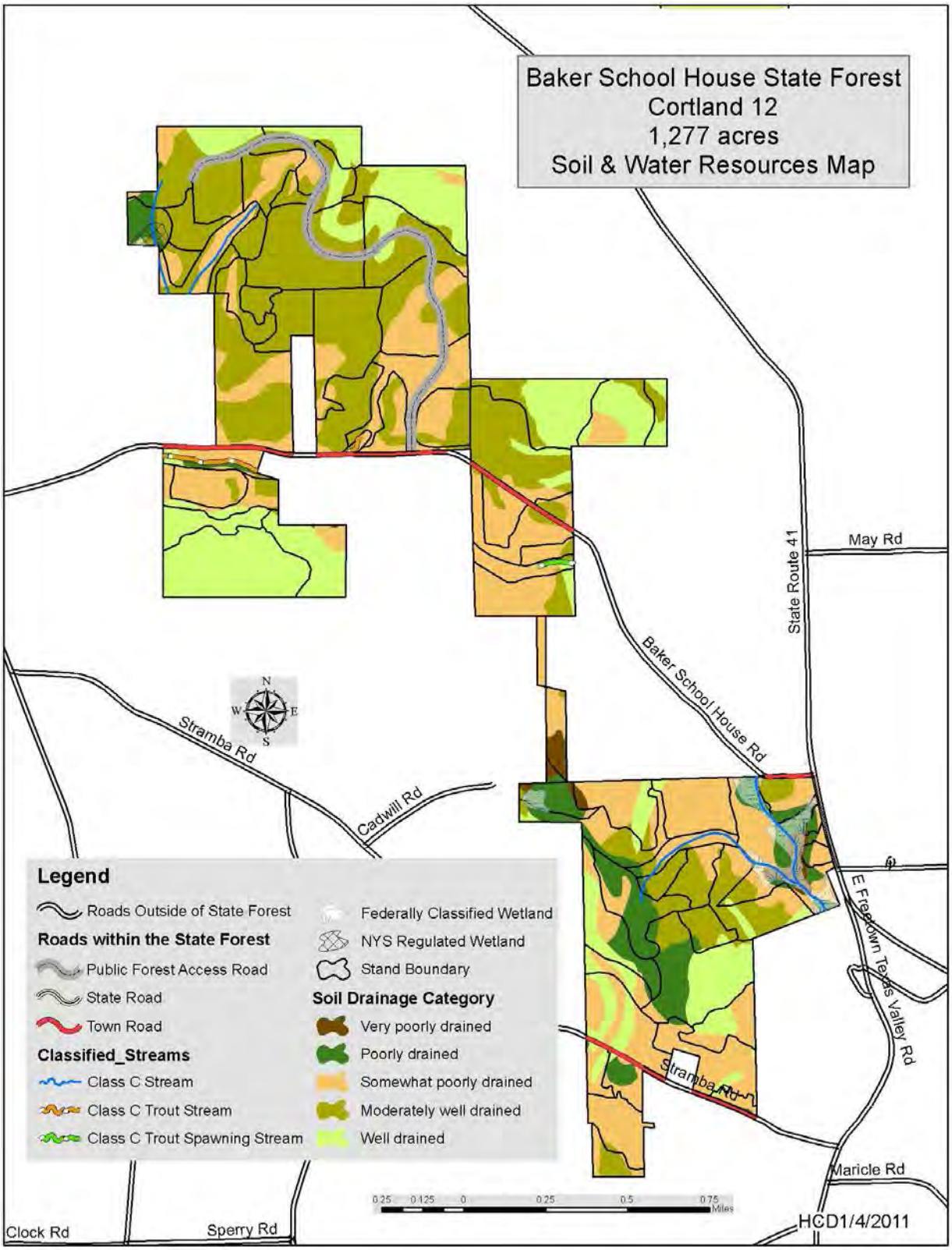
should indicate FLT as well as NCNST on map legend**.**	
The FLTC commends the NYS DEC's recognition of the Finger Lakes Trail's status in these public lands as a single use foot trail in their Statewide Strategic Plan for State Forest Management and applauds its very same designation as set forth in the Plan for this Unit. Foot paths should provide a wilderness kind of experience, which this UMP is giving us by providing pedestrian only trails. Pedestrians and bikers can share trails. Do not restrict trail use to hikers only. It is best to combine the volunteer trail maintenance efforts for both important groups.	Public input gathered during development of this UMP, other UMPs, the Region 7 Draft Recreation Master Plan and the Strategic Plan for State Forest Management indicates that people using foot trails prefer trails be restricted to pedestrian use only because they have a variety of conflicts with other recreationists, especially with motorized use, mountain bikers and horse riders.
I support the use of horses on these lands provided they do not walk on foot paths.	Horses are currently allowed on all areas within the unit except designated foot paths, snow covered snowmobile trails and areas specifically posted for no horses as long as Department policies, rules and regulations are followed.
Need better developed parking area, especially for use during the winter months.	There are two parking areas scheduled to be constructed that should improve winter access. One trail is located at the S59A trailhead (snowmobile trail) at the southern end of Mt. Roderick Public Forest Access Road and the other is located at Papish Pond Multiple Use Area.
I encourage you to work with CNY Dirt to include mountain bike trail construction in Taylor Valley.	Although there are no designated mountain bike trails on the unit, mountain bikes are currently allowed on all areas within the unit except designated foot paths as long as Department policies, rules and regulations are followed. These areas include over seventeen miles of public forest access and haul roads as well as numerous miles of access trails. There are designated multiple-use trail networks where mountain bikes are allowed, that are existing or proposed located on nearby Tuller Hill and Morgan Hill State Forests.
I wonder why a handicapped fishing access site was not proposed for Papish Pond. It would seem like a good idea.	An accessible fishing pier may be considered during future updates to this UMP provided there is public need and support; there are adequate monetary

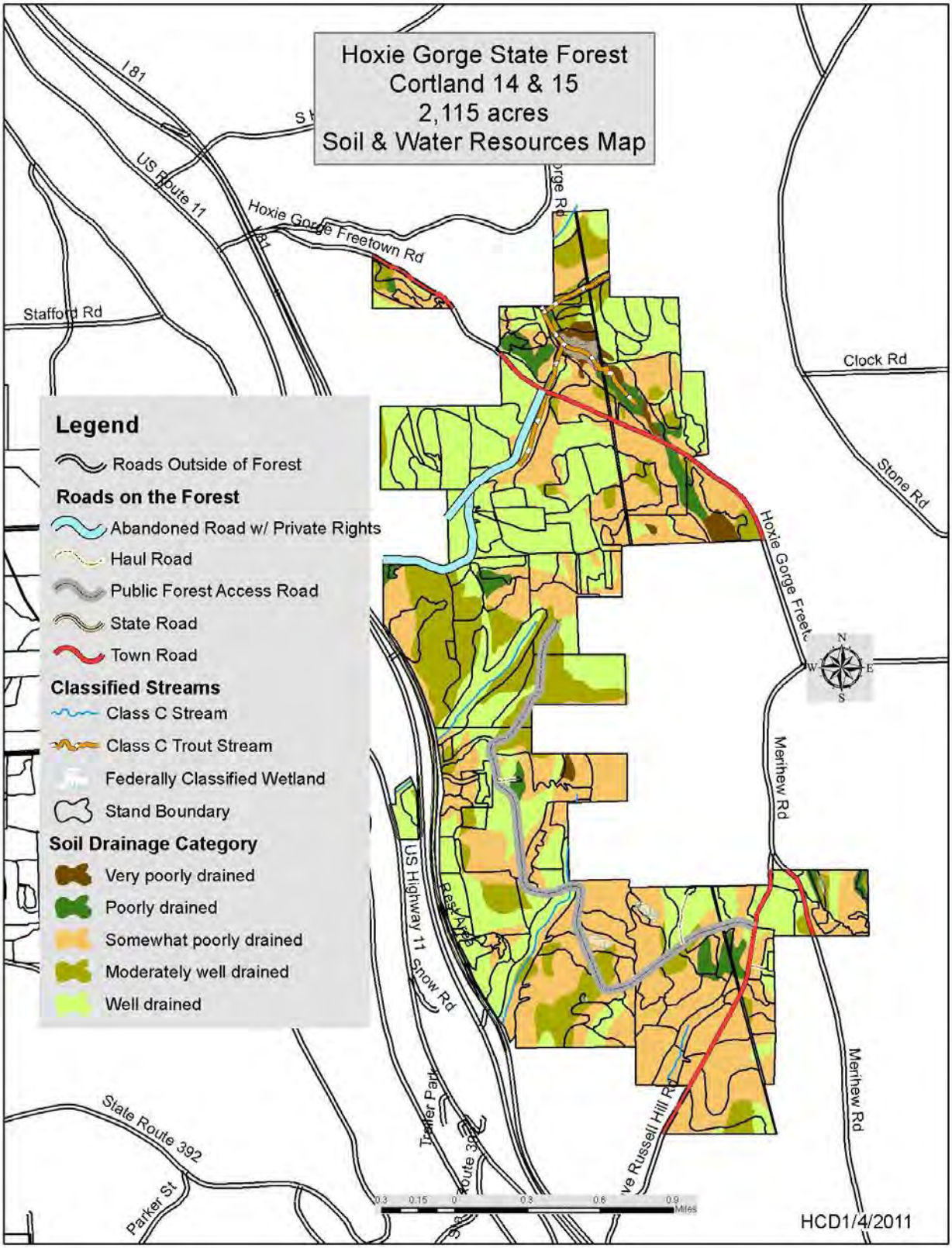
	resources; and the recreation/fisheries resource is still viable.
Ecosystem Management/Wildlife Habitat	
Please emphasize early successional forest management – this in support of small game birds, threatened and endangered birds and other valuable wildlife. Create early successional habitat at a minimal cost to the state by using logging operations and VSP agreements with conservation groups. I also feel that the money from hunting and fishing license sales should go back into wildlife habitat projects on these state lands.	The DEC recognizes that early successional habitat is lacking on the Unit and the surrounding landscape. Therefore the plan outlines an increase in early successional habitat from 5% of the Unit to 12% through sustainable forest management. Hunting and fishing license fees go into the State's Conservation Fund, which is the Division of Fish, Wildlife and Marine Resources primary funding sources. The State lands within this unit are managed by the Division of Lands & Forests, which does not receive money from the Conservation Fund.
I recommend aggressively creating a diverse age structure within the forests to ensure healthy forested ecosystems.	Through active and passive management strategies, the plan looks to create a diverse age structure by using even and uneven-aged management systems to increase early and late successional habitat while reducing the mid successional habitat on the unit.
Forest Products/Economy	
These state forests are very important to the local economy. I am a logger that harvests trees from state forests. They support my family including to help send my children to college. The state forests provide logs to local mills, which provide over a thousand local jobs. Jobs in these rural communities are hard to come by. These forests provide a sustainable heat source (firewood) to local families at a much lower cost than fossil fuels.	One of the goals of this plan is to provide economic benefits to local communities and the State of New York by providing forest resources through the Forest Product Sales Program. Forest products sales provide income to the State, supply raw materials to the forest product industry, create local jobs and supply local families with fuelwood.

