



Department of
Environmental
Conservation

Eastern Lake Ontario UNIT MANAGEMENT PLAN DRAFT

Towns of Albion, Boylston, Orwell, Richland and
Sandy Creek

County of Oswego

June 2017

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

1285 Fisher Avenue
Cortland, NY 13045
(607) 753-3095 ext. 217

Eastern Lake Ontario Unit Management Plan

A planning unit consisting of four State Forests, in Oswego County

June 2017

Prepared by the Eastern Lake Ontario Unit Management Planning Team:

Daniel J. Sawchuck, Senior Forester

Acknowledgments

The Eastern Lake Ontario Unit Management Planning Team would like to gratefully acknowledge the efforts of all those who contributed to this plan. We particularly would like to thank the following people for information and review they provided:

Linda Collart, Mineral Resources Specialist

Glenn Wolford, Land Surveyor 3 (Retired)

Scott Jackson, Forest Ranger 1

Scott Prindle, Aquatic Biologist 1

Mike Putnam, Wildlife Biologist 1

Thomas Swerdan, Conservation Operations Supervisor 3

New York State Department of Environmental Conservation

Division of Lands and Forests

Region 7

1285 Fisher Avenue

Cortland, NY 13045

(607) 753-3095

www.dec.ny.gov

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 Eastern Lake Ontario 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.

Table of Contents

DEC'S MISSION	1
VISION STATEMENT	1
TABLE OF CONTENTS.....	3
PREFACE	7
STATE FOREST OVERVIEW.....	7
<i>Legal Considerations</i>	<i>7</i>
MANAGEMENT PLANNING OVERVIEW	7
<i>Public Participation</i>	<i>8</i>
<i>Strategic Plan for State Forest Management.....</i>	<i>8</i>
DEC'S MANAGEMENT APPROACH AND GOALS.....	8
<i>Forest Certification of State Forests</i>	<i>8</i>
<i>Ecosystem Management Approach</i>	<i>9</i>
<i>Ecosystem Management Strategies.....</i>	<i>10</i>
<i>State Forest Management Goals</i>	<i>10</i>
LOCATION MAP	13
I. INFORMATION ON THE EASTERN LAKE ONTARIO UNIT	14
STATE LANDS IN THE UNIT	14
<i>Table I.A. – State Lands in the Unit</i>	<i>14</i>
<i>Facilities Not Included in this UMP.....</i>	<i>14</i>
SOILS.....	14
<i>Table I.B. – Predominant Soil Types Found on the Unit.....</i>	<i>15</i>
WATER RESOURCES.....	16
<i>Watersheds</i>	<i>16</i>
<i>Wetlands.....</i>	<i>16</i>
<i>Streams, Rivers and Intermittent Streams</i>	<i>16</i>
<i>Water Bodies.....</i>	<i>17</i>
<i>Spring Seeps and Vernal Pools</i>	<i>18</i>
<i>Table I.C – Water Resources of the Unit.....</i>	<i>18</i>
BIODIVERSITY	19
<i>Fishery Resources and Fish Species</i>	<i>19</i>
<i>Wildlife Resources</i>	<i>20</i>
<i>Species of General Interest.....</i>	<i>20</i>
<i>Species of Greatest Conservation Need</i>	<i>21</i>
<i>Table I.D. Species of Greatest Conservation Need by Species Group Likely to be Found On or In the Vicinity of the Unit</i>	<i>22</i>
<i>Endangered, Threatened or Special Concern Species.....</i>	<i>24</i>
<i>Table I.E – Endangered, Threatened or Special Concern Species</i>	<i>24</i>
<i>Found on or in the vicinity of the Unit. *</i>	<i>24</i>
<i>Forest Type.....</i>	<i>29</i>
<i>Table I.F - Vegetative Types and Stages within the Unit.....</i>	<i>30</i>
<i>Representative Sample Areas.....</i>	<i>30</i>
<i>High Conservation Value Forests.....</i>	<i>32</i>
<i>Table I.G – Representative Sample Areas and High Conservation Value Forests of the Unit.....</i>	<i>33</i>
<i>Resource Protection Areas</i>	<i>34</i>
VISUAL RESOURCES	34
HISTORIC AND CULTURAL RESOURCES	35
<i>History of the Unit</i>	<i>35</i>
<i>Inventory of Resources</i>	<i>36</i>
<i>Historic and Archaeological Site Protection</i>	<i>36</i>
<i>Archaeological Research</i>	<i>37</i>
REAL PROPERTY.....	37

<i>Boundary Lines</i>	37
<i>Table I.H – Status of Boundary Lines</i>	37
<i>Exceptions and Deeded Restrictions</i>	37
<i>Table I.I. – Exceptions and Deeded Restrictions</i>	38
<i>Conservation Easement Land</i>	39
<i>Land Acquisition</i>	40
INFRASTRUCTURE	40
<i>Roads, Haul Roads, Trails and Parking</i>	41
<i>Table I.J – Existing Access and Parking</i>	41
<i>Signs / Kiosks</i>	42
<i>Designated Campsites and Lean-tos</i>	42
<i>Communications Facilities</i>	42
<i>Utility Transmission and Collection Facilities</i>	42
<i>Military Field Exercises</i>	42
FORMAL AND INFORMAL PARTNERSHIPS AND AGREEMENTS	42
RECREATION	43
<i>Hunting</i>	43
<i>Fishing</i>	43
<i>Trapping</i>	43
<i>Camping</i>	44
<i>Trail-based Recreation</i>	45
<i>Table 11. – Multiple Use Trails</i>	45
<i>Overall Assessment of the Level of Recreational Development</i>	45
UNIVERSAL ACCESS	46
<i>Application of the Americans with Disabilities Act (ADA)</i>	46
MINERAL RESOURCES	47
<i>Oil, Gas and Solution Exploration and Development</i>	47
<i>Mining</i>	47
SUPPORTING LOCAL COMMUNITIES	47
<i>Tourism</i>	47
<i>Taxes Paid</i>	47
<i>Table I.L – Projected 2014 Tax Summary for Unit</i>	48
FOREST PRODUCTS.....	48
<i>Timber</i>	48
<i>Non-Timber Forest Products</i>	49
FOREST HEALTH.....	49
<i>Invasive Species</i>	49
<i>Table I.M – Invasive Species, Pests and Pathogens</i>	50
<i>Native Pests and Pathogens</i>	51
II. SUMMARY OF ECO-REGION ASSESSMENTS	52
ECO-REGION SUMMARY	52
<i>Northern Appalachian – Acadian Ecoregion</i>	52
<i>Great Lakes Ecoregion</i>	53
ECO-REGION ASSESSMENT	53
<i>Table II.A. Land Use and Land Cover for the Landscape Surrounding the Unit</i>	54
LOCAL LANDSCAPE CONDITIONS	55
<i>Habitat Related Gaps</i>	55
III. MANAGEMENT AREA GOALS, OBJECTIVES AND ACTIONS.....	56
GOAL 1: PROVIDE HEALTHY AND BIOLOGICALLY DIVERSE FOREST ECOSYSTEMS.	56
<i>Objective 1.1 Soil and water quality will be protected by preventing erosion, compaction and nutrient depletion.</i>	57
<i>Objective 1.2 Provide forest vegetation types or features which are declining or rare in the landscape to enhance wildlife habitat diversity.</i>	58
<i>Objective 1.3 Protect at-risk species and significant ecological communities.</i>	59
<i>Objective 1.4 Conserve and Enhance Fish and Wildlife Habitat.</i>	60
<i>Objective 1.5 Monitoring of Ecosystem Health</i>	62

