

Mohawk Vista UNIT MANAGEMENT PLAN

Towns of Columbia, Bridgewater, Frankfort, German Flatts, Herkimer, Marshall, Sangerfield, Schuyler, Stark, Warren Counties of Herkimer and Oneida November 2019

DIVISION OF LANDS AND FORESTS

Bureau of State Land Management, Region 6

Herkimer Sub-Office

225 North Main Street, Herkimer, NY 13350

OFFICE OF THE COMMISSIONER

New York State Department of Environmental Conservation 625 Broadway, 14th Floor, Albany, New York 12233-1010 P: (518) 402-8545 | F: (518) 402-8541 www.dec.ny.gov

NOV 2 5 2019

MEMORANDUM

TO:

The Record

FROM:

Basil Seggos, Commissioner <

SUBJECT: Mohawk Vista UMP

The Mohawk Vista Unit Management Plan has been completed. The Plan is consistent with Department policy and procedure, involved public participation and is consistent with the Environmental Conservation Law, Rules and Regulations. The plan includes management objectives for a ten year period and is hereby approved and adopted.

Mohawk Vista Unit Management Plan

A planning unit consisting of 3 State Forests in Herkimer County and 2 State Forests in Oneida County

September 2019

Prepared by the Mohawk Vista Unit Management Planning Team:

Mary Kay Allen, Senior Forester

Mike Contino, Real Property

Dave Erway, Senior Fisheries Biologist

Tom Hart, Conservation Operations Supervisor III (Retired)

Scott Healy, Supervising Forester

Steve Heerkens, Senior Wildlife Biologist

Jessica Mosher, Forest Technician

Rob Piersma, Forest Ranger Supervisor

Dave Smith, Regional Forester

Jerry Zaykoski, Regional Minerals Manager

New York State Department of Environmental Conservation

Division of Lands and Forests

Region 6

Herkimer Sub - Office

225 North Main Street

Herkimer, NY 13350

315-866-6330

https://www.dec.ny.gov/lands/109481.html

DEC's Mission

"The quality of our environment is fundamental to our concern for the quality of life. It is hereby declared to be the policy of the State of New York to conserve, improve and protect its 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." - Environmental Conservation Law 1-0101(1)

Vision Statement

State Forests on the Mohawk Vista Unit will be managed in a sustainable manner by promoting ecosystem health, enhancing landscape biodiversity, protecting soil productivity and water quality. In addition, the State Forests on this unit will continue to provide the many recreational, social and economic benefits valued so highly by the people of New York State. DEC will continue the legacy which started more than 80 years ago, leaving these lands to the next generation in better condition than they are today.

This plan sets the stage for DEC to reach these ambitious goals by applying the latest research and science, with guidance from the public, whose land we have been entrusted to manage.

STATE Forest Overview

Table of Contents

DEC'S MISSION	2
VISION STATEMENT	2
TABLE OF CONTENTS	3
PREFACE	
STATE FOREST OVERVIEW	
Legal Considerations	
CP-42 Contact Cooperation, and Consultation with Indian Nations	
Public Participation	
Strategic Plan for State Forest Management	
DEC'S MANAGEMENT APPROACH AND GOALS	
Ecosystem Management Approach	
Ecosystem Management Strategies	
State Forest Management Goals	
LOCATION MAP	11
INFORMATION ON THE MOHAWK VISTA UNIT	12
STATE LANDS IN THE UNIT	
HIGH CONSERVATION VALUE FORESTS	
Soils	
Water Resources	
Major Streams, Rivers and Water Bodies	
BIODIVERSITY	
Common Species	
Habitat	
At-Risk Species	
VISUAL RESOURCES	
HISTORIC AND CULTURAL RESOURCES	
History of the Unit	
Inventory of Resources	
Historic and Archaeological Site Protection	ک ۲
Archaeological Research	
REAL PROPERTY	
Boundary Lines	
Exceptions and Deeded Restrictions	
Encroachments	
Land Acquisition	
INFRASTRUCTURE	
Roads and Trails	
Signs / Kiosks	
Boating and Fishing Facilities	
Designated Campsites and Lean-tos	
Utility Transmission	
Non-recreational Uses	
FORMAL AND INFORMAL PARTNERSHIPS AND AGREEMENTS	
RECREATION	
Exceptional Recreational Opportunities	
Wildlife-related Recreation	
Water-based Recreation	
Water-based RecreationTrail-based Recreation	
Other Recreational Activities	
Overall Assessment of the Level of Recreational Development	
Universal Access	
UNIVERSIAL MUULUU	

PREFACE

STATE Forest Overview

Application of the Americans with Disabilities Act (ADA)	
MINERAL RESOURCES	
Oil, Gas and Solution Mining Exploration and Development	
SUPPORTING LOCAL COMMUNITIES	
Tourism	
Taxes Paid	
FOREST PRODUCTS	36
Timber	
Non-Timber Forest Products	
Maple Tapping	
FOREST HEALTH	
Native Pests and Pathogens	
Managing Deer Impacts	
SUMMARY OF ECO-REGION ASSESSMENTS	
ECO-REGION SUMMARY	
LOCAL LANDSCAPE CONDITIONS	
HABITAT RELATED DEMANDS	
MANAGEMENT NEEDS, ISSUES AND CONCERNS	
MANAGEMENT OBJECTIVES AND ACTIONS	
OBJECTIVES	
Ecosystem ManagementResource Protection	
Infrastructure and Real Property	
Public/Permitted Use	
Forest Management and Health	
Ten-Year List of Management Actions	
Unit-wide Actions	
FOREST MANAGEMENT ACTIONS	
FOREST TYPE CODES FOREST MANAGEMENT ACTION SCHEDULES	
BIBLIOGRAPHY	61
GLOSSARY	
APPENDICES & FIGURES	72
APPENDIX A - SUMMARY OF COMMENTS DURING PUBLIC SCOPING SESSIONS	
APPENDIX B - RESPONSIVENESS SUMMARY TO PUBLIC COMMENTS	
APPENDIX C - STATE ENVIRONMENTAL QUALITY REVIEW (SEQR)	
Figure 1 - Soils Maps	
Figure 2 - Water Resources Maps	
Figure 3 - Infrastructure Maps	
Figure 4 - Recreation Maps	
Figure 5 - Current Forest Stand Identification Maps	
Figure 6 - Current Forest Age Structure Maps	
Figure 7 - Current Forest Composition Mans	110

STATE Forest Overview

Preface

State Forest Overview

The public lands comprising this unit play a unique role in the landscape. Generally, the State Forests of the unit are described as follows:

- large, publicly owned land areas;
- managed by professional Department of Environmental Conservation (DEC) foresters;
- green certified jointly by the Forest Stewardship Council (FSC) & Sustainable Forestry Initiative (SFI);
- set aside for the sustainable use of natural resources, and;
- open to recreational use.

Management will ensure the **sustainability**, **biological diversity**, and protection of **functional ecosystems** and optimize the ecological benefits that these State lands provide, including the following:

- maintenance/increase of local and regional biodiversity
- response to shifting land use trends that affect habitat availability
- mitigation of impacts from invasive species
- response to climate change through carbon sequestration and habitat, soil and water protection

Legal Considerations

Article 9, Titles 5 and 7, of the Environmental Conservation Law (ECL) authorize DEC to manage lands acquired outside the Adirondack and Catskill Parks. This management includes watershed protection, production of timber and other forest products, recreation, and kindred purposes.

For additional information on DEC's legal rights and responsibilities, please review the statewide Strategic Plan for State Forest Management (SPSFM) at http://www.dec.nv.gov/lands/64567.html. Refer specifically to pages 33 and 317.

CP-42 Contact Cooperation, and Consultation with Indian Nations

The Commissioner's Policy (CP-42) (https://www.dec.ny.gov/public/36929.html) provides guidance to DEC staff concerning cooperation and consultation with Indian Nations on issues relating to protection of environmental and cultural resources within New York State. Specifically, this policy (i) formally recognizes that relations between the Department and Indian Nations will be conducted on a government-to-government basis; (ii) identifies the protocols to be followed by Department staff in working with Indian Nations; and (iii) endorses the development of cooperative agreements between the Department and Indian Nations to address environmental and cultural resource issues of mutual concern.

Nine Indian Nations reside within, or have common geographic borders with New York State: the Mohawk, Oneida, Onondaga, Cayuga, Seneca, Tonawanda Seneca, Tuscarora, Unkechaug, and Shinnecock. Communication between DEC and the Indian Nations should be direct and involve two-way dialogue and feedback. Face-to-face meetings are generally desirable; however, phone calls, correspondence, and other methods of communication are

PREFACE

MANAGEMENT Planning Overview

also encouraged. Therefore, DEC staff should be reaching out to the respective Nations as early in the UMP planning process as possible. The Department wishes to ensure that its actions, with respect to the environment and cultural resources, are sensitive to the concerns of Indian Nations, and that the perspective of the recognized Indian Nations is sought and taken into account when the Department undertakes an action having implications for indigenous peoples, their territories, and their culture. The Department and Indian Nations share key roles in protecting and preserving natural and cultural resources important to all citizens, and early consultation and cooperation between the Department and Indian Nations will foster more comprehensive protection and preservation of those resources.

Management Planning Overview

The Mohawk Vista Unit Management Plan (UMP) is based on a long-range vision for the management of Albert J. Woodford Memorial (Tassell Hill), Mount Hunger, Steuben Hill, Ohissa, and Otsquago State Forests, and 5 separate parcels of Detached Forest Preserve, balancing long-term ecosystem health with current and future demands. This Plan addresses management activities on this unit for the next ten years, though some management recommendations will extend beyond the ten-year period. Factors such as budget constraints, wood product markets, and forest health problems may necessitate deviations from the scheduled management activities.

Public Participation

One of the most valuable and influential aspects of UMP development is public participation. Public meetings are held to solicit input and written and verbal comments are encouraged while management plans are in draft form. Mass-mailings, press releases and other methods for soliciting input are often also used to obtain input from adjoining landowners, interest groups and the general public.

Strategic Plan for State Forest Management

This unit management plan is designed to implement DEC's statewide Strategic Plan for State Forest Management (SPSFM). Management actions are designed to meet local needs while supporting statewide and eco-regional goals and objectives.

The SPSFM is the statewide master document and Generic Environmental Impact Statement (GEIS) that guides the careful management of natural and recreational resources on State Forests. The plan aligns future management with principles of landscape ecology, ecosystem management, multiple use management and the latest research and science available at this time. It provides a foundation for the development of Unit Management Plans. The SPSFM divides the State into 80 geographic "units," composed of DEC administered State Forests that are adjacent and similar to one another. For more information on management planning, see SPSFM page 21 at http://www.dec.ny.gov/lands/64567.html.

DEC's Management Approach and Goals

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,

DEC'S Management Approach AND GOALS

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 FSC® C002027



Ecosystem Management Approach

State Forests on this unit will be managed using an ecosystem management approach which will holistically integrate principles of landscape ecology and multiple use management to promote habitat biodiversity, while enhancing the overall health and resiliency of the State Forests.

Ecosystem management is a process that considers the total environment - including all non-living and living components; from soil micro-organisms to large mammals, their complex interrelationships and habitat requirements and all social, cultural, and economic factors. For

PREFACE

DEC'S Management Approach AND GOALS

more information on ecosystem management, see SPSFM page 39 at http://www.dec.ny.gov/lands/64567.html.

Multiple-use Management

DEC will seek to simultaneously provide many resource values on the unit such as, fish and wildlife, wood products, recreation, aesthetics, minerals, watershed protection, and historic or scientific values.

Landscape Ecology

The guiding principle of multiple use management on the unit will be to provide a wide diversity of habitats that naturally occur within New York, while ensuring the protection of rare, endangered and threatened species and perpetuation of highly ranked unique natural communities. The actions included in this plan have been



Landscape ecology seeks to improve landscape conditions, taking into account the existing habitats and land cover throughout the planning unit, including private lands

developed following an analysis of habitat needs and overall landscape conditions within the planning unit (i.e. the geographical area surrounding and including the State Forests) the larger ecoregion and New York State.

Ecosystem Management Strategies

The following strategies are the tools at DEC's disposal, which will be carefully employed to practice landscape ecology and multiple-use management on the unit. The management strategy will affect species composition and habitat in both the short and long term. For more information on these management strategies, please see SPSFM page 81 at http://www.dec.ny.gov/lands/64567.html.

Passive Management

DEC foresters will employ passive management strategies through the designation of natural and protection areas, and buffers around those areas, such as along streams, ponds and other wetlands, where activity is limited.

Silviculture (Active Management)

DEC foresters will practice silviculture; the art and science of controlling the establishment, growth, composition, health, and quality of forests and woodlands, in an effort to promote biodiversity and produce sustainable forest products. There are two fundamental silvicultural systems which can mimic the tree canopy openings and disturbances that occur naturally in all forests; even-aged management and uneven aged management. Each system favors a different set of tree species. In general, even-aged management includes creating wide openings for large groups of trees that require full sunlight to regenerate and grow together as a cohort, while uneven-aged management includes creating smaller patch openings for individual trees or small groups of trees that develop in the shade but need extra room to grow to their full potential.

State Forest Management Goals

Goal 1 - Provide Healthy 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

DEC'S Management Approach AND GOALS

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. The Department will manage State Forests so that they demonstrate a high degree of health as measured by multiple criteria, including the biodiversity that they support.

Goal 2 - Maintain Man-made State Forest Assets

Man-made assets on State Forests include structures, boundary lines, trails, roads and any other object or infrastructure that exists because it was put there by people. Many of these items need no more than a periodic check to make sure they are still in working order. Others need regular maintenance to counteract the wear of regular use. It is the Department's intent to ensure that all man-made items on State Forests are adequately maintained to safely perform their intended function.

Goal 3 – Provide Recreational Opportunities for People of all Ages and Abilities

State Forests are suitable for a wide variety of outdoor recreational pursuits. Some of these activities are entirely compatible with one another, while others are best kept apart from each other. 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 the same State Forest, the Department will endeavor to provide recreational opportunities to all those who wish to experience the outdoors in a relatively undeveloped setting.

Goal 4 – Provide Economic Benefits to the People of the State

ECL §1-0101(1) provides in relevant part that "It is hereby declared to be the policy of the State of New York to conserve, improve and protect its 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." (Emphasis added) In considering all proposed actions, the Department will attempt to balance environmental protection with realizing potential economic benefit.

Goal 5 – Provide a Legal Framework for Forest Conservation and Sustainable Management of State Forests

Staff must have clear and sound guidance to direct their decisions and actions. Likewise, the public must have clear information regarding what they are and are not allowed to do on State Forests. Both of these are provided by well-written laws, regulations and policies. The Department will work to improve existing legal guidance that has proved to be inadequate, and create new guidance that is needed but does not yet exist.

Article XIV of the New York State Constitution states.

Section 1. The lands of the state, now owned or hereafter acquired, constituting the forest preserve as now fixed by law, shall be forever kept as wild forest lands. They shall not be leased, sold or exchanged, or be taken by any corporation, public or private, nor shall the timber thereon be sold, removed or destroyed.

Section 3. 1. Forest and wild life conservation are hereby declared to be policies of the state. For the purpose of carrying out such policies the legislature may appropriate moneys for the acquisition by the state of land, outside of the Adirondack and Catskill parks as now fixed by law, for the practice of forest or wild life conservation. The prohibitions of section 1 of this article shall not apply to

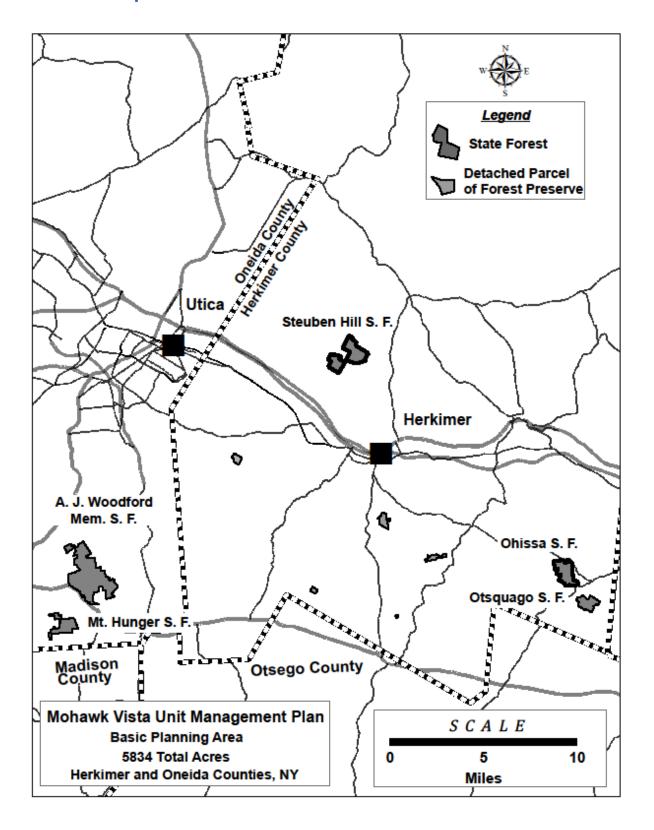
PREFACE

DEC'S Management Approach AND GOALS

any lands heretofore or hereafter acquired or dedicated for such purposes within the forest preserve counties but outside of the Adirondack and Catskill parks as now fixed by law, except that such lands shall not be leased, sold or exchanged, or be taken by any corporation, public or private.

These sections of the Constitution apply to State Forests in Herkimer and Oneida Counties as they are designated as "Forest Preserve Counties" by virtue of containing lands within the Adirondack Park Blue Line. As such, these State Forests cannot be leased for mineral resources by the State. There are no existing wells or proposed drilling for mineral resources in this unit.

Location Map



STATE LANDS IN THE UNIT

Information on the Mohawk Vista Unit

State Lands in the Unit

Table I.A. contains the names of the state land facilities that make up this unit. A web page for each of the State Forests in this unit is in the process of being developed. Each web page will feature an updated map of the State Forest with recreational information and natural features.

Table I.A. – State Lands in the Unit	
Facility Name and Webpage	Acreage
Albert J. Woodford Memorial State Forest (Oneida 8 - also known as Tassell Hill)	2663
Mount Hunger State Forest (Oneida 22)	598
Steuben Hill State Forest (Herkimer 2)	1008
Ohissa State Forest (Herkimer 6)	680
Otsquago State Forest (Herkimer 5)	410
Detached Parcel HE 5	102
Detached Parcel HE 10	194
Detached Parcel HE 2	46
Detached Parcel (unknown number - Town of Warren, Herkimer County)	126
Detached Parcel (unknown number - Town of Warren, Herkimer County)	7
TOTAL	5834

High Conservation Value Forests

High Conservation Value Forests (HCVF) are those portions of State Forests which have known high conservation values that the Department feels should take precedent over all other land use and management decisions. HCVFs may not be identified on every Unit and State Forests that have an HCVF designated will not necessarily have multiple classifications. Areas that are identified as having exceptional values may be managed for timber, wildlife and/or recreation, however management activities must maintain or enhance the high conservation values present. Currently, HCVFs are assigned to one or more of five land classifications, four of which may be found on State Forests:

- 1. <u>Rare Community</u> Forest areas that are in or contain rare, threatened or endangered ecosystems.
- 2. <u>Special Treatment</u> Forest areas containing globally, regionally or nationally significant concentrations of biodiversity values (e.g. endemism, endangered species, and refugia).
- 3. <u>Cultural Heritage</u> Forest areas fundamental to meeting basic needs of local communities (e.g. subsistence, health) and are critical to their traditional cultural identity (areas of cultural, ecological, economic or religious significance identified in cooperation with such local communities).

Soils

- 4. Watershed Forest areas that provide safe drinking water to local municipalities.
- 5. <u>Forest Preserve</u>* Forest areas containing globally, regionally or nationally significant large landscape level forests, contained within, or containing the management unit, where viable populations of most if not all naturally occurring species exist in natural patterns of distribution and abundance.

*Forest Preserve lands inside both the Adirondack and Catskills Park Blue line. Although Forest Preserve is not considered State Forest, they offer a significant high conservation value for lands managed by the Department.

A small portion of Steuben Hill State Forest has been identified as having high conservation value for the watershed category. Acreage totals for designated HCVFs located within the unit can be found in the appropriate sections below. For more information on HCVFs please go to http://www.dec.ny.gov/lands/42947.html.

Soils

Soils provide the foundation, both figuratively and literally, of forested ecosystems. They support an immense number of microorganisms, fungi, mosses, insects, herpetofauna and small mammals which form the base of the food chain. They filter and store water and also provide and recycle nutrients essential for all plant life. For information on DEC's policies for the protection of forest soils, as well as water resources please see SPSFM page 108 at http://www.dec.ny.gov/lands/64567.html.

Table I.B. below lists the soil types that are most commonly found on the State Forests, as well as their drainage characteristics.

Table I.B Soils	Table I.B Soils (see Figure 1 for maps)					
State Forest	Predominant Soil Type(s)	Soil Characteristics				
Albert. J. Woodford Memorial State Forest	Arnot Channery Silt Loam Chadakoin Silt Loam Lansing Silt Loam Manlius Channery Silt Loam Mardin Loam	Well Drained Well Drained Well Drained Well Drained Moderately Well Drained				
Mount Hunger State Forest	Chadakoin Silt Loam Manlius Channery Silt Loam Mardin Loam Venango Silt Loam	Well Drained Well Drained Moderately Well drained Somewhat Poorly Drained				
Ohissa State Forest	Burdette Silt Loam Hornell Silt Loam Lansing Silt loam Nassau Silt Loam Shaly Rock Land, Very Steep	Somewhat Poorly Drained Somewhat Poorly Drained Well Drained Somewhat Excessively Drained Excessively Drained				

WATER RESOURCES

	Burdette Silt Loam	Somewhat Poorly Drained
Otoguogo	Hornell Silt Loam	Somewhat Poorly Drained
Otsquago State Forest	Lansing Silt Loam	Well Drained
State Forest	Manheim Silt Loam	Somewhat Poorly Drained
	Nassau Silt Loam	Somewhat Excessively drained
	Burdette Silt Loam	Somewhat Poorly Drained
	Hornell Silt Loam	Somewhat Poorly Drained
Steuben Hill	Lansing Silt Loam	Well drained
State Forest	Nassau Silt Loam	Somewhat Excessively Drained
	Shaly Rock Land, Very	Excessively Drained
	Steep	

Water Resources

DEC's GIS data contains an inventory of wetlands, vernal pools, spring seeps, intermittent streams, perennial streams, rivers and water bodies on the unit. This data is used to establish special management zones and plan appropriate stream crossings for the protection of water resources.

Table I.C. contains a summary of water resources data on the unit.

Table I.C. – Water Resources (see Figure 2 for maps)						
	Albert J.	Mt. Hunger	Ohissa	Otsquago		en Hill
	Woodford	State	State	State Fores	st State	Forest
	Memorial	Forest	Forest			
	State Forest Unadilla River		Nowadaga C	rook - Moho	wk Lowo	r West Canada
Watershed	Oriskany Creek	•	River	NECK - WOULD	wk Lowe Creel	
Hydrologic Unit	Ninemile Creek		14101			daga Creek -
	River				I	wk River
	<u> </u>		L			
Watershed High					55 Ac	res in the
Conservation					south	east corner
Value Forest						
Regulated	300 acres	7 acres				
Wetlands						
Streams/Rivers *						
		Albert J.	Mt.	Ohissa	Otsquago	Steuben Hill
		Woodford	Hunger	State	State	State Forest
		Memorial	State	Forest	Forest	
		State Forest	Forest			
	AA or A					

BIODIVERSITY

	В					
Perennial streams/rivers	С	4.55 miles	.97 miles	3.25 miles	.35 miles	2.09 miles
	D					
Trout streams/rivers	AA (T), A (T), B (T) or C (T)	1.68 miles	.25 miles		.3 miles	
Water Bodies						
Water bodies (open-wabeaver ponds and lake	•	88.6 acres	1.6 acres			

^{*}For information regarding stream classifications please refer to http://www.dec.ny.gov/permits/6042.html.

In New York State, waters with a designation of A or AA signify that the water can be used as a source of drinking water. A designation of B indicates that the water can be used for swimming or other contact recreation but is not used for drinking water.

A designation of C indicates that the water could support a fish population, but is not suitable for drinking water.

A designation of D is the lowest classification.

Streams with a classification of A, B or C may also have a (T) or (TS) designation which means that the stream is capable of supporting a trout population (T), or trout spawning (TS). All streams with a designation of C(T) or higher are subject to the stream protection provisions of the Protection of Waters regulations

Major Streams, Rivers and Water Bodies

Albert J. Woodford Memorial Sate Forest has several popular fishing locations. Chittning Pond is located in the southwest portion of the State Forest. This pond has an accessible fishing pier and a shallow boat launch for small boats. It is a very popular, family oriented fishing site for warm water species.