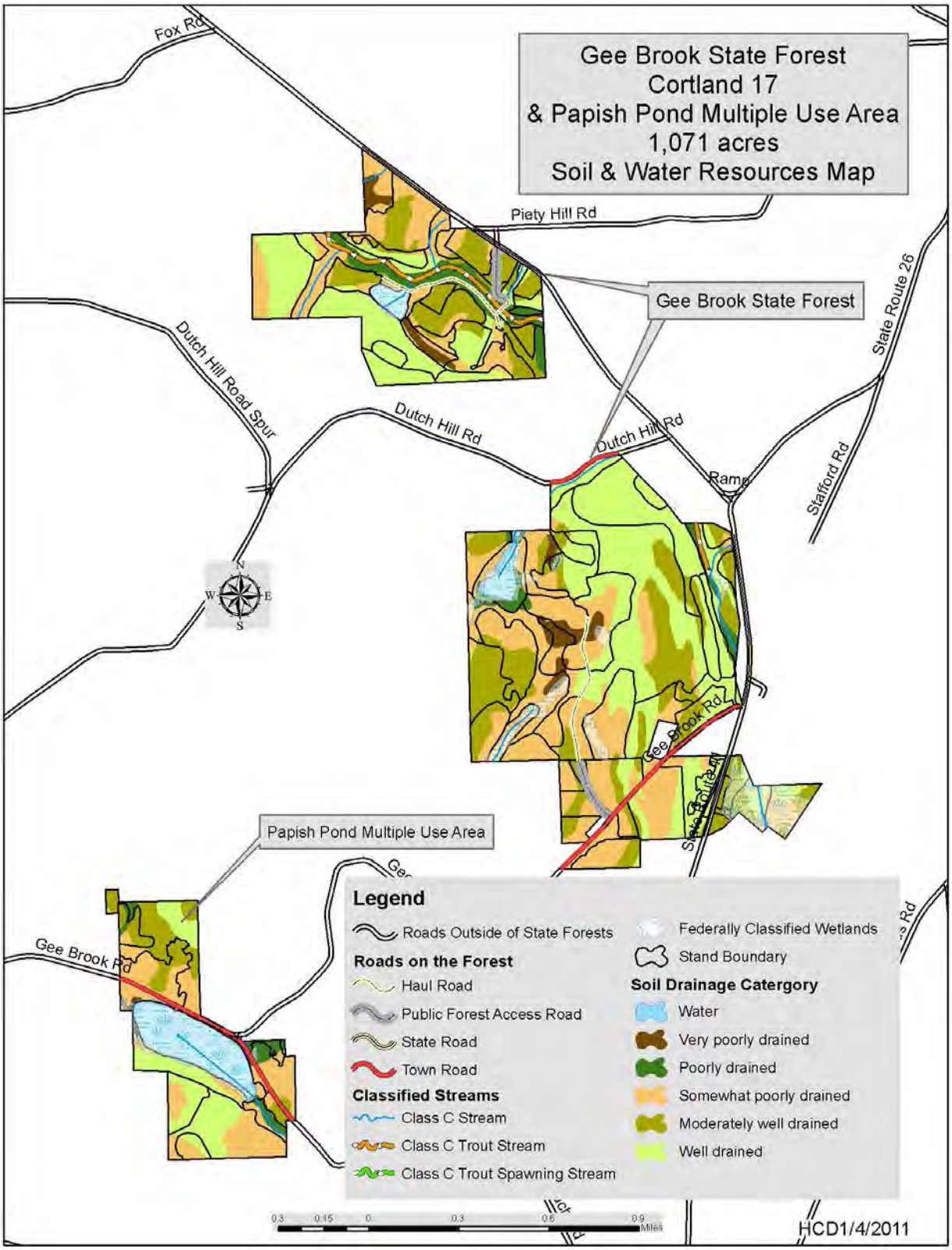
APPENDIX XIX Index for the Maps of the Unit

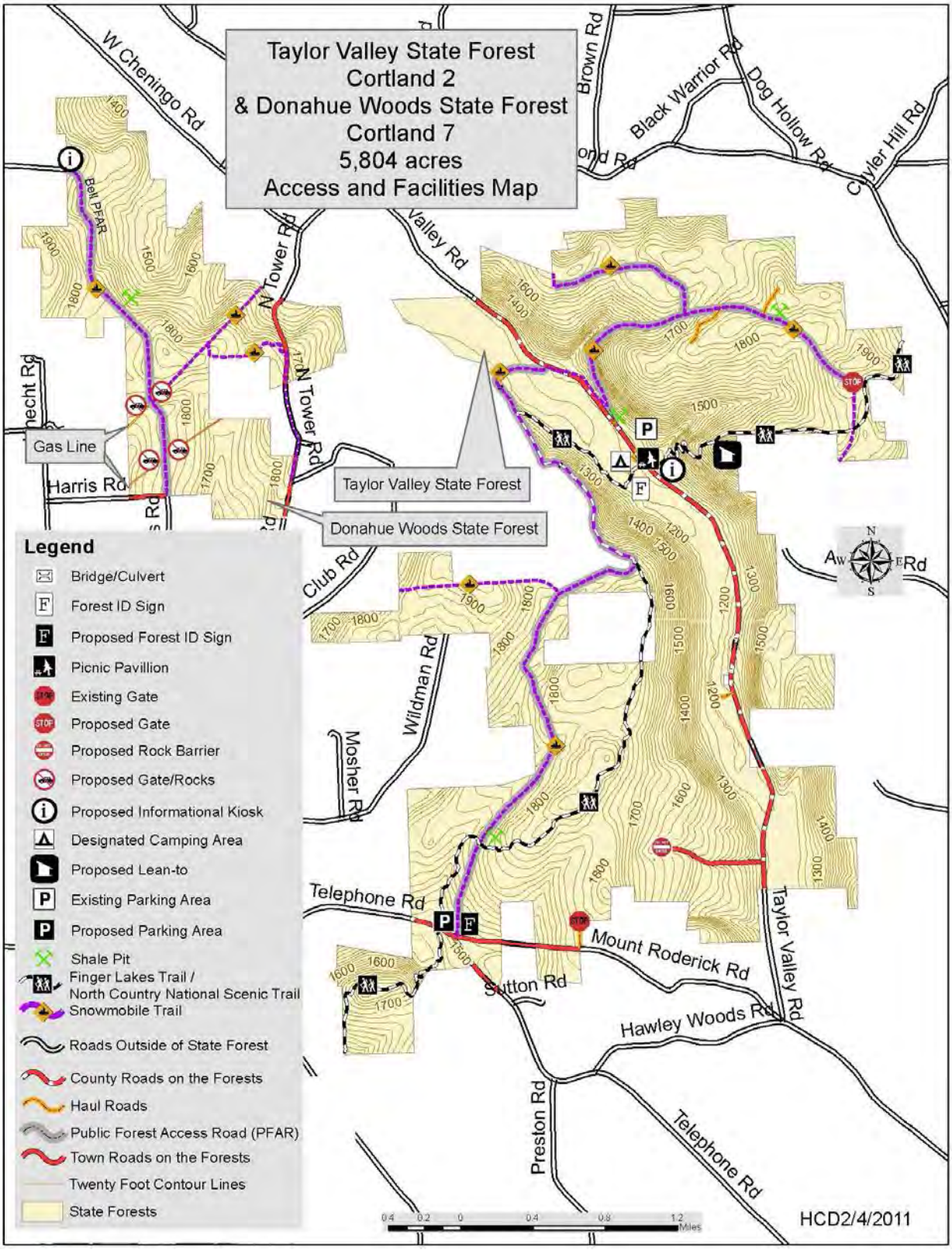

Taylor Valley Management Area
Watershed and Landscape
Assessment Map
NILES
SPAFFORD
TULLY
FABIUS
DE RUYTER
CUYLER
TRUXTON
LINCKLAEN
SUMMERHILL
HOMER
Lower East Branch Tioughnioga Creek
Cheningo Creek
Trout Brook
SOLON
TAYLOR
PITCHER
GROTON
Upper Tioughnioga River
Middle Otselic River
FREETOWN
FREEVILLE
GERMAN
Merrill Creek
Lower Otselic River
LAPEER
MARATHON
Middle Tioughnioga River
SMITHVILLE
TRIANGLE
LISLE
GREENE
BERKSHIRE
NEWARK VALLEY
N
W
E
S
Legend
Watershed Boundaries
State Forests on Unit
Open Water
Developed, Open Space
Developed, Low Intensity
Developed, Medium Intensity
Developed, High Intensity
Barren Land (Rock, Sand, Clay)
Deciduous Forest
Coniferous Forest
Mixed Forest
Shrub/Scrub
Grassland/Herbaceous
Pasture/Hay
Cultivated Crops
Forested Wetlands
Emergent Herbaceous Wetland
Map by: HCD-01/10
0 2 4 8 12 16
Miles

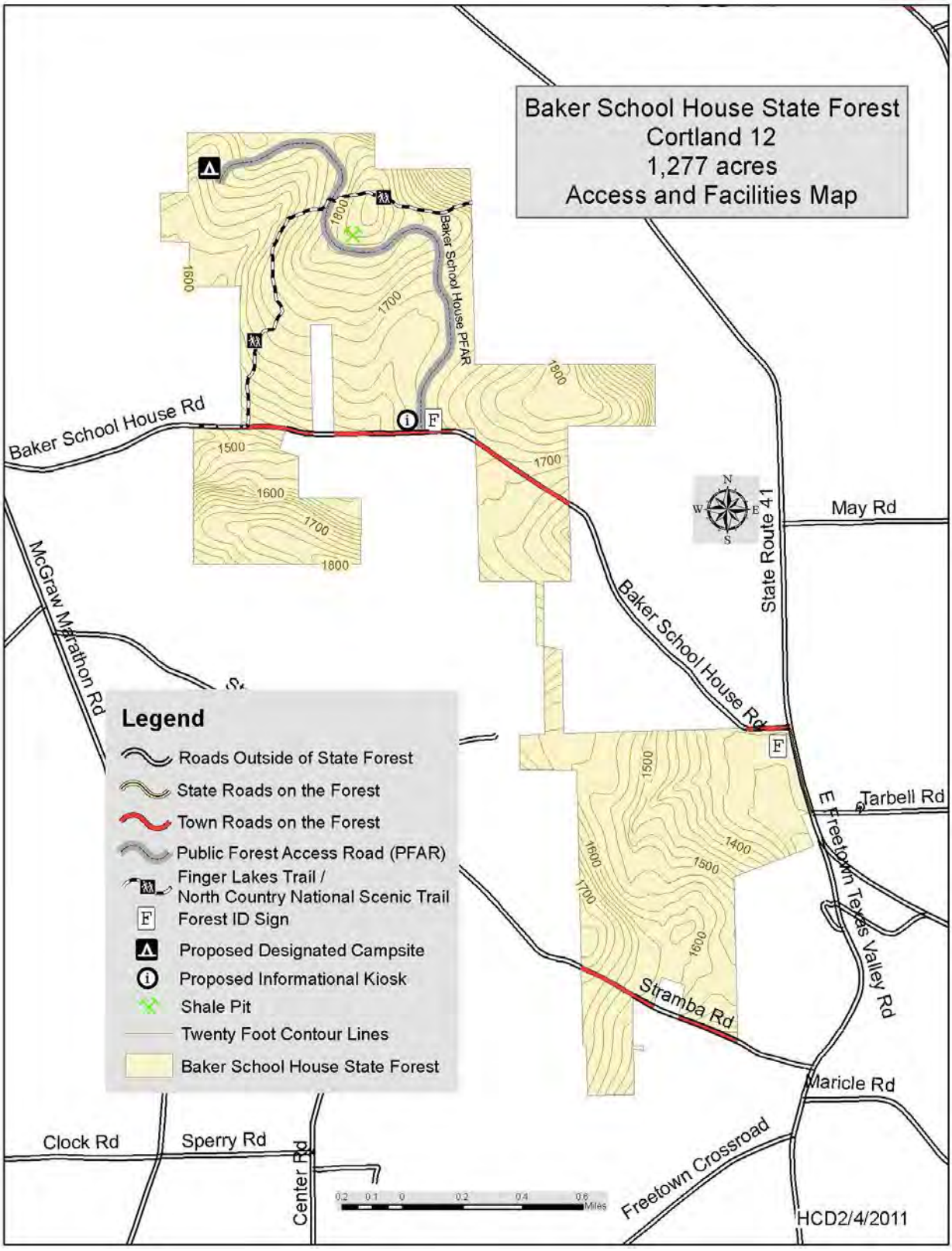

Taylor Valley State Forest
Cortland 2
& Donahue Woods State Forest
Cortland 7
5,804 acres
Soil & Water Resources Map
Donahue Woods State Forest
Taylor Valley State Forest
Legend
Roads Outside of Forest
Roads on the Forests
County Road
Haul Road
Public Forest Access Road
Town Road
Classified Streams
Class C Stream
Class C Trout Stream
Class C Trout Spawning Stream
NYS Regulated Wetland
Federally Classified Wetland
Stand Boundary
Soil Drainage Category
Water
Very poorly drained
Poorly drained
Somewhat poorly drained
Moderately well drained
Well drained
Jones Rd
Dog Hollow Rd
W Cheningo Rd
Sprouse Rd
Bell Rd
Tuyler Hill Rd
Knecht Rd
Tower Rd
Harris Rd
Allen Hill Rd
Wildman Rd
Mosher Rd
Telephone Rd
Kiwanis Rd
Mount Roderick Rd
Taylor Valley Rd
Hawley Woods Rd
Preston Rd
N
W
E
S
0.5 0.25 0 0.5 1 1.5 Miles
HCD1/4/2011