Objective 1.6	Apply Forest Management Principals and silvicultural systems to maintain or enhance ecosystem health and biodiversity.	63
Objective 1.7	Ensure compatibility of recreational activities and facilities with ecosystem sustainability.	66
Objective 1.8	Ensure compatibility of oil and gas exploration with ecosystem sustainability	66
GOAL 2: MAINTAIN MAN-MADE STATE FOREST ASSETS.....		67
Objective 2.1	Preserve and Protected Historic and Cultural Resources wherever they occur on the Unit ..	67
Objective 2.2	Maintain and enhance basic infrastructure which includes forest access roads, access trails, haul roads, trails, gates, boat launches, parking areas and associated facilities.	68
Objective 2.3	Maintain Boundary lines to identify State property and prevent timber theft and encroachments	68
Objective 2.4	Maintain the State Forest and other property identification or informational signs.	69
Objective 2.5	This Unit will be managed so that the overall quality of the visual resources is maintained or improved.	69
GOAL 3: PROVIDE RECREATIONAL OPPORTUNITIES FOR PEOPLE OF ALL AGES AND ABILITIES		69
Objective 3.1	Insure sustainable use of current recreational opportunities.	70
Objective 3.2	Enhance sustainable use of recreational opportunities.....	71
Objective 3.3	Provide recreational opportunities that are universally accessible and comply with the Americans with Disabilities Act.	72
Objective 3.4	Provide and enhance information on the Unit.	73
Objective 3.5	Address concerns and demand for Off-Highway and All-Terrain Vehicle use on the Unit.....	73
Objective 3.6	Support the traditional recreational uses of state land which include hunting, fishing, trapping, orienteering and viewing of natural resources.	76
GOALS 4: PROVIDE ECONOMIC BENEFITS TO THE PEOPLE OF THE STATE		76
Objective 4.1	Provide a steady flow of forest products.	77
Objective 4.2	Provide Property Tax Income to Local Governments and Schools.....	77
Objective 4.3	Provide for natural gas and other mineral resource exploration and development while protecting natural resources and quality recreational opportunities.	77
Action 4.3.1	If lands are nominated for leasing of extraction rights a hierarchical tract assessment process, as described in Action 1.8.1, will be conducted by the NYS DEC Division of Lands & Forests to determine if a lease may be granted and if so what conditions will be placed in the lease.....	78
Objective 4.4	Provide local communities support through forest-based tourism.	78
Objective 4.5	Protect rural character and provide ecosystem services and open space benefits to local communities.	78
MANAGEMENT ACTION SCHEDULES		79
A. Individual Projects Schedule Listed by Priority for 0 to 5 Years.....		79
B. Individual Projects Schedule Listed by Priority for 6 to 10 Years.....		80
C. Unit Wide Maintenance & Projects Throughout the Life of the Plan		80
D. Land Management Action Schedule.....		82
Forest Type Codes		82
Management Strategy		83
Treatment Type		83
Table III.A - Land Management Action Schedule for First Five-Year Period		85
Table III.B. - Land Management Action Schedule for Second Five-Year Period.....		87
Table III.C. - Stands without Scheduled Management within 10 Years		89
Table III.D - Resource Protection/Natural Areas		94
BIBLIOGRAPHY.....		101
GLOSSARY		104
GLOSSARY REFERENCES		112
APPENDICES & FIGURES.....		114
APPENDIX A - SUMMARY OF COMMENTS DURING PUBLIC SCOPING SESSIONS		114
APPENDIX B - SUMMARY DOCUMENT FOR THE CHATEAUGAY STATE FOREST DRAFT ATV CONNECTOR TRAIL PLAN		115
APPENDIX C - CHATEAUGAY STATE FOREST DRAFT ATV CONNECTOR TRAIL PLAN		121
APPENDIX D - STATE ENVIRONMENTAL QUALITY REVIEW (SEQR)		126
APPENDIX E – FISH SPECIES FOUND ON THE UNIT		127

APPENIX F - LISTS OF AMPHIBIANS AND REPTILES, BREEDING BIRDS AND MAMMALS FOUND ON OR IN THE VICINITY OF THE UNIT. ...	128
FIGURE 1. – SOILS MAP	141
FIGURE 2 – WATER RESOURCES AND SPECIAL MANAGEMENT ZONE MAPS	142
FIGURE 3. – INFRASTRUCTURE AND RECREATION MAPS	145
FIGURE 4. – CURRENT FOREST TYPE AND FOREST STAND IDENTIFICATION NUMBER MAPS.....	150
FIGURE 5. – MANAGEMENT DIRECTION MAPS	158
FIGURE 6. – MANAGEMENT ACTION SCHEDULE MAPS.....	162

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

This unit also contains lands categorized as Conservation Easement Lands. They are managed by DEC Division of Lands & Forests, with different management priorities than those on State Forests and are described in this plan.

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.

The Salmon River Corridor Grant Of Open Space Conservation Easement was made on December 29, 1993 between NM Holdings Inc (the Grantor), and The People of The State of New York (the Grantee) for the purpose of protecting the natural/ open space condition by restricting the development of the designated property while permitting compatible use.

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.ny.gov/lands/64567.html>. Refer specifically to pages 33 and 317.

Management Planning Overview

The Eastern Lake Ontario Unit Management Plan (UMP) is based on a long range vision for the management of the Altmar, Chateaugay, Sandy Creek and Trout Brook State Forests as well as a portion of the Salmon River Open Space Conservation Easement, balancing long-term ecosystem health with current and future demands. This Plan addresses management activities on this unit for the next ten

PREFACE

DEC's Management Approach and Goals

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, 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.

DEC's Management Approach and Goals

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



SUSTAINABLE
FORESTRY
INITIATIVE
SFI-00102

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 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 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.

PREFACE

DEC's Management Approach and Goals

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>.



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

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 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.

DEC'S Management Approach and Goals

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.