In about the center of this State Forest, on the north side of White Street are two unnamed ponds that also feature good fishing for warm water species. There are no piers, docks or other structures here, so access is slightly more difficult.

Biodiversity

Information regarding biodiversity has been gathered to support the following goals:

- "Keep Common Species Common," by maintaining landscape-level habitat diversity and a wide variety of naturally occurring forest-based habitat as well as managing plantations according to DEC natural resources policy.
- Protect and in some cases, manage known occurrences and areas with potential to harbor endangered plants, wildlife and natural communities.

BIODIVERSITY

• Consider other "at-risk species" whose population levels may presently be adequate but are at risk of becoming imperiled due to new incidences of disease or other stressors.

Common Species

The following information sources indicate which common species (among other species) are present over time:

NYS Breeding Bird Atlas

Block Numbers: 4674B, 4675D, 4775C, 4976A, 4977C, 5075D, 5174A, 5175C

Breeding Bird Atlas blocks can be searched at http://www.dec.ny.gov/cfmx/extapps/bba/

Herp Atlas

Block Numbers: 168, 177, 364, 667

Herp Atlas information on amphibians, toads, frogs, turtles, lizards and snakes can be found at http://www.dec.ny.gov/animals/7140.html

Game Species Harvest Levels

WMU Numbers: 6R, 6S, 7M

White-Tailed Deer Harvest Summary 2015 (http://www.dec.ny.gov/docs/wildlife_pdf/2015deerrpt.pdf)

Black Bear Harvest Summary 2015

(http://www.dec.ny.gov/docs/wildlife_pdf/bbrpt2015.pdf)

Spring Turkey Take by County

(http://www.dec.ny.gov/outdoor/30420.html)

Fall Turkey Take by County

(http://www.dec.ny.gov/outdoor/30412.html)

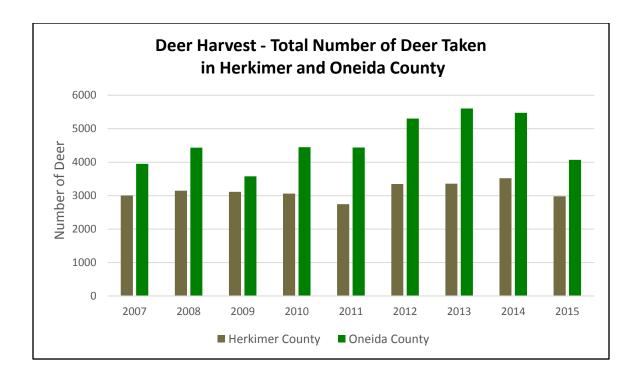
Specific game species management does not generally occur on state land parcels, but within the Wildlife Management Unit (WMU) the properties are located. State forests are too small to manage wildlife individually. In some cases, forest habitat projects are implemented to promote both game and non-game species. Projects may include apple tree releases, clear-cutting, mowing the shoulder of the road, tree and shrub plantings and creation of vernal water sources.

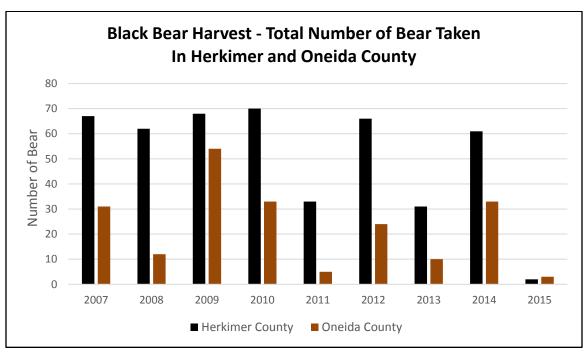
Southern portions of Oneida and Herkimer Counties lack significant holdings of public land so in turn the parcels identified within this plan are popular destinations for sportsman and receive moderate hunting pressure with the heaviest hunting pressure during the firearms deer seasons.

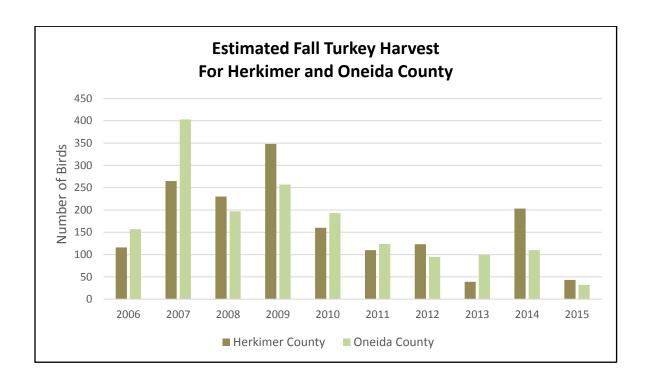
The presence or abundance of any given game species is dependent on the habitat types located on the state forests. In general, state forest stands are maturing and most are in stages that do not favor early successional species like ruffed grouse, cottontail rabbits or snowshoe hare. All the parcels in the Mohawk Vista plan have deer, occasional black bear, turkey, a variety of furbearers (fisher, red and grey fox, raccoon, coyote, beaver and muskrat) and small game in varying densities and distributions. Game abundance can vary with

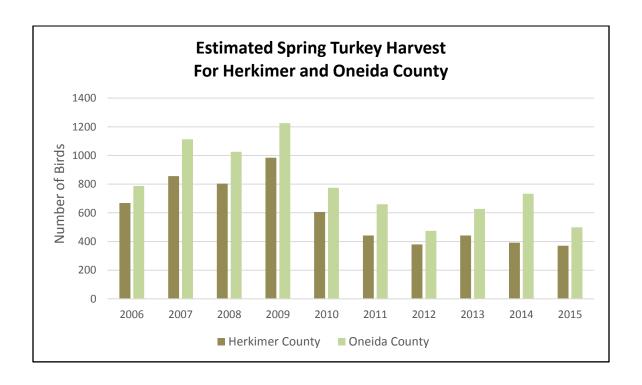
elevation, proximity to active agriculture, and current forest stand conditions. Winter severity and spring conditions can dictate deer or turkey numbers encountered. All the parcels in the plan are susceptible to heavy snowfall with semi migratory species like deer and turkeys moving off higher elevation stands in the winter and returning in spring as the snow retreats.

The WMU's that contain the Mohawk Vista state land parcels are 6R, 6S and 7M. Harvest of various species can be located on the DEC website. It should be noted that deer and bear harvests are tallied by WMU, while turkey harvest is reported by county.





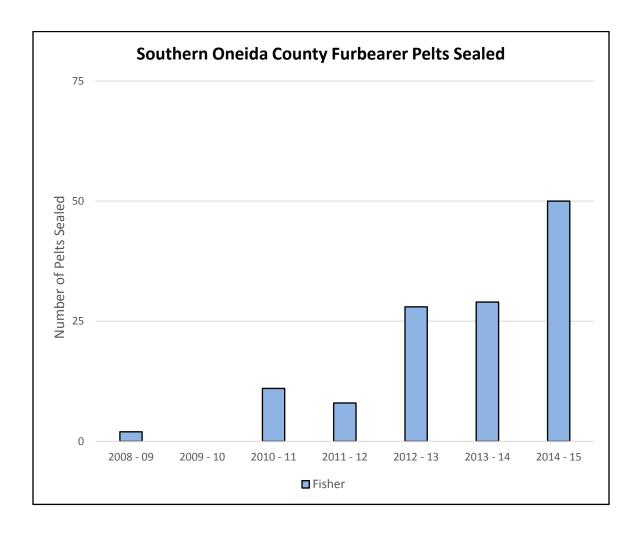


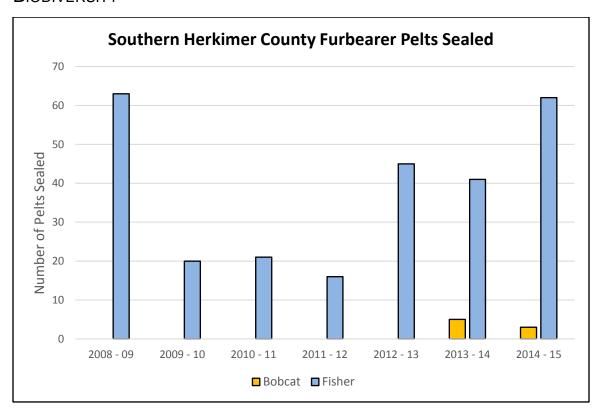


The decline in harvest (of turkeys) from 2014 to 2015 is likely due to poor production in 2013 and severe winters in 2014 and 2015. Turkey populations are down significantly from the

early to mid-2000s due, in part, to poor production and severe winter weather three of the last five years. (Taken from "Spring Turkey Take by County" from the DEC Website)

Estimated wild turkey harvest (statewide) during fall 2015 was 2,045 birds, a roughly 60% decrease from the fall 2014 estimated harvest. This reduction in the estimated take was anticipated based on the changes made to the fall season structure for 2015. In the Northern Zone, where the season length was reduced by one-third and the bag limit was reduced to one bird, we observed a decline in estimated take of 64%. In the Southern Zone, where the season length was reduced by one-half (western NY) or two-thirds (southeastern NY), we observed a decline in estimated take of roughly 63% (taken from "Fall Turkey Take by County" from DEC's website).





Furbearer Harvest Data was taken from the DEC's website (http://www.dec.ny.gov/outdoor/93855.html).

Habitat

The following information provides several representations of habitat types on the unit.

Vegetative Types and Stages

Table I.D Vegetative Types and Stages within the Unit (see Figure 4 for maps)					;)
Vegetative Type	Acres by Size Class				% of
vegetative Type	0 -5 in	6 - 11 in	12+ in	Other	Total
Natural Forest Hardwood	257	310.9	1495.5		38.5%
Natural Forest Conifer		244.4	338.7		10.9%
Plantation Softwoods	5.3	579	1547.7		39.8%
Plantation Hardwoods					0
Wetland				221.1	4.2%
Ponds				88.8	1.6%
Open/Brush				122.9	2.3%
Other (Roads, Parking lots, etc.)				147.8	2.7%
Total (Acres)	262.3	1134.3	3381.9	580.6	100%

Resource Protection Areas

In the course of practicing active forest management, it is important to identify areas on the landscape that are either reserved from management activity or where activity is conducted in

BIODIVERSITY

such a manner as to provide direct protection and enhancement of habitat and ecosystem functions. For more information on these protective measures, see SPSFM page 85 at http://www.dec.ny.gov/lands/64567.html.

Special Management Zones (SMZs) provide continuous over-story shading of riparian areas and adjacent waters, by retaining sufficient tree cover to maintain acceptable aquatic habitat and protect riparian areas from soil compaction and other impacts. DEC's buffer guidelines also maintain corridors for movement and migration of all wildlife species, both terrestrial and aquatic. Buffers are required within SMZs extending from wetland boundaries, high-water marks on perennial and intermittent streams, vernal pool depression, spring seeps, ponds and lakes, recreational trails, campsites and other land features requiring special consideration. See Figure 2 for a map of the SMZs as applied on the unit. For more information regarding Special Management Zones please see www.dec.ny.gov/sfsmzbuffers.pdf.

At-Risk Species

The presence of at-risk species and communities on the Mohawk Vista Unit and in the surrounding landscape has been investigated to inform appropriate management actions and protections. This investigation was conducted in development of this UMP and the associated inventory of State Forest resources. A more focused assessment will be conducted before undertaking specific management activities in sensitive sites. Appropriate protections may include reserving areas from management activity or mitigating impacts of activity. For more information on protection of at-risk species, please see SPSFM page 115 at http://www.dec.ny.gov/lands/64567.html.

Investigation included the following:

- A formal plant survey was conducted on this Unit in the spring of 2005 by the New York Natural Heritage Program.
- Element Occurrence Records for the New York Natural Heritage Program's Biological and Conservation Data System were consulted for information.
- Consultation of NHP species guides.
- Consultation of the NYS Comprehensive Wildlife Conservation Strategy

Table I.E. lists the species predicted on the State Forests that comprise this Unit, as well as their required habitats.

VISUAL RESOURCES

Table I.E At-Risk Spec	cies*			
Species Name	NYNHP Rank	Habitat	Record Source	NYS Status
PI	ant Species	Confirmed or Predicted	within the Unit	
Hill's Pondweed	S2, G3	aquatic plant of high alkaline shallow impoundments	NYNH PRO's: (PRED)	Threatened
Spreading Globeflower	S3, G5T3	rich, moist calcareous meadows, swamps, and open woods	NYNH PRO's: (PRED)	Rare
Oth	er Species	Confirmed or Predicted i	n the Landscape	<u> </u>
Arrowhead Spiketail (dragon fly)	S3, G4	forested, small, spring fed streams and seeps with soft bottoms and some rocks	NYNH PRO's: (PRED)	Not Listed
Bald Eagle (bird)	Federally Protected	tree lined large bodies of water that support fish and waterfowl populations for their food source	NYNH PRO's: (PRED)	Threatened
Brook Snaketail (dragon fly)	S3, G4	clear, shallow, rapid flowing streams that have sandy, rocky bottoms	NYNH PRO's: (PRED)	Not Listed
Pied Billed Grebe (bird)	S3B, S1N, G5	marshy shorelines of ponds, shallow lakes or bays	NYNH PRO's: (PRED)	Threatened
Short-eared Owl (bird)	S2, G5	this is a ground nesting owl that prefers open grassland areas with some water nearby	NYNH PRO's: (PRED)	Endangered
Timber Rattlesnake (snake)	S3, G4	forested areas that contain open rocky ledges and outcroppings	NYNH PRO's: (PRED)	Threatened
Upland Sandpiper (bird)	Federally Protected	large, grassy fields with perching structures (fence posts) nearby	NYNH PRO's: (PRED)	Threatened

^{*}Defined as NYNHP rank S1, S2, S2-3, G1, G2 or G2-3 <u>OR</u> identified as an SGCN. Species with a rank of 1 are critically imperiled. Species with a rank of 5 are demonstrably secure.

Key to Codes - (PRED) - Predicted Species; (CONF) - Confirmed Species

Visual Resources

The aesthetic quality of State Forests is considered in management activity across the unit. However, some areas have greater potential to preserve or create unique opportunities for public enjoyment. These especially scenic areas are inventoried below. For information on the

HISTORIC AND CULTURAL RESOURCES

protection of visual resources, please see SPSFM page 81 at http://www.dec.ny.gov/lands/64567.html.

Tassell Hill is located at the north end of Albert J. Woodford Memorial State Forest and is the highest elevation in Oneida County at 1,944 feet above sea level. This summit has a fairly good view to the north that is periodically maintained by cutting the taller vegetation as it grows in height.

Chittning Pond is also a pleasant place to visit, especially in the fall when the leaves are changing color and migratory waterfowl are passing through.

Historic and Cultural Resources

History of the Unit

The present-day Mohawk River Valley is the product of the overflow of glacial Lake Iroquois flowing from West to East, carving a path between the Adirondack Mountains to the north, and the Catskill Mountains to the south. Massive amounts of sediments were deposited in the lowlands of the valley, with the Mohawk River remaining at its core. The Mohawk is now a fraction of the size of the massive river that had filled the valley some 10,000 years ago. With its fertile farmland, and connection to the Great Lakes further to the West, the Mohawk Valley would become an essential corridor for the Native Americans of the Iroquois Confederacy, and later for European Colonists as they expanded into the "New World". It also became a strategic military route during both the French and Indian, and American Revolutionary Wars, as well as the location of the historic Erie Canal which would connect the global markets of New York City with the natural resources to be found in New York, and the Great Lakes beyond. The Mohawk Vista Unit, with most of its lands lying in the hilltops surrounding this valley, gets its name from these lands overlooking the mighty valley below.

As with most State Reforestation Areas across New York State, the State Forest lands in the Mohawk Vista Unit were originally farm lands, but located on poor soils, and therefore not very productive. The 1929 State Reforestation Act, and the 1931 Hewitt Amendment, authorized the New York State Conservation Department to acquire land outside the Forest Preserve to be used for reforestation. This was at a time when only about 25% of New York's land was forested, the majority having been cleared for European settlement, an exploitation of the State's once-vast timber resource. These old farm lands were then planted by the Civilian Conservation Corps, a program that was part of President Franklin D. Roosevelt's "New Deal" that put young men to work during the Great Depression, to prevent soil erosion and to restore New York's forests. The Park and Recreation Land Acquisition Bond Act of 1960 also provided for purchasing of State Reforestation Areas, notably Ohissa and Otsquago State Forests within this Unit. A more detailed history of State Reforestation Areas in New York can be found in Chapter 1, page 15 of the SPSFM, or at the following web site: http://www.dec.ny.gov/lands/4982.html.

Some of the more interesting historical notes about the Mohawk Vista Unit are:

 Tassel Hill State Forest (Oneida R.A. #8) was renamed to Albert J. Woodford Memorial State Forest, to honor Mr. Woodford, who served as the Head Forester for the New York State Conservation Department's District 8 for 31 years, and then went on to become the Assistant Director of Lands and Forests within the Department.

HISTORIC AND CULTURAL RESOURCES

- Otsquago State Forest (Herkimer R.A. #5) was purchased by the State from Owen D. and Louise P. Young in 1962. Owen D. Young was the first CEO of the Radio Corporation of America (RCA), and founded what was later to become Owen D. Young Central School, to provide a more local educational institution for the children of his hometown of Van Hornesville. Franklin D. Roosevelt, then Governor of New York State, and personal friend of Owen D. Young, spoke at the commencement of the first graduating class in 1931.
- The area encompassed by the Mohawk Vista Unit was the Hop Capital of the United States, from 1850, until the early 20th century, when a killer fungus and Prohibition put an end to the hop farms of the area. Hop plants can still be found growing in the wild on Albert J. Woodford Memorial State Forest.
- The detached parcels of Forest Preserve that are included within the Unit are lands acquired by the State through foreclosures on U.S. Deposit Fund Mortgages, usually in the late 1800s and early 1900s. Because these lands are less than 500 acres in size, and are within Forest Preserve Counties (Oneida and Herkimer), though not within the Adirondack Park boundary, they are treated in the same respect as all Forest Preserve lands in New York State.
- In the early 2000s, the State pursued possibly acquiring 4,860 acres of land within the Towns of Schuyler, Herkimer and Newport, which would have been one of the largest land purchases by the State at the time, outside of the Adirondack and Catskill Parks. This land was near, though not adjoining, Steuben Hill State Forest (Herkimer R.A. #2). Public input on whether the State should purchase the land was mixed, but ultimately the local towns voted against State acquisition. The property was formerly owned by George Cogar, who was the co-founder of the multi-million-dollar Mohawk Data Sciences corporation, and inventor of the "Data Recording and Verifying Machine". He also invented the "Cogar System 4" intelligent terminal, a precursor to the modern-day personal computer. In 1983, George Cogar and some prospective German clients were flying to a remote hunting cabin in British Columbia for a hunting vacation, when their plane disappeared. After an exhaustive search, neither the plane, nor its passengers were ever found, and presumed dead.
- During the 1960s, the land between and including Albert J. Woodford Memorial State Forest (Oneida R.A. #8), Mount Hunger State Forest (Oneida R.A. #22), and Beaver Creek State Forest (Madison R.A. #12), was identified by both the Conservation Department's Division of Lands and Forests, and Bureau of Wildlife, to be ideal for the creation of a large, contiguous block of State land, that would be managed for timber production, recreation, and for the promotion of fish and wildlife habitat. While this concept was never seen to its full fruition, multiple "wildlife ponds" were created on Albert J. Woodford Memorial State Forest, including the popular Chittning Pond.
- While not on State land, there is a private cemetery located within, and totally surrounded by, Mount Hunger State Forest (Oneida R.A. #22). This cemetery contains

REAL PROPERTY

the grave sites of some of the area's early settlers, with dates ranging from 1811 through 1881.

Inventory of Resources

The term "cultural resources" encompass 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) as well as Article 9 of Environmental Conservation Law, 6NYCRR Section 190.8 (g) and Section 233 of Education Law to include such resources in the range of environmental values that are managed on public lands. For more information on protection of historic and cultural resources, please see SPSFM page 139 at http://www.dec.ny.gov/lands/64567.html.

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.

Historic and Archaeological Site Protection

No known historic or archaeological sites are located within this unit. Unrecorded sites that may exist on the property are protected by the provisions of the New York State Historic Preservation Act (SHPA - Article 14 PRHPL), Article 9 of Environmental Conservation Law, 6NYCRR Section 190.8 (g) and Section 233 of Education Law. No actions that would impact known resources are proposed in this Unit Management Plan. Should any such actions be proposed in the future they will be reviewed in accordance with the requirements of SHPA. Unauthorized excavation and removal of materials from any of these sites is prohibited by Article 9 of Environmental Conservation Law and Section 233 of Education Law. In some cases, additional protection may be afforded these resources by the federal Archaeological Resources Protection Act (ARPA).

Archaeological Research

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

Real Property

DEC's Bureau of Real Property GIS system contains maps and some deeds for State Forest properties. Original deeds were also consulted to complete the information below.

REAL PROPERTY

Boundary Lines

This unit includes 5 separate State Forests with a total of 41.2 miles of boundary line. Table IV.A Boundary Line Management Action Schedule on page 51 outlines each State Forest, miles of boundary line and the proposed maintenance schedule.

Boundary lines are regularly maintained on a 5-year to 7-year schedule.

Encroachments and other issues are addressed as they become apparent.

For more information on boundary line maintenance, please see SPSFM page 153 at http://www.dec.ny.gov/lands/64567.html.

Exceptions and Deeded Restrictions

Table I.F. – Exceptions and Deeded Restrictions				
Facility Name	RA#	RA# Description E.g., deeded ROW, easement, access lane, water rights, cemetery, etc.		
Otsquago	Herk. 5	power lines and telephone lines	HER-00366-327	
Ohissa	Herk. 6	power line		
Ohissa	Herk. 6	Roof Cemetery	6184	
Albert J. Woodford Memorial	On. 8	power line	Map 10384	
Mt. Hunger	On. 22	telephone line	Map 6097	
Mt. Hunger	On. 22	pipeline	Map 9360	
Mt. Hunger	On. 22	telephone line (underground)	Proposal A Map	
Mt. Hunger	On. 22	Whalen Road Cemetery	Tax Map 405.000-1-17	
Mt. Hunger	On. 22	Tennessee Gas Pipeline	TRP	

Encroachments

Well-marked boundary lines that are readily identifiable to the public reduce unintentional trespass. However, encroachments onto State Forest lands do sometimes occur. Such issues requiring resolution are listed in the following table. No new encroachment issues exist at this time on the unit. Should any new encroachments be found, they will be addressed in a timely fashion.

Land Acquisition

Acquisition of property from willing sellers on the landscape surrounding the unit may be considered in the following priority areas:

- In-holdings and adjoining properties that would reduce management costs and benefit resource protection and public access goals
- the mineral estate wherever it is split from a State Forest tract
- properties within identified matrix forest blocks and connectivity corridors

INFRASTRUCTURE

- forested lands in underserved areas of the state
- forested lands in areas that are in need of watershed protection

For more information on land acquisition, please see SPSFM page 147 at http://www.dec.ny.gov/lands/64567.html.

Infrastructure

State Forests are managed with a minimal amount of improvements to accommodate rustic, forest based recreational opportunities while providing for resource protection; public health and safety; and access for individuals of all ability levels. For more information on infrastructure policies, please see SPSFM page 157 at http://www.dec.ny.gov/lands/64567.html.

Roads and Trails

DEC's GIS data contains an inventory of public forest access roads, haul roads and multipleuse-trails on the unit, including a representation of the allowable uses along each road or trail segment. Table I.G. contains a summary of roads, trails and related infrastructure on the unit.

ADDITIONAL INFORMATION

DECinfo Locator – An interactive online mapper can be used to view recreational assets and trails on this Unit to help people plan outdoor activities. Located on DEC's website at https://gisservices.dec.ny.gov/gis/dil/.

Google Earth Virtual Globe Data - Some of DEC's map data, including accessible recreation destinations, boat launches, lands coverage, roads and trails on this Unit can be viewed in Google Maps or Google Earth. (Also located at DEC's Mapping Gateway)

Table I.G. – Existing Access and Parking (see Figure 3 for maps)				
Category	Total			
	Amount			
Public Forest Access Roads	2.7 mi.			
Haul Roads	0.3 mi.			
Snowmobile Trails	7.6 mi.			
(Including Roads)	7.0 1111.			
Stream Crossings				
Snowmobile Bridges	2			
Related Infrastructure				
Parking Areas / Pull Offs	4			
Snowmobile Gates	2			

FORMAL AND INFORMAL PARTNERSHIPS AND AGREEMENTS

Use and Demand on Roads, Haul Roads and Parking Areas

Haul Roads and Public Forest Access Roads are two classes of roads that provide access to the unit for many purposes, but are built and maintained to different standards. The two paragraphs below detail the differences.