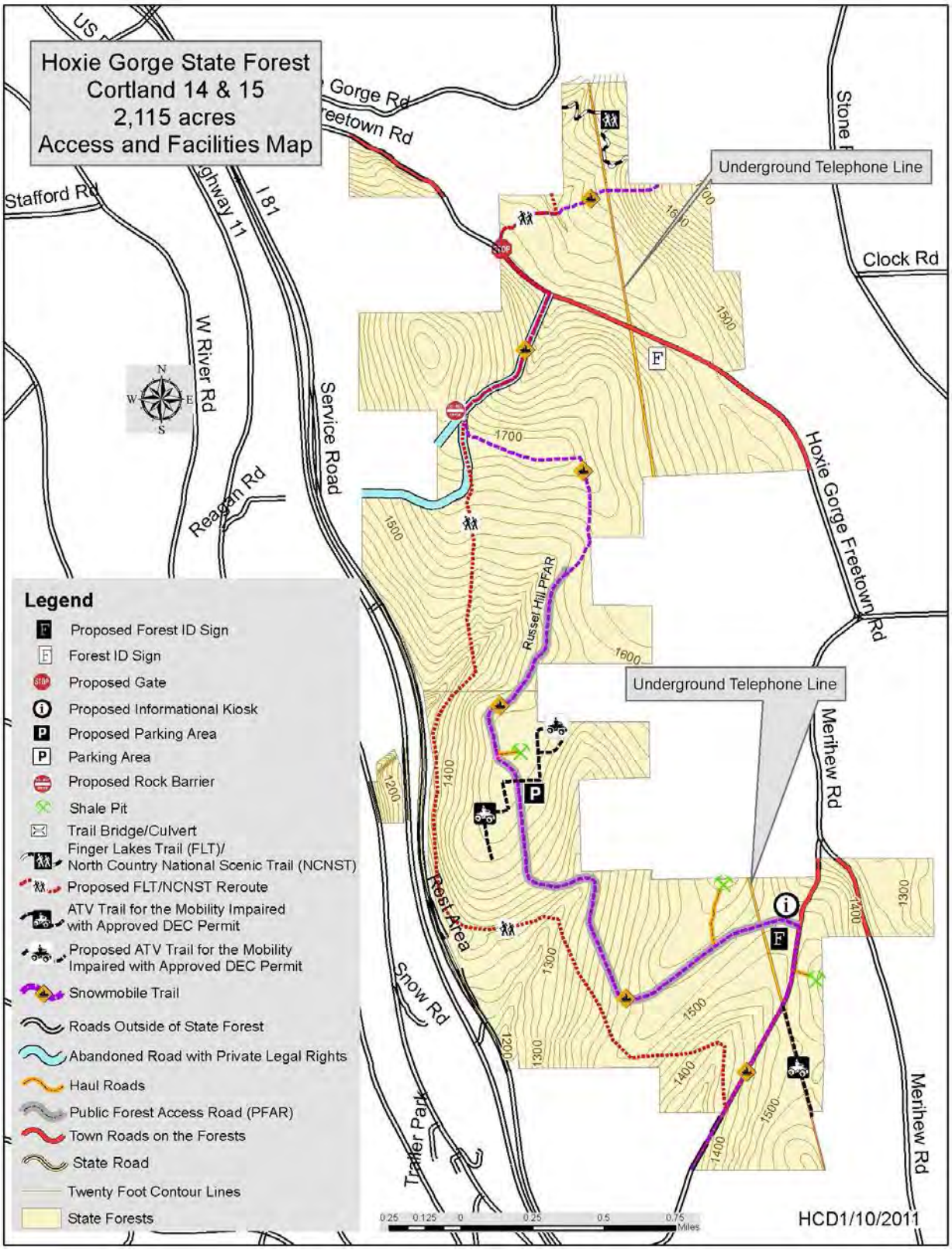

Baker School House State Forest
Cortland 12
1,277 acres
Soil & Water Resources Map
May Rd
State Route 41
Baker School House Rd
Stramba Rd
Cadwill Rd
E Freetown Texas Valley Rd
Maricle Rd
Clock Rd
Sperry Rd
HCD1/4/2011
Legend
Roads Outside of State Forest
Roads within the State Forest
Public Forest Access Road
State Road
Town Road
Classified_Streams
Class C Stream
Class C Trout Stream
Class C Trout Spawning Stream
Federally Classified Wetland
NYS Regulated Wetland
Stand Boundary
Soil Drainage Category
Very poorly drained
Poorly drained
Somewhat poorly drained
Moderately well drained
Well drained
0.25 0.125 0 0.25 0.5 0.75
Miles

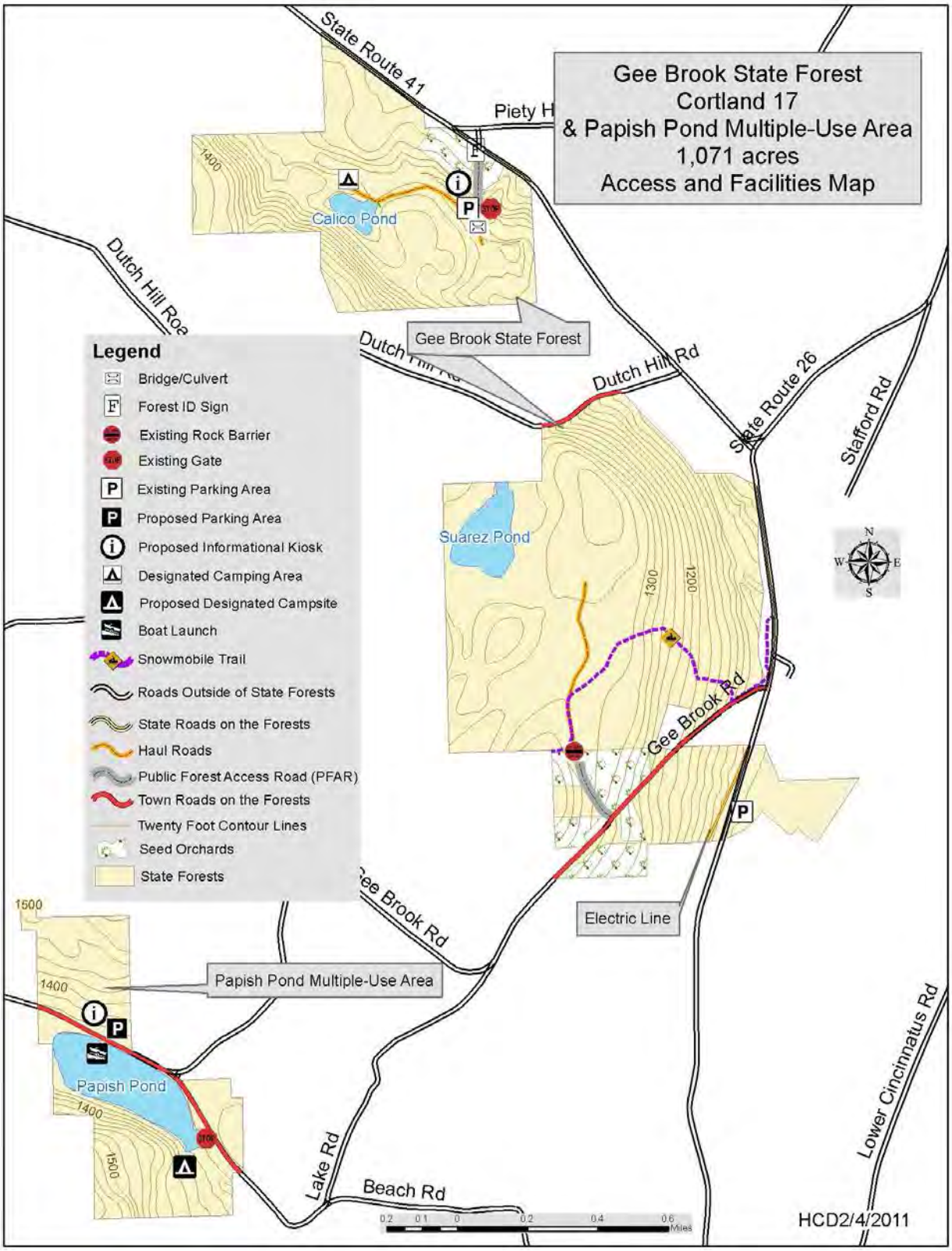

Hoxie Gorge State Forest
Cortland 14 & 15
2,115 acres
Soil & Water Resources Map
Legend
Roads Outside of Forest
Roads on the Forest
Abandoned Road w/ Private Rights
Haul Road
Public Forest Access Road
State Road
Town Road
Classified Streams
Class C Stream
Class C Trout Stream
Federally Classified Wetland
Stand Boundary
Soil Drainage Category
Very poorly drained
Poorly drained
Somewhat poorly drained
Moderately well drained
Well drained
I 81
US Route 11
Hoxie Gorge Freetown Rd
Stafford Rd
Clock Rd
Stone Rd
Merihew Rd
US Highway 11 Snow Rd
State Route 392
Parker St
Russell Hill Rd
N
S
E
W
0.3 0.15 0 0.3 0.6 0.9 Miles
HCD1/4/2011