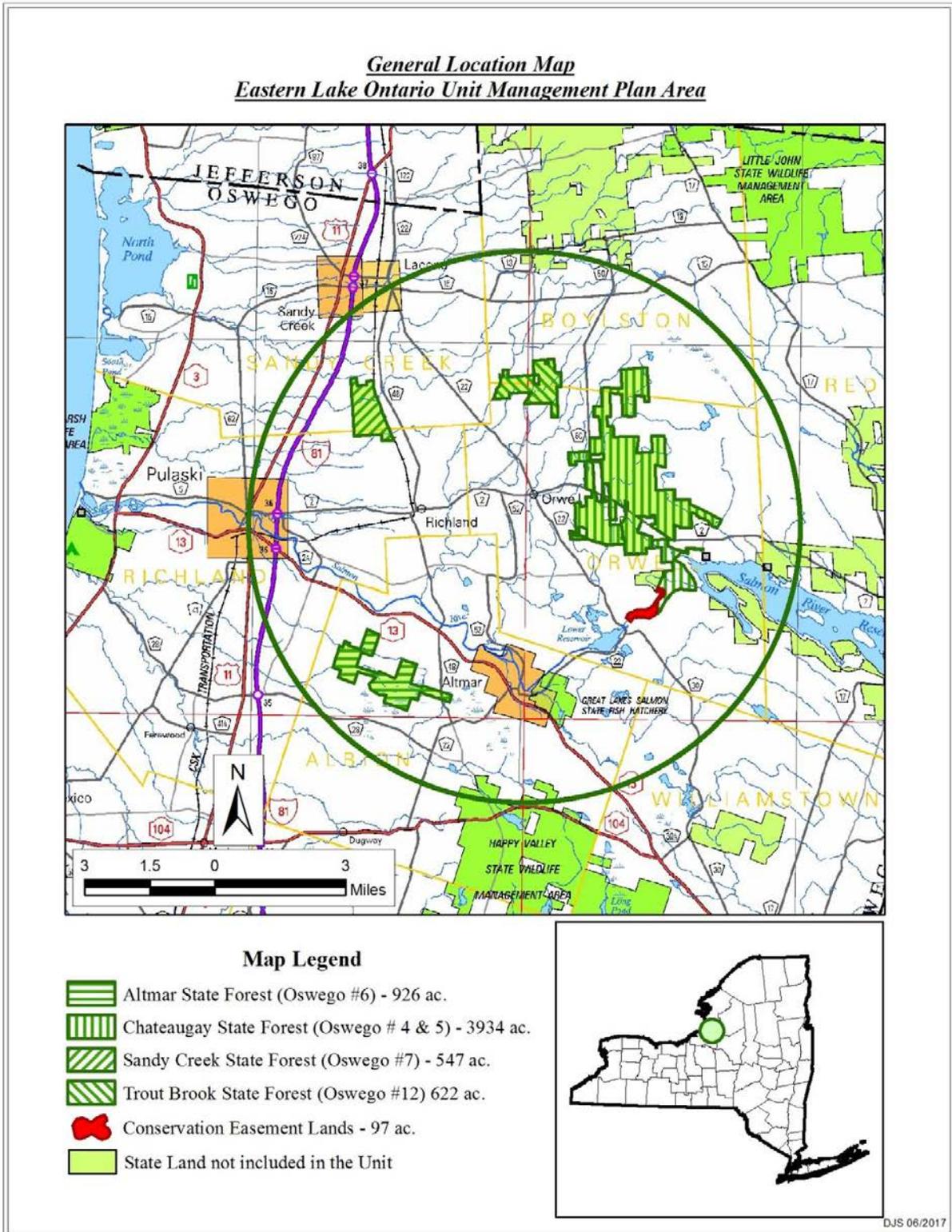
Goal 4 – Provide Economic Benefits to the People of the State

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.

Location Map



INFORMATION ON THE EASTERN LAKE ONTARIO UNIT

STATE LANDS IN THE UNIT

I. Information on the Eastern Lake Ontario 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 has been developed for each of the State Forests. Each web page features 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
Altmar State Forest – http://www.dec.ny.gov/lands/63037.html	926
Chateaugay State Forest – http://www.dec.ny.gov/lands/63155.html	3,934
Sandy Creek State Forest – http://www.dec.ny.gov/lands/63590.html	547
Trout Brook State Forest – http://www.dec.ny.gov/lands/63958.html	622
Salmon River Open Space Conservation Easement Lands	97
Total Acres	6,126

Facilities Not Included in this UMP

The Salmon River Falls Unique Area is located adjacent to the Unit. This unique area has a unit management plan and will continue to be managed following the Salmon River Falls Unique Area Unit Management Plan goals, objectives and actions.

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>.

The soils characteristics of this Unit vary depending upon the topography of land. This variation can be seen in the listing of the "Predominant Soil Types Found on the Unit" (Table I.B).

The soil types of the upland and sloped areas generally are the Colton – Hinckley complex, Worth-Empeyville and the Adams – Windsor complex. These soils can be generally described as deep, moderately well drained to excessively drained. The texture is typically moderately course to course and dominated by stone and gravel.

INFORMATION ON THE EASTERN LAKE ONTARIO UNIT

SOILS

The soil types of the low lying and more level areas are the Naumburg –Duane complex, Rifle Muck and Scriba types. These soils can be generally described as deep, somewhat poorly drained to very poorly drained. The texture is generally found to be mostly fine sandy loams to decomposed organic deposits.

Table I.B. - Predominant Soil Types Found on the Unit		
Facility Name	Predominant Soil Type(s)	Acres
Altmar State Forest	Adams – Windsor complex	342
	Naumburg –Duane complex	311
	Worth - Empeyville	177
	Colton – Hinckley complex	42
	Rifle Muck	38
	Miscellaneous	16
Chateaugay State Forest	Worth - Empeyville	2100
	Colton – Hinckley complex	1411
	Rifle Muck	309
	Westbury – Dannemora complex	42
	Naumburg –Duane complex	24
	Miscellaneous	48
Sandy Creek State Forest	Scriba	290
	Ira and Sodus	157
	Windsor	30
	Miscellaneous	70
Trout Brook State Forest	Worth - Empeyville	301
	Canaan – Rock outcrop	153
	Colton – Hinckley complex	115
	Westbury – Dannemora complex	25
	Miscellaneous	28
Salmon River Open Space Conservation Easement Lands	Colton – Hinckley complex	47
	Canaan – Rock outcrop	41
	Miscellaneous	9

INFORMATION ON THE EASTERN LAKE ONTARIO UNIT

WATER RESOURCES

The predominant soil types are derived from the SSURGO soils data. The miscellaneous description contains soil types found on each facility which are less than 20 acres and are made up of some of the above types plus the following soil types: Alton Gravelly, Canandaigua silt loam, Deerfield, Fluvaquents & udifluvents, Herkimer channery, Humaquepts & fibrists, Lamson, Sun loam and Windsor. A map (Fig. 1.) identifying the locations of the soil is found in the Appendices and Figures section of this Plan.

Water Resources

Watersheds

The Unit is part of the part of the greater Lake Ontario Basin and found primarily within the Salmon River Watershed. This broader watershed designation can be further divided into five separate watersheds (Table 3.) as defined by the U.S. Geological Survey (USGS) Hydraulic Unit Code 12 (HUC12). A hydraulic unit/watershed is a drainage area that is delineated based upon the surface water drainage from a specific point of stream order or location and includes all the land and surface areas that drain into it. Also included in one of these watersheds is a portion of a watershed which is utilized as the drinking water supply for the Village of Orwell. This small section of watershed has been further designated as a Watershed High Conservation Value Forest as itemized in Table 3.

Wetlands

In New York, wetlands are legally protected by the State if they meet the criteria found in section 24-0107 of the Freshwater Wetlands Act and occupy at least 12.4 acres (see Appendix I for State wetland classifications). The Eastern Lake Ontario Unit contains 17 different State Classified freshwater wetlands totaling approximately 735 acres.