Haul roads are permanent, unpaved roads, which are not designed for all-weather travel, but may have hardened or improved surfaces with drainage features/structures. They are constructed according to forestry best management practices primarily for the removal of forest products, providing limited access by log trucks and other heavy equipment. The haul road listed here is not open for public motor vehicle use but may be used in the future for administrative use or other land or forest management activities.

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. 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) (http://www.dec.ny.gov/docs/lands_forests_pdf/sfunpavedroad.pdf).

Use and demand on multiple use trails is discussed under Recreation.

Signs / Kiosks

There are a total of 5 State Forest I.D. sign standards on the unit. There is also a sign standard at the entrance to the Chittning Pond parking area.

There are no informational kiosks on the unit. Addition of informational kiosks for each state forest will be addressed as funding allows.

Boating and Fishing Facilities

Chittning Pond has an Accessible fishing pier, picnic tables and parking. There is also a graveled area where car top boats may be put in. The structural compatibility of this site will be evaluated for potential development of improved accessibility features, including a waterway access site, within the first five years of the plan.

Designated Campsites and Lean-tos

At present, there are no formally designated campsites, or lean-tos though camping does happen at informal locations like log landings.

Utility Transmission

These are listed above in the Exceptions and Deeded Restrictions table.

Non-recreational Uses

Agricultural Use

Each year incidences of illegal agricultural activity (mostly marijuana) are discovered by DEC personnel or reported by others. The trend for this activity has been on the increase.

Formal and Informal Partnerships and Agreements

Conservation and stewardship partnerships are increasingly important, especially for public land management agencies. Considering the fact that resources will always be limited, collaboration

RECREATION

across political, social, organizational and professional boundaries is necessary for long-term success and sustainability. Encouraging the development of cooperative and collaborative relationships is and can be done through volunteer agreements with the department. For more information on these and other partnerships, please see SPSFM page 181 at http://www.dec.ny.gov/lands/64567.html.

Partnerships with several organizations exist on this unit. Each is beneficial and extremely important to the Herkimer DEC Office. These partnerships are formalized through the Volunteer Stewardship Agreement Program (VSA) and Temporary Revocable Permits (TRP).

The Department presently has a Volunteer Stewardship Agreement with the CNY Snow Travelers Snowmobile Club, for maintaining and grooming snowmobile trails on the Unit. These trails are open for public use, and are also used by hikers during the off-season.

A group of mountain bikers now has a Volunteer Stewardship Agreement with the Department to help maintain mountain bike trails on Albert J. Woodford Memorial State Forest.

Recreation

Recreation is a major component of planning for the sustainable use of State Forests on this unit. DEC accommodates diverse pursuits such as snowmobiling, horseback riding, hunting, trapping, fishing, picnicking, cross-country skiing, snowshoeing, bird watching, geocaching, mountain biking, and hiking. Outdoor recreation opportunities are an important factor in quality of life. We often learn to appreciate and understand nature by participating in these activities. However, repeated use of the land for recreational purposes can have significant impacts. For further discussion of recreational issues and policies, please see SPSFM page 187 at http://www.dec.ny.gov/lands/64567.html. The following section includes an inventory of recreational opportunities available on this unit as well as a description of use and demand for each activity. Recreational maps and geographic data are available at DEC's Mapping Gateway http://www.dec.ny.gov/pubs/212.html in Google format or at DECinfo Locator at https://gisservices.dec.ny.gov/gis/dil/.

Exceptional Recreational Opportunities

Chittning Pond and the ponds on White Street on Albert J. Woodford Memorial State Forest offer family friendly fishing opportunities. Small car top boats may be easily launched from parking areas that are very close by. The Chittning Pond site offers an Accessible fishing pier, parking and picnic tables.

Wildlife-related Recreation

Hunting

Big game and small game hunting occurs quite frequently across the Mohawk Vista Unit. This area of the district is interspersed with agricultural fields and pastures. The area is teaming with a variety of game species. White-tailed deer, Wild Turkey, and Ruffed Grouse are all present on the unit, and routinely hunted.

Fishing

As mentioned above the ponds on Albert J. Woodford Memorial State Forest (Chittning Pond and the ponds on White Street) provide easy access and family friendly fishing opportunities. The structural compatibility of the Chittning Pond site will be evaluated for potential development

RECREATION

of improved accessibility features, including a waterway access site within the first five years of the plan.

These water bodies were sampled by the Fisheries Staff in the spring of 2016 and were found to be stable, healthy environments for warm water species. The use on these areas is typically high due to their easy access and the proximity to urban centers of population. The dike and associated water control structures at Chittning Pond are in the design stage of a rehabilitation project, which is expected to be completed within the first 5-year period of this plan. The ponds on White Street are in need of major rehabilitation. These ponds were built in 1953 and have only received minimal maintenance since then. The dikes and drainage structures have deteriorated badly. The drainage structures need to be replaced and the dikes need major rehab work.

Trapping

Some trapping does take place on this unit, though this activity is not as popular here as on the northern areas. Trapping is available on all of the state lands within the unit, in accordance with existing trapping regulations.

Viewing Natural Resources

Whether driving the roads in search of wildlife, hiking through the woods exploring rocks and upturned trees, bird watching, visiting an open spot at night to view the stars, or just being out in the middle of the woods, away from the noise and distraction of everyday life, many people go to State Lands for many different reasons.

The height of ground known as Tassell Hill, located on Albert J. Woodford Memorial State Forest is the highest point of elevation in Oneida County. From this point the view to the north is remarkable.

Camping

At present, no formal, designated campsites exist on the unit. Most camping is done by big game hunters who camp with trailers in old log landings, parking areas and wide spots in the road. These requests for camping are handled under an expedited Temporary Revocable Permit through the Herkimer Office.

Water-based Recreation

Swimming is allowed in the bodies of open water that exist on the unit. However, there are no lifeguards or beaches. The man-made ponds are relatively shallow with muddy bottoms and not terribly appealing to swim in. The wetlands and beaver flows with open water are similar in nature.

Boating is allowed on these water bodies as mentioned above. Canoes and kayaks can easily be put in at the ponds on White Street and there is a graveled area for car-top type boats to be launched at Chittning Pond. The Chittning Pond site will be evaluated for the possible construction of an accessible waterway access site for persons with disabilities, after the reconstruction of the dike has taken place. This evaluation is expected to take place within the first five years of the plan.

During fishing season, families with small children can often be found at Chittning Pond.

Trail-based Recreation

Table I.H. – Trails* (See Recreation Maps for Locations)				
Use	Length (mi.)	State Forest		
Mountain Biking	13.2	Albert J. Woodford Memorial		
Snowmobile	3.6	Albert J. Woodford Memorial, Mt. Hunger		

^{*} Length available for each use includes use on PFARs; does not include municipal roads.

Foot Trail Use

No designated foot trails exist on the unit. Old fire lanes, old farm lanes, skid trails and other old logging roads provide many informal opportunities for hiking.

Cross Country Skiing

Cross country skiing opportunities are widely available on this unit, though there are no designated trails. Unplowed PFARs and logging roads/skid trails provide great opportunities to enjoy this pastime.

Use and demand for this activity of course varies with the weather and snow conditions.

Equestrian

There are no specifically designated horse trails on this unit. As stated in the Strategic Plan for State Forest Management, the riding, driving or leading of horses is permitted unless it is otherwise prohibited by law, regulation or posted notice. The existing truck trails, old logging roads, old fire lanes and old farm lanes provide opportunities for this use.

Two major horseback riding areas (Otter Creek Trail System, south of Lowville in Lewis County, and Brookfield Horse Trail System in eastern Madison County) are within a day's drive of this unit. These areas provide good opportunities for destination travelers. Local neighbors of the state forests on this unit occasionally use the roads and trails with their horses.

Mountain Biking

There are a little over 13 miles of mountain bike trails on Albert J. Woodford Memorial State Forest. These trails were informally developed by a group of enthusiastic riders. They will be formally designated when a Volunteer Stewardship Agreement (VSA) is signed by the riders and this plan is approved. These trails are very technical in nature and are rated as difficult or expert for the most part.

As stated in the Strategic Plan, mountain bikes are permitted to travel on any existing road or trail on State Forests, unless it is prohibited by signage. The existing PFARs, old logging roads, old fire lanes and old farm lanes provide beginner or novice opportunities for this use. The development of a less technical "beginner" mountain bike trail on Albert J. Woodford Memorial State Forest, to accommodate a wider range skill levels, is recommended in the second five years of this plan.

Universal Access

The mountain bike trails on Albert J. Woodford Memorial State Forest will be periodically rerouted or temporarily closed as needed when management actions occur in their vicinity. Good communication with the groups that use these trails will ensure that any changes in the trail system are widely known.

Snowmobiling

Albert J. Woodford Memorial State Forest and Mt. Hunger State Forest have designated snowmobile trails that traverse these state forests.

Like other winter sports, use of these trails is directly dependent on weather conditions. With cold temperatures and good snow totals, the trails are groomed regularly by the local clubs. The use of these trails will sky rocket when conditions are good.

Other Recreational Activities

Target Shooting

On Albert J. Woodford Memorial State Forest there is a shale pit on Janis Road, about 0.3 miles north of Route 20 that is no longer used as a source of gravel. This has become a bit of an attractive nuisance for target shooting. Some shooters seem to be very conscientious about cleaning up after themselves, while it is clear that others are most certainly not. Quite often all manner of things that have been "blown to bits" are found here making the area dump-like in nature. Signs will be posted in this area asking people to clean up after themselves. If this is not effective, the area will be closed to target shooting.

Overall Assessment of the Level of Recreational Development

It is important that recreational use is not allowed to incrementally increase to an unsustainable level. DEC must consider the impact on the unit from increased use on other management goals or other recreational uses. DEC must consider the full range of impacts, including long-term maintenance and the balancing of multiple uses.

Trash that is left on site after a party is one of the most visible negative impacts of recreational use. That, along with dumping of household garbage, results in many hours spent trying to track down the culprits. The labor and equipment costs to clean up these messes can be in the thousands of dollars annually, which could be much better spent maintaining existing facilities such as roads, trails and campsites.

Use of off-road motor vehicles on designated trails causes these trails to become rutted, and eventually unusable for their original intent, and is probably the next most obvious sign of inappropriate recreational use. At the time of the writing of this plan, off-road motor vehicles are not allowed on the Unit.

Universal Access

DEC has an essential role in providing universal access to recreational activities that are often rustic and challenging by nature, and ensuring that facilities are not only safe, attractive and sustainable, but also compatible with resources. For more information on universal access policies, please see SPSFM page 173 at http://www.dec.ny.gov/lands/64567.html.

UNIVERSAL ACCESS

Application of the Americans with Disabilities Act (ADA)

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.

Title II also requires that new facilities, and parts of facilities that are newly constructed for public use, are to be accessible to people with disabilities. In rare circumstances where accessibility is determined to be structurally impracticable due to terrain, the facility, or part of facility is to be accessible to the greatest extent possible and to people with various types of disabilities.

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.

Any new facilities, assets and accessibility improvements to existing facilities or assets proposed in this UMP are identified in the section containing proposed management actions.

The Department is not required to make each of its existing facilities and assets accessible as long as the Department's programs, taken as a whole, are accessible.

For copies of any of the above-mentioned laws or guidelines relating to accessibility, contact the DEC Universal Access Program Coordinator at 518-402-9428 or UniversalAccessProgram@dec.nv.gov.

Motorized Access Permit for People With Disabilities (MAPPWD)

The Department's Motorized Access Program for People with Disabilities (MAPPWD) permits qualifying people with disabilities to use motor vehicles along specific routes for access to programs, such as hunting and fishing, on state lands. These routes are provided to facilitate access to these traditional programs and not for the support of ORV or ATV riding activities. This program provides access to significant recreational opportunities throughout the state and is one more way that New York is opening the outdoors to people with disabilities. This permit program is maintained pursuant to DEC Commissioner's Policy 3 (CP-3).

MAPPWD permits may be obtained from Regional DEC Foresters through regional DEC offices.

MINERAL RESOURCES

The permit provides access for those who seek solitude, connection to nature, undisturbed wildlife habitat, and inclusion with fellow sportspeople. Permit holders can use specified vehicles to travel beyond the reach of public roads, to areas where others must hike or bike.

On this UMP unit, Mt. Hunger State Forest has about 2.2 miles of trail for this purpose. At present, portions of this trail are in need of maintenance. This will be scheduled in the first 5-year management action schedule.

Mineral Resources

Oil, Gas and Solution Mining Exploration and Development

Oil and gas production from State Forest lands, where the mineral rights are owned by the state, are only undertaken under the terms and conditions of an oil and gas lease. As surface managers, the Division of Lands and Forests would evaluate any concerns as they pertain to new natural gas leases on State Forest lands should any be proposed. Consistent with past practice, prior to any new leases, DEC would hold public meetings to discuss all possible leasing options and environmental impacts. A comprehensive tract assessment would be completed as part of this process. For more information on natural gas and other mineral resource policies, please see SPSFM page 225 at http://www.dec.ny.gov/lands/64567.html.

The current status of leases on this unit are as follows:

Existing leases on the unit:

• There are no existing or planned leases on the unit at this time.

Active wells on the unit:

• There are no active wells on the unit at this time.

Inactive wells on the unit:

• There are no inactive wells on the unit at this time.

Mining

There are no active gravel/shale pits or other surface mines in this unit. There is one inactive shale pit on Albert J. Woodford Memorial State Forest. This shale pit will remain inactive. The shale derived from this pit is generally of low quality that doesn't hold up well. It is often very sharp-edged and can cut into and damage tires. Activity at the mine has been conducted under the regulatory threshold as less than 750 cubic yards or 1,000 tons of material has been removed within any 12-successive calendar months. Therefore, the site is not subject to jurisdiction under the Mined Land Reclamation Law and there is no requirement for a New York State mining permit. Although there are no commercial mines within the state lands comprising the Mohawk Vista Management Unit, privately owned mining operations do exist within three to five miles of state lands in the Unit. Surficial deposits surrounding these state lands are generally glacial till deposits that would not yield large amounts of sand and gravel. Most of the mines in the area are small and are permitted by the local municipalities or local construction companies. There are a few mine sites near state lands in the Unit that are no longer in operation and have undergone reclamation returning the land to a productive use. Crushed stone and gravel needs will be met with material obtained from commercial pits in the area. This material is of much better quality and will last for a longer amount of time. Anticipated needs

SUPPORTING LOCAL COMMUNITIES

include routine maintenance and rehabilitation of PFARs and any new log landings needed for timber harvesting.

There are only two active quarries near the Unit ranging in size from twenty-six to three hundred-forty acres. The closest quarries to any of the forests is a twenty-six-acre dolomite quarry located three miles northeast of Steuben Hill State Forest and a three hundred-forty-acre limestone quarry located six miles west of Albert J. Woodford Memorial State Forest. There are no quarries in the immediate vicinity of Mount Hunger, Ohissa or Otsquago State Forests.

There are approximately five active sand and gravel operations near the Unit ranging in size from four to eighteen acres. The closest sand and gravel operations to any of the forests are an eighteen-acre mine located three miles west of Albert J. Woodford Memorial State Forest and a four-acre mine located two miles to the west of Steuben Hill State Forest. There are no sand and gravel deposits in the immediate vicinity of Mount Hunger, Ohissa or Otsquago State Forests.

Under Article 7 of the New York Consolidated Laws / Public Lands, 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 plan.

Supporting Local Communities

Tourism

State Forests can be an economic asset to the local communities that surround them. It is estimated that more than three out of every four Americans participate in active outdoor recreation of some sort each year. When they do, they spend money, generate jobs, and support local communities. For more information, please see SPSFM page 245 at http://www.dec.ny.gov/lands/64567.html.

Taxes Paid

The New York State Real Property Tax Law provides that all reforestation areas are subject to taxation for school and town purposes. Some reforestation areas are also subject to taxation for county purposes. Most unique areas and multiple use areas are exempt from taxation. All of these lands are assessed as if privately owned.

Detailed tax information can be obtained by contacting Herkimer County Real Property or Oneida County Real Property Tax Office. The following taxes are projected for State lands in this unit for the 2014 tax year:

• Township Tax (incl. highway, general, fire taxes, etc.): \$18,122.00

Total School Tax: \$77,488.00

• Total County Tax: \$1,700.00

• Other Tax: \$4,200.00

FOREST PRODUCTS

Forest Products

Timber

Timber management provides a renewable supply of sustainably-harvested forest products and can also enhance biodiversity. The products harvested may include furniture quality hardwoods, softwoods for log cabins, fiber for paper making, firewood, animal bedding, wood pellets, biofuel, and chips for electricity production. For more information, please see SPSFM page 251 at http://www.dec.ny.gov/lands/64567.html.

Information on upcoming timber expected to be produced from timber management activities on the unit is contained in the land management action schedules in Part IV of this plan.

The authority to sell forest products from DEC administered lands is provided by the Environmental Conservation Law. To perpetuate the growth, health and quality of the forest resources, the Department has implemented a sustained yield timber management program for State Forest lands.

Forest stands being considered for timber harvesting are selected based on the following criteria:

- 1) Adequate access;
- 2) Wildlife considerations;
- 3) Present and future forest health concerns (including invasive plants and pests);
- 4) Current distribution of vegetative stages within the unit management land area and surrounding landscape, including the eco-regional habitat gaps as per the Strategic Plan for State Forest Management;
- 5) Ability to regenerate stands (if a regeneration harvest);
- 6) Existing timber and vegetation management needs from other unit management plans:
- 7) Market conditions;
- 8) Potential growth response of stands to treatment
- 9) Presence of rare, threatened and endangered species and unique natural communities

By law, any trees to be removed in a harvest must be designated, and paid for prior to removal. Designation (marking) of trees is made by DEC forestry staff. After designation is completed, a fair market appraisal is conducted. No products may be sold at less than the fair market value. Forest stands are selected for harvest based on the criteria outlined above, and the desired future conditions identified by this Unit Management Plan.

The Environmental Conservation Law requires that different procedures are employed based on the appraised value of a timber sale. Sales that are appraised greater than \$10,000 are called revenue sales and sales that are appraised at less than \$10,000 are known as local sales. Revenue sales contracts must be approved by DEC's Central Office staff, and revenue sale contracts valued at \$25,000 or more must be approved by the Office of the State Comptroller. The Regional Forester has the authority to execute local sale contracts. All sales valued at more than \$500 (and those less than \$500 which are thought to have substantial public interest) are publicly advertised and competitively bid.

FOREST HEALTH

Timber prices and demand for stumpage have leveled off recently and a steady demand exists for all manner of standing timber. Most timber harvesters have increased the mechanized aspect of their day to day operations and chipping low grade material is commonplace.

Due to low staffing levels, timber harvesting for this working circle has been far below anticipated and sustainable levels.

This long term, and as yet unaddressed, problem has decreased the ability to manage overcrowded timber stands, resulting in adverse effects on forest health, tree growth rates, State Forest infrastructure (the latter which is often enhanced when roads are upgraded as part of a timber sale contract) and wildlife populations.

Non-Timber Forest Products

Berry picking, mushroom picking and leek picking are the major non-timber forest products that are harvested on these areas, though only for personal use. Commercial use is not allowed without a contract, and the only contracts for non-timber products that are currently allowed on State Forests is for producing maple sap.

Maple Tapping

A decision was made that in Region 6 of DEC the focus of maple tapping opportunities would be in the Lowville and Potsdam working circles. This decision was based on proximity to major maple producers and the potentially much larger acreage of appropriate stands that exist in those working circles.

Forest Health

Forest health is pursued with the goal of maintaining biodiversity. Any agent that decreases biodiversity can have a deleterious effect on the forest as a whole and its ability to withstand stress. Forest health in general should favor the retention of native species and natural communities or species that can thrive in site conditions without interrupting biodiversity. For more information on forest health, please see SPSFM page 277 at http://www.dec.ny.gov/lands/64567.html.

In the State Forests in this plan, overall forest health is good. The untended softwood plantations are slowly declining and will likely continue to do so until they are thinned out.

Emerald Ash Borer has been detected in Rome, to the west in the Syracuse area, and to the east in the Saratoga and Albany area. New quarantine zones have been established around the newly discovered out breaks.

See http://www.dec.ny.gov/docs/lands_forests_pdf/eabquarmaps.pdf for a current map of the EAB quarantine zones.

All of the current protocols and guidelines for dealing with EAB are being followed. New methods of control and response are still being developed as we learn about this particular pest.

Invasive Species

As global trade and travel have increased, so have the introduction of non-native species. While many of these non-native species do not have adverse effects on the areas in which they are

FOREST HEALTH

introduced, some become invasive in their new ranges, disrupting ecosystem function, reducing biodiversity and degrading natural areas. Invasive species have been identified as one of the greatest threats to biodiversity, second only to habitat loss. Invasive species can damage native habitats by altering hydrology, fire frequency, soil fertility and other ecosystem processes.

Table I.I. – Invasive Species, Pests and Pathogens		
Plants	Status	
Giant Hogweed (Heracleum mantegazzianum)	Invasive: This plant is known to exist on Albert J. Woodford Memorial State Forest. The special unit from Albany has treated this patch several times in the past few years which has helped contain it. However, the patch is slowly getting bigger.	
Japanese Knotweed (Polygnum cuspidatum or Fallopia japonica)	<i>Invasive</i> : Various sized patches growing on all state forests on this unit.	
Giant Knotweed (Polygonum sachalinense or Fallopia sachalinensis)	Invasive: Various sized patches growing on all state forests on this unit.	
Wild Parsnip (Pastinaca sativa L.)	<i>Invasive</i> : Various sized patches growing on all state forests on this unit.	
Garlic Mustard (Alliaria petiolata)	<i>Invasive</i> : Various sized patches growing on all state forests on this unit.	

Insects	Status
Forest Tent Caterpillar (Malacosoma disstria)	Native: Infestations are cyclical and come in waves, generally from north to south. Populations crashed about 6 years ago and are building at this time. The next infestation will depend on weather and population dynamics of this insect.
Eastern Tent Caterpillar (Malacosoma americanum)	Native: Infestations are cyclical and come in waves, generally from north to south. Populations crashed about 6 years ago and are building at this time. The next infestation will depend on weather and population dynamics of this insect.
Gypsy Moth (Lymantria dispar)	Invasive: Infestations are cyclical for this insect; however, it usually occurs in hotspots that vary according to weather, elevation and population dynamics. This insect is susceptible to some natural predators and parasites that can help keep the population in check.
Sirex Woodwasp (Sirex noctilio)	<i>Invasive</i> : This wasp has reportedly been found in Oneida County. Very few problems have been identified due to this insect.

FOREST HEALTH

Deer Ticks (Ixodes scapularis)	Native : Though native to New York, the range of these ticks is expanding each year. These creatures are technically arachnids (they have 8 legs). Most State Forests in this unit have resident populations of deer ticks.
Diseases	Status
Beech Bark Disease (Nectria coccinea)	<i>Invasive</i> : Present throughout the northeast for many years. Unfortunately, there is no effective treatment. Not cutting beech trees that appear to be immune is practiced with scattered and limited success.
Ash Dieback (various agents)	Native: Occurs in pockets throughout this unit. Keeping the hardwood stands healthy and properly thinned appears to help.
Red Rot, Butt Rot (various species) primarily in White Pine	Native: Found in some softwood plantations in this unit. Keeping the plantations healthy and properly thinned seems to help.
Animals	Status
Porcupines	Native: These animals have been found in this area for hundreds of years. Due to lack of predators and limited hunting pressure, populations in some areas have skyrocketed. High density populations can seriously damage trees that are being grown for high quality forest products.

At this time, the knotweed infestations are mostly small patches. Herbicide spot treatments and some cultural practices done in a timely manner should help keep these patches in check. If not treated, current research indicates that this plant will spread out of control, though it doesn't survive well under a closed forest canopy.

Native Pests and Pathogens

Forest tent caterpillars pose a threat to hardwood stands, though they can occasionally cause problems in softwood stands. Heavy infestations occur in cycles based on weather, cold temperatures and the availability of organisms that are parasites and that prey on these creatures. Trees (especially sugar maple) that have repeatedly been severely defoliated by the tent caterpillar often go into decline and die. Management options include aerial spraying, releasing parasitic wasps or trapping the larvae with commercially available implements. Delaying treatments of stressed stands is also recommended.

Managing Deer Impacts

There is limited ability to manage deer impacts using silvicultural systems. The most effective method of keeping deer impacts in line with management objectives is to monitor impacts while working with the Division of Fish, Wildlife and Marine Resources to observe and manage the herd. On properties where deer are suspected of impacting values and objectives associated with biodiversity and timber management, such impacts must be inventoried and assessed. Deer Browse is not a problem on this unit. Hunting pressure combined with a high percentage of agricultural land on the unit creates an environment where the natural tree seedlings are not in demand as a food source. For more information on managing deer impacts, please see SPSFM page 291 at http://www.dec.ny.gov/lands/64567.html.