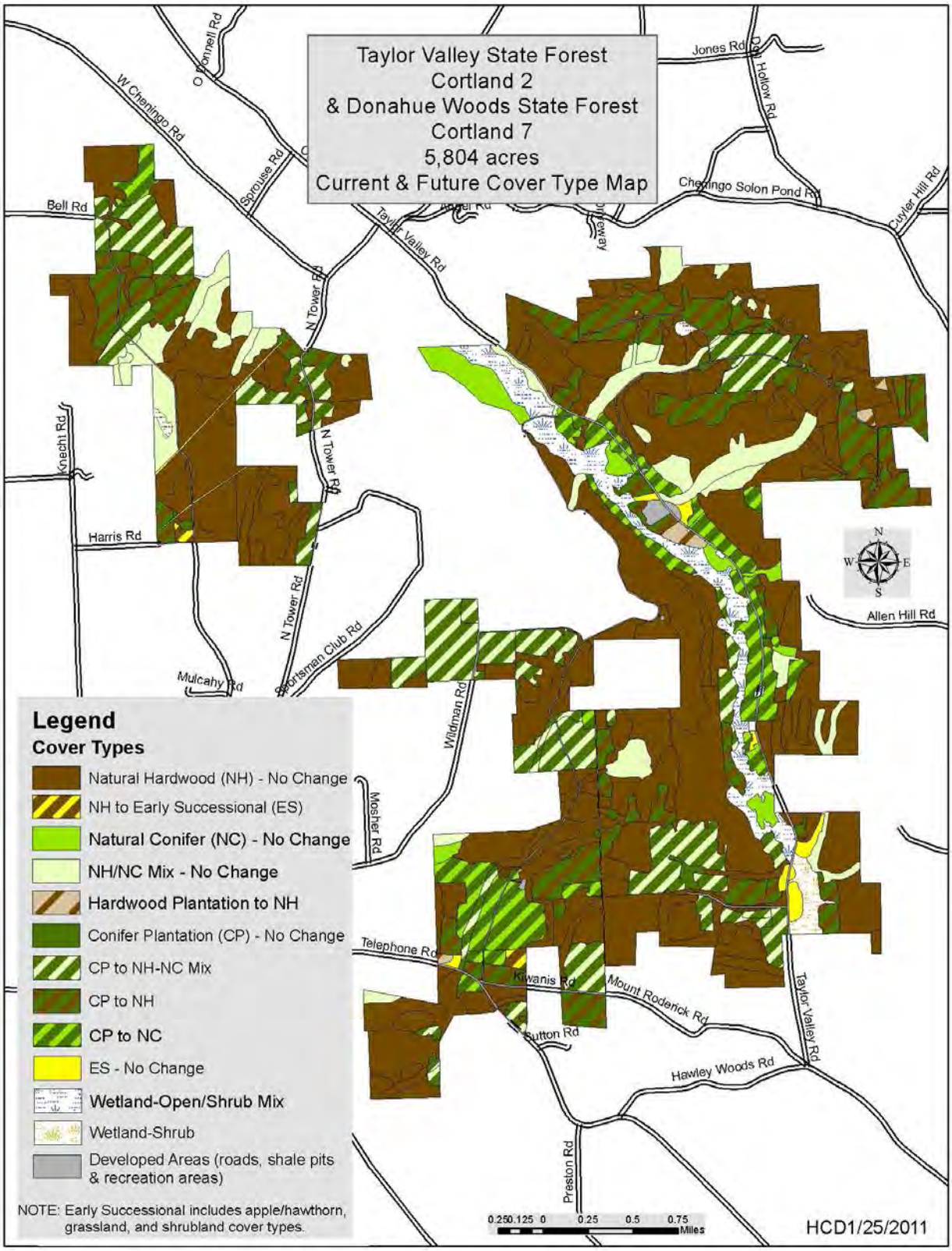

Gee Brook State Forest
Cortland 17
& Papish Pond Multiple Use Area
1,071 acres
Soil & Water Resources Map
Fox Rd
Piety Hill Rd
Gee Brook State Forest
State Route 26
Dutch Hill Road Spur
Dutch Hill Rd
Stafford Rd
Gee Brook Rd
Papish Pond Multiple Use Area
Legend
Roads Outside of State Forests
Roads on the Forest
Haul Road
Public Forest Access Road
State Road
Town Road
Classified Streams
Class C Stream
Class C Trout Stream
Class C Trout Spawning Stream
Federally Classified Wetlands
Stand Boundary
Soil Drainage Catergory
Water
Very poorly drained
Poorly drained
Somewhat poorly drained
Moderately well drained
Well drained
0.3 0.15 0 0.3 0.6 0.9 Miles
HCD1/4/2011

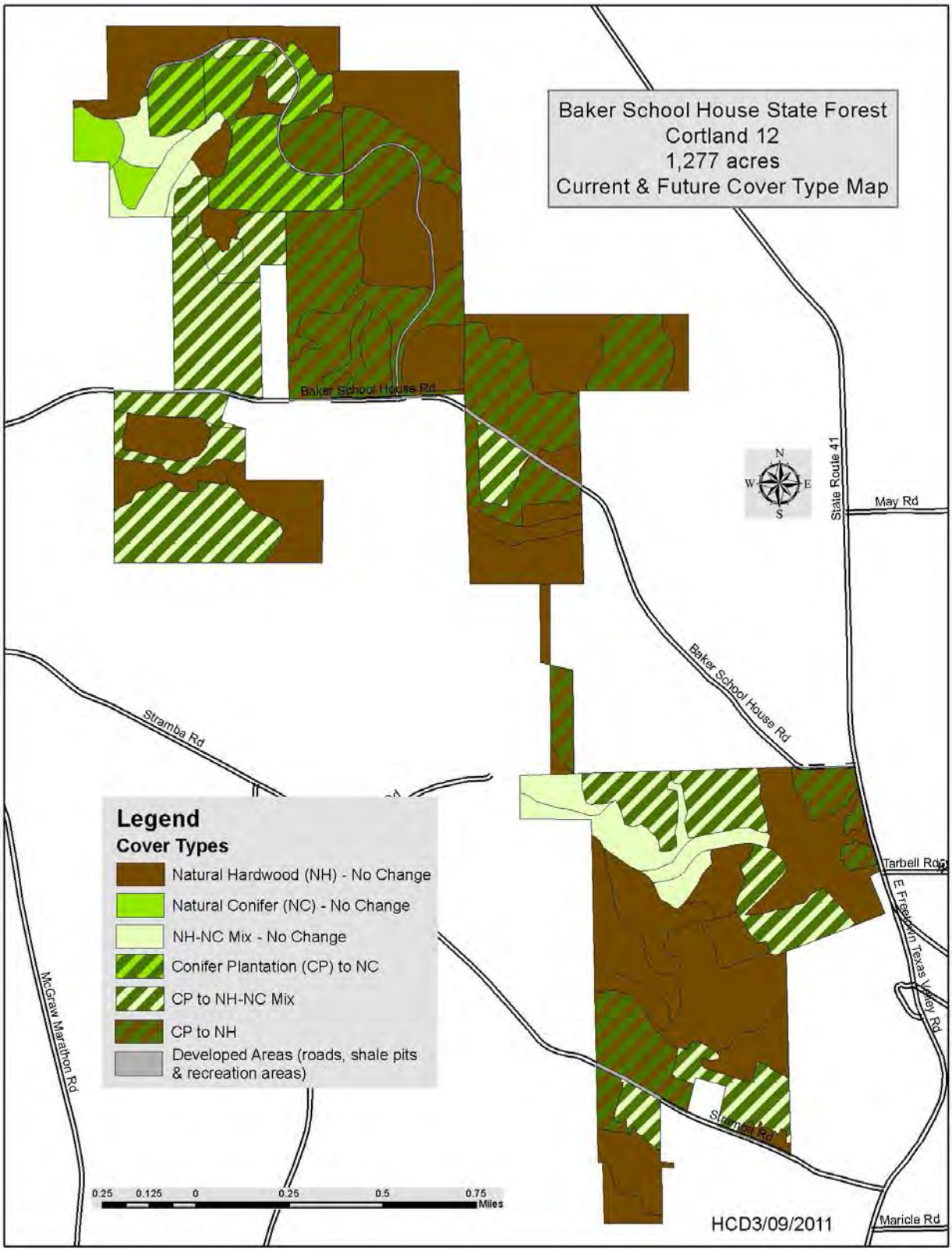

Taylor Valley State Forest
Cortland 2
& Donahue Woods State Forest
Cortland 7
5,804 acres
Access and Facilities Map
W Cheningo Rd
Brown Rd
Black Warrior Rd
Dog Hollow Rd
Cuyler Hill Rd
Bell PFAR
N Tower Rd
Valley Rd
Gas Line
Harris Rd
Taylor Valley State Forest
Donahue Woods State Forest
Club Rd
Wildman Rd
Mosher Rd
Telephone Rd
Mount Roderick Rd
Sutton Rd
Hawley Woods Rd
Taylor Valley Rd
Preston Rd
Telephone Rd
Legend
Bridge/Culvert
Forest ID Sign
Proposed Forest ID Sign
Picnic Pavillion
Existing Gate
Proposed Gate
Proposed Rock Barrier
Proposed Gate/Rocks
Proposed Informational Kiosk
Designated Camping Area
Proposed Lean-to
Existing Parking Area
Proposed Parking Area
Shale Pit
Finger Lakes Trail / North Country National Scenic Trail
Snowmobile Trail
Roads Outside of State Forest
County Roads on the Forests
Haul Roads
Public Forest Access Road (PFAR)
Town Roads on the Forests
Twenty Foot Contour Lines
State Forests
0.4 0.2 0 0.4 0.8 1.2 Miles
HCD2/4/2011

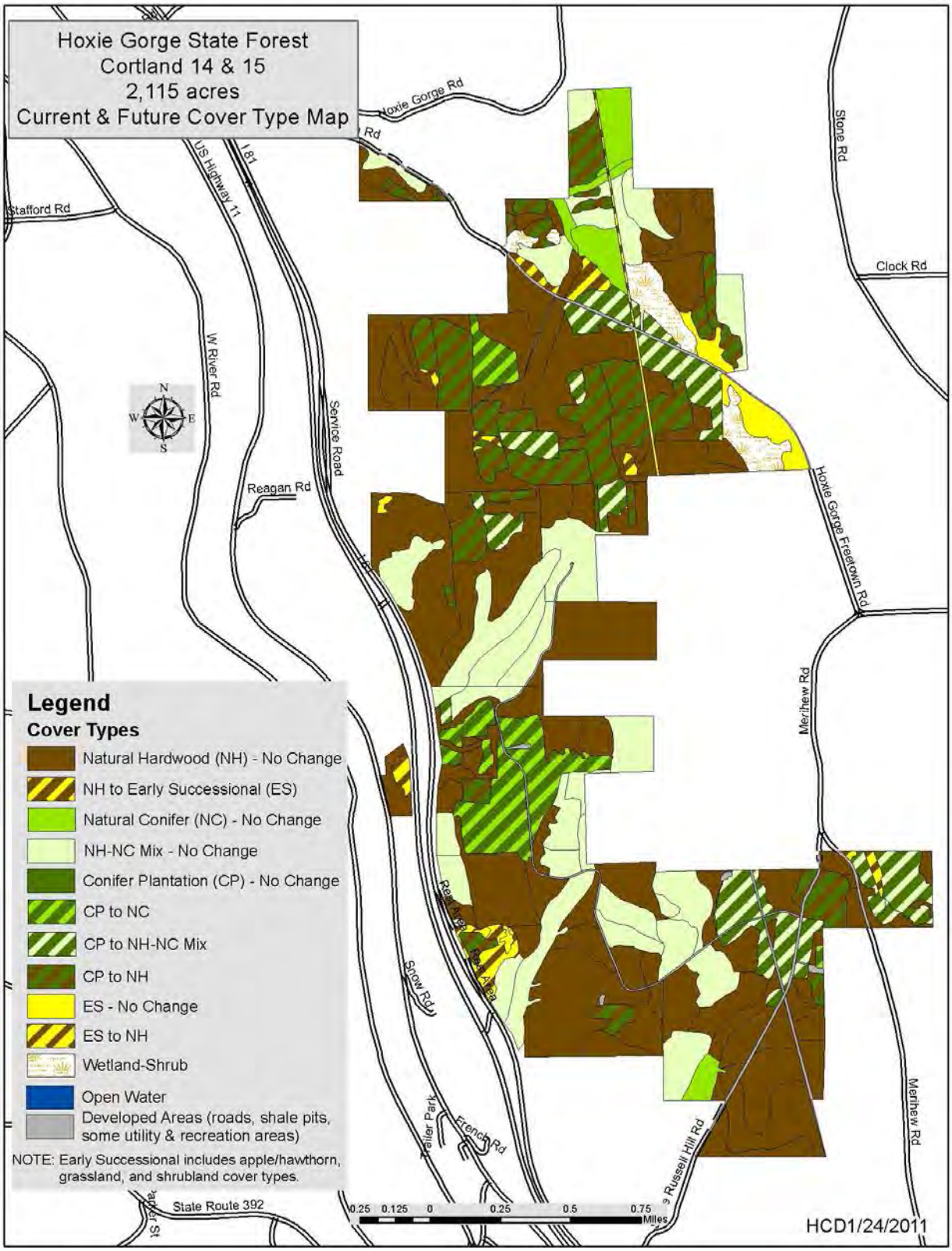

Baker School House State Forest
Cortland 12
1,277 acres
Access and Facilities Map
Baker School House PFAR
Baker School House Rd
McGraw Marathon Rd
State Route 41
May Rd
Baker School House Rd
Tarbell Rd
E Freetown Texas Valley Rd
Stramba Rd
Maricle Rd
Clock Rd
Sperry Rd
Center Rd
Freetown Crossroad
HCD2/4/2011
Legend
Roads Outside of State Forest
State Roads on the Forest
Town Roads on the Forest
Public Forest Access Road (PFAR)
Finger Lakes Trail / North Country National Scenic Trail
Forest ID Sign
Proposed Designated Campsite
Proposed Informational Kiosk
Shale Pit
Twenty Foot Contour Lines
Baker School House State Forest