Wetlands may also qualify for federal protection based on hydrology, vegetation, and soils. There are 70 additional, federally-designated freshwater wetlands on the Unit totaling approximately 172 acres. Maps showing the locations of wetlands are found in the Appendices and Figures section, Fig. 2.

There are two wetland associated ecological communities identified by the Natural Heritage Program located on this Unit. These communities are the Hasto Road Swamp located on Altmar State Forest and the Pennock Bog located on the Chateaugay State Forest. Both of these communities have been identified as Spruce-Fir Swamps and have been given a Heritage State Rank of S3. Also a portion of the Pennock Bog has been identified as a shallow emergent marsh with a Heritage State Rank of S3. These rankings are high enough to designate the areas as Representative Sample Areas (RSA).

Streams, Rivers and Intermittent Streams

The Department provides a class and standard designation of all waters within the state based on existing or expected best usage of each water or waterway segment.

- The classification AA or A is assigned to waters used as a source of drinking water.
- Classification B indicates a best usage for swimming and other contact recreation, but not for drinking water.
- Classification C is for waters supporting fisheries and suitable for non - contact activities.

- The lowest classification and standard is D.

Waters with classifications A, B, and C may also have a standard of (T), indicating that it may support a trout population, or (TS), indicating that it may support trout spawning (TS). Special requirements apply to sustain these waters that support these valuable and sensitive fisheries resources.

Small ponds and lakes with a surface area of 10 acres or less, located within the course of a stream, are considered to be part of a stream and are subject to regulation under the stream protection category of Protection of Waters.

Certain waters of the state are protected on the basis of their classification. Streams and small water bodies located in the course of a stream that are designated as C(T) or higher (i.e., C(TS), B, or A) are collectively referred to as "protected streams," and are subject to the Department's stream protection provisions of the Protection of Waters regulations.

This Unit has approximately 24.5 miles of consistent streams which flow most of the year and 7.3 miles of intermittent streams. Of these streams, 5.8 miles are classified as Class D waters, 2.0 miles are classified as Class C waters, and 16.7 miles are classified as C (T) trout waters. (*NYSDEC Protection of Waters Website, 2012*)

There are seven different named streams which include one named river along with numerous unnamed lesser tributaries or intermittent streams. The following are the named streams on the Unit and their classification:

- Deer Creek - C
- Little Grindstone Creek - C(T)
- Orwell Brook - C(T)
- Pekin Brook - C(T)
- Pennook Brook – C(T)
- Salmon River - C(T)
- Trout Brook - C(T)

A portion of the Salmon River runs approximately 2.25 miles through the Salmon River Conservation Easement lands. This section of the Salmon River is referred to as the by-pass reach since this section of river is primarily bypassed due to the diverting of water from the Salmon River Reservoir through a pipeline to the Bennett Bridges Power house for the purpose of Hydroelectric power generation. The Salmon River is known for its world class trout and salmon fishery. This by-pass section of the Salmon River is not accessible to the salmon fishery due to the hydroelectric generation facilities.

Water Bodies

Beaver Ponds

The Unit presently has 14 beaver ponds totaling approximately 34 acres and range in size from 0.2 acres to 12.3 acres. The ponds size and depth are dependent upon the activeness of the beaver population and are very susceptible to change due to trapping or predator activity and high water conditions. These

INFORMATION ON THE EASTERN LAKE ONTARIO UNIT

WATER RESOURCES

ponds may have native trout populations, but populations will decrease over time due to the likeliness of increasing water temperatures.

Spring Seeps and Vernal Pools

Spring seeps are areas where groundwater emerges from underground to the surface. They are valuable to wildlife, particularly wild turkey because in severe winters they provide snow-free feeding sites and are among the first sites to provide green plants in spring. Spring seeps are used by amphibians such as the Jefferson salamander, spotted salamander and by **neotropical migratory birds** such as the veery and wood thrush. The springs and seeps on this unit are also important suppliers of clean cold waters necessary for productive headwaters to the native trout and salmon fishery. A specific inventory identifying spring seep has not been conducted on this Unit. A quick review of the Department's GIS water resources data show that there are a minimum of 15 locations that serve as spring seeps with the potential for more on the Unit.

Vernal pools are small areas that are wet in the spring of the year. The pools derive their name from vernalis, the Latin word for spring, because they result from various combinations of snowmelt, precipitation and high water tables associated with the spring season. The pools tend to occur in small depressions and while many dry up in late summer, a few have water year-round. By definition, vernal pools are free of fish and can support a rich **community** of amphibians and invertebrates that would be difficult to sustain if fish were present. Due to the relatively flat topography, heavy snowfalls and relatively flat topography of the area, there is an abundance of and vernal pools on the Unit.

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 the water resources of the Unit. The locations of the various water resources are found in the Appendices and Figures section of this Plan (Fig 2.)

Table I.C – Water Resources of the Unit	
Watersheds	
Hydrologic unit(s)	Watershed name(s)
HUC 12 Code # 041401020802	Grindstone Creek – Frontal Lake Ontario
HUC 12 Code # 041401020405	Little Sandy Creek – Frontal Lake Ontario
HUC 12 Code # 041401020704	Orwell Creek – Salmon River
HUC 12 Code # 041401020702	Salmon River Reservoir – Salmon River
HUC 12 Code # 041401020703	Trout Brook
Watershed HCVF	Village of Orwell Water Supply 187 ac.

Wetlands		
Regulated wetland		735 ac.
Unregulated wetland (less than 12.4 acres)		172 ac.
Streams/Rivers		
Intermittent streams		7.3 mi.
Perennial streams/rivers	AA or A	mi.
	B	mi.
	C	2.0 mi.
	D	5.8 mi.
Trout streams/rivers	AA (T), A (T), B (T) or C (T)	16.7 mi.
Water Bodies		
Water bodies (open-water ponds and lakes)		34 ac.

Biodiversity

Biodiversity is the variety or diversity of plants, animals and other living things in an area or region. Information regarding biodiversity in and surrounding this Unit 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.
- 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.

Fishery Resources and Fish Species

The primary fishery resources on the Unit are the trout streams described above which run through the Unit. Orwell Brook, Trout Brook and Deer Creek provide spawning habitat for trout and salmon which run from Lake Ontario. Little Grindstone Creek is stocked annually with brook trout. There are also numerous smaller streams on the Unit that are Class C(t) and support brook trout, but may be too small to attract significant fishing activity. These smaller streams serve as brook trout spawning and nursery waters.

There are a number of small pond areas which are beaver made impoundments. These vary in size and are typically impediments to fish passage and can also cause water temperatures to warm which may

INFORMATION ON THE EASTERN LAKE ONTARIO UNIT

BIODIVERSITY

reduce the capability to support trout species. The streams of this unit support a variety of stream fish species. The following is a list of fish species found on or in the vicinity of the Unit.

Wildlife Resources

The presence and abundance of wildlife species depends upon the availability and quality of suitable habitat. The area surrounding the Unit has a high percentage of forest cover with scattered pasture and occasional crop land located on private lands in the western vicinity of the Unit. While the factors which affect individual wildlife species populations are many and varied, the general trend around this Unit is for the woodland wildlife populations and those species associated with open land to remain stable.