SUMMARY OF ECO-REGION ASSESSMENTS

ECO-REGION SUMMARY

Summary of Eco-Region Assessments

To practice ecosystem management, foresters, must assess the natural landscape in and around the management unit. State Forest managers utilized The Nature Conservancy Eco-Region Assessments to evaluate the landscape in and around this management unit. The Mohawk Vista UMP falls within the Great Lakes and High Allegheny Plateau Eco-Regions.

Eco-Region Summary

Great Lakes Eco-Region:



Conservancy, Great Lakes Ecoregional Planning Team 1999). The ecoregion extends from northeastern Minnesota across to north central New York, and south to northern Indiana and Ohio. The entire landscape was glaciated during the last Ice Age, and is characterized by level lake plains, level to gently rolling lowlands, and hillier upland areas. Elevation across the ecoregion ranges from 300 to over 2,000 feet. Michigan's Porcupine and Huron Mountains and Minnesota's North Shore are some of the areas with higher elevations, while the southern shores of Lakes Michigan, Erie and Ontario have lower elevations and less relief. In New York, the Great Lakes Ecoregion represents the watersheds of the Finger Lakes, Lake Ontario and Lake Erie, including the Mohawk River Valley. Historically, the northern part of the ecoregion was dominated by northern hardwood forests, pine forests, and spruce-fir forests. The vast majority of these forests was cut over by 1910, and is now in second growth; some areas are even in third growth. Much of the Great Lakes Ecoregion in New York was dominated by tallgrass prairies and savannas, with some beech-maple and other hardwood forests mixed in. This area has been almost completely converted to agricultural and urban or residential uses. The primary disturbance events that helped to shape these ecosystems were fire, blow-downs, and insect and disease outbreaks in the forested parts of the ecoregion, and fire in the grasslands and savannas.

ECO-REGION ASSESSMENT

High Allegheny Plateau Eco-Region:



The High Allegheny Plateau (HAP) Ecoregion is located along the southern tier of New York and the northern tier of Pennsylvania (Zaremba and Anderson et. al. 2003). It includes a small portion of New Jersey. Well known features in HAP include the Catskills, The Shawangunks, The Kittatinny Ridge, The Poconos, Allegany State Park, Allegheny National Forest, and a large mass of Pennsylvania stateowned land. The HAP ecoregion is defined by high elevation features at the northern end of the Appalachian Plateau. Most of the ecoregion is above 1200 feet. The general land form of the area is mid-elevation hills separated by numerous narrow stream-cut valleys. One of the main features of the ecoregion is an abundance of rivers and streams. The Delaware, Susquehanna, and Allegheny Rivers and their many tributaries cover the entire ecoregion. The Delaware River drains into Delaware Bay; the Susquehanna flows into the Chesapeake Bay; the Allegheny flows into the Ohio and eventually into the Mississippi. These three different drainages contribute to the high overall aquatic diversity in the ecoregion. The northern and eastern portions of the ecoregion were glaciated; the southwest portion was not. Many northern species and communities reach their southern limit in HAP, while many southern species extend into the ecoregion but not beyond. Species and communities associated with glaciated landforms occur in the north and east; biodiversity associated with older substrate and deeper erosional soils occurs in the southwest. Another prominent feature of the ecoregion is its currently low population density, although major population centers are nearby. There are 1.7 million people living in the 16.9 million acres of HAP (2000 census data). The largest city is Binghamton, New York at 47,000. Only 250,000 people in HAP live in cities over 10,000. The overall population trend in HAP indicates that people are moving out of the ecoregion with the notable exception of the areas within reach of New York City by major highways. There are large and significant managed areas in HAP, including three large intact forested areas: the Catskills, the Allegheny National Forest/Allegany State Park complex, and the Pennsylvania state land in central PA.

Eco-Region Assessment

Table II.A. Land Use and Land Cover for the Landscape Surrounding Mohawk Vista		
Land Use and Land Cover	Approximate Acreage	Percent of Landscape
deciduous forest	152,360.1	25.25231
pasture/ hay	147,984.5	24.5271
cultivated crops	99,322.93	16.46188

SUMMARY OF ECO-REGION ASSESSMENTS

LOCAL LANDSCAPE CONDITIONS

Table II.A. Land Use and Land Cover for the Landscape Surrounding Mohawk Vista		
Land Use and Land Cover	Approximate Acreage	Percent of Landscape
shrub/ scrub	49,061.24	8.131458
mixed forest	27,417.13	4.544142
developed, open space	27,183.62	4.50544
woody wetlands	23,493.72	3.893873
grassland/ herbaceous	21,669.24	3.591481
evergreen forest	21,135.28	3.502982
developed, low intensity	15,674.94	2.59798
developed, medium intensity	6,683.709	1.107765
open water	5,092.953	0.844111
emergent herbaceous woodlands	3,844.901	0.637258
developed, high intensity	1,912.554	0.316989
barren land (rock/ sand/ clay)	514.1657	0.085218
Total	603,350.96	100

Local Landscape Conditions

The above chart was compiled using the National Land Cover Database 2011 information. This data was derived from the Multi - Resolution Land Characteristics Consortium which is made up of 9 major federal agencies that provide and make use of land cover information and how it changes.

What we can learn from this data is that the area that the Mohawk Vista unit encompasses is about 33% forested, 45% open but covered with vegetation (cropland, pasture etc.) and only about 8% developed on any level.

The aerial photo coverage shows that these covertypes occur in a patchwork combination with the State Forests making up the largest forested acreages in one piece, under a single ownership, by far. Of the 200,900 acres listed as forested, within this UMP area, State Forests account for 5359 forested acres or about 3%.

These conditions are favorable for species that require varied habitat. Species that require large tracts of unbroken high forest will likely not thrive as well here.

At present, there does not appear to be a demand for filling any landscape gaps in this unit.

Habitat Related Demands

The ponds on White Street on Albert J. Woodford Memorial State Forest provide valuable habitat (large, shallow warm water ponds) that is not common in this part of the county. It is important to try to keep this habitat if possible. These ponds need significant maintenance and rehab if they are to remain as ponds.

MANAGEMENT NEEDS, ISSUES AND CONCERNS

HABITAT RELATED DEMANDS

Management Needs, Issues and Concerns

<u>Trash, Dumping and Vandalism</u> – A common problem region wide is the illegal dumping of trash and the destructive vandalism that takes place on these State Forests. These areas are in rural locations with only a few year-round neighbors and relatively close to larger population bases. The roads are lightly traveled most times of the year making them attractive places for unsavory characters to illegally dump their trash or damaging the land by going off road illegally with ATV's and full-sized vehicles. The resources that need to be used to clean up the trash and fix the other problems caused by illegal use could be much better utilized to keep up on routine maintenance or make much needed improvements.

The end of the Public Forest Access Road on Albert J. Woodford Memorial State Forest that goes north from White Street, and the very top of Tassell Hill Road (also on Albert J. Woodford Memorial State Forest) are places that people habitually dump all manner of trash and are also frequent places where underage drinking and partying occur.

<u>Access Roads</u> - Another major challenge on the unit is maintenance of the roadways that provide access to the State Forests. Public Forest Access Roads are roads built and maintained by DEC for State Forests. Additional access is provided by numerous town roads that are supposed to be maintained by the local municipalities.

Due to a combination of long term reduced funding and staffing, many roads of each type are steadily degrading. These roads are critical to providing public access to the property and moving forest products from timber sales. Poor maintenance can also lead to erosion and sedimentation which not only degrades the road but also impacts adjacent areas, including streams, wetlands and water bodies.

More state resources need to be spent on these roads, including funds for rehabilitation and annual maintenance not only for Public Forest Access Roads but for the other categories of roads as well. Improved roads should be one of the primary management objectives for this unit. The main access road to Mt. Hunger State Forest is in dire need of work. If resources cannot be found to bring this road up to standards, it will not be negotiable for cars in a very short time.

There is one haul road on Albert J. Woodford Memorial State Forest, and it goes up to the top of Tassell Hill. It will remain closed to motor vehicle use. This area has been chronically abused by full sized 4-wheel drive vehicles. It may be opened for administrative use or management actions in the future.

Information on the Unit

State Forests generally are relatively low-profile state lands. Most provide extensive versus intensive recreation opportunities, unless there is a particular point of interest like a trail network, scenic vista, etc. Each has its own unique opportunities which could be better presented to potential public users.

Currently the state forests, which comprise the Mohawk Vista Unit, are identified by Facility ID signs that are brown hanging wooden signs about 3' by 3' with yellow lettering identifying the

OBJECTIVES

name of the state forest (and usually the acreage). The boundaries are then marked by small DEC boundary line signs and yellow paint. There is usually no other on-site information. Providing the public more information about these state forests is an important objective of management of these lands. Providing kiosks on site with information and a map or maps of the SF, and a web page for each of the state forests, would provide more detailed info before a user ventured into the field.

The Detached Forest Preserve Parcels in this unit first need to be identified with a survey. Some of these areas are not well known and the exact locations need to be identified and the boundary lines marked and posted. Once this is established future management can be scheduled. These lands cannot have timber harvests, but recreation activities are allowed.

Management Objectives and Actions

Management objectives and actions for Mohawk Vista are based on DEC's "Management Approach and Goals" outlined at the beginning of this UMP, as well as on the specific resource conditions, community and user's interests, and management tools and resources identified over the course of developing this UMP.

Objectives below are paired with actions; some more specific actions are spelled out in the "Ten-Year Management Actions" which follows the tables below.

Objectives

Ecosystem Management

Objective	Actions	
Active Forest Management		
AFM I – Apply sound silvicultural practices	All current guidelines will be followed.	
AFM II – Use harvesting plans to enhance diversity of species, habitats & structure	All current guidelines and Best Management Practices will be followed.	
AFM III – Fill ecoregional gaps to maintain and enhance landscape-level biodiversity	All current guidelines will be followed.	
AFM IV – Enhance matrix forest blocks and connectivity corridors where applicable	None exist on this unit.	
AFM V – Practice forest and tree retention on stands managed for timber	All current guidelines will be followed.	

OBJECTIVES

Objective	Actions
HCVF- Identify and maintain HCVFs	A small HCVF for watershed protection exists on the southern edge of Steuben Hill (Herkimer 2) State Forest. There are some public water supply intakes downhill from this area of the State Forest. These intakes are deep, drilled wells and are quite far from the state land. There are some drainages that originate at the state land and run close to these wells. Extra precautions will be taken when any management actions occur in this area of the state land.

The following are guidelines and policies that relate to the above objectives and actions, which are in place and being followed.

- 2015 Special Management Zone Rules for State Forests and Wildlife Management Areas http://www.dec.ny.gov/docs/wildlife_pdf/yfismzrules.pdf
- Plantation Management on State Forests (ONR-DLF-1)
 http://www.dec.ny.gov/docs/lands_forests_pdf/policysfplantation.pdf
- Retention on State Forests (ONR-DLF-2)
 http://www.dec.ny.gov/docs/lands_forests_pdf/policysfrention.pdf
- Clearcutting on State Forests (ONR-DLF-3)
 http://www.dec.ny.gov/docs/lands_forests_pdf/policysfclearcutting.pdf
- State Forest Rutting Guidelines
 http://www.dec.ny.gov/docs/lands_forests_pdf/ruttingguidelines.pdf

Resource Protection

Table III.B. –Resource Protection Objectives and Actions		
Objective	Actions	
Soil and Water Protection		
SW I – Prevent erosion, compaction and nutrient depletion	NYS Best Management practices will be followed. Areas that are too steep or too wet will not be harvested. New skid trails and access roads will be engineered at the appropriate grades. These guidelines are outlined and enforced in the timber harvest contracts used in the sale of all forest products on State Forests.	
SW II – Identify and map SMZ's and adapt management for highly-erodible soils	Special management zones are identified on our GIS layer and on the ground before any treatments take place.	

OBJECTIVES

Table III.B. –Resource Protection Objectives and Actions		
Objective	Actions	
At-Risk Species and Natural Communities		
ARS I – Protect ARS&C ranked S1, S2, S2-3, G1, G2 or G2-3 where present	All current guidelines will be followed.	
ARS II – Conduct habitat restoration and promote recovery of declining species	Use of the Predicted Richness Overlays in the Geographic Information System (PRO GIS) will help identify opportunities. All guidelines will be followed.	
ARS III - Consider protection and management of Species of Greatest Conservation Need	Use of the PROS GIS layer will help identify opportunities. All guidelines will be followed.	
Visual Resources and Aesthetics		
VR I – Maintain or improve overall quality of visual resources	The vista from the top of Tassell Hill on Albert J. Woodford Memorial State Forest will be maintained through periodic cutting of trees and shrubs that obscure the view. New opportunities will be taken advantage of as they are identified.	
VR II – Use natural materials where feasible	All current guidelines will be followed.	
VR III – Lay out any new roads/trails to highlight vistas and unique natural features	New opportunities will be taken advantage of as they are identified, and as partners are identified to help maintain them.	
VR IV – Develop kiosks to provide education and reduce sign pollution	All current guidelines will be followed.	
Historic and Cultural Resources		
HC I – Preserve and protect historic and cultural resources wherever they occur	All current guidelines will be followed.	
HC II – Inventory resources in GIS and with OPRHP	All current guidelines will be followed.	

Infrastructure and Real Property

Table III.C. –Infrastructure and Real Property Objectives and Actions		
Objective	Actions	
Boundary Line Maintenance		
BL I – Maintain boundary lines	See maintenance schedule in Ten Year List of Mgt. Actions	
BL II – Address encroachments and other real property problems	These situations are addressed as they occur.	
Infrastructure		

OBJECTIVES

Table III.C. –Infrastructure and Real Property Objectives and Actions		
Objective	Actions	
INF I – Provide and maintain public forest access roads, access trails, haul roads, parking areas, and associated appurtenances	See maintenance schedule in Ten Year List of Mgt. Actions	
INF II – Upgrade, replace or relocate infrastructure out of riparian areas where feasible	These situations are addressed as they become evident.	
INF III – Resolve issues of uncertain legal status or jurisdiction	These situations are addressed as they become evident.	
INF IV – Prevent over-development	Current guidelines will be followed. Very limited development is planned on this unit.	

Public/Permitted Use

Table III.D – Public / Permitted Use Objectives and Actions		
Objective	Actions	
Univer	sal Access	
UAI – Use minimum tool approach to provide universal access to programs	Current guidelines will be followed. A MAPPWD CP-3 trail exists on Mt. Hunger SF and is scheduled for maintenance and rehab.	
Formal and Informal Partnerships and Agreements		
PRT I – Collaborate with local organizations and governments to reach mutual goals	Partnerships are sought out and nurtured where ever possible.	
PRT II – Consider full range of impacts associated with VSAs (AANRs) and recurring TRPs	Current guidelines will be followed.	
Recreation		
REC I – Accommodate public use while preventing illegal activity, reducing impacts and enhancing public safety	The dike at Chittning Pond will be rehabilitated to DEC Dam Safety standards. All other current guidelines will be followed.	
REC II – Provide public recreation information	Kiosks will be placed at all state forest units as funding allows, and a web page will be prepared for each state forest. In addition, this UMP and Google Earth are excellent sources of specific information.	

OBJECTIVES

Table III.D – Public / Permitted Use Object	tives and Actions		
Objective	Actions		
REC III – Inventory recreational amenities and schedule recreation management actions	A list of all recreational resources is maintained in a G.I.S. database and through the DEC Maintenance Management System. This database will be updated on a yearly basis to reflect any changes to the recreational amenities, add any newly constructed amenities, and plan for any future maintenance or construction activities.		
REC IV – Enhance fish & game species habitat	Fish species within the Unit will be periodically monitored through angler surveys and through fish sampling. Fish species will then be managed by the Bureau of Fisheries, based on suitable habitat for appropriate species. Timber harvesting activities will be conducted utilizing NYS BMP guidelines to protect water quality. Game species will be monitored through the DECALS program, and game take allowances will be adjusted accordingly by the Bureau of Wildlife. Wildlife habitat enhancement will be considered with all timber harvesting activities. The shallow warm water ponds on White Street on Albert J. Woodford Memorial State		
Off-Highway and A	Forest will be rehabbed as funds allow. All-Terrain Vehicle Use		
ATV I – Enhance recreational access by people with disabilities under the MAPPWD program	Department staff will improve existing routes and evaluate any possible new MAPPWD routes for disabled persons as opportunities allow.		
ATV II – Consider requests for ATV connector routes across the unit	All requests will be handled on a case by case basis, and follow the guidance provided in the "Strategic Plan for State Forest Management" or subsequent policy.		
	ocal Communities		
LC I – Provide revenue to New York State and economic stimulus for local communities	Timber harvesting activities on State lands provides income for New York State and provides local jobs for communities.		
LC II – Improve local economies through forest-based tourism	State Forest lands are promoted through multiple brochures and through DEC's website to enhance tourism.		

OBJECTIVES

Table III.D – Public / Permitted Use Objectives and Actions						
Objective	Actions					
LC III – Protect rural character and provide ecosystem services to local communities.	State Forest land on the Unit will remain undeveloped and retain Open Space within the local communities.					

Forest Management and Health

Table III.E. –Forest Management and Hea	Ith Objectives and Actions						
Objective	Actions						
Forest Products							
FP I – Sustainably manage for forest products	Current guidelines will be followed.						
FP II – Educate the public about the benefits of silviculture	This plan, public meetings, county wide conservation field days, and other public forums will be used to get the word out.						
Plantation	Management						
PM I – Convert plantation stands to natural forest conditions where appropriate	Current guidelines will be followed.						
PM II – Artificially regenerate plantations where appropriate	Current guidelines will be followed.						
Fore	st Health						
FH I – Use timber sales to improve forest health and the diversity of species	Any timber harvest conducted will include considerations in the prescription to help improve the health of the harvested stand.						
FH II – Protect the unit and surrounding lands from introduced diseases and invasive plant and animal species	On the ground surveillance, timely inventory and alerts from the public help to identify potential forest health issues. Appropriate actions will be taken when these problems are discovered. The quarantines that are currently in place have proven fairly successful in slowing the spread of catastrophic insect and disease pests.						
Managing	Deer Impacts						
DM I – Monitor impacts of deer browsing on forest health and regeneration	Deer browse impacts are monitored as part of/during inventory field work and when in the field for other activities.						

OBJECTIVES

Table III.E. –Forest Management and Health Objectives and Actions						
Objective	Actions					
DM II – Address issues of over-browsing	Deer browse is not a problem on this unit. Hunting pressure combined with a high percentage of agricultural land on the unit creates an environment where the natural tree seedlings are not in demand as a food source.					
Fire Ma	anagement					
FM I – Support Forest Rangers in controlling the ignition and spread of wildfires	Most DEC employees in the region have some training in this area and can help as needed.					
FM II – Maintain naturally occurring fire- dependent communities	There are no known fire-dependent communities on this unit.					
Carbon S	equestration					
CS I – Keep forests as forests, where appropriate	No major covertype changes are proposed for this unit.					
CS II – Enhance carbon storage in existing stands	Current guidelines will be followed. For more information see the NYS Strategic Plan for State Forest Management.					
CS III – Keep forests vigorous and improve forest growth rates	Forest health is the number one goal with any timber harvest conducted.					
CS IV – Sequester carbon in forest products	Current guidelines will be followed. For more information see the NYS Strategic Plan for State Forest Management.					

TEN-YEAR LIST OF MANAGEMENT ACTIONS

Ten-Year List of Management Actions

Unit-wide Actions

Action 1

Develop and subsequently adopt this UMP with future amendments as needed and periodic updates at least every ten years.

Action 2

Create/update the web page for each State Forest in this unit, including an electronic, printable map showing the location of recreational amenities.

Action 3

Maintain boundary lines and roads per the schedules below.

Table IV.A. Boundary Line Management Action Schedule (BL I, BL II)							
State Forest	Length of	Year of Last	Issues				
State Forest	Boundary (mi.)	Maintenance	Maintenance				
Herkimer 2, Steuben Hill	8.6	2015	2022	None at this time			
Herkimer 5, Otsquago	3.8	2010	2017	None at this time			
Herkimer 6, Ohissa	5.4	2011	2018	None at this time			
Oneida 8, Albert J. Woodford Memorial	16.1	2014	2021	None at this time			
Oneida 22, Mt. Hunger	7.3	2015	2022	None at this time			

TEN-YEAR LIST OF MANAGEMENT ACTIONS

Table IV	Table IV.B. Roads Management Routine Maintenance Schedule (INF I, II)								
Road Name	Length	Last	Last	Next	Next	Issues			
Noau Name	(miles)	Brushing	Grading	Brushing	Grading				
	Oneid	a 8, Albert J.	Woodford	Memorial State	Forest				
Public Forest Access Road heading north from White Street	0.7	2010?	2010?	1 st five years of plan	1 st five years of plan	Dumping and underage drinking and partying occur regularly at the end of this road.			
Haul Road to top of Tassell Hill	0.3	-	-	Not scheduled for maintenance at this time	Not scheduled for maintenance at this time	Road barricaded to motor vehicle use due to illegal use and abuse. May be opened for administrative use or management actions in the future. Not scheduled for maintenance at this time.			
		Oneida 22	, Mt. Hung	er State Forest	.,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
Whalen Road (public forest access road)	1.6	-	Partial grading done in 2011	As soon as possible	As soon as possible	This road is in need of major rehab work. If this is not done soon, the road should be closed as it will not be safe to drive.			
Whalen Road Extension (public forest access road)	0.3	-	-	As soon as possible	As soon as possible	This road is in need of major rehab work. If this is not done			

Ten-Year List of Management Actions

			soon, the
			road should
			be closed as
			it will not be
			safe to drive.

Action 4

Follow all stand treatment and recreation schedules as listed in Table III.D –Public / Permitted Use Objectives and Actions starting on page 48.

Action 5

Formalize the mountain bike trails on Albert J. Woodford Memorial State Forest when the Volunteer Stewardship Agreement is in place. Do minor trail location changes, sign all trails, post maps and other information to website.

Action 6

In the first 5 years of the plan, rehab the 2 ponds on Albert J. Woodford Memorial State Forest on the north side of White Street. Dikes and spillways need to be repaired or replaced.

Action 7

In the first 5 years of the plan clear encroaching trees and shrubs from the vista at the top of Tassell Hill (Albert J. Woodford Memorial State Forest).

Action 8

In the first 5 years of the plan provide needed maintenance on the MAPPWD (CP-3) trail on Mt. Hunger SF.

Action 9

In the first 5 years of the plan install gates on the portion of the snowmobile trail that goes northwest off of Janis Road and then onto private land. Gates should be installed at Janis Road and at the boundary line where the trail leaves State Land. This should help eliminate illegal off road use of this trail.

Action 10

Perform the rehabilitation of the dike and water control structures at Chittning Pond, in accordance with recommendations from the DEC Dam Safety Unit.

Action 11

In the first 5 years of the plan upgrade the fishing access site at Chittning Pond so that it meets accessibility standards. Also evaluate the possible location of an accessible waterway access site at this location.

Action 12

In the second 5 years of the plan clear the invasives (black locust, buckthorn, goldenrod) from the apple orchard in stand A-17 on Albert J. Woodford Memorial State Forest. This area is an established orchard that has heirloom varieties and wild varieties of apples. It has been cleared in the past, but the apple trees are getting overgrown by the invasives and other plants.

Action 13

In the second 5 years of this plan identify, locate and mark the boundary lines of the detached parcels in this unit.

Action 14

In the second 5 years of this plan improve the parking area on Janis Road just north of the intersection with Route 20.

Action 15

The present mountain bike trail system on Albert J. Woodford Memorial State Forest is comprised of trails that are very technical in nature, and therefore meant for advanced riders. In the second 5 years of this plan establish less technical "beginner" mountain bike trails on Albert J. Woodford Memorial State Forest to accommodate a wider range of skill levels. The distance of these trails, and their location, will be determined by the suitability of the terrain, but will most likely be in the vicinity of the southern part of the State Forest.

Forest Management Actions

The tables below list all stands for which it is anticipated there will be management actions within the next 10 years. All stands identified are in need of treatment. At the actual time of treatment, the forester responsible for each harvest will do a detailed stand analysis. All guidelines and policies will be considered and applied including:

Final Management Rules for Special Management Zones on State Forests http://www.dec.ny.gov/docs/lands_forests_pdf/sfsmzbuffers.pdf

Plantation Management on State Forests (ONR-DLF-1) http://www.dec.ny.gov/docs/lands_forests_pdf/policysfplantation.pdf

Retention on State Forests (ONR-DLF-2)

http://www.dec.ny.gov/docs/lands_forests_pdf/policysfrention.pdf

Clearcutting on State Forests (ONR-DLF-3)

http://www.dec.ny.gov/docs/lands_forests_pdf/policysfclearcutting.pdf

State Forest Rutting Guidelines

http://www.dec.ny.gov/docs/lands forests pdf/ruttingguidelines.pdf

This information will then be used to create a specific treatment prescription for each stand on an acre by acre basis that will be implemented by the foresters that mark out the sale.