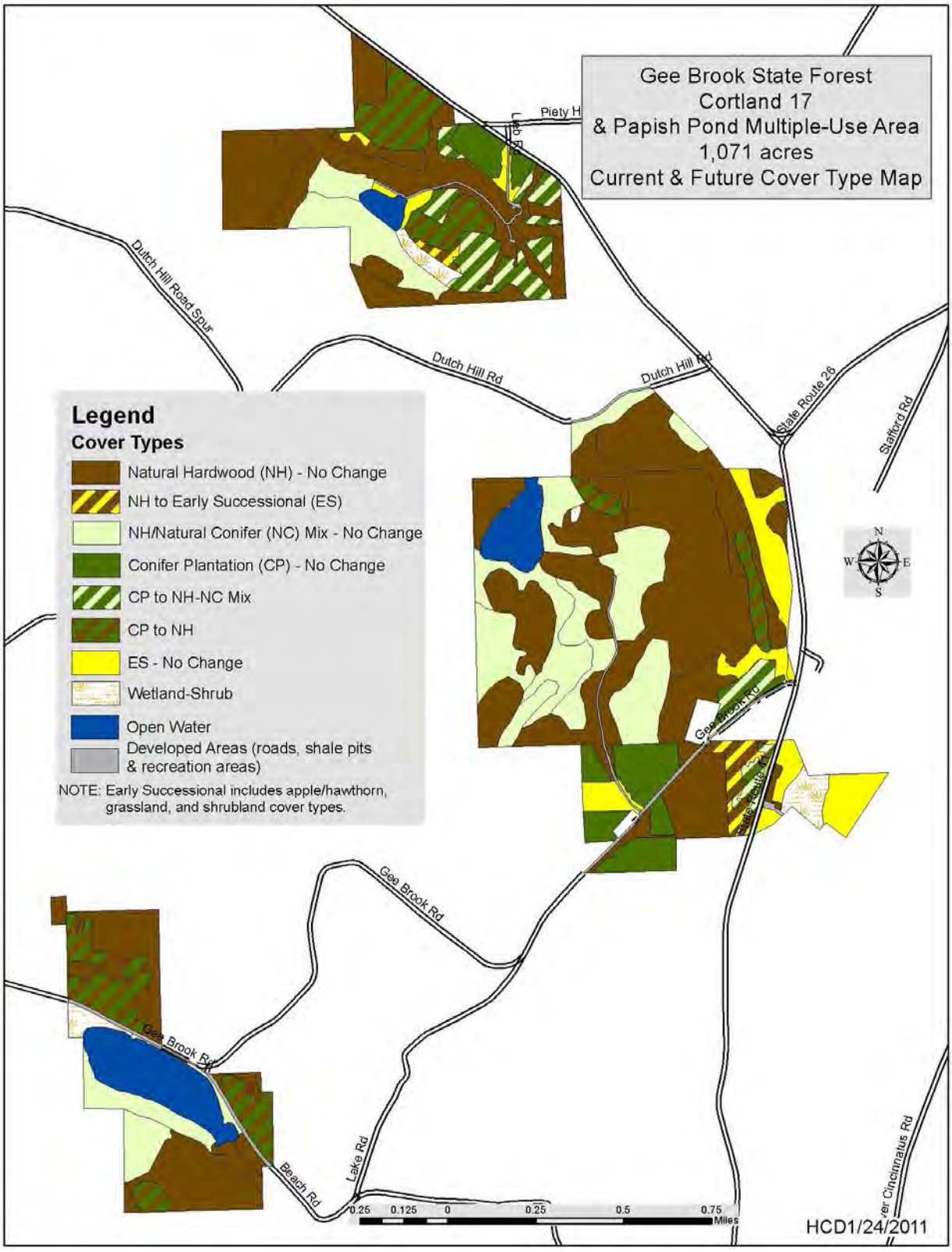

Hoxie Gorge State Forest
Cortland 14 & 15
2,115 acres
Access and Facilities Map
Gorge Rd
Freetown Rd
Stafford Rd
Highway 11
I 81
W River Rd
Reagan Rd
Service Road
Stone
Clock Rd
Underground Telephone Line
Hoxie Gorge Freetown Rd
Russel Hill PFAR
Underground Telephone Line
Merihew Rd
Rest Area
Snow Rd
Trailer Park
Merihew Rd
Legend
Proposed Forest ID Sign
Forest ID Sign
Proposed Gate
Proposed Informational Kiosk
Proposed Parking Area
Parking Area
Proposed Rock Barrier
Shale Pit
Trail Bridge/Culvert
Finger Lakes Trail (FLT)/
North Country National Scenic Trail (NCNST)
Proposed FLT/NCNST Reroute
ATV Trail for the Mobility Impaired
with Approved DEC Permit
Proposed ATV Trail for the Mobility
Impaired with Approved DEC Permit
Snowmobile Trail
Roads Outside of State Forest
Abandoned Road with Private Legal Rights
Haul Roads
Public Forest Access Road (PFAR)
Town Roads on the Forests
State Road
Twenty Foot Contour Lines
State Forests
0.25 0.125 0 0.25 0.5 0.75
Miles
HCD1/10/2011

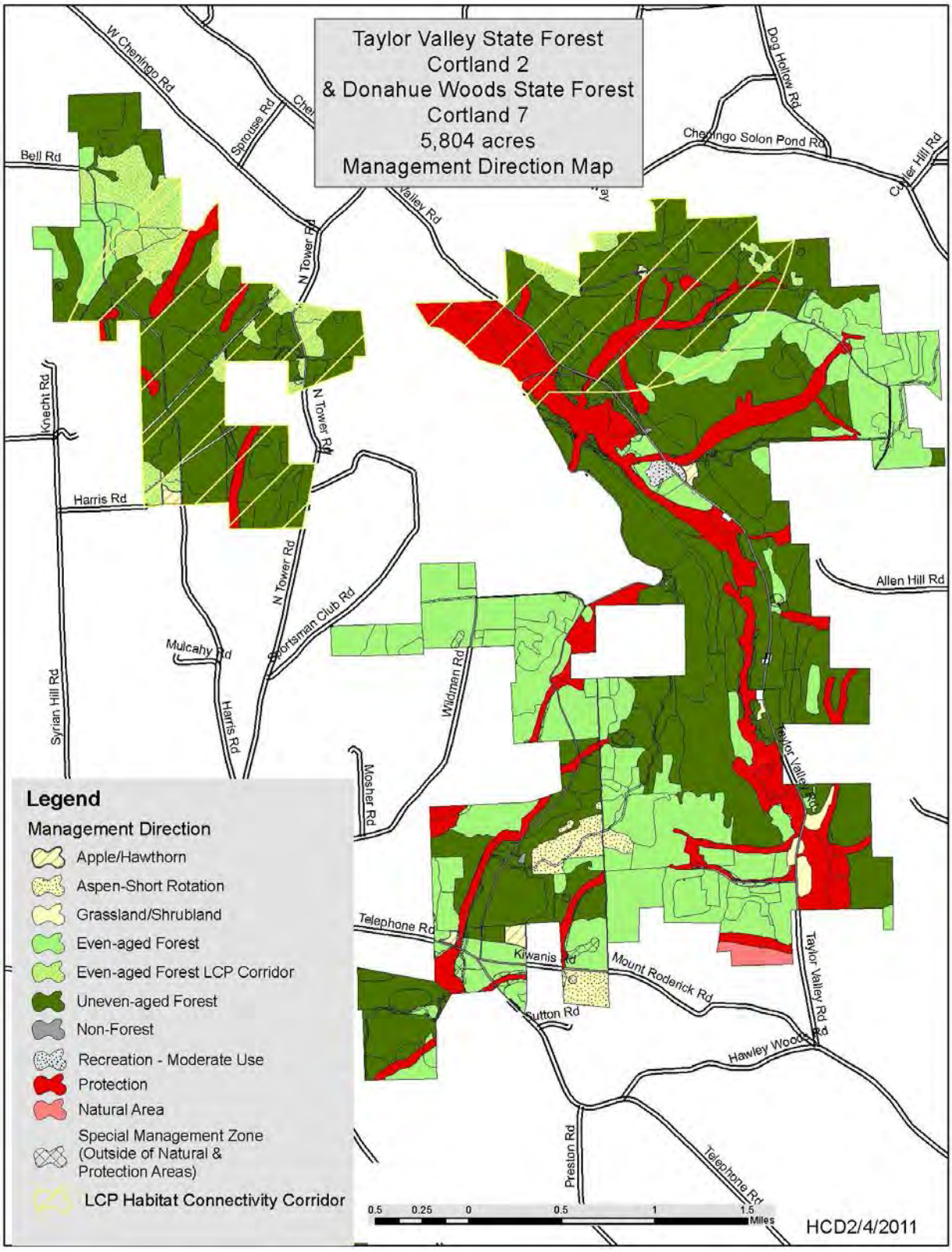

Gee Brook State Forest
Cortland 17
& Papish Pond Multiple-Use Area
1,071 acres
Access and Facilities Map
State Route 41
Piety H
Calico Pond
Dutch Hill Roa
Gee Brook State Forest
Dutch Hill Rd
State Route 26
Stafford Rd
Suarez Pond
Gee Brook Rd
Electric Line
Papish Pond Multiple-Use Area
Papish Pond
Lake Rd
Beach Rd
Lower Cincinnatus Rd
HCD2/4/2011
Legend
Bridge/Culvert
Forest ID Sign
Existing Rock Barrier
Existing Gate
Existing Parking Area
Proposed Parking Area
Proposed Informational Kiosk
Designated Camping Area
Proposed Designated Campsite
Boat Launch
Snowmobile Trail
Roads Outside of State Forests
State Roads on the Forests
Haul Roads
Public Forest Access Road (PFAR)
Town Roads on the Forests
Twenty Foot Contour Lines
Seed Orchards
State Forests