Many of the common, game and non-game wildlife species are important contributors to the forested landscape and indicators of the health and productivity of the available habitat. The State Forests provide large tracts of undeveloped land with varying habitat types which are home to the many different common species in the area. The specific common wildlife species and their populations will vary depending upon their range and the habitat available.

Wildlife species occurrence has been monitored through different State efforts which focused on different classifications. There has been the NYS Breeding Bird Atlas Project, completed in 2007, that is designed to reveal the distribution of breeding birds in New York <http://www.dec.ny.gov/cfm/xtapps/bba> . The next survey is the Herp Atlas Project, completed in 1999, that was designed to document the geographic distribution of New York State's amphibians and reptiles <http://www.dec.ny.gov/animals/7140.html> . The Department also compiles harvest reports for the main game species of bear, deer and turkey and are made available on the Department's web pages <http://www.dec.ny.gov/outdoor/42232.html> , & <http://www.dec.ny.gov/outdoor/30420.html> .

An estimated 123 species of birds, 51 species of mammals, 17 species of reptiles and 17 species of amphibians may be found on or in the vicinity of the Unit. Further information about many of these wildlife species are described below. Rather than list every species, species are described for those "Species of General Interest," "Species of Greatest Conservation Need," and "**Special Concern, Threatened or Endangered Species**".

Species of General Interest

Backyard song birds – These include common song birds such as blue jays, black-capped chickadees, white-breasted nuthatch, Northern flicker, dark-eyed juncos and robins. Their populations are expected to remain stable.

Black Bear - Bear are present and their numbers are expected to remain stable or slightly increase.

Beaver - Beaver are important for their ability to create wetland habitat for other animal species. Beaver are abundant in the numerous wetlands and watercourses on the Unit. Their numbers are expected to be stable in the future.

Bobcat - Bobcat are present in low numbers. Their population is expected to remain stable.

Deer – White-tailed deer are an important component of the Unit's fauna, both for their recreational value and their capacity to impact other resources and human activities and interests. Deer numbers are relatively low on the Unit due to the harsh winter climate and limited food resources to carry overwintering deer. The Department manages deer populations in accordance with recommendations from the Citizen Task Force established for each Wildlife Management Unit. The Upper Salmon River Unit is within Deer Management Unit (DMU) numbers 6N and 6K.

Eastern Cottontail Rabbit - Population has been decreasing as former agricultural lands have become forested.

Eastern Coyote - Coyote are present throughout the Unit. Recent DNA research suggests that the eastern coyote is a genetic mix of Algonquin wolf of Canada and the western coyote. Their population is expected to increase slightly.

Fisher - Fisher use hemlock woods in large forested areas for their habitat. They are one of the few species that prey on porcupine. Their numbers are expected to remain stable or increase.

Otter – Otter are present on the Unit. Their population is expected to remain stable.

Red & Gray Fox - They are present on the Unit. However, like the Cottontail, their numbers are declining as open lands increasingly grow back into forest.

Snowshoe Hare – Require early successional habitat that is declining in the region. Their population is expected to decline.

Turkey - Turkey are present on the Unit, but their population density is less than other areas of New York State that have less snow fall and more agricultural land. Their numbers are expected to remain stable.

Woodpeckers - Pileated, hairy and downy woodpecker populations are expected to increase as the forests mature. They are important for their ability to create tree cavities that are needed by other bird and mammal species.

Species of Greatest Conservation Need

In 2005, the Department released *New York State's Comprehensive Wildlife Conservation Strategy* (CWCS). The CWCS is New York's state wildlife action plan and serves as a guiding document for managing wildlife species in greatest need of conservation. For more information about the CWCS Plan it can be found at: <http://www.dec.ny.gov/animals/30483.html>.

This plan addresses the conservation of those "*Species of Greatest Conservation Need*" (SGCN). This list of species was developed by DEC Bureau of Wildlife staff in consultation with experts and scientists from across the State. In the plan, the State is examined by major watersheds to determine those species in greatest need of conservation. The Eastern Lake Ontario Unit is in the Southeast Lake Ontario Basin portion of the CWCS plan. Table I.D lists those SGCN species known to be on or in the vicinity of the Unit and their population trends.

INFORMATION ON THE EASTERN LAKE ONTARIO UNIT

BIODIVERSITY

Table I.D. Species of Greatest Conservation Need by Species Group Likely to be Found On or In the Vicinity of the Unit

SGCN Mammals

Species Group	Population Trend
---------------	------------------

Tree Bats

Eastern red bat	Unknown
-----------------	---------

Hoary bat	Unknown
-----------	---------

Furbearer

River otter	Stable
-------------	--------

SGCN Birds: NYS Breeding Bird Atlas 2000 - 2005.

Species Group	Population Trend
---------------	------------------

Early Successional forest/shrub land birds

American woodcock	Decreasing
-------------------	------------

Black-billed cuckoo	Decreasing
---------------------	------------

Black-throated blue warbler	Decreasing
-----------------------------	------------

Blue-winged warbler	Decreasing
---------------------	------------

Brown thrasher	Decreasing
----------------	------------

Canada warbler	Decreasing
----------------	------------

Ruffed grouse	Decreasing
---------------	------------

Willow flycatcher	Decreasing
-------------------	------------

Deciduous/mixed forest breeding birds

Scarlet tanager	Decreasing
-----------------	------------

Wood thrush	Decreasing
-------------	------------

Forest breeding raptors

Cooper's hawk	Increasing
---------------	------------

INFORMATION ON THE EASTERN LAKE ONTARIO UNIT

BIODIVERSITY

		successional fields with a combination of shrubby and open areas within the territory. (www.dec.ny.gov/animals/7494.html)		
Horned Lark <i>Eremophila alpestris</i>	S5	Occupies areas with short grasses and/or barren ground. (www.dec.ny.gov/animals/7494.html)	BBA(CONF)	PSC
Least Bittern <i>Ixobrychus exilis</i>	S3	Shallow or deep emergent marshes.	BBA (CONF)	T
Northern Goshawk <i>Accipiter gentilis</i>	S4	Various forest types, especially mature forest.	BBA (CONF)	PSC
Red-headed Woodpecker <i>Melanerpes erythrocephalus</i>	S4	Its breeding habitat is characterized by the presence of dead trees for nest sites, snags for roosting, and open ground for foraging. Prefers river bottoms, wooded swamps, and open grasslands with scattered trees. (www.dec.ny.gov/animals/7494.html)	BBA(CONF)	PSC
Red-shouldered Hawk <i>Buteo lineatus</i>	S4	This raptor breeds in moist woodlands, riverine forests, the borders of swamps, open pine woods and similar habitats. Nesting almost always occurs near water, such as a swamp, river or pond. (www.dec.ny.gov/animals/7494.html)	BBA(CONF)	PSC
Sharp-shinned Hawk <i>Accipiter striatus</i>	S4	Sharp-shinned Hawks breed in deep forests.	BBA(CONF)	PSC
Vesper Sparrow	S5	This species is unique in that it requires patches of bare ground within its breeding territory, making severely disturbed habitats such as reclaimed mines, overgrazed pasture, and row crops potentially suitable. (www.dec.ny.gov/animals/7494.html)	BBA(CONF)	PSC
Whip-poor-will <i>Caprimulgus vociferus</i>	S4	Breeds in dry, deciduous or mixed forests with sparse underbrush near open areas needed for foraging. (www.dec.ny.gov/animals/7494.html)	BBA(CONF)	PSC
Auricled twayblade	S1	This orchid is found in low woods or along riverbanks, often under	PROs (PRED)	E