Because of low staffing levels, stand treatments in this unit are lagging far behind expected schedules. Stand treatments will strive to decrease unacceptable growing stock, jumpstart growth rates and so regulate the stand. After this is done, a much better determination can be made as to the true future potential of these areas.

No major changes in cover type or stand conversions (barring any natural disasters or major pest or disease infestations) are anticipated over the next 10 years.

Stands not listed are not scheduled for treatment in the 10-year consideration of this unit management plan. However, natural occurrences (wind storms, insect or disease infestations) as well as economic conditions (demand, or lack thereof, for forest products) may also alter which stands will be treated in this time period.

No designated natural areas have been identified in the unit.

FOREST TYPE CODES

Forest Type Codes

Softwood Species	Hardwood Species	Forest Type
EL – European Larch	Asp – Quaking or Bigtooth Aspen	Hem-NH – Natural Forest Hemlock with Northern Hardwoods
Hem – Hemlock	BB – Black Birch	NH-Hem – Natural Forest Northern Hardwoods with Hemlock
NS – Norway Spruce	BC – Black Cherry	Natural Forest (P) - Natural
JL – Japanese Larch	BE – Beech	Forest- Protection - areas that are not necessarily
JP – Jack Pine	HM – Hard (Sugar) Maple	excluded from management
RP – Red Pine	RM – Red (Soft) Maple	actions, but will need special consideration for any
SP – Scotch Pine	RO – Red Oak	treatments
WP – White Pine	WA – White Ash	Plantation - An area that was open ground (usually cropland or pasture) that was planted to trees. Most areas in this management unit were planted with softwood species. A few small areas were planted with hardwood species.
WS – White Spruce	WO – White Oak	
	YB – Yellow Birch	

FOREST MANAGEMENT ACTION SCHEDULES

Forest Management Action Schedules

Table IV.CLand Management Action Schedule for First Five-Year Period (by State Forest)								
State Forest	Stand	Acres		Forest Type		_	gement gory	Treatment Type
State Forest	Stand	Acres	Species	Current	Future	Current	Future	rreadment rype
								Thinning/
						Even	Even	Sawtimber
Herkimer 2	3.1	23	NS, RP	Plantation	Plantation	Aged	Aged	Harvest
						_	_	Thinning/
	2.2	4.0	DD 116	51 · · ·	51	Even	Even	Sawtimber
Herkimer 2	3.2	13	RP, NS	Plantation	Plantation	Aged	Aged	Harvest
						_	_	Thinning/
	1.0		RP, JL,			Even	Even	Sawtimber
Herkimer 2	10	28	ВС	Plantation	Plantation	Aged	Aged	Harvest
						_	_	Thinning/
	1_					Even	Even	Sawtimber
Herkimer 6	5	48	NS, WP	Plantation	Plantation	Aged	Aged	Harvest
						_	_	Thinning/
			RO,	Natural	Natural	Even	Even	Sawtimber
Herkimer 6	15.1	22	Hem	Forest	Forest	Aged	Aged	Harvest
								Thinning/
			RO,	Natural	Natural	Even	Even	Sawtimber
Herkimer 6	15.2	14	Hem	Forest	Forest	Aged	Aged	Harvest
								Thinning/
			Hem,	Natural	Natural	Uneven	Uneven	Sawtimber
Oneida 8	A-19	34	HM, WA	Forest	Forest	Aged	Aged	Harvest
						_	_	Thinning/
			NS, BC,			Even	Even	Sawtimber
Oneida 8	B-16.3	34	WA	Plantation	Plantation	Aged	Aged	Harvest
								Thinning/
			NS, BC,			Even	Even	Sawtimber
Oneida 8	B-4	32	WA	Plantation	Plantation	Aged	Aged	Harvest
								Thinning/
			RP, BC,			Even	Even	Sawtimber
Oneida 8	B-26.4	21	WP	Plantation	Plantation	Aged	Aged	Harvest
						1		Thinning/
				Natural -	Natural	Uneven	Uneven	Sawtimber
Oneida 8	B-8	16	WA, HM	Forest	Forest	Aged	Aged	Harvest
						_		Thinning/
			NG	D	5 1 · · · ·	Even	Even	Sawtimber
Oneida 8	C-2.1	60	NS	Plantation	Plantation	Aged	Aged	Harvest
						_	_	Thinning/
						Even	Even	Sawtimber
Oneida 8	C-18.2	32	RP, HM	Plantation	Plantation	Aged	Aged	Harvest
			l			_	_	Thinning/
			Hem,	Natural	Natural	Even	Even	Sawtimber
Oneida 22	3.2	33	HM, WA	Forest	Forest	Aged	Aged	Harvest

FOREST MANAGEMENT ACTION SCHEDULES

Table III.FLand Management Action Schedule for Second Five-Year Period (by State Forest)								
State Forest	Stand Acres			Forest Type			gement gory	Treatment Type
State 1 51 CSt	Julia	710.05	Species	Current	Future	Current	Future	caliiiciic i ypc
								Thinning/
Oneida 8	A-24	7	HM, BC, WA	Natural Forest	Natural Forest	Uneven Aged	Uneven Aged	Sawtimber Harvest
Official 6	7 2 -	,	WA,	TOTEST	Torest	/ igca	/ igea	Thinning/
			Hem,	Natural	Natural	Uneven	Uneven	Sawtimber
Oneida 8	B-1.1	22	НМ	Forest	Forest	Aged	Aged	Harvest
								Thinning/
			HM, WA,	Natural	Natural	Even	Even	Sawtimber
Oneida 8	B-9.1	62	ВС	Forest	Forest	Aged	Aged	Harvest
								Thinning/
			RP, WA,	51	51	Even	Even	Sawtimber
Oneida 8	B-22.1	14	ВС	Plantation	Plantation	Aged	Aged	Harvest
						Even	Even	Thinning/ Sawtimber
Oneida 8	B-45	19	JL, BC	Plantation	Plantation	Aged	Aged	Harvest
Official 6	D 43	13	JE, DC	Tiditation	Tiditation	Ageu	Ageu	Thinning/
			WA, HM,	Natural	Natural	Uneven	Uneven	Sawtimber
Oneida 8	C-17.1	31	BC	Forest	Forest	Aged	Aged	Harvest
								Thinning/
			HM, RM,	Natural	Natural	Uneven	Uneven	Sawtimber
Oneida 22	25	8	WA	Forest	Forest	Aged	Aged	Harvest
								Thinning/
			WA, HM,	Natural	Natural	Uneven	Uneven	Sawtimber
Oneida 22	23	11	RM	Forest	Forest	Aged	Aged	Harvest
								Thinning/
0 - 14 - 22	25		HM, WA,	Natural	Natural	Uneven	Uneven	Sawtimber
Oneida 22	35	4	BE	Forest	Forest	Aged	Aged	Harvest
						Even	Even	Thinning/ Sawtimber
Herkimer 2	29	31	NS, BC	Plantation	Plantation	Aged	Aged	Harvest
HEIMIHEI Z	23	31	143, 50	i idiliation	i idiliation	Ageu	Ageu	Thinning/
			RO,	Natural	Natural	Even	Even	Sawtimber
Herkimer 5	1.1	13	Hem, RM	Forest	Forest	Aged	Aged	Harvest
			- ',			0	0	Thinning/
			NS, WP,			Even	Even	Sawtimber
Herkimer 5	12	21	WA	Plantation	Plantation	Aged	Aged	Harvest
								Thinning/
			WP, WA,			Even	Even	Sawtimber
Herkimer 5	14	28	HM	Plantation	Plantation	Aged	Aged	Harvest

FOREST MANAGEMENT ACTION SCHEDULES

								Thinning/
			WP, HM,	Natural	Natural	Even	Even	Sawtimber
Herkimer 6	3	29	RO	Forest	Forest	Aged	Aged	Harvest
								Thinning/
			WP, RM,	Natural	Natural	Even	Even	Sawtimber
Herkimer 6	17.1	56	WA	Forest	Forest	Aged	Aged	Harvest

Bibliography

NYSDEC, "New York State Strategic Plan for Sate Forest Management". Albany, NY, 2010

New York Natural Heritage Program Classification and Management of High Conservation Value Forests (HCVF) and Representative Sample Areas (RSA) On State Forests. Version 6-2013 Public Site from NYSDEC website.

Predicted Richness Overlays (PROs): User Guide and Disclaimers

New York Natural Heritage Program (NYNHP) May 2009

Swartz. Kurt C., Editor. 2008. Unpaved Forest Road Handbook. NYS DEC, Bureau of State Land Management.

NYSDEC Website, NY Natural Heritage Program Active Inventory List. Plants that are Actively Tracked and Surveyed. http://www.dec.ny.gov/animals/66348.html

"Spring Turkey Take by County" from the NYS DEC Website

"Fall Turkey Take by County" from the NYS DEC Website

Glossary

<u>Access trails</u> - temporary, unpaved roads which do not provide all weather access within the state land. 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 log landings or other staging areas. Constructed according to best management practices, these trails may be used to support other management objectives such as recreational access corridors. Maintenance is limited to activities which minimally support seasonal access objectives.

<u>Adaptive management</u> - 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

<u>Afforestation</u> - The establishment of a forest or stand in an area where the preceding vegetation or land use was not forest

<u>Age class(es)</u> - trees of a similar age originating from a single natural event or regeneration activity

<u>All-aged</u> - a condition of a forest or stand that contains trees of all or almost all age classes.

<u>Basal area</u> - 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)

<u>Best Management Practices (BMP's)</u> - 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

Biodiversity - 1. the variety and abundance of life forms, processes, functions, and structures of plants, animals, and other living organisms, including the relative complexity of species, communities, gene pools, and ecosystems at spatial scales that range from local through regional to global —synonym biological diversity, diversity; 2. an index of richness in a community, ecosystem, or landscape and the relative abundance of these species —note 1. there are commonly five levels of biodiversity: (a) genetic diversity, referring to the genetic variation within a species; (b) species diversity, referring to the variety of species in an area; (c) community or ecosystem diversity, referring to the variety of communities or ecosystems in an area; (d) landscape diversity, referring to the variety of ecosystems across a landscape; and (e) regional diversity, referring to the variety of species, communities, ecosystems, or landscapes within a specific geographic region —note 2. each level of biodiversity has three components: (a) compositional diversity or the number of parts or elements within a system, indicated by such measures as the number of species, genes, communities, or ecosystems; (b) structural diversity or the variety of patterns or organizations within a system, such as habitat structure, population structure, or species morphology; and (c) functional diversity or the number of ecological processes within a system, such as disturbance regimes, roles played by species within a community, and nutrient cycling within a forest

<u>Biological legacy</u> - 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

Blowdown - tree or trees felled or broken off by wind

<u>Browse -</u> portions of woody plants including twigs, shoots, and leaves consumed by animals such as deer

<u>Buffer zone(s)/buffer strip</u> - 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

<u>Cavity tree/den</u> - tree a tree containing an excavation sufficiently large for nesting, dens or shelter; tree may be alive or dead

<u>Clearcut</u> - the cutting of essentially all trees, producing a fully exposed microclimate for the development of a new age class —note 1. regeneration can be from natural seeding, direct seeding, planted seedlings, or advance reproduction —note 2. cutting may be done in groups or patches (group or patch clearcutting), or in strips (strip clearcutting) —note 3. the management unit or stand in which regeneration, growth, and yield are regulated consists of the individual clearcut stand —note 4. when the primary source of regeneration is advance reproduction, the preferred term is overstory removal

<u>Climax forest</u> - an ecological community that represents the culminating stage of a natural forest succession for its locality / environment

<u>Coarse filter</u> - approach a strategy for conserving biodiversity that involves maintaining a variety of native ecosystems within a landscape context. A coarse filter approach would ensure the availability of grasslands, shrublands, open wetlands, forest wetlands, riparian zones, northern hardwood forest and mixed northern hardwood/conifer forest in various stages of successional development. This approach assumes that a representative array of native ecosystems will contain the vast majority of species in a region

<u>Coarse woody material</u> - any piece(s) of dead woody material on the ground in forest stands or in streams

Cohort - a population of trees that originate after some type of disturbance

<u>Community</u> - **1.** 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. **2.** a group of people living in a particular local area

<u>Conversion</u> - a change from one silvicultural system to another or from one tree species to another

<u>Corridor(s)</u> - 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

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

<u>Crown class</u> - a category of tree based on its crown position relative to those of adjacent trees.

a) 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. b) 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. c) 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. d) 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

<u>Cultural resources</u> - significant historical or archaeological assets on sites as a result of past human activity which are distinguishable from natural resources

Cutting interval - the number of years between harvest or regeneration cuts in a stand

<u>Designated recreational trail(s)</u> - a Department authorized recreational trail that is signed and/or mapped

<u>Diameter (at) Breast Height (DBH)</u> - the diameter of the stem of a tree (outside bark) measured at breast height (4.5 ft) from the ground

<u>Disturbance</u> - 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

<u>Early successional habitat</u> - the earliest stage of development in an ecosystem. An example: vegetative habitat where early successional is seen as old fields, brushy shrubby type plants, with species that are shade intolerant

<u>Ecosystem</u> - 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

<u>Ecosystem management</u> - the appropriate integration of ecological, economic, and social factors in order to maintain and enhance the quality of the environment to best meet 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

<u>Edge(s)</u> - the more or less well-defined boundary between two or more elements of the environment, e.g., a field adjacent to a woodland or the boundary of different silvicultural treatments

<u>Endangered species</u> - 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

<u>Even-aged</u> - a class of forest or stand composed of trees of about the same age. The maximum age difference is generally 20 years

<u>Even-aged (silviculture)</u> - a program of forest management directed to the establishment and maintenance of stands of trees having relatively little (10-20 yrs) variation in ages. The guidelines to be applied in using this system at all stages of tree development are uniquely different from the uneven-aged system

<u>Flood plain(s)</u> - the level or nearly level land with alluvial soils on either or both sides of a stream or river that is subject to overflow flooding during periods of high water level

<u>Forest fragmentation</u> - 1. the process by which a landscape is broken into small islands of forest within a mosaic of other forms of land use or ownership. Note- fragmentation is a concern because of the effect of noncontiguous forest cover on connectivity and the movement and dispersal of animals in the landscape 2. islands of a particular age class (e.g., old growth) that remain within areas of younger-aged forest

<u>Forestry</u> - 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

<u>Fragipan</u> - a dense and brittle layer of soil. Its hardness results mainly from extreme density or compactness rather than from high clay content; the material may be dense enough to restrict root, nutrient, and water penetration

<u>Gaps</u> - natural communities, habitats, successional stages, or organisms which have been identified as lacking in the landscape

<u>Geocaching</u> - an outdoor activity in which the participants use a Global Positioning System (GPS) receiver or other navigational techniques to hide and seek containers

<u>Geographic Information System (GIS)</u> - 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

<u>Group selection</u> - trees are removed and new age classes are established in small groups — note 1. the width of groups is commonly approximately twice the height of the mature trees with smaller openings providing microenvironments suitable for tolerant regeneration and larger openings providing conditions suitable for more intolerant regeneration —note 2. the management unit or stand in which regeneration, growth, and yield are regulated consists of an aggregation of groups

<u>Habitat</u> - 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

Hardwoods - road-leafed, deciduous trees belonging to the botanical group Angiospermae

<u>Haul roads</u> - 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 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

<u>Improvement thinning(s)</u> - the removal of less desirable trees of any species in a stand of poles or larger trees, primarily to improve composition and quality

<u>Indicator species</u> - 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

<u>Invasive species</u> - species that have become established outside their natural range which spread prolifically, displacing other species, and sometimes causing environmental damage

<u>Keystone species</u> - a plant or animal species that strongly influences that functioning of an entire ecosystem; for example, the way beaver influence wetlands

<u>Landscape</u> - a spatial mosaic of several ecosystems, landforms, and plant communities across a defined area irrespective of ownership or other artificial boundaries and repeated in similar form throughout

<u>Landscape ecology</u> - the study of the distribution and abundance of elements within landscapes, the origins of these elements, and their impacts on organisms and processes.

<u>Landscape matrix</u> - the most extensive and connected landscape element type present, which plays the dominant role in landscape functioning; for example, New York's South-Central Highlands (Central Appalachian) landscape is dominantly forest cover; thus, the landscape matrix is forest cover

Large poles - trees that are 9 to 11 inches in diameter at breast height

Large sawtimber - trees that are 24 inches or greater in diameter at breast height

<u>Late successional habitat</u> - habitats predominated by forests with older and larger trees, having more structural complexity than mature forest, and being either in the process of developing or have developed old growth characteristics; they may exhibit evidence of past human or natural disturbances; these forests may exist as entire stands or as smaller patches within younger stands

<u>Log landing(s)/(Log deck)</u> - a cleared area to which logs are skidded and are temporarily stored before being loaded onto trucks for transport

<u>Mast</u> - 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

<u>Mature forest cover</u> - pertaining to an even-aged stand that has attained most of its potential height growth, or has reached merchantability standards. Within uneven-aged stands, individual trees may become mature but the stand itself consists of trees of diverse ages and stages of development

Medium sawtimber - trees that are 18-23 inches in diameter at breast height

<u>Mesic</u> - of sites or habitats characterized by intermediate moisture conditions; i.e., neither decidedly wet nor dry

Mid Successional - forests that are pole-sized or larger, with relatively open understories

<u>Multiple use</u> - a strategy of land management fulfilling two or more objectives, e.g. forest products removal and recreation

<u>Natural area(s)</u> - an area allowed to develop naturally; intervention will be considered to protect forest health (e.g. fire or invasive plant or animal invasive species), to enhance structural or species diversity, to protect, restore or enhance significant habitats or to exploit or create regeneration opportunities for desired plant species

<u>Natural regeneration</u> - the establishment of a forest stand from natural seeding, sprouting, suckering or layering

<u>Neotropical migratory birds (migrants)</u> - birds that breed in Canada and the United States and spend the winter in Mexico, Central America, South America or the Caribbean islands; these species represent more than 50% (340 of the 600 species) of North American birds

<u>Niche</u> - **1.** the ultimate unit of the habitat, i.e., the specific spot occupied by an individual organism; **2.** by extension, the more or less specialized relationships existing between an organism, individual or synusia, and its environment; **3.** the specific set of environmental and habitat conditions that permit the full development and completion of the life cycle of an organism —note the ecological niche of a species is the functional role of the species in a community; the fundamental niche is the totality of environmental variables and functional roles to which a species is adapted; the realized niche is the niche a species normally occupies

<u>Northern hardwood forest</u> - 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

<u>Old growth</u> - 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

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

<u>Overstory removal</u> - the cutting of trees constituting an upper canopy layer to release adequate desirable advanced regeneration in the understory

<u>Parcelization</u> - the subdivision of land into smaller ownership blocks. This intrudes new features and activities into the forest and changes its character, but does not necessarily fragment it in biophysical terms

<u>Patch cut</u> - a type of clearcut where the cut area consists of a small part of a stand or forest. The minimum size of a patch depends primarily on (a) the creation of microclimate conducive to establishment of desired regeneration of particular tolerance, and (b) the area needed for safe felling and yarding of harvested trees

<u>Pioneer Species</u> - a plant capable of invading bare sites (newly exposed soil) and persisting there or colonizing them until supplanted by later successional species

<u>Plantation</u> - 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

Poletimber - trees that are generally 6-11 inches diameter at breast height

<u>Prescribed fire</u> - fire that is deliberately ignited to burn wildland fuels in either their natural or modified state and under specific environmental conditions which allow the fire to be confined to a predetermined area and produces the fireline intensity and rate of spread required to attain planned resource management objectives.

<u>Protection area</u> - land excluded from most active management to protect sensitive sites; exclusions include: timber harvesting, road construction, 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

<u>Public Forest Access Roads (PFAR)</u> - 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) (http://www.dec.ny.gov/docs/lands_forests_pdf/sfunpavedroad.pdf). As a general guideline, sufficient access is typically achieved when 1 mile of PFAR is developed for each 500 acres of state land, and no position within the Unit lies more than one half-mile from a PFAR or public highway

Pulpwood - low grade or small diameter logs used to make paper products, wood chips

Regeneration - seedlings or saplings of any origin

<u>Release</u> - **1.** a treatment designed to free trees from undesirable, usually overtopping, competing vegetation; **2.** a treatment designed to free young trees not past the sapling stage from undesirable competing vegetation that overtops or closely surrounds them

<u>Riparian buffer (zone)</u> - 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

<u>Rotation</u> - the period of years between stand establishment and final harvest as designated by management decisions

<u>Salvage cutting</u> - 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

<u>Sapling</u> - a small tree, usually defined as being between 1 and 5 inches diameter at breast height

Sawtimber - trees that are 12 inches and larger diameter at breast height

<u>Seed tree</u> - 1. a regeneration method consisting of cutting all trees except for a small number of widely dispersed trees retained for seed production and to produce a new age class in fully exposed microenvironment; 2. a tree retained for seed production —note seed trees are usually removed after regeneration is established

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

Seedling(s)/sapling(s) - trees less than 6 inches diameter at breast height

<u>Shade tolerance</u> - the ability of a tree species to germinate and grow at various levels of shade; a) shade tolerant: having the capacity to compete for survival under shaded conditions, b) shade intolerant: having the capacity to compete for survival only under direct sunlight conditions; light demanding species

<u>Shelterwood</u> - an even-aged method of natural regeneration designed to regenerate and maintain a stand with a single age class; the cutting of most trees, leaving those needed to produce sufficient shade to produce a new age class in a moderated microenvironment —note the sequence of treatments can include three types of cuttings: (a) an optional preparatory cut to enhance conditions for seed production, (b) an establishment cut to prepare the seed bed and to create a new age class, and (c) a removal cut to release established regeneration from competition with the overstory; cutting may be done uniformly throughout the stand (uniform shelterwood), in groups or patches (group shelterwood), or in strips (strip shelterwood); in a strip shelterwood, regeneration cuttings may progress against the prevailing wind

<u>Silviculture</u> - 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

<u>Single tree selection</u> - individual trees of all size classes are removed more or less uniformly throughout the stand, to promote growth of remaining trees and to provide space for regeneration — a synonym is individual tree selection

<u>Site</u> - the area in which a plant or forest stand grows, considered in terms of its environment, particularly as this determines the type and quality of the vegetation the area can support

<u>Skid trail(s)</u> - a temporary or permanent trail used to skid or forward felled trees from the stumps to the log landing

Small poles - trees 6-8 inches diameter at breast height

Small sawtimber - trees 12-17 inches in diameter at breast height

<u>Snags</u> - 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

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

<u>Spatial analysis</u> - an examination of data in the context of where it occurs geographically or "on the ground;" This is usually accomplished by tying database information to GIS based maps

<u>Species</u> - 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

Species richness - the number of different species present within a defined area

<u>Stand</u> - 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 — see all-aged stand, mixed, pure, even-aged, and uneven-aged stands —note 1. a mixed stand is composed of a mixture of species —note 2. a pure stand is composed of essentially a single species —note 3. in a stratified mixture stand different species occupy different strata of the total crown canopy

<u>Stand structure</u> - 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 materials

<u>State Forest/State Reforestation Area</u> - 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)

<u>Stocking</u> - 1. the amount of material on a given area – example: the stand is fully stocked ;2. an indication of growing- space occupancy relative to a pre-established standard

<u>Succession</u> - the gradual supplanting of one community of plants by another —note 1. the sequence of communities is called a sere, or seral stage —note 2. a sere whose first stage is open water is termed a hydrosere, one whose first stage is dry ground, a xerosere —note 3. succession is primary (by pioneers) on sites that have not previously borne vegetation, secondary after the whole or part of the original vegetation has been supplanted, allogenic when the causes of succession are external to and independent of the community (e.g., accretion of

soil by wind or water, or a change of climate), and autogenic when the developing vegetation is itself the cause

Suite - species similar in their habitat needs which may respond similarly to habitat changes

<u>Sustainable forest management</u> - 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

<u>Temporary revocable permit (TRP)</u> - a Department permit which authorizes the use of state land for a specific purpose for a prescribed length of time

<u>Thinning(s)</u> - a silvicultural treatment made to reduce stand density of trees primarily to improve growth of remaining trees, enhance forest health, or recover potential mortality

<u>Threatened species</u> - a species likely to become endangered in the foreseeable future, throughout all or a significant portion of its range, unless protected

<u>Timber Stand Improvement (TSI)</u> - 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

<u>Understory</u> - the smaller vegetation (shrubs, seedlings, herbaceous plants, small trees) within a forest stand, occupying the vertical zone between the overstory and the forest floor

<u>Uneven-aged system</u> - a planned sequence of treatments designed to maintain and regenerate a stand with three or more age classes

<u>Uneven-aged stand/forest</u> - a stand with trees of three or more distinct age classes, either intimately mixed or in small groups

<u>Universal Design</u> - Universal design is the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design.