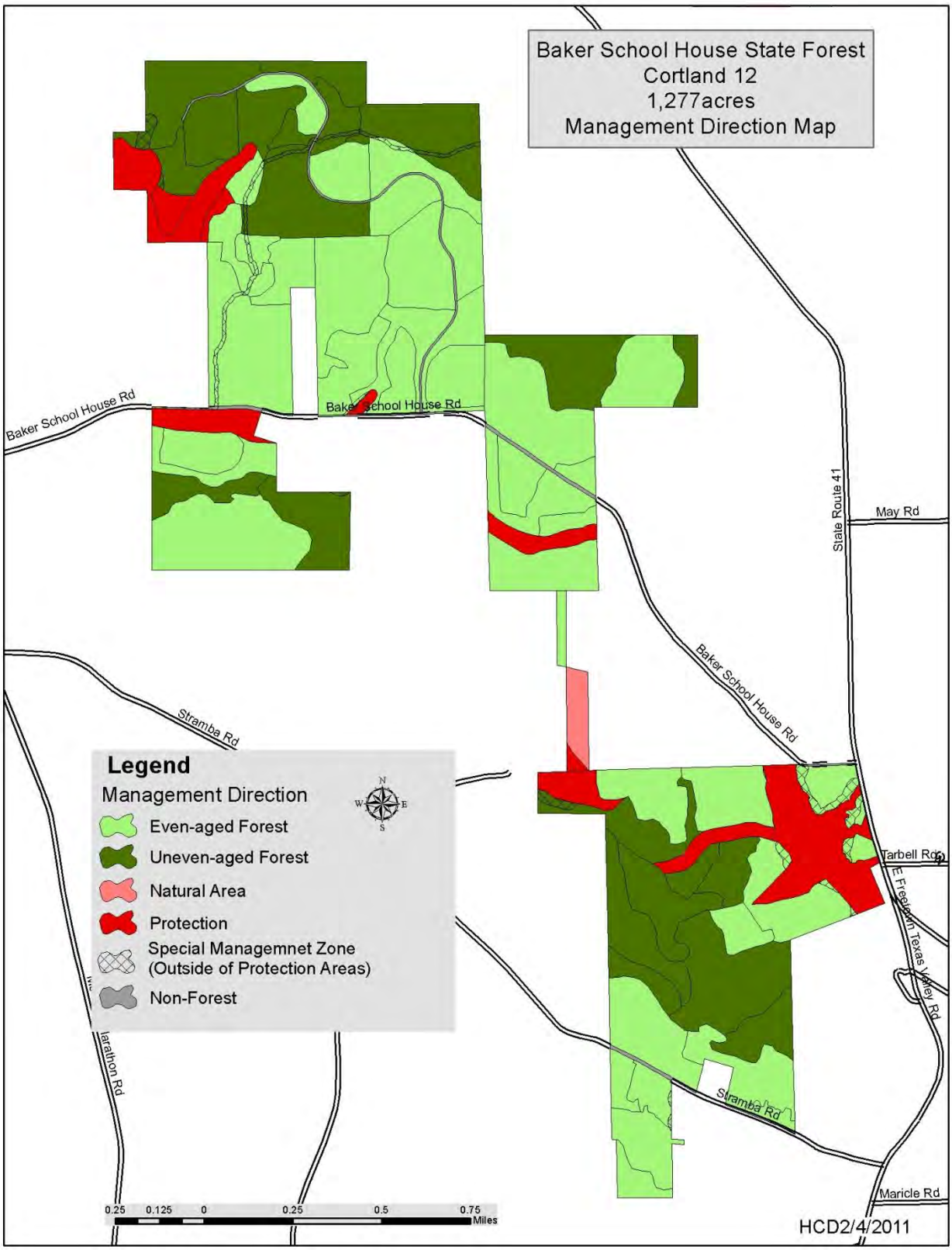

Taylor Valley State Forest
Cortland 2
& Donahue Woods State Forest
Cortland 7
5,804 acres
Current & Future Cover Type Map
Legend
Cover Types
Natural Hardwood (NH) - No Change
NH to Early Successional (ES)
Natural Conifer (NC) - No Change
NH/NC Mix - No Change
Hardwood Plantation to NH
Conifer Plantation (CP) - No Change
CP to NH-NC Mix
CP to NH
CP to NC
ES - No Change
Wetland-Open/Shrub Mix
Wetland-Shrub
Developed Areas (roads, shale pits & recreation areas)
NOTE: Early Successional includes apple/hawthorn, grassland, and shrubland cover types.
0.250.125 0 0.25 0.5 0.75 Miles
HCD1/25/2011
Jones Rd
Deer Hollow Rd
W Cheningo Rd
O Donnell Rd
Sprouse Rd
Bell Rd
Taylor Valley Rd
Cheningo Solon Pond Rd
Cuyler Hill Rd
N Tower Rd
Knecht Rd
Harris Rd
Sportsman Club Rd
Mulcahy Rd
Allen Hill Rd
Wildman Rd
Mosher Rd
Telephone Rd
Kiwanis Rd
Mount Roderick Rd
Sutton Rd
Hawley Woods Rd
Preston Rd
N
S
E
W

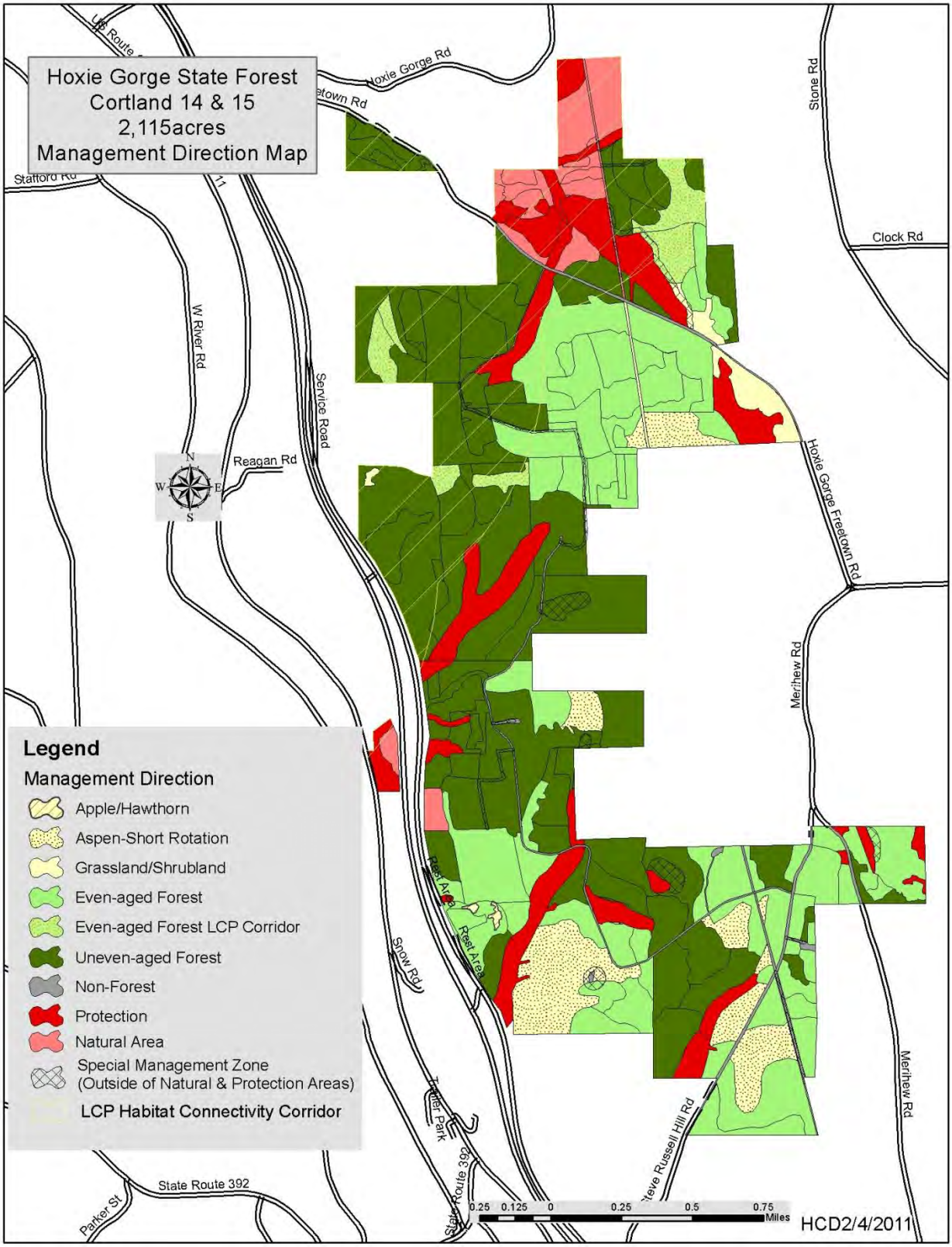

Baker School House State Forest
Cortland 12
1,277 acres
Current & Future Cover Type Map
Baker School House Rd
State Route 41
May Rd
Baker School House Rd
Stramba Rd
Tarbell Rd
E Freeman Texas Valley Rd
McGraw Marathon Rd
Stramba Rd
Maricle Rd
N
W
E
S
Legend
Cover Types
Natural Hardwood (NH) - No Change
Natural Conifer (NC) - No Change
NH-NC Mix - No Change
Conifer Plantation (CP) to NC
CP to NH-NC Mix
CP to NH
Developed Areas (roads, shale pits & recreation areas)
0.25 0.125 0 0.25 0.5 0.75
Miles
HCD3/09/2011

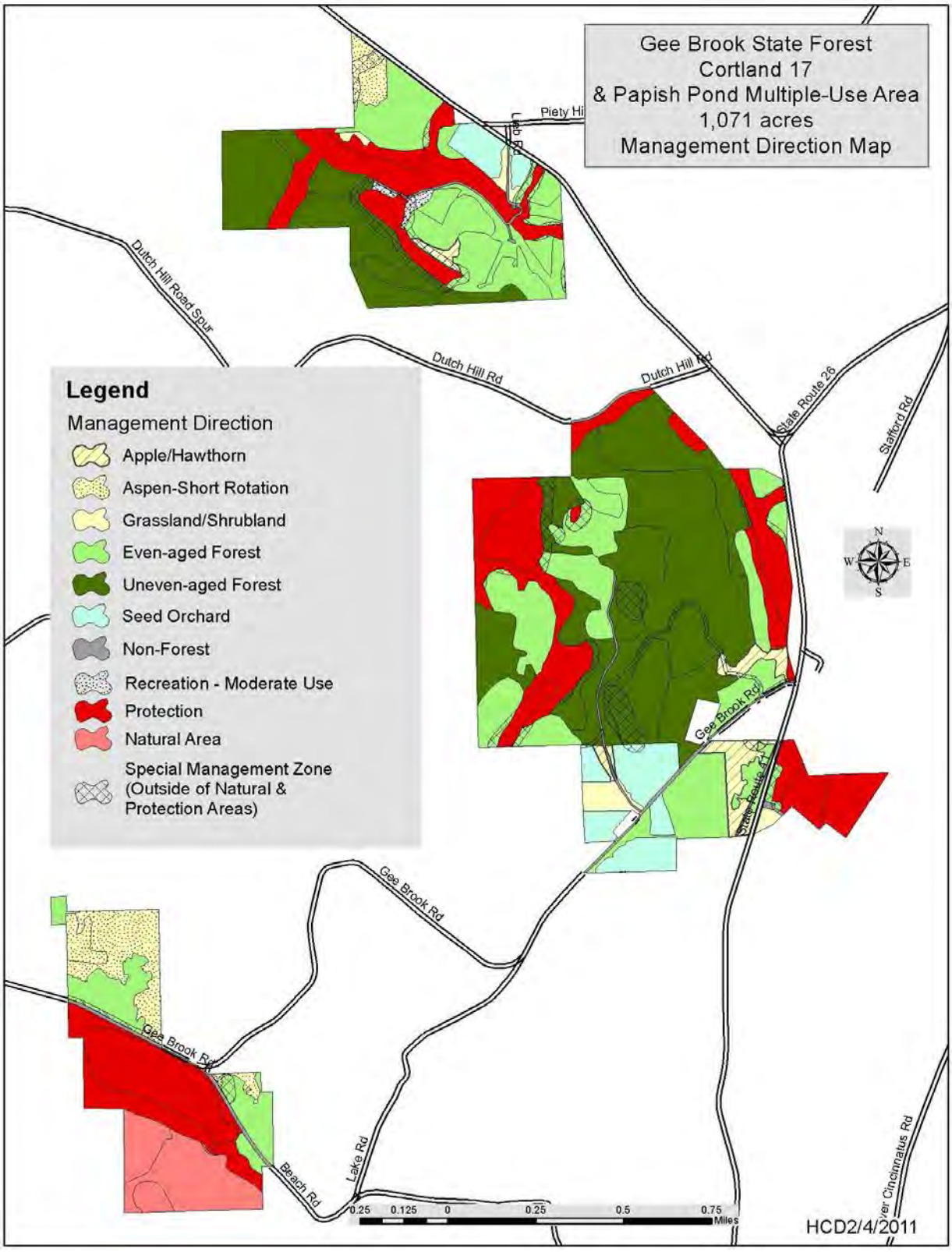

Hoxie Gorge State Forest
Cortland 14 & 15
2,115 acres
Current & Future Cover Type Map
Hoxie Gorge Rd
Stone Rd
Clock Rd
US Highway 11
I 81
Stafford Rd
W River Rd
Service Road
Reagan Rd
Hoxie Gorge Freetown Rd
Merihew Rd
Snow Rd
Keller Park
French Rd
Russell Hill Rd
State Route 392
Legend
Cover Types
Natural Hardwood (NH) - No Change
NH to Early Successional (ES)
Natural Conifer (NC) - No Change
NH-NC Mix - No Change
Conifer Plantation (CP) - No Change
CP to NC
CP to NH-NC Mix
CP to NH
ES - No Change
ES to NH
Wetland-Shrub
Open Water
Developed Areas (roads, shale pits, some utility & recreation areas)
NOTE: Early Successional includes apple/hawthorn, grassland, and shrubland cover types.
0.25 0.125 0 0.25 0.5 0.75 Miles
HCD1/24/2011