INFORMATION ON THE EASTERN LAKE ONTARIO UNIT

BIODIVERSITY

		hemlock or near coniferous swamps or alder thickets (New York Natural Heritage Program 2005).		
Butterwort <i>Pinguicula vulgaris</i>	S2	A plant of seepage areas on open limey-shale cliffs or in the mist of a nearby waterfall. (New York Natural Heritage Program 2005).	PROs (PRED)	T
Downy lettuce <i>Lactuca hirsuta</i>	S1	The species grows in open woods, clearings, thickets, powerline and pipeline rights-of-way, and ridgetops.	PROs (PRED)	E
Hills pondweed <i>Potamogeton hillii</i>	S2	An aquatic plant of alkaline waterways including ponds, streams, lakes, ditches, and other impoundments. (New York Natural Heritage Program 2005).	PROs (PRED)	T
Hookers orchid <i>Platanthera hookeri</i>	S1	This orchid is found in dry to moist woodlands and forest, but seems to prefer more forested areas with open understories or successional forest, particularly those dominated by poplar and pine (New York Natural Heritage Program 2005)	PROs (PRED)	E
Pod grass <i>Scheuchzeria palustris</i>	S3	This plant is found in sphagnum bogs and nutrient poor to medium fens, mostly within the Adirondacks and Tug Hill regions.	PROs (PRED)	R
Roseroot <i>Rhodiola rosea</i> L.	S1	Roseroot has been found at only a few sites in New York, all of them cliffs, and all but one near waterfalls. (New York Natural Heritage Program 2005).	PROs (PRED)	E
Southern twayblade <i>Listera australis</i>	S1	A plant of peat moss areas including bogs, poor fens, and wet woods (New York Natural Heritage Program 2005).	PROs (PRED)	E
Virginia false gromwell <i>Onosmodium virginianum</i>	S1	The sole extant record for this species in the state is at an inland red cedar barrens, where it is found growing in calcareous soil with exposed bedrock and a mixture of trees, grasses and herbs. (New York Natural Heritage Program 2005).	PROs (PRED)	E

INFORMATION ON THE EASTERN LAKE ONTARIO UNIT

BIODIVERSITY

Eastern pearshell <i>Margaritifera margaritifera</i>	S2	Generally this species lives buried in clean, mixed substrates in fast-flowing unpolluted trout streams and smaller rivers. (New York Natural Heritage Program 2005).	PROs (PRED)	Not listed
---	----	---	----------------	---------------

*Defined as NYNHP rank S1, S2, S2-3, G1, G2 or G2-3

Key to Codes

BBA - Breeding Bird Atlas

(PRED) - Predicted Species

(CONF) - Confirmed Species

PROs – Predicted Richness Overlays

Status

E - Endangered Species (New York)

T - Threatened Species (New York)

PSC - Protected, Special Concern Species
(New York)

Forest Type

The following information provides several representations of forest types or habitats found on the unit. The Unit is comprised of 91% forest, 7% of wetlands, ponds and brushy areas and the remaining 2% made up of roads, power lines and parking lots.

Successional Stages

The forest types can be characterized by the stage it may be in, in relation to age or succession. There are three general categories used to characterize the successional stages of forest types, **early successional**, **mid successional** and **late successional** forest stages. The early succession stage forests are primarily old fields or areas with brushy or shrubby type plants or trees with mainly seedling or sapling size trees and species that are shade intolerant. The mid succession stage forests have trees that are pole-sized or larger, with relatively open understories. The late succession stage is forests that have older and larger trees with more structural complexity than mature mid stage successional forests.

This Unit contains approximately 1% acres of early successional forest and shrub habitat type. This habitat is comprised of young trees and brushy areas also described as **seedling- sapling/** brush habitat. These areas are primarily regenerated timber **stands** and provide important habitat for many wildlife species. There are also early successional forest and shrub habitat found on private lands adjacent to the Unit. These areas are made up of mainly abandoned farm fields.

The mid successional forest habitat dominates this Unit, making up approximately 91% of the Unit. This forest habitat consists of pole-size (6" **DBH**) or larger trees, with relatively open understories. This habitat is typically made up of **even age** forests which include trees the same ages with 10 to 20 years often less than 120 years old. This Unit contains 4440 acres of even aged forest (72%) and 1142 acres of **uneven age** forest (19%) which contain three different distinct age classes of trees. The forests on private lands surrounding the Unit emulate those on the Unit and are primarily mid successional forest habitat as well.

There is very little to no late successional forest habitat on this Unit. The forest stands on this Unit lack the late successional habitat components such as large diameter dead standing trees (**snags**), large diameter deadwood on the ground (coarse woody debris) and large old (**biological legacy**) trees which have survived from a previous ecosystem. It is anticipated that over the next 50 to 100 years that portions of the mid successional forest on the Unit will continue to mature and develop the attributes associated with late successional forest habitats.

Cover Types

Forest cover types may also be characterized by forest stands with which contain primarily deciduous or conifer trees. The Natural Forest Hardwood vegetative type are forest stands which contain 90% or more deciduous trees. The Natural Forest Conifer vegetative type are forest stands which are natural reproducing and contain a minimum of 10% conifer tree species. The Plantation Softwood vegetative type is a stand that has been planted with conifer species.

Natural forest conifers and planted conifer habitat is an important component of the Unit and the surrounding landscape. Table I.D shows that 38% of the Unit consists of Plantation **Softwoods (conifer)**

INFORMATION ON THE EASTERN LAKE ONTARIO UNIT

BIODIVERSITY

and 16% of consist of Natural Forest Conifers types. These conifer types combined total 54% of the Unit containing evergreen forest habitat. This habitat is important because they moderate temperature extremes, help improve previously eroded and nutrient-depleted soils and provide valuable cover for birds and mammals throughout the year.

Wetlands vegetative types found on this Unit provide many benefits to water quality and wildlife. This Unit contains about 363 acres (6%) of open wetlands and an additional 9% of forested wetlands. Wetlands filter, clean and store rain and snowmelt, help reduce flooding and provide habitat for many forms of wildlife such as geese, ducks, frogs, and salamanders.

The follow Table I.F shows the vegetative types and stages of the Unit collected from data gathered during the forest inventory of the Unit.

Vegetative Types and Stages

Table I.F - Vegetative Types and Stages within the Unit					
Vegetative Type	Acres by Size Class				% of Total
	0 -5 in	6 - 11 in	12+ in	Other	
Natural Forest Hardwood	79	384	1793		37%
Natural Forest Conifer	2	299	673		16%
Plantation Softwoods		91	2262		38%
Wetland				363	6%
Ponds				34	1%
Open/Brush				4	0%
Other (Roads, Parking lots, etc.)				136	2%
Total (Acres)	81	774	4728	537	100%
	1%	13%	77%	9%	

Representative Sample Areas-

There are three representative Sample Areas (RSA) found on this Unit. Representative Sample Areas (RSA) are stands which represent *common* ecological communities (i.e. **forest types**) of high or exceptional quality in their natural state. RSAs are setup to serve one or more of the following purposes:

1. To establish and/or maintain an ecological reference condition; or
2. To create or maintain an under-represented ecological condition (i.e. includes samples of successional phases, forest types, ecosystems, and/or ecological communities); or

3. To serve as a set of protected areas or refugia for species, communities and community types not captured in other protection standards such as an **endangered species** or a High Conservation Value Forest.