<u>Variable patch retention (harvest system)</u> - an approach to harvesting based on the retention of structural elements or biological legacies (trees, snags, logs, etc.) from the harvested stand for integration into the new stand to achieve various ecological objectives

<u>Watershed</u> - 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

<u>Wetland(s)</u> - 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

Appendices & Figures

Appendix A - Summary of Comments During Public Scoping Sessions

Pick up trash more often so that people do not think it is OK to dump.

Post "No Dumping" signs to discourage this activity.

DEC should be on these state forests more often so that people can see that there is an official presence.

Be certain that proper measures are taken to ensure that erosion does not occur on logging jobs on state land.

Reinstate the homeowner lottery firewood program.

Hunting, fishing and trapping must be included in the planning process.

Maintain vista at top of Tassell Hill.

Keep the ponds on the north side of White Street - don't breach the dams.

Establish a loop hiking trail to the top of Tassell Hill.

Appendix B - Responsiveness Summary to Public Comments

Appendix B - Responsiveness Summary to Public Comments

Responsiveness Summary for Mohawk Vista Draft UMP

Includes written comments submitted by 5/25/17 and comments from public meeting on 4/11/17

Recreation

Comment: Create horse trails on Mt. Hunger to link up with horse trails on Brookfield. **Response:** To link these areas, about 2 miles of private land and some major highways would have to be crossed. The only way this could be done is if an organized group under a Volunteer Stewardship Agreement with the Department would tackle this project and get landowner permission to cross the private land.

Comment: Mt. Bike group would like more improved parking, bridges on trails, some assistance with overall maintenance of trails.

Response: Having a Volunteer Stewardship Agreement with the Department will make this feasible. As discussed with the mountain biking group, bridges are not the preferred method of crossing wet areas due to maintenance and liability issues.

Comment: Would like to see a beginner mountain bike trail loop around Chittning Pond. **Response:** A less technical trail has been discussed for the future.

Comment: Would like to see additional mountain bike trails east of existing mountain bike trail loops.

Response: There is still some preliminary work to be done on the existing trails before any new trails can be considered.

Comment: Would like to see improvement of ponds on White Street with improved access. **Response:** These ponds are scheduled for rehab in the first 5 years of this plan. As always, these projects are subject to funding availability.

Comment: Supports pond rehab of White Street Ponds - adds diversity and provides habitat **Response:** see above

Comment: Would like to see a foot trail established on Albert J. Woodford Memorial State Forest.

Response: There is a fair amount of work scheduled for this initial UMP. This could be considered in future updates.

Comment: Would like ATV trails on Tassell Hill State Forest (Albert J. Woodford memorial State Forest).

Response: The statewide policy on this issue, as stated in the Strategic Plan, is that the Department will consider reasonable and limited requests from organized ATV clubs. ATV trails will only be considered on State Lands as connector trails to existing trail systems.

APPENDIX B - RESPONSIVENESS SUMMARY TO PUBLIC COMMENTS

Comment: ATV's should not be allowed on State Forests. Objective ATV II of Table III D should be removed.

Response: The statewide policy on this issue, as stated in the Strategic Plan, is that the Department will consider reasonable and limited requests from organized ATV clubs. ATV trails will only be considered on State Lands as connector trails to existing trail systems.

Comment: Not in favor of motorized "Universal Access" for the general public - undermines the CP3 Program.

Response: "Universal Access" for the purposes of the Strategic Plan and this UMP refers to the multi-layer approach for providing safe, compatible, sustainable, and attractive facilities to enable people with disabilities to enjoy outdoor experiences. The only motorized component of this program is the Motorized Access Program for People w/Disabilities (MAPPWD), which designates roads and trails that are open to people with mobility impairment to use motorized vehicles on.

Comment: Would like legal access for Jeep Clubs, including maps of where they can legally ride and contact info for when they encounter something wrong.

Response: The most primitive, legal driving experience is on our public forest access roads. Off road experiences are not available on State Forests. Any motor vehicle driving off road is doing so illegally and subject to tickets and fines. County highway maps are a very good source of information as to what roads are legal. DEC will continue to update our state forest maps on our websites to provide better information on what roads in state forests are open to motor vehicles. Forest Rangers, County Sheriffs and State Police are the law enforcement agencies that should be contacted for most situations.

Comment: Provide live webcams for those who cannot physically get out to State Forest. **Response:** This is something that could be looked at in the future. Many locations on State Forests do not have cellphone service and power to run the needed devices is an issue. Vandalism is also a major concern as the location of the devices would be fairly remote. Permits have been given for organizations that are under Volunteer Stewardship agreements to place webcams in other state forests.

Comment: Provide better access for hunting for people who have difficulty getting around. **Response:** The MAPPWD is available for this.

Comment: Would like to see the vista from the top of Tassell Hill enhanced by either cutting trees to be able to see to the south and east or by constructing a viewing tower.

Response: This UMP proposes within the first five years of plan completion to clear vegetation that is obscuring the view from the top of Tassell Hill. A tower would be the best way to see the entire 360 degree vista from the top of Tassell Hill but because there are already several major projects proposed in the plan construction of a tower should be considered in the update for this plan.

Comment: Recreation and tourism should be recognized as economic benefits provided by State Forests.

Appendix B - Responsiveness Summary to Public Comments

Response: These items are identified several times in different parts of this UMP and at length in the Strategic Plan.

Management of State Forests

Comment: Timber sales (preparation) should be contracted out so that DEC only oversees the operation - would save time and be more efficient use of limited staff time.

Response: It is hoped that staffing issues will be resolved. The necessary checks and balances of contracting out the preparation of timber sales to ensure that the work was up to required standards would take almost as much time as doing it ourselves.

Comment: Forest management should promote young forest to help wildlife - hunting and fishing very important.

Response: The Department recognizes all of the very important benefits of hunting and fishing. This unit is somewhat unique as there is a large percentage of surrounding lands that are still in agriculture. The management of State Forest lands attempts to reach a balance of successional stages and covertypes on each State Forest. Due to the fact that many acres of State Forest are fairly uniform aged softwood plantation, it will be some time before a true balance can be reached.

Comment: The harvest schedule will impact all areas of the mountain bike trail system. Would like to see trails preserved as much as possible.

Response: Initial conversations with the mountain bike group included this topic. The mountain bike trails cover a large percentage of the Albert J. Woodford Memorial State Forest. The harvest schedule was developed with these trails in mind and the actual impact to the trails is very limited. Early discussions with the group identified acceptable options of reroutes (both temporary and permanent), buffering, and temporary closures when timber harvesting would take place in the vicinity of a trail. When a trail will be impacted by a timber harvest, the representative of the group will be contacted very early in the process and on the ground options will be discussed.

Comment: Would like to see a larch sale on Mt. Hunger.

Response: The timber harvesting schedule is developed based on individual stand conditions. The stands scheduled for harvest in this time frame are those most in need of treatment. The larch stands will be considered in the update for this unit.

Comment: Hemlock stands should not be logged because of the severe threat of Hemlock Wooly Adelgid (HWA) and removing successful resilient trees from the gene pool will decrease chances of survival of this species.

Response: HWA is not present in this unit. The primary goal of timber harvesting any stand is to maintain and enhance the health of that stand. One fundamental understanding of dealing with invasive species is that maintaining optimal stocking levels to ensure that the trees remaining after a harvest are able to maintain and increase vigor and growth is one of the best ways to limit the effects of invasives and give the stand the best chance to survive. In no case will the

APPENDIX B - RESPONSIVENESS SUMMARY TO PUBLIC COMMENTS

hemlock component be eliminated and the best trees are the ones that are left to grow and provide genetically superior seeds for the next generation of trees.

Comment: DEC should develop early detection and rapid response plans for invasive species and this UMP should include a consideration of likely threats and best management practices. **Response:** The Department has a statewide Early Detection/ Rapid Response plan which can be found at http/www.dec.ny.gov/animals/265.html. This plan addresses threats that currently exist on the unit along with best management practices for those threats. The plan will be updated every 10 years and additional threats will be addressed accordingly. Information on additional pests in New York State may be found on the DEC Website.

Comment: Carbon sequestration should be considered a forest product and this plan should manage more acres for late successional stages of forest growth. Data should be presented (with sources) that led to objectives CS II and IV in Table IIIE.

Response: The data and sources that led to the CS II and IV objectives can be found in the Strategic Plan. All State Forests are managed in a balanced manor for multiple benefits, including carbon sequestration. Forest stands that are maintained with optimal stocking levels will store carbon at increased rates compared to stagnant, declining stands. In addition, forested areas will remain as forest in this unit.

Comment: The State Forests in this unit are located in counties that are "Forest Preserve Counties" and have some additional protection from the NYS Constitution as stated in Article XIV section 1 and 3. Oil and Gas drilling is not allowed on these state lands and Objective MR 1 in Table III.D should be removed.

Response: Excellent point. The pieces of pertinent legislation have been added to this document and the MRI of Table IIID has been removed. As stated, no drilling of any kind is planned for this unit.

Comment: All oil and gas drilling on any State Forest should be prohibited. **Response:** This is a statewide policy decision and beyond the scope of this UMP.

Comment: Any legacy drilling sites should be tested for water quality.

Response: As mentioned in the plan, no drilling sites exist on this unit and none are planned.

Comment: There is no information on the management for the detached parcels.

Response: This is addressed in the History section on page 26 of this plan and in the Ten Year List of Management Actions on page 48.

Comment: Data tables should be provided in some sort of spreadsheet format. **Response:** This is being looked into. The documents are presented as they are due to compatibility issues. It's not certain if this is possible at this time.

Comment: The soils on Tassell Hill are listed as well drained in the plan. This is not accurate, the soils on this area are poorly drained.

Response: The soils on Tassell Hill (Albert J. Woodford Memorial State Forest) are broken down into 5 basic categories according to the Oneida County Soil Survey from the US Department of

Appendix B - Responsiveness Summary to Public Comments

Agriculture Natural Resources Conservation Service. Well Drained Soils account for about 47.7%, Moderately Well Drained Soils account for about 18.8%, Somewhat Poorly Drained Soils account for about 27.2%, Poorly Drained Soils account for about 4.9% and Open Water accounts for about 1.4% by area. Due to space limitations in the UMP, only the top 5 most prevalent soil types were mentioned.

Comment: There is no mention of a homeowner firewood harvesting program in the plan. **Response:** There has not been a homeowner firewood program for this area for many years due to the lack of staff. This program takes a lot of time to administer and will not be possible.

Infrastructure

Comment: Routine maintenance on AJ Woodford State Forest should include trash pickup - trash dumping is out of control.

Response: Trash is picked up by Department crews once in the spring and once in the fall, and at other times when significant quantities are found. The town highway crews also pick up trash from time to time. Dumping or any abuse of public land is unacceptable.

Comment: Adjoining neighbor would like to work with DEC to maintain Whalen Road. **Response:** Whalen Road is on the schedule for rehab work by department crews. A Temporary Revocable Permit could be issued for maintenance in the meantime.

Comment: Would like to see things stay pretty much the same as far as access goes - likes the Tassell Hill area for hunting because of the large acreage that is not accessible to motor vehicles.

Response: No new access roads are planned.

Comment: Would like to see a planned volunteer day for garbage pickup **Response:** That could be looked into. It would be especially helpful if a group was formed that could be signed up under a Volunteer Stewardship Agreement to help care for these state forests, including helping organize and staff a cleanup day.

Comment: Would like to see dumpsters put on state land would eventually help solve garbage problems.

Response: This has been tried in other public land situations, and the dumpster end up getting used for people's home garbage. The DEC has an official policy of users being responsible for removing any garbage they generate, "Carry it in, Carry it out".

Comment: When picking up garbage, the burn areas from bonfires and burning tires should also be cleaned up - any trash evidence just encourages people to dump more stuff.

Response: Illegal dumping, partying and burning things (like tires!) have been chronic problems on State lands. Sites when cleaned up are cleaned up as thoroughly as possible, though it is difficult to get rid of all signs of large fires, in particular.

Comment: Use trail cams to catch dumpers.

APPENDIX B - RESPONSIVENESS SUMMARY TO PUBLIC COMMENTS

Response: This has been used with mixed success in the past, and will continue to be used in appropriate situations.

Comment: Fix up Whalen Road.

Response: Whalen Road is high on the list of priority projects for this UMP.

Comment: Application of brine from well drilling should be prohibited on roads within the unit. **Response:** At present, no permits for brine application by area towns have been issued and no requests have been submitted.

Comment: Establish a parking area at the corner of Janis Rd. and Route 20.

Response: Due to the slope of the ground and the fact that Janis Road intersects Route 20 on a curve, this is not possible due to safety concerns. A parking area a short distance north of this intersection is scheduled to be built in this plan.

Comment: Put up more gates and barriers to keep illegal off-road activity under control **Response:** Illegal activity has been a chronic problem. Additional gates and barriers will be installed as funding becomes available.

Comment: Add foot bridges to cross the 2 main streams that feed Chittning Pond.

Response: Crossings are considered on a case by case basis.

Wildlife

Comment: Monitor and regulate fisher harvest levels to ensure that the fisher populations are not pushed into decline.

Response: Furbearer harvest levels are set at the state level and therefore beyond the scope of this UMP.

Appendix C - State Environmental Quality Review (SEQR)

Appendix C - State Environmental Quality Review (SEQR)

State Environmental Quality Review (SEQR)

This Plan and the activities it recommends will be in compliance with State Environmental Quality Review (SEQR), 6NYCRR Part 617. The State Environmental Quality Review Act (SEQRA) requires the consideration of environmental factors early in the planning stages of any proposed action(s) that are undertaken, funded or approved by a local, regional or state agency. The Strategic Plan for State Forest Management (SPSFM) serves as the Generic Environmental Impact Statement (GEIS), regarding management activity on State Forests. To address potential impacts, the SPSFM establishes SEQR analysis thresholds for each category of management activity.

Management actions in this Plan are within the thresholds established in the SPSFM, therefore these actions do not require additional SEQR. Any future action that does not comply with established thresholds will require additional SEQR prior to conducting the activity.

STATE ENVIRONMENTAL QUALITY REVIEW ACT

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:

- 1. Forest management activities occurring on acreage occupied by protected species ranked S1, S2, G1, G2 or G3
- 2. Pesticide applications adjacent to plants ranked S1, S2, G1, G2 or G3
- 3. Aerial pesticide spraying by airplane or helicopter
- 4. 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.
- 5. Well drilling plans
- 6. 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
- 7. Carbon injection and storage or waste water disposal

Therefore the actions proposed in this UMP will be carried out in conformance with the conditions and thresholds established for such actions in the Strategic Plan/Generic Environmental Impact Statement, and do not require any separate site specific environmental review (see 6 NYCRR 617.10[d]).

APPENDIX C - STATE ENVIRONMENTAL QUALITY REVIEW (SEQR)

Actions not covered by the Strategic Plan/Generic Environmental Impact Statement

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.