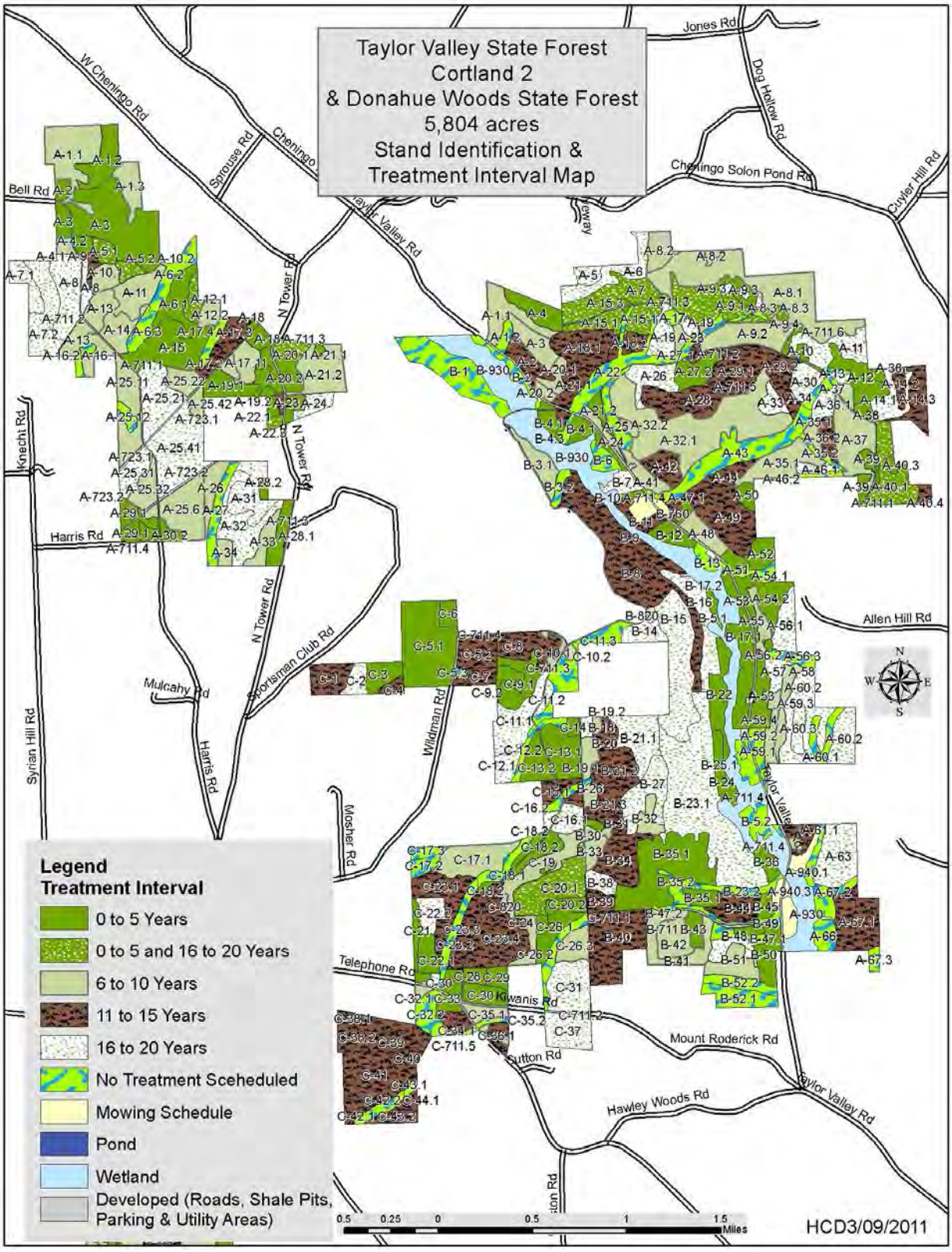

Gee Brook State Forest
Cortland 17
& Papish Pond Multiple-Use Area
1,071 acres
Current & Future Cover Type Map
Legend
Cover Types
Natural Hardwood (NH) - No Change
NH to Early Successional (ES)
NH/Natural Conifer (NC) Mix - No Change
Conifer Plantation (CP) - No Change
CP to NH-NC Mix
CP to NH
ES - No Change
Wetland-Shrub
Open Water
Developed Areas (roads, shale pits & recreation areas)
NOTE: Early Successional includes apple/hawthorn, grassland, and shrubland cover types.
Dutch Hill Road Spur
Dutch Hill Rd
Dutch Hill Rd
State Route 26
Stafford Rd
Gee Brook Rd
Gee Brook Rd
Gee Brook Rd
Beach Rd
Lake Rd
N
W
E
S
0.25 0.125 0 0.25 0.5 0.75 Miles
HCD1/24/2011

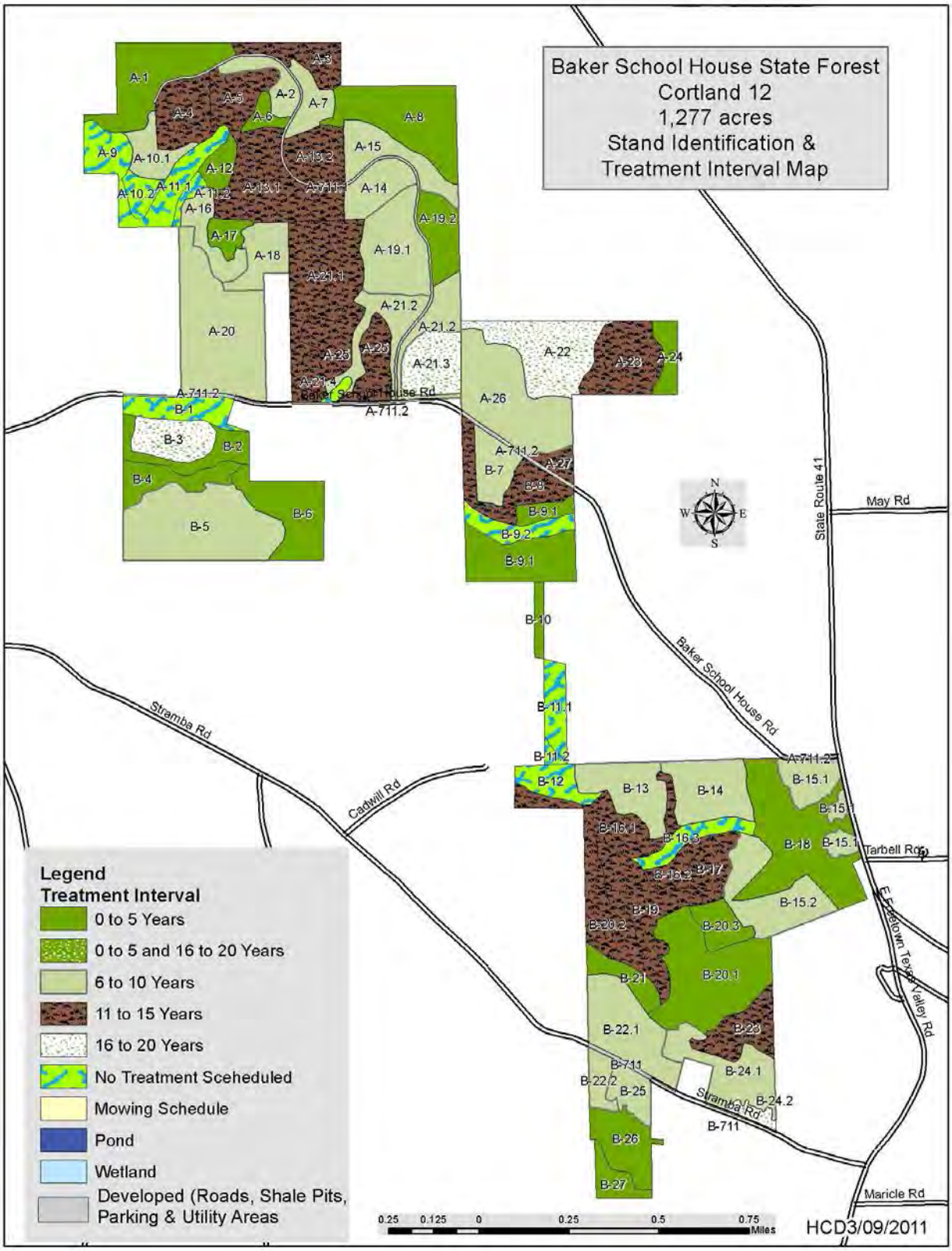

Taylor Valley State Forest
Cortland 2
& Donahue Woods State Forest
Cortland 7
5,804 acres
Management Direction Map
W Cheningo Rd
Sprouse Rd
Bell Rd
Cheningo Solon Pond Rd
Dog Hollow Rd
Cutler Hill Rd
N Tower Rd
Valley Rd
Knecht Rd
Harris Rd
Allen Hill Rd
Mulcahy Rd
Sportsman Club Rd
Syrian Hill Rd
Wildman Rd
Mosher Rd
Telephone Rd
Kiwanis Rd
Mount Roderick Rd
Sutton Rd
Taylor Valley Rd
Hawley Wood
Preston Rd
Legend
Management Direction
Apple/Hawthorn
Aspen-Short Rotation
Grassland/Shrubland
Even-aged Forest
Even-aged Forest LCP Corridor
Uneven-aged Forest
Non-Forest
Recreation - Moderate Use
Protection
Natural Area
Special Management Zone
(Outside of Natural &
Protection Areas)
LCP Habitat Connectivity Corridor
0.5 0.25 0 0.5 1 1.5
Miles
HCD2/4/2011