RSAs can simply be viewed as an effort to keep high quality examples of common ecosystems or assemblages from becoming rare in the landscape. An RSA designation does not prevent future management and in certain cases might require silvicultural treatment to achieve **site** conditions that will perpetuate the representative community. In addition, treatment of an RSA to mitigate unfavorable conditions that threaten the continuation of the target community will be allowed (ex. fire, natural pests or pathogens). Although allowed, silvicultural treatment or infrastructure development should not impact the RSA in a way that will degrade or eliminate the viability of the specific assemblage or community. For more information on RSAs please go to <http://www.dec.ny.gov/lands/42947.html>.

The first of three RSA's is a Spruce-Fir Swamp which is part of the Hasto Road Swamp found on the Altmar State Forest, Stands B-16 & B-19. This swamp is dominated by red maple (*Acer Rubrum*) and red spruce (*Picea rubens*) tree species. It is located in two wide depressions next to a system of relict Great Lakes dunes and is approximately 141 acres in size. The wetlands are encircled by a northern hardwood - hemlock forest, pine-northern hardwoods on relict dunes and conifer plantations on relict dunes. The New York Natural Heritage Program has evaluated this element occurrence as having a quality status as excellent or good estimated viability and given it a Heritage State Rank of S3. A map showing the location of this RSA is found in the Appendices & Figures, Fig 4., titled "Altmar State Forest Oswego #6 Inventory Mosaic & Type Map".

The remaining two RSA's are located in what has been identified as the Pennock Bog found on the Chateaugay State Forest, stands C-14, C-20 & C-21. These two RSA's are a Spruce-fir Swamp and Shallow emergent marsh both located adjacent to one another.

The larger of the two is a Spruce -Fir Swamp delineated as stands C20 and C21 on the State Forest Inventory Mosaic Map found in the Appendice and Figures, Fig4. , titled Chateaugay State Forest Oswego #4- Compartment C Inventory Mosaic & Type Map. This swamp is dominated by red maple (*Acer Rubrum*) and red spruce (*Picea rubens*) tree species. This community type is 52 acres, which is average in size and located within the flood plain of Pennock Brook. This RSA is found in one patch and is surrounded by a larger wetland. As this swamp flows downstream the grades into maple-hardwood swamp. Upstream of the swamp is found a shallow emergent marsh which is the other RSA identified at the site.

The Shallow emergent marsh RSA is delineated as stand C14 and is 32 acres in size and a small example of this type. This is an open wetland dominated by herbaceous plants within the flood plain of Pennock brook. This marsh lies adjacent to a spruce-fir swamp with both being surrounded within a mostly forested landscape. The marsh is currently stable but will decrease in size if trees and shrubs invade it.

INFORMATION ON THE EASTERN LAKE ONTARIO UNIT

BIODIVERSITY

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. **Rare Community** - Forest areas that are in or contain rare, threatened or endangered ecosystems.
2. **Special Treatment** - Forest areas containing globally, regionally or nationally significant concentrations of biodiversity values (e.g. endemism, **endangered species**, and **refugia**).
3. **Cultural Heritage** – 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).
4. **Watershed** - Forest areas that provide safe drinking water to local municipalities.
5. **Forest Preserve*** - 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.*

For more information on HCVFs please go to <http://www.dec.ny.gov/lands/42947.html>.

This Unit has two areas designated as High Conservation Value Forests (HCVF). High Conservation Value Forests 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. Areas identified as having exceptional values may be harvested, but management activities must maintain or enhance the high conservation values present.

As state earlier, a HCVF designation does not necessarily prevent future active management and in certain cases might require silvicultural treatment to achieve site conditions that will perpetuate the representative value. In addition, treatment of an HCVF to mitigate unfavorable conditions that threaten the continuation of the target value will be allowed (ex. fire, natural pests or pathogens). Although allowed, silvicultural treatment or infrastructure development should not impact the

HCVF in a way that will degrade or eliminate the viability of the specific assemblage or community value now or in the future.

The first HCVF is identified as Rare Community named the Hasto Road Dunes is the only known example of an ancient (early post-glacial) dune system on the eastern shore of Lake Ontario (*State Land Assessment Project: Biodiversity Inventory of region 7 State Forests; 2005*). This is located on the Altmar State Forest, stands B-2, B-3, B-4, B-11, B-17 & B-18 and is approximately 164 acres in size. This ancient dune system is forested and rises abruptly out of a forested wetland. The area around the dune is upland forest or wetland cover types. This dune system is a relic from an ancient post-glacial lakeshore located approximately 14 miles inland from the current Lake Ontario. The New York Natural Heritage Program has evaluated this element occurrence as concluded that the quality status for viability is estimated to be fair to poor. The New York Natural Heritage Program has given this occurrence a State Rank of S1S2. A map of the site showing the location is found in the Appendices & Figures, Fig 4., Altmar State Forest Oswego #6 Inventory Mosaic & Type Map.

The second HCVF is identified as a Watershed HCVF of the Village of Orwell Municipal Water Supply. This includes a portion of the watershed for the Village of Orwell’s water supply that is located on the Chateaugay State Forest. This is part of the western edge of the forests delineated as state forest inventory stands Oswego Ra #4, B-14 through B-19 and Oswego Ra #5, A-1 through A-5, A-10, A-12, and A-15. A map of showing the location of this HCVF is found in the Appendices & Figures, Fig 4., Chateaugay State Forest Oswego #4- Compartment B Inventory Mosaic & Type Map and Chateaugay State Forest Oswego #5 Inventory Mosaic & Type Map. This area consists of natural hardwoods and softwood plantation that are managed forests for timber production.

A summary of the RSA’s and HCFV’s found within this Unit are listed in Table 6.

Table I.G – Representative Sample Areas and High Conservation Value Forests of the Unit				
Community Name	Vegetative Type	Facility Name / Stand Numbers	NYNHP Rank	Acreage
<i>Representative Sample Areas of Commonly Occurring Natural Communities (RSA)</i>				
Hasto Road Swamp	Spruce-Fir Swamp	Altmar SF, stand #: B16, B19	S3	96
Pennock Bog	Spruce-Fir Swamp	Chateaugay SF, Stands C20, C21	S3	52
Pennock Bog	Shallow Emergent Marsh	Chateaugay SF, Stand C14	S5	32
<i>Rare Community High Conservation Value Forest (HCVF)</i>				
Hasto Road Dunes	Ancient Great Lakes Dunes	Altmar SF	S1S2	136

INFORMATION ON THE EASTERN LAKE ONTARIO UNIT

VISUAL RESOURCES

Village of Orwell Municipal Water Supply Watershed	Watershed Protection Area	Chateaugay SF	187

Resource Protection Areas

Resource protection areas are areas that have been excluded from or restrict most active management to protect sensitive sites from major disturbance. The exclusions include timber harvesting, road construction, oil and gas exploration and development and some recreational activities. These areas most often include steep slopes, wetlands, wet woodlands and riparian zones along stream corridors.

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 such a manner as to provide direct protection and enhancement of habitat and ecosystem functions. Areas can be identified as Protection Areas which restrict management for a complete forest stand or as Special Management Zones which limit activity based upon buffer distances from specific features such as wetland boundaries, streams, vernal pools, and recreation assets like trails. There are approximately 2,394 acres or 37% of this Unit identified as either protection areas or special management zones.

Special Management Zones (SMZs) provide buffers for 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 SMZ's 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. A map showing the SMZs identified on this Unit is found in the Appendices & Figures, Fig 2. Eastern Lake Ontario Unit Special Management Zones map. For more information regarding Special Management Zones please see www.dec.ny.gov/sfsmzbuffers.pdf

The identification of large, non-fragmented forested areas, also called matrix forest blocks, is an important component of biodiversity conservation and forest ecosystem protection. In addition, securing connections between major forested landscapes and their imbedded matrix forest blocks is important for the maintenance of viable populations of species, especially wide-ranging and highly mobile species, and ecological processes such as dispersal and pollination over the long term. There currently are no designated matrix forest blocks or connectivity corridors identified on this Unit.

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. This Unit is very flat and has very limited viewing areas that would lend itself to visual vistas. The areas which would be most sensitive to visual or aesthetic concerns are those adjacent to the public roads and

highways. For information on the protection of visual resources, please see SPSFM page 127 at <http://www.dec.ny.gov/lands/64567.html>.

Historic and Cultural Resources

History of the Unit

Before the arrival of European settlers, human habitation of the Salmon River area was mostly transient. Archaeological evidence indicates presence of Native American temporary encampments for hunting, fishing and other resource gathering activities. Within Oswego County, the only evidence of permanent Native American village sites has been found in the extreme southern region outside the boundaries on the Unit (*Faust, 1954*).

The first European settlers came to Oswego County in the early 1600s. In 1615, French General Samuel de Champlain, with a band of Huron Indian warriors, led a raid by canoe across Lake Ontario and by foot along the Salmon River, continuing to Oneida Lake. Although Champlain's war party was conquered by the Iroquois at Oneida Lake, Champlain himself survived, returning north to report on his impressions. Awareness of the area spurred further exploration. By the middle of the century the French had established a Jesuit mission and fur-trading post at Oswego. The Iroquois brought pelts from far and near. They traded primarily beaver furs and deerskins in exchange for guns, gunpowder and iron implements (*Clark, 1946, and Faust, 1954*).

After the Revolutionary War, the newly established State of New York acquired lands from the remaining Native Americans through a combination of purchases and treaties. The government set out to encourage migration to western and northwestern New York, sending land agents throughout New England to tell of the wonders of this region (*Bentley, 1965*). Large tracts of lands were conveyed to individuals for development. In the early 1790s, Alexander Macomb purchased nearly 4,000,000 acres of upstate New York, including lands of this Unit. Later this immense parcel was broken up and sold to various investors. By the time settlement of the area first began those lands that lie within the Unit were divided into two main tracts: the land to the south of the Salmon River was part of the Scriba Patent and to the north was the Boylston tract land. As settlement progressed, the large tracts of land were further subdivided.

During the Great Depression the State of New York began to acquire Reforestation lands under Article 9, Title 5 of New York State's Environmental Conservation law. In 1933, the Conservation Department bought its first parcel in the area now included in this Unit. Most of the acreage was acquired in the mid to late 1930s, with continued purchases of abandoned farmlands through the 1940s. These parcels ranged from 4 to 724 acres, with a typical parcel about one hundred acres in size. Since then only a few smaller parcels have been acquired.

During the late 1930s through 1950s **reforestation** was considered necessary to put these lands into productivity and prevent erosion of abandoned farmlands. The Civilian Conservation Corps (CCC) carried out much of the planting on acquired lands within the Eastern Lake Ontario Unit. CCC camps were active in the area up until 1942 when the camps were closed. The camps which did most of the reforestation

INFORMATION ON THE EASTERN LAKE ONTARIO UNIT

HISTORIC AND CULTURAL RESOURCES

planting were CCC Camp S-130 in Williamstown, CCC Camp S-116 in Winona and the CCC Camp in Camden. From the late 1930s through 1962, many parcels were planted and some replanted with white pine, red pine, white spruce, Japanese larch, Norway spruce, Scotch pine, white cedar and other conifer species. Often the land was first hand plowed and trees planted in blocks. Refill plantings of **conifers** or in some cases, **hardwoods** occurred as needed. There was a hiatus in planting in the mid- 1940s during World War II. Planting resumed again by the Conservation Department in the late 1940s and early 1950s, with some of the previous area needing replanting. In all, some 2353 acres of the Unit lands were planted to conifer species. The majority of the open lands however, were simply allowed to revert back to second growth hardwoods.

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.

- Review of the archaeological inventory shows no known sites are present on the Unit lands. There are numerous stone foundations and walls present on the Unit remaining from the old homesteads and previous owners.
- There is an existing abandoned crop silo present on the Unit. This silo is still standing and not very visible and is hidden from most users. The silo has an approximate four foot drop into the inside of the silo. This could cause a hazard if someone were to jump into the silo, they may find it difficult to get out.

Historic and Archaeological Site Protection

The historic and archaeological sites located within the unit as well as additional unrecorded sites that may exist on the property are protected by the provisions of the New York State Historic Preservation Act (SHPA - Article 14 PRHPL), Article 9 of Environmental Conservation Law, 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

The archaeological sites located on this land unit as well as additional unrecorded sites that may exist on the property may be made available for appropriate research. 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 is responsible for surveying and oversight of this Unit’s property lines. They also maintain all the legal documents, deeds, maps and GIS property line data for the State Forest properties. Original deeds were also consulted to complete the information below.

Boundary Lines

This Unit contains over 66 miles of property lines which delineate the boundaries of this Unit. The Department places great emphasis on maintaining the boundary lines of State Forest so they are readily identifiable to the public and for administrative purposes. The boundary lines are painted on a seven year cycle by the Departments Division of Operations staff. Table I.H lists the length of boundaries for each property included in this Unit.

Table I.H – Status of Boundary Lines		
Facility Name	Length of Boundary (mi.)	Length Needing Maintenance
Altmar SF	10.8	
Chateaugay SF	40.4	7.0
Sandy Creek SF	4.6	
Trout Brook SF	7.3	
Salmon River Conservation Easement	3.0	3.0

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.I contains information pertaining to the Unit lands, on various property use agreements, deed restrictions or easements, compiled from files and other information in the Region 7 Real Property office, *Wolford (2012)*. Abstracts of title were not examined except to obtain additional information on

INFORMATION ON THE EASTERN LAKE ONTARIO UNIT

REAL PROPERTY

easements or other items referred to in deeds or other records. For more information about specific property use agreements please contact the Department's Bureau of Real Property located in the Syracuse Regional office.

Table I.I. - Exceptions and Deeded Restrictions			
Facility Name	RA