FIGURE 1 - SOILS MAPS

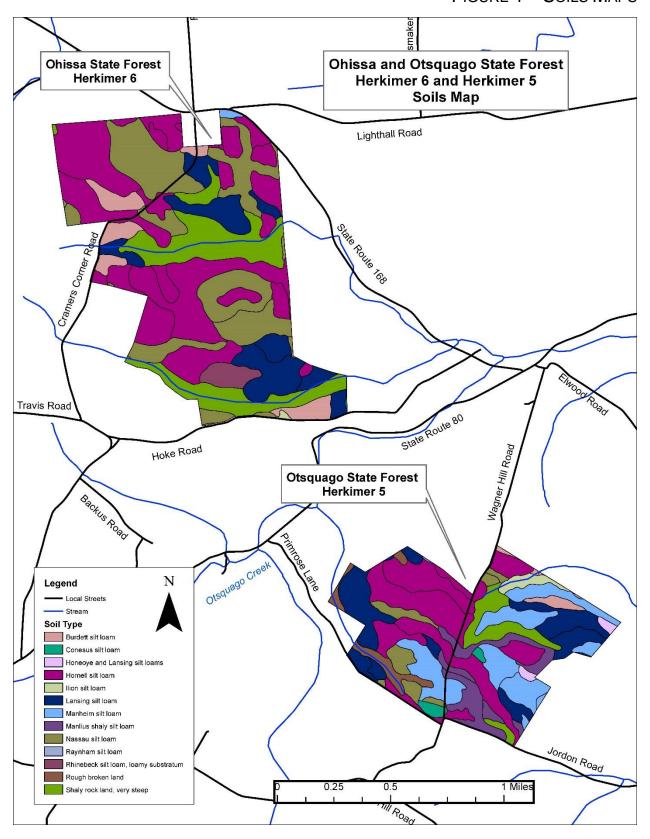


FIGURE 1 - SOILS MAPS

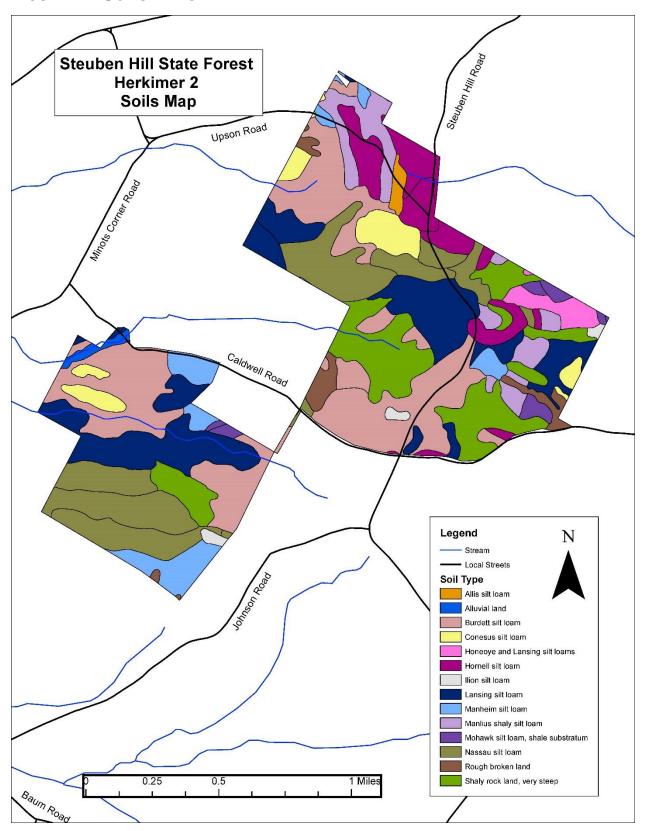


FIGURE 1 - SOILS MAPS

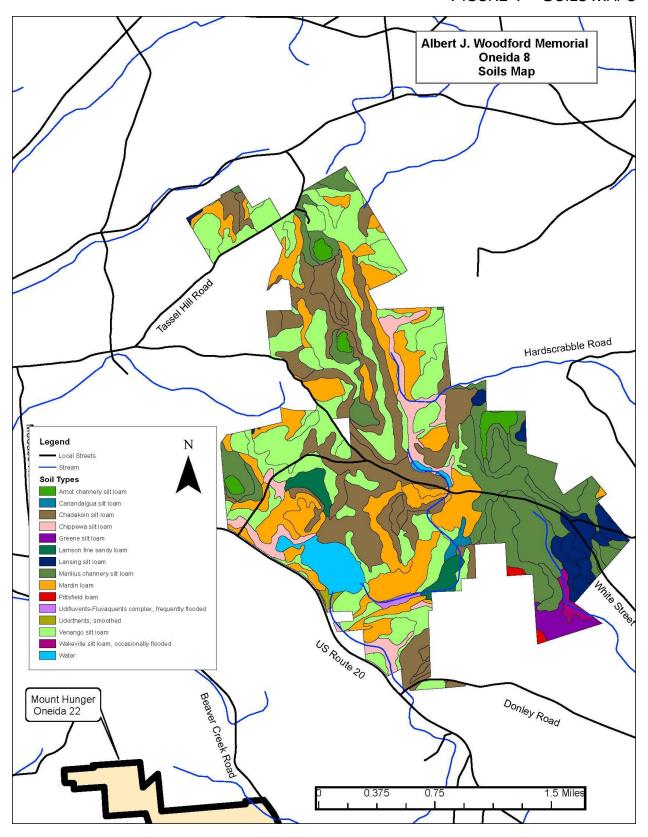


FIGURE 1 - SOILS MAPS

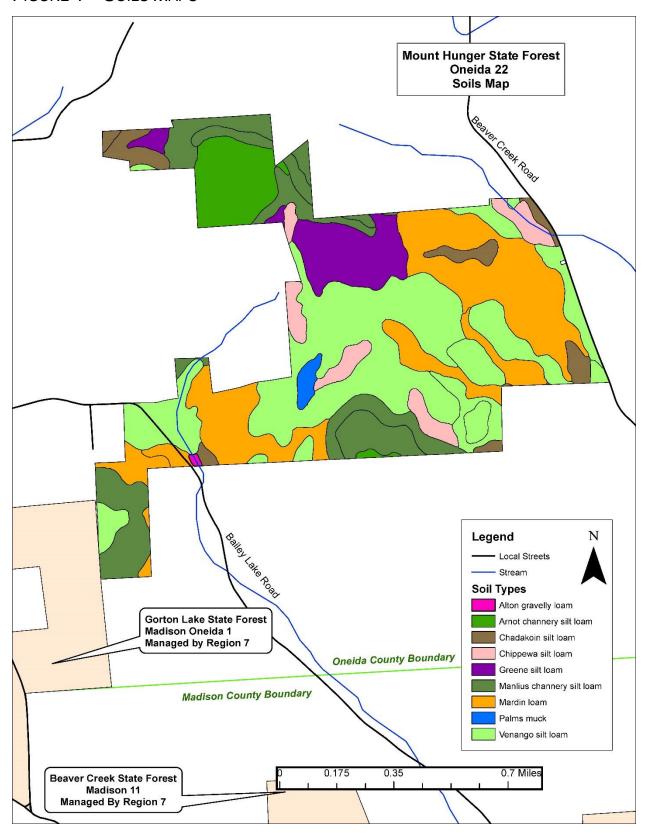


FIGURE 2 – WATER RESOURCES MAPS

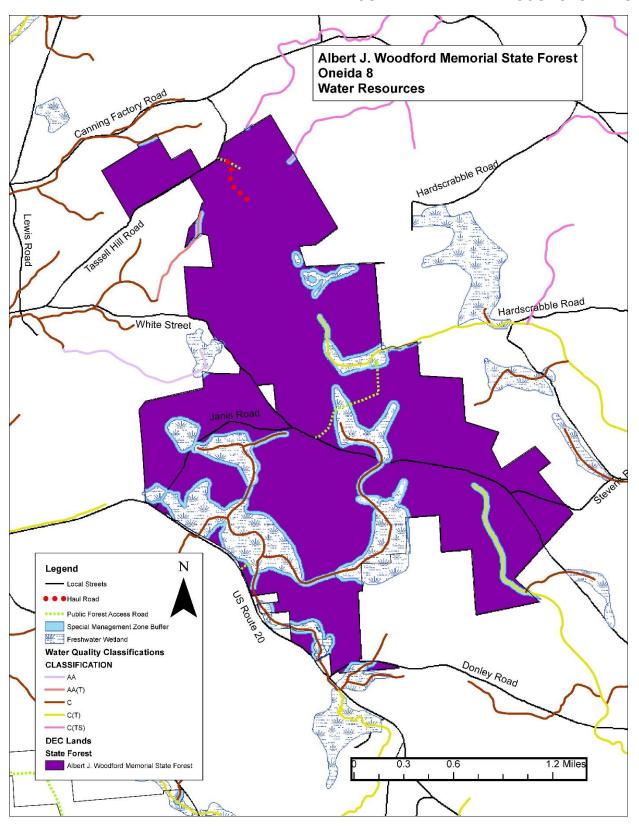


FIGURE 2 – WATER RESOURCES MAPS

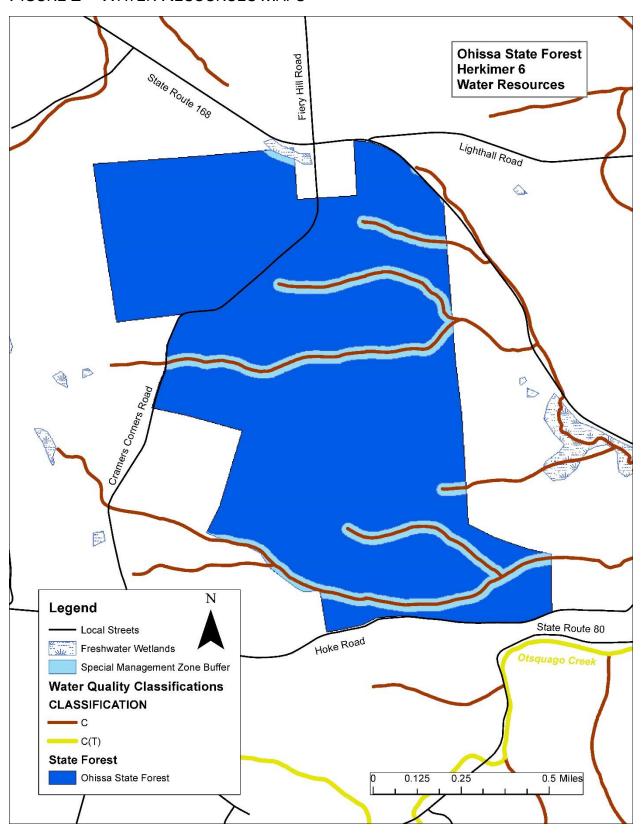


FIGURE 2 – WATER RESOURCES MAPS

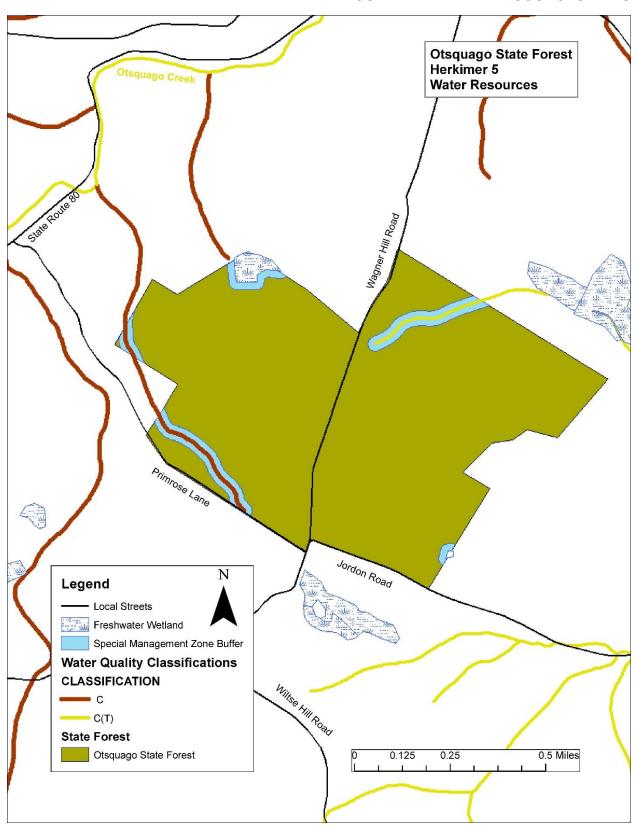


FIGURE 2 – WATER RESOURCES MAPS

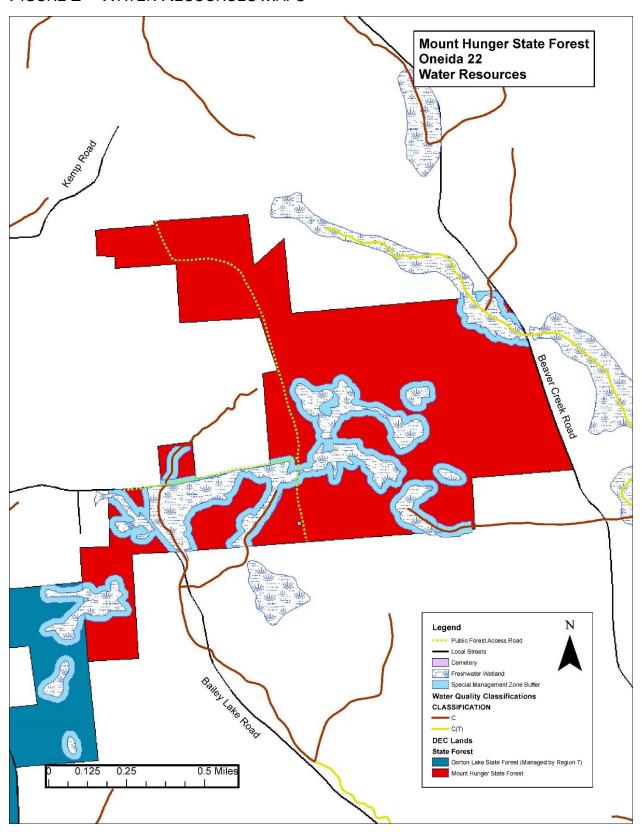


FIGURE 2 – WATER RESOURCES MAPS

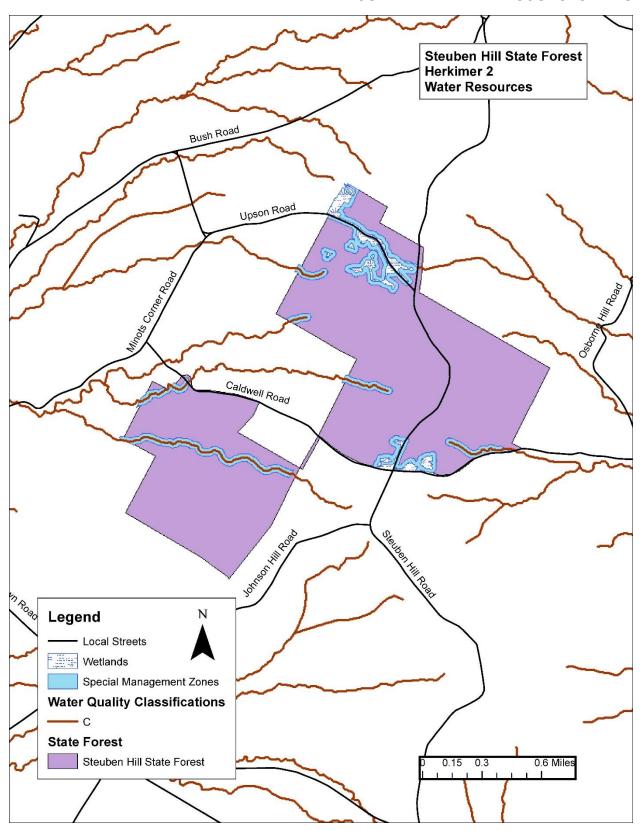


FIGURE 3 – INFRASTRUCTURE MAPS

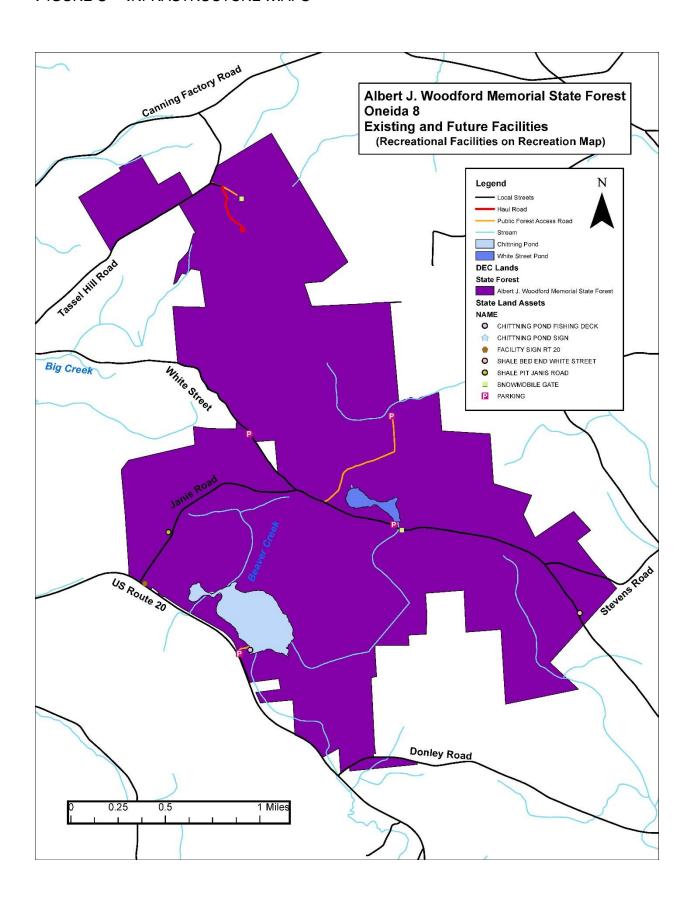


FIGURE 3 - INFRASTRUCTURE MAPS

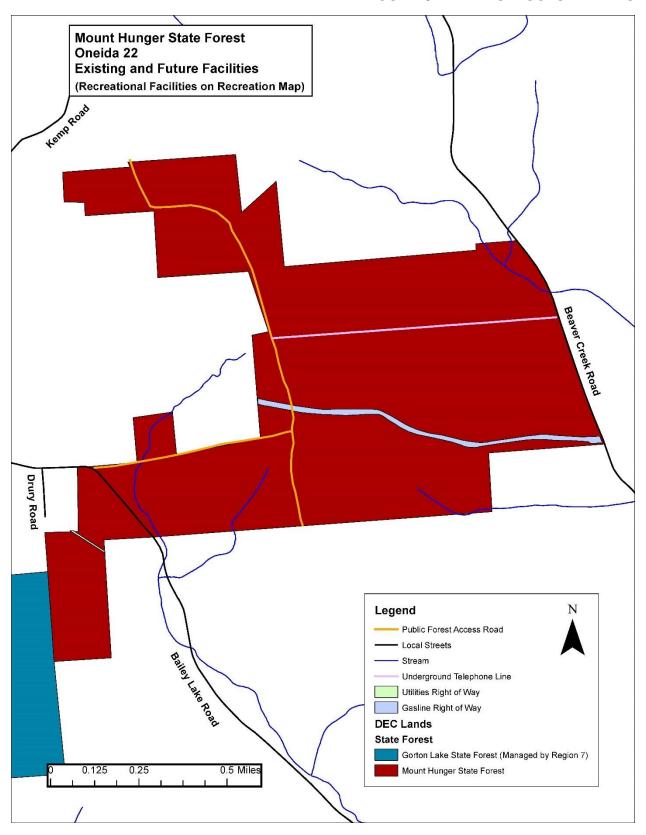


FIGURE 3 – INFRASTRUCTURE MAPS

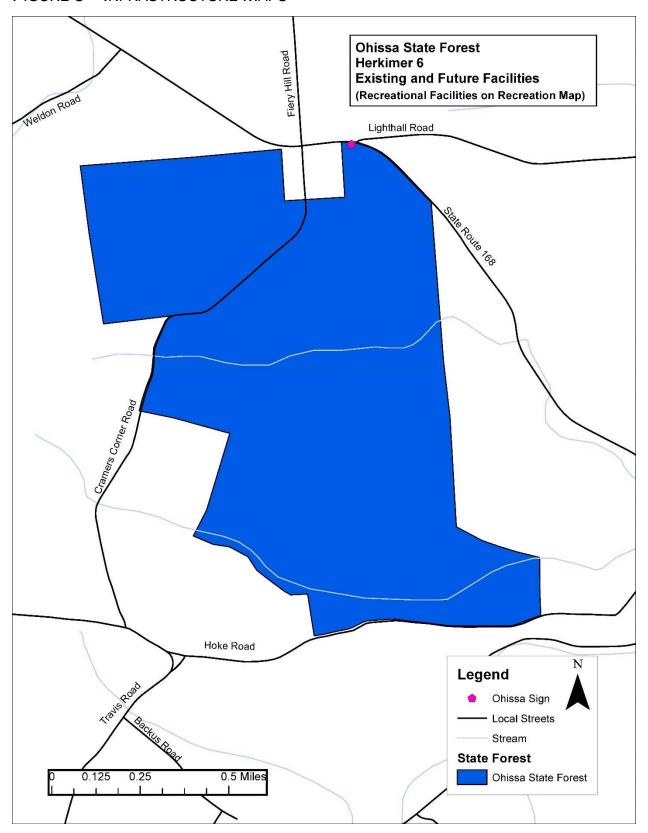


FIGURE 3 – INFRASTRUCTURE MAPS

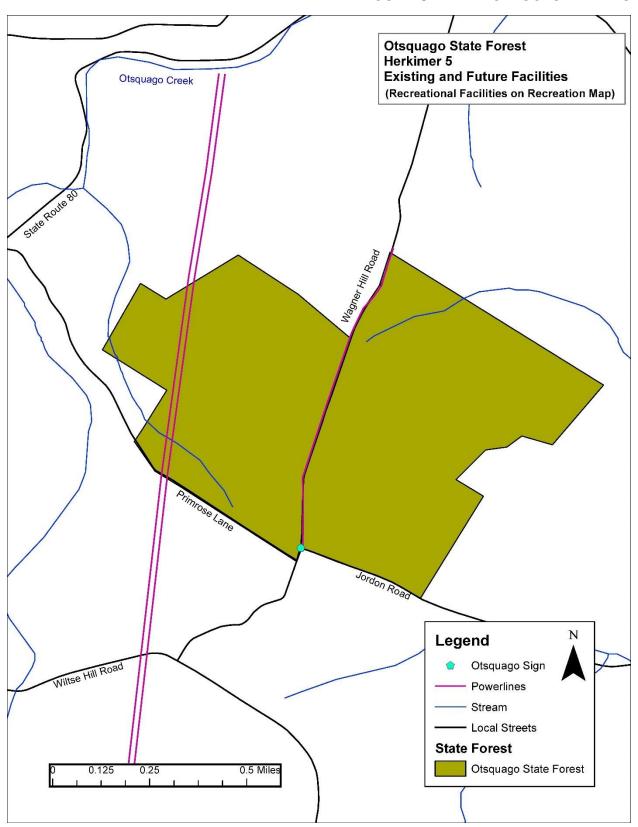


FIGURE 3 – INFRASTRUCTURE MAPS

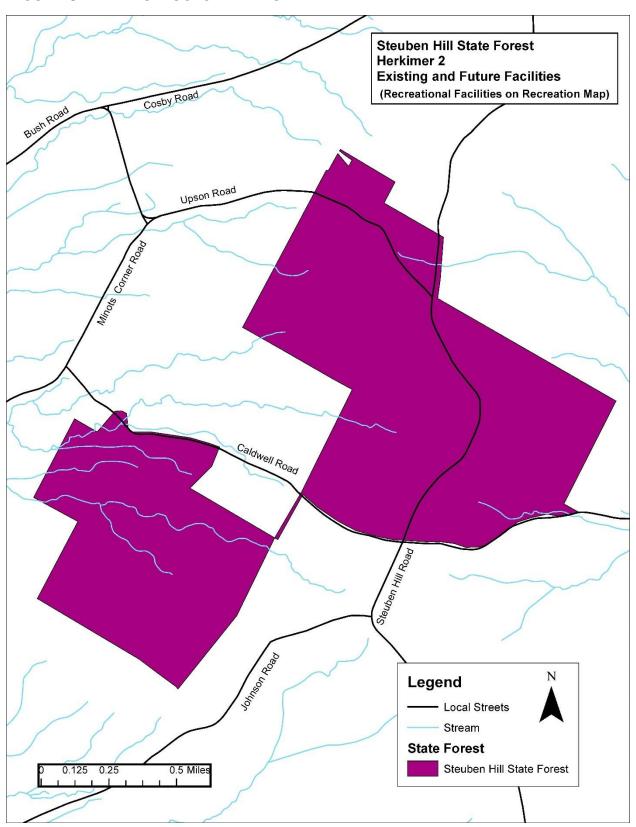


FIGURE 4 - RECREATION MAPS

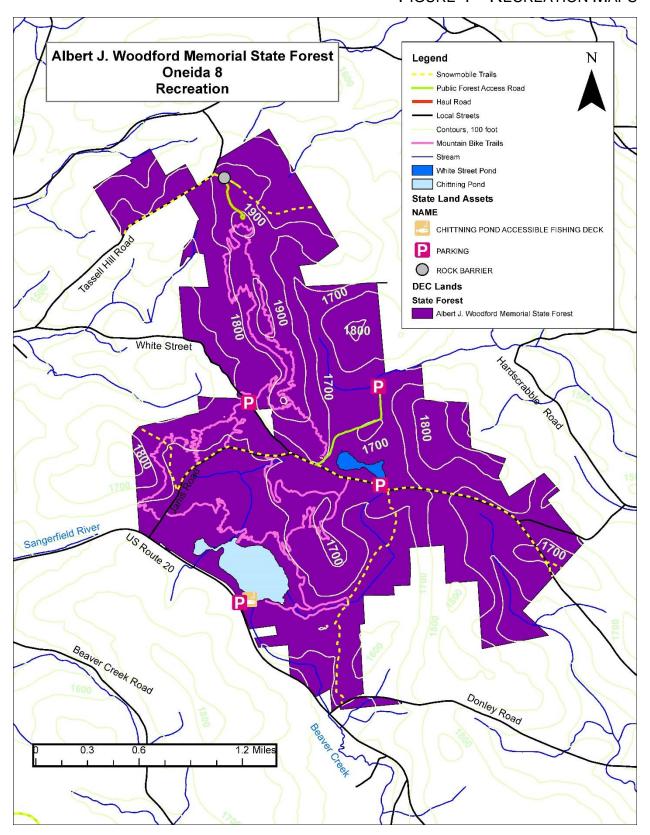


FIGURE 4 – RECREATION MAPS

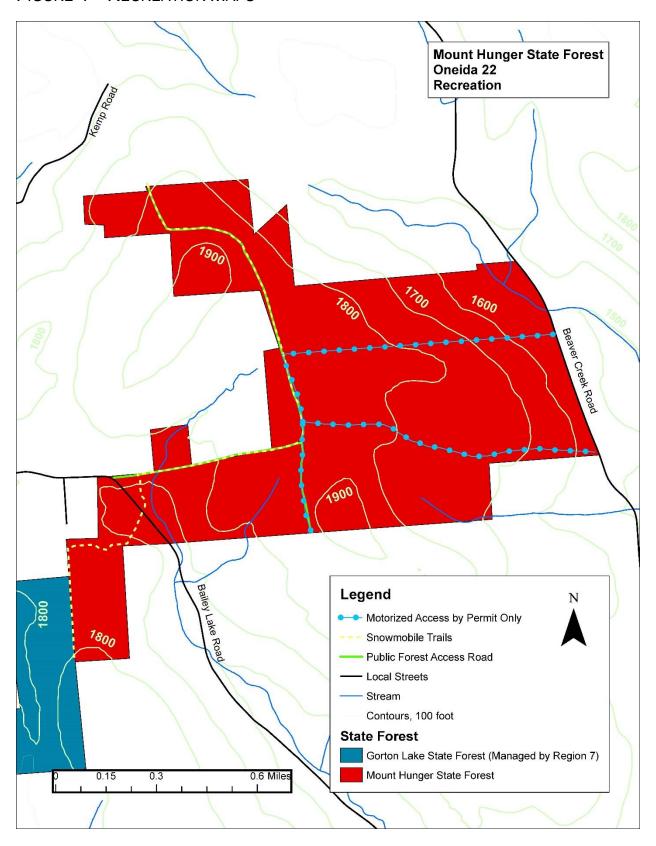


FIGURE 4 – RECREATION MAPS

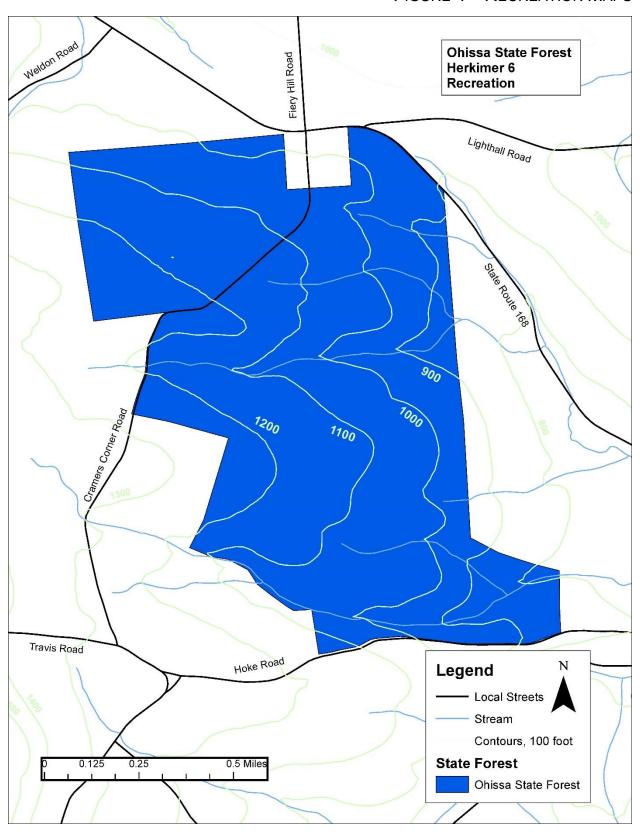


FIGURE 4 – RECREATION MAPS

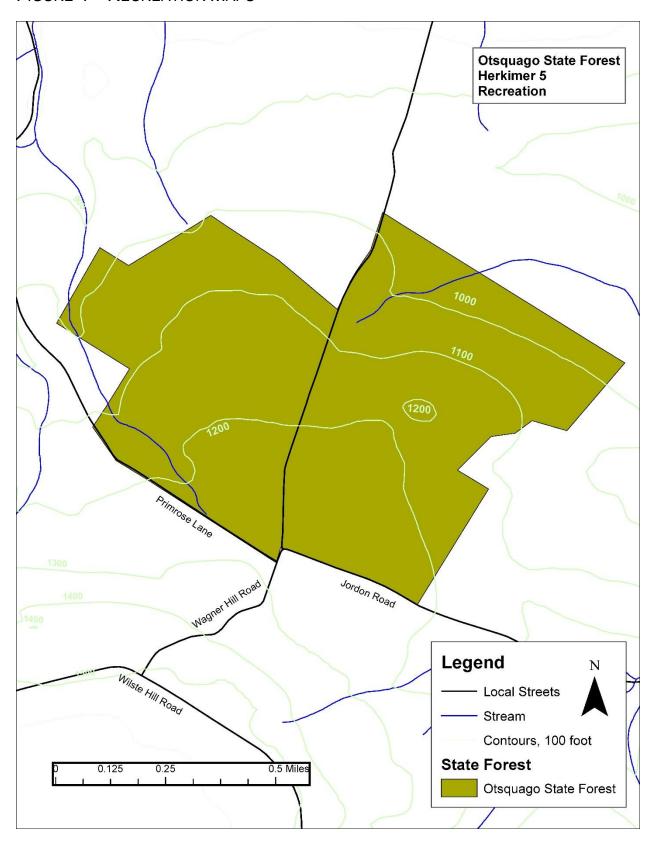


FIGURE 4 - RECREATION MAPS

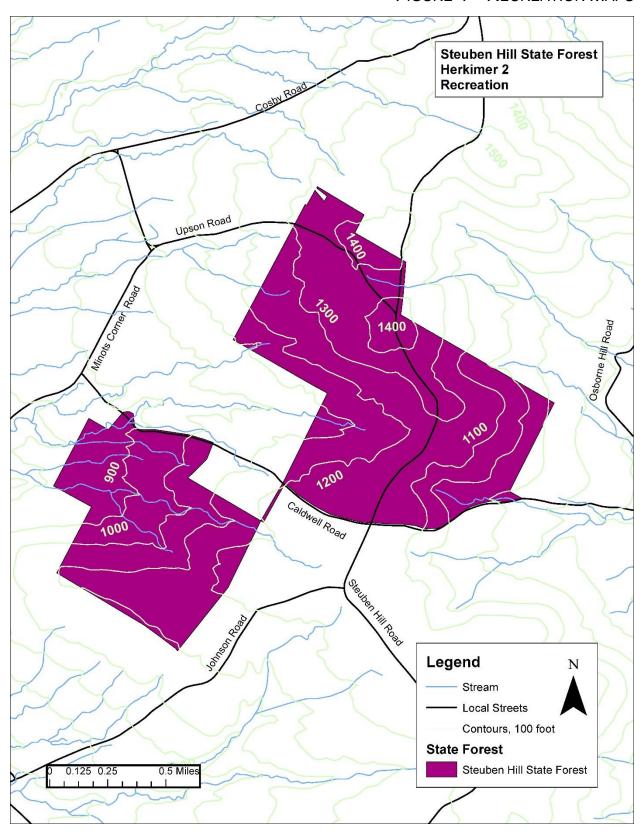


FIGURE 5 – CURRENT FOREST STAND IDENTIFICATION MAPS

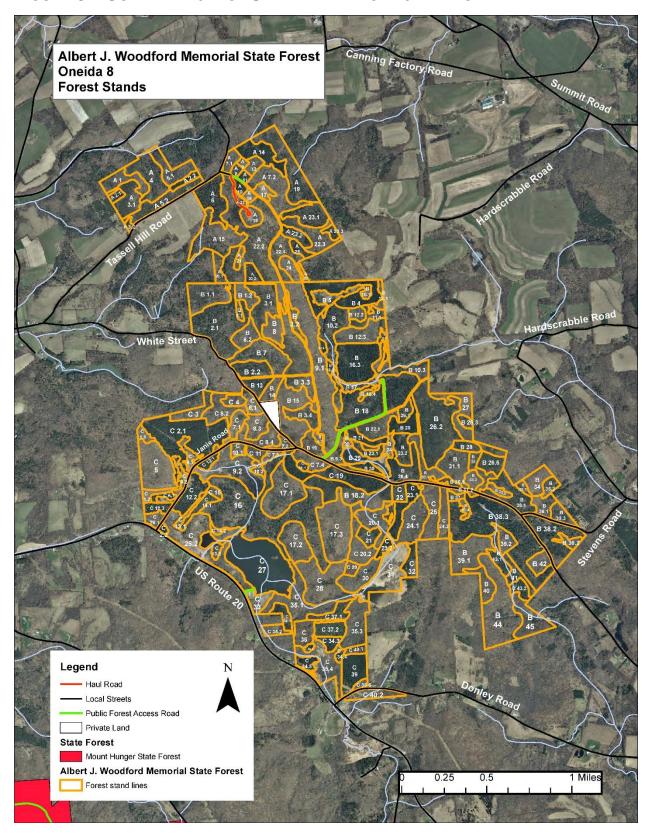


FIGURE 5 – CURRENT FOREST STAND IDENTIFICATION MAPS

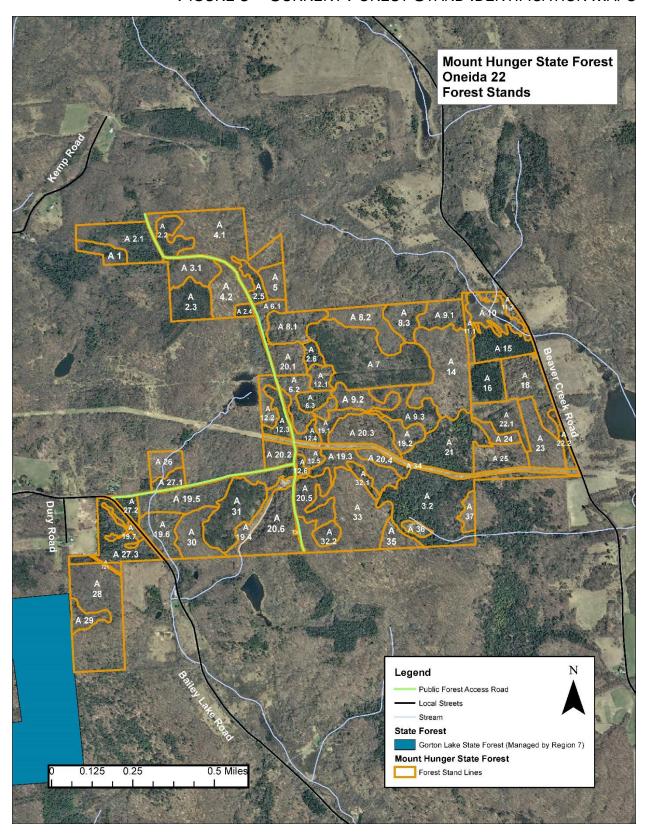


FIGURE 5 – CURRENT FOREST STAND IDENTIFICATION MAPS

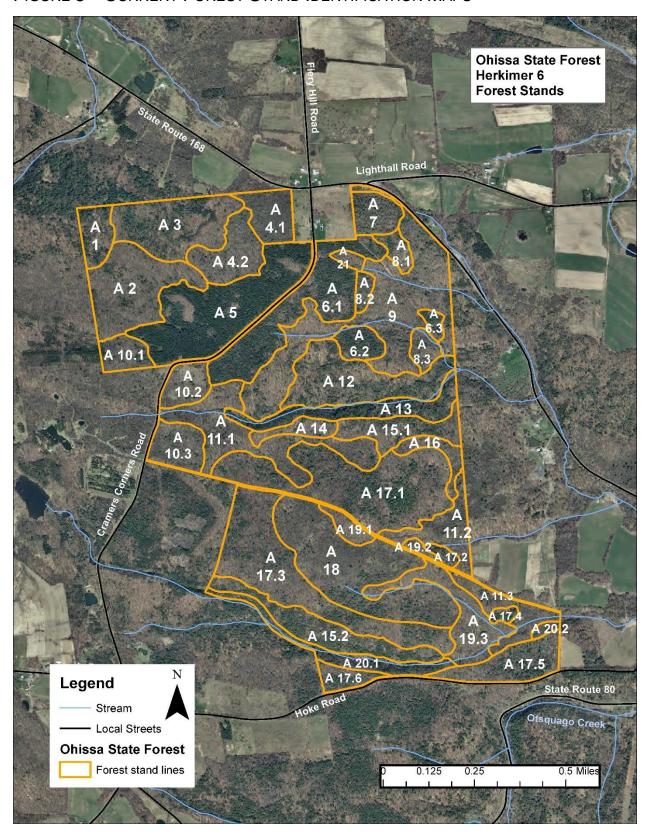


FIGURE 5 – CURRENT FOREST STAND IDENTIFICATION MAPS

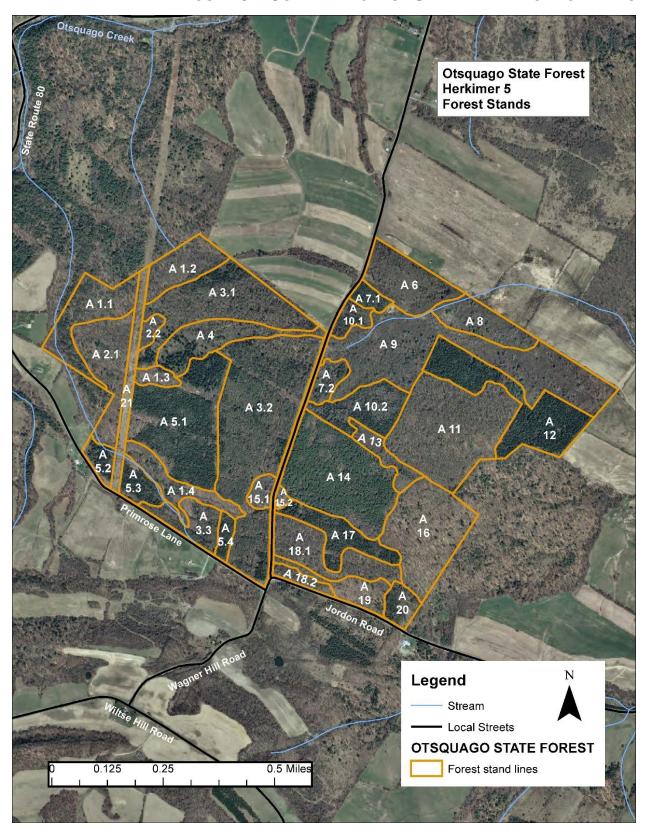


FIGURE 5 – CURRENT FOREST STAND IDENTIFICATION MAPS

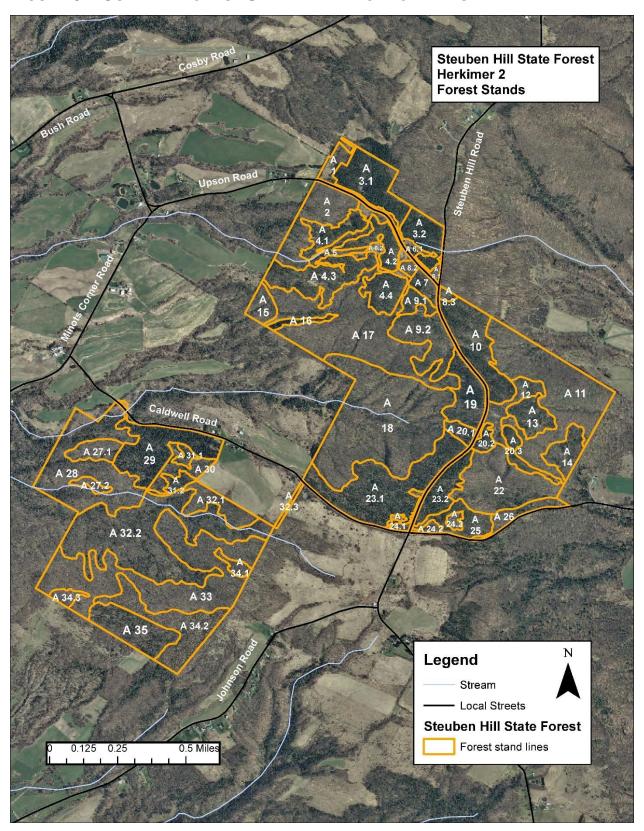


FIGURE 6 – CURRENT FOREST AGE STRUCTURE MAPS

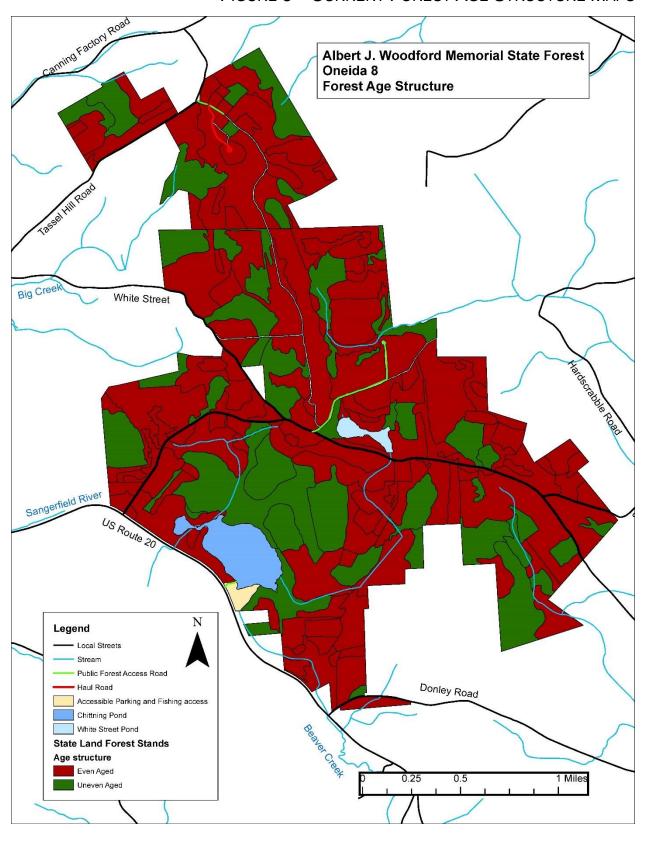


FIGURE 6 – CURRENT FOREST AGE STRUCTURE MAPS

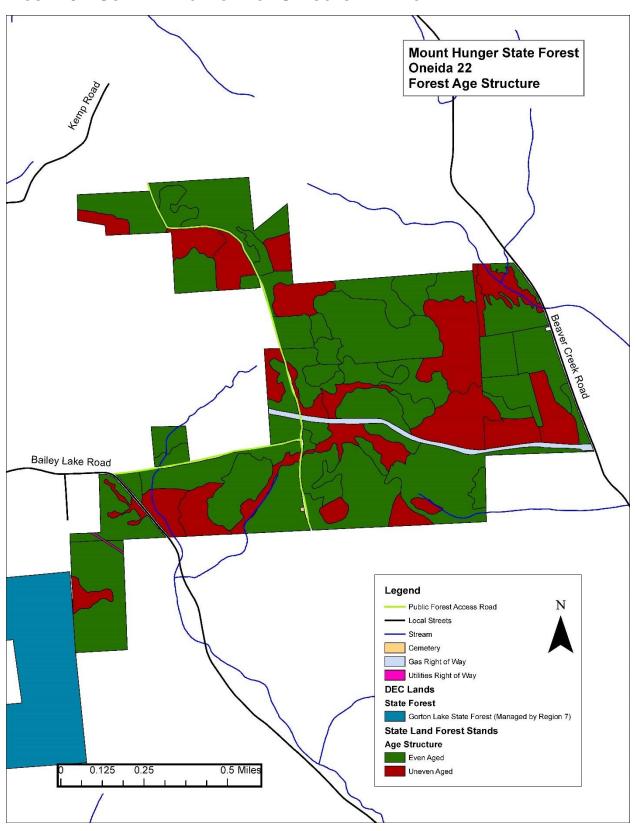


FIGURE 6 – CURRENT FOREST AGE STRUCTURE MAPS

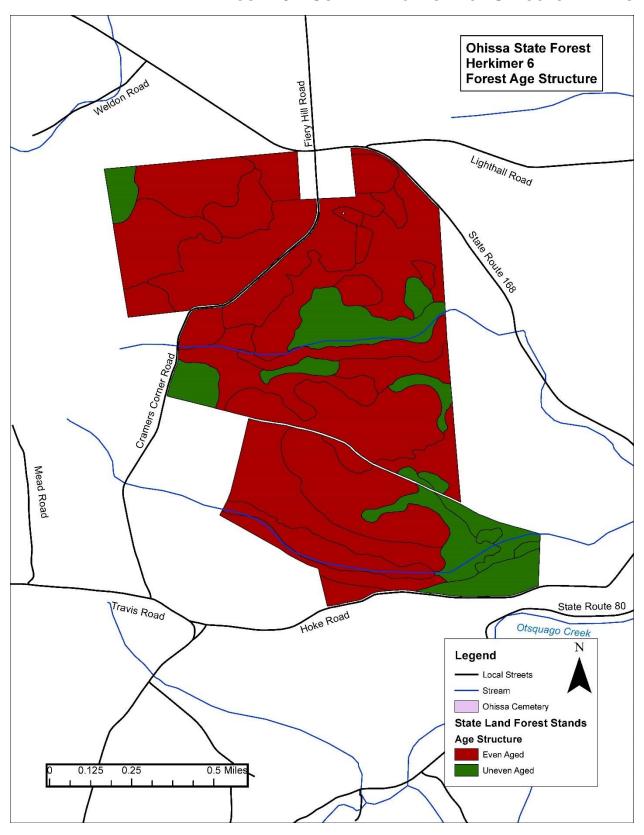


FIGURE 6 – CURRENT FOREST AGE STRUCTURE MAPS

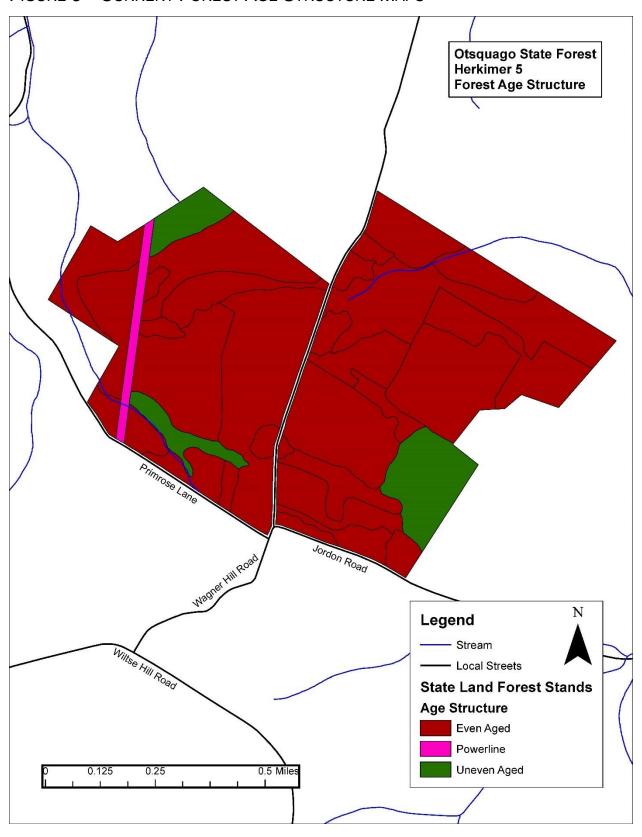


FIGURE 6 – CURRENT FOREST AGE STRUCTURE MAPS

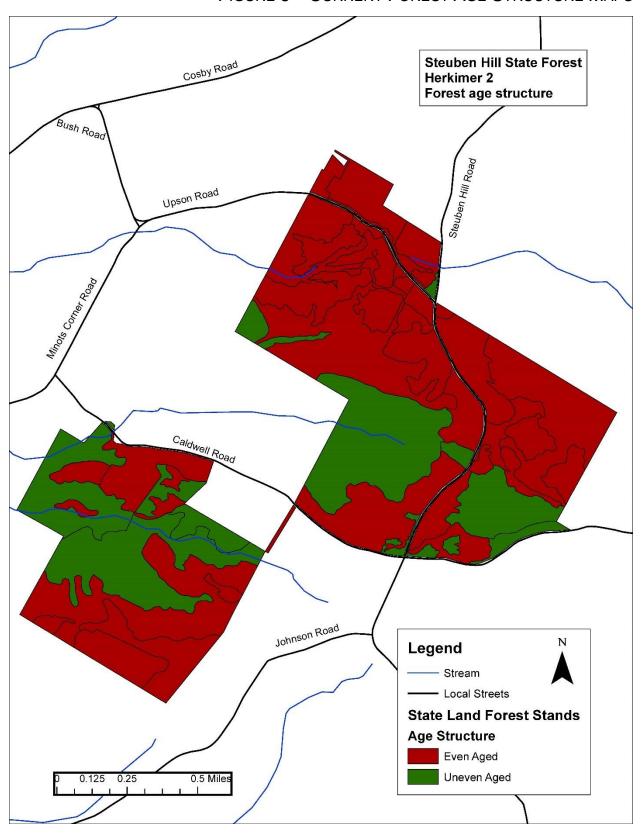


FIGURE 7 – CURRENT FOREST COMPOSITION MAPS

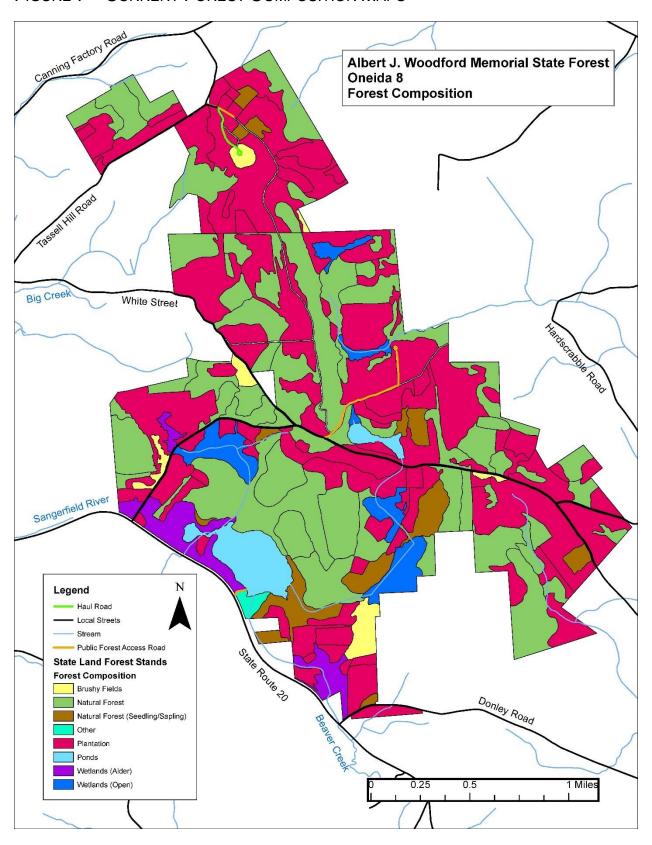


FIGURE 7 – CURRENT FOREST COMPOSITION MAPS

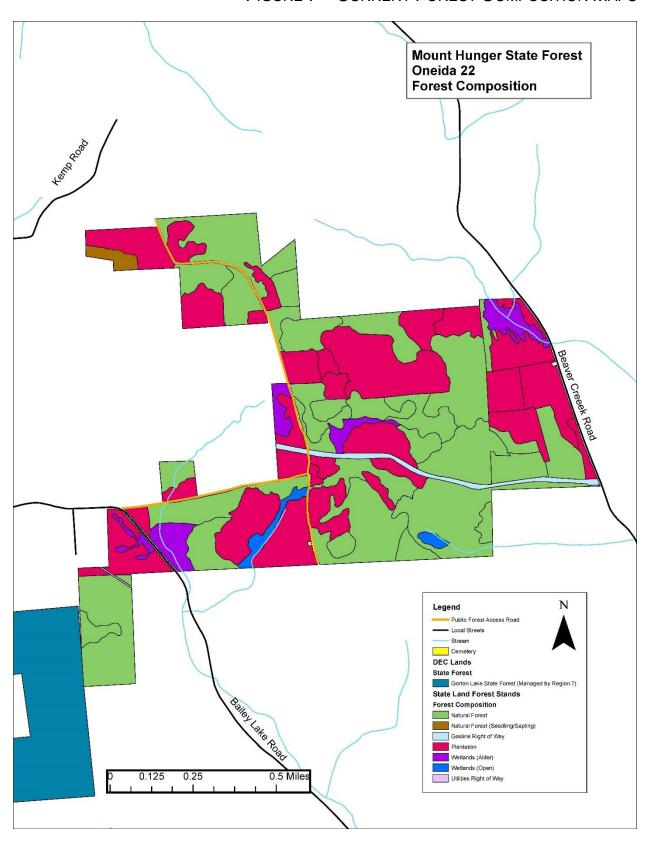


FIGURE 7 – CURRENT FOREST COMPOSITION MAPS

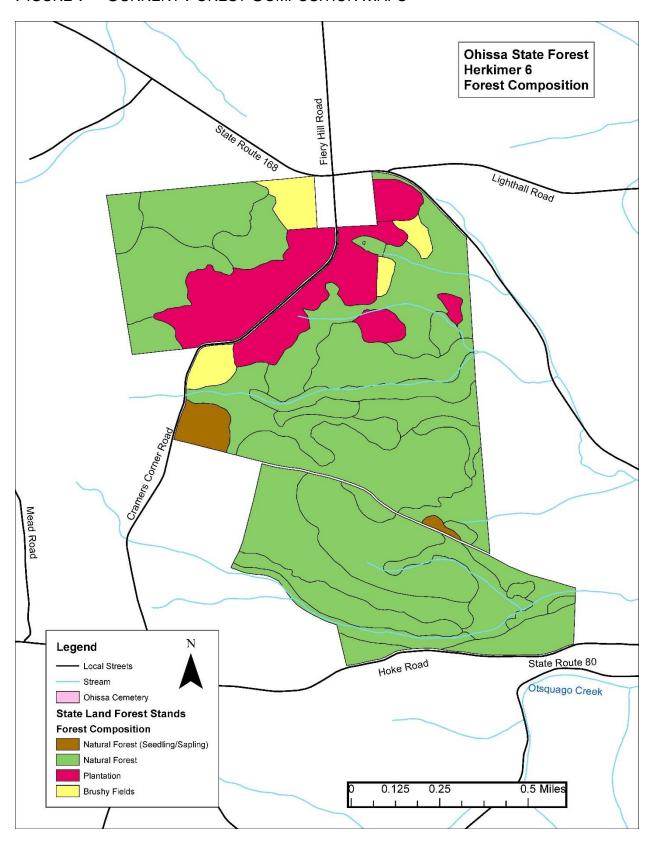


FIGURE 7 – CURRENT FOREST COMPOSITION MAPS

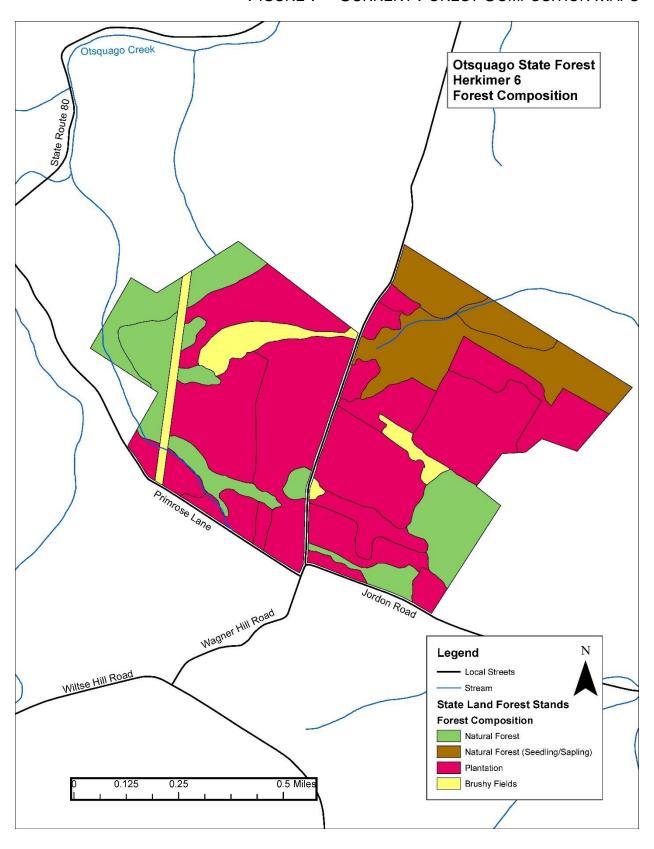


FIGURE 7 – CURRENT FOREST COMPOSITION MAPS