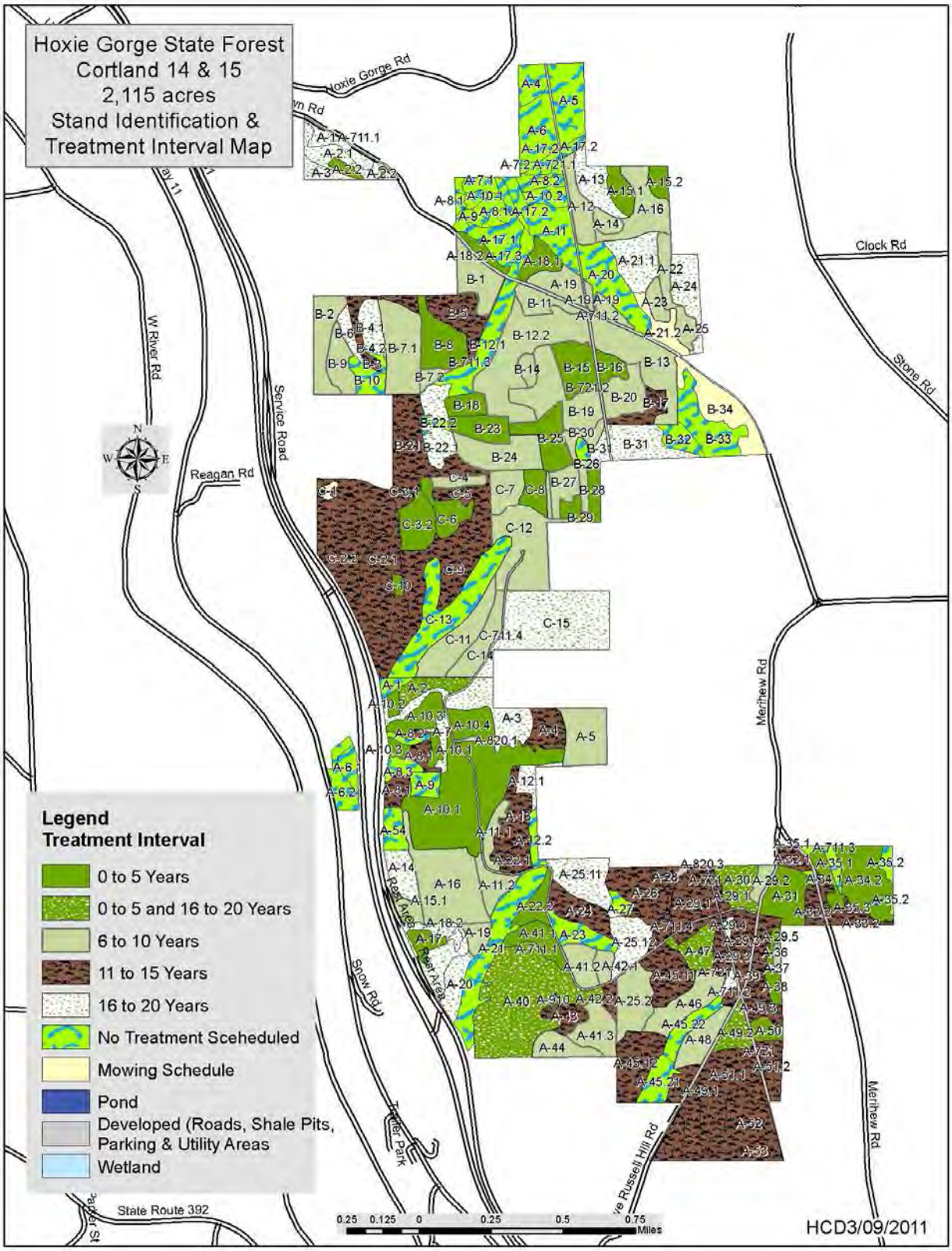

Baker School House State Forest
Cortland 12
1,277acres
Management Direction Map
Baker School House Rd
Baker School House Rd
State Route 41
May Rd
Baker School House Rd
Stramba Rd
Tarbell Rd
E Freeman Texas Valley Rd
Stramba Rd
Maricle Rd
Legend
Management Direction
Even-aged Forest
Uneven-aged Forest
Natural Area
Protection
Special Managemnet Zone
(Outside of Protection Areas)
Non-Forest
N
W
E
S
0.25 0.125 0 0.25 0.5 0.75
Miles
HCD2/4/2011

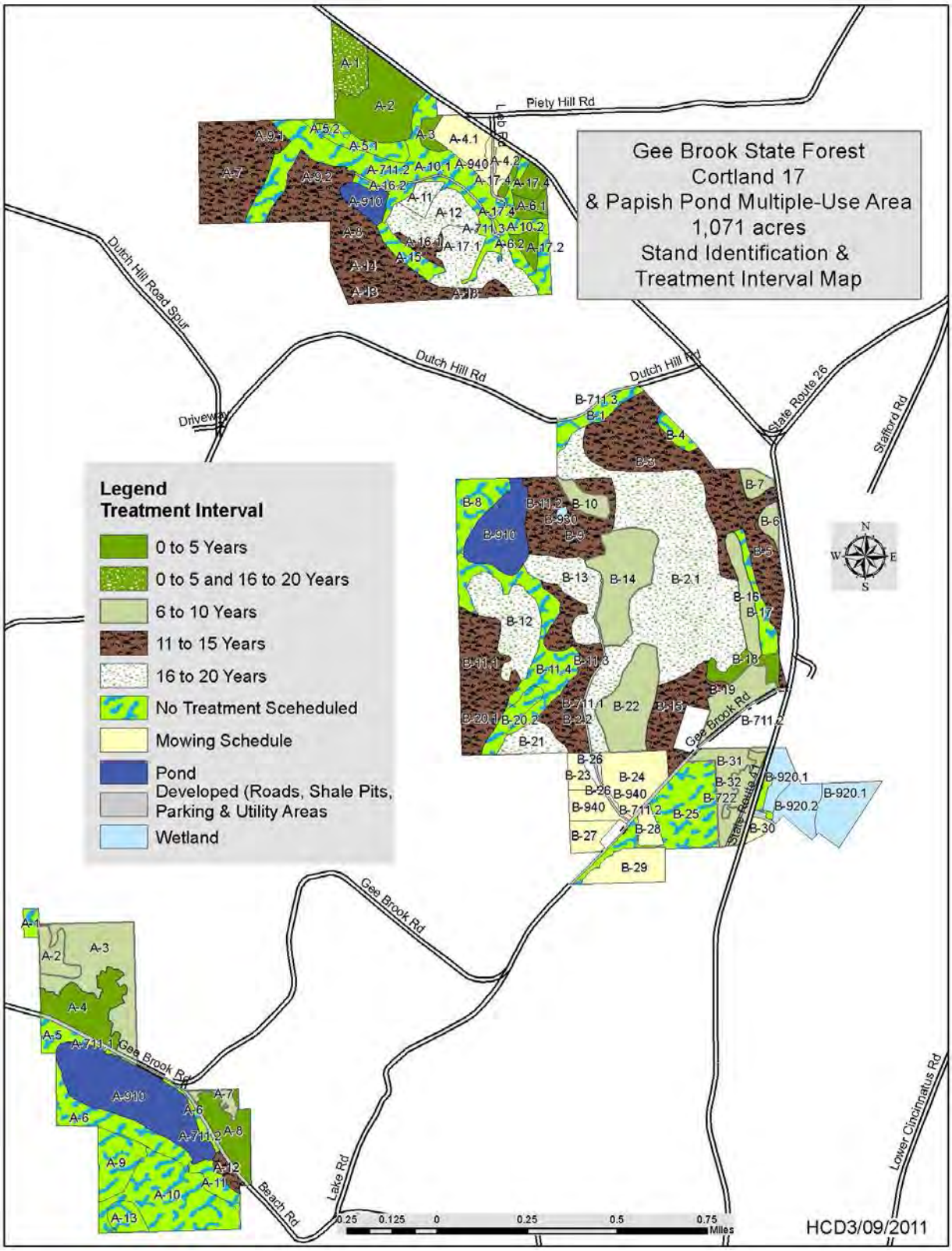

Hoxie Gorge State Forest
Cortland 14 & 15
2,115acres
Management Direction Map
Noxie Gorge Rd
Stone Rd
Clock Rd
Stafford Rd
W River Rd
Service Road
Reagan Rd
Hoxie Gorge Freetown Rd
Merihew Rd
Rest Area
Snow Rd
Jaffer Park
State Route 392
Parker St
Steve Russell Hill Rd
Legend
Management Direction
Apple/Hawthorn
Aspen-Short Rotation
Grassland/Shrubland
Even-aged Forest
Even-aged Forest LCP Corridor
Uneven-aged Forest
Non-Forest
Protection
Natural Area
Special Management Zone
(Outside of Natural & Protection Areas)
LCP Habitat Connectivity Corridor
0.25 0.125 0 0.25 0.5 0.75
Miles
HCD2/4/2011


Gee Brook State Forest
Cortland 17
& Papish Pond Multiple-Use Area
1,071 acres
Management Direction Map
Legend
Management Direction
Apple/Hawthorn
Aspen-Short Rotation
Grassland/Shrubland
Even-aged Forest
Uneven-aged Forest
Seed Orchard
Non-Forest
Recreation - Moderate Use
Protection
Natural Area
Special Management Zone
(Outside of Natural &
Protection Areas)
Piety Hi
Dutch Hill Road Spur
Dutch Hill Rd
Dutch Hill Rd
State Route 26
Stafford Rd
Gee Brook Rd
Gee Brook Rd
Gee Brook Rd
Lake Rd
Beach Rd
N
W
E
S
0.25 0.125 0 0.25 0.5 0.75
Miles
HCD2/4/2011


Taylor Valley State Forest
Cortland 2
& Donahue Woods State Forest
5,804 acres
Stand Identification &
Treatment Interval Map
Legend
Treatment Interval
0 to 5 Years
0 to 5 and 16 to 20 Years
6 to 10 Years
11 to 15 Years
16 to 20 Years
No Treatment Sceheduled
Mowing Schedule
Pond
Wetland
Developed (Roads, Shale Pits, Parking & Utility Areas)
Jones Rd
W Chenango Rd
Sprouse Rd
Chenango
Dog Hollow Rd
Chenango Solon Pond Rd
Cuyler Hill Rd
Bell Rd
Taylor Valley Rd
N Tower Rd
Knecht Rd
Harris Rd
Mulcahy Rd
Sportsman Club Rd
Syrian Hill Rd
Allen Hill Rd
Wildman Rd
Mosher Rd
Telephone Rd
Kiwanis Rd
Sutton Rd
Mount Roderick Rd
Hawley Woods Rd
0.5 0.25 0 0.5 1 1.5 Miles
HCD3/09/2011


Baker School House State Forest
Cortland 12
1,277 acres
Stand Identification &
Treatment Interval Map
Legend
Treatment Interval
0 to 5 Years
0 to 5 and 16 to 20 Years
6 to 10 Years
11 to 15 Years
16 to 20 Years
No Treatment Sceheduled
Mowing Schedule
Pond
Wetland
Developed (Roads, Shale Pits, Parking & Utility Areas
Baker School House Rd
Stramba Rd
Cadwill Rd
May Rd
State Route 41
Tarbell Rd
E Freetown Texas Valley Rd
Maricle Rd
0.25 0.125 0 0.25 0.5 0.75 Miles
HCD3/09/2011


Hoxie Gorge State Forest
Cortland 14 & 15
2,115 acres
Stand Identification &
Treatment Interval Map
Hoxie Gorge Rd
W River Rd
Service Road
Reagan Rd
Clock Rd
Stone Rd
Merihew Rd
Snow Rd
Trailer Park
State Route 392
Legend
Treatment Interval
0 to 5 Years
0 to 5 and 16 to 20 Years
6 to 10 Years
11 to 15 Years
16 to 20 Years
No Treatment Sceheduled
Mowing Schedule
Pond
Developed (Roads, Shale Pits, Parking & Utility Areas
Wetland
0.25 0.125 0 0.25 0.5 0.75
Miles
HCD3/09/2011


Gee Brook State Forest
Cortland 17
& Papish Pond Multiple-Use Area
1,071 acres
Stand Identification &
Treatment Interval Map
Legend
Treatment Interval
0 to 5 Years
0 to 5 and 16 to 20 Years
6 to 10 Years
11 to 15 Years
16 to 20 Years
No Treatment Sceheduled
Mowing Schedule
Pond
Developed (Roads, Shale Pits, Parking & Utility Areas
Wetland
Piety Hill Rd
Dutch Hill Road Spur
Dutch Hill Rd
Driveway
State Route 26
Stafford Rd
Gee Brook Rd
Lake Rd
Beach Rd
Lower Cincinnatus Rd
0.25 0.125 0 0.25 0.5 0.75 Miles
HCD3/09/2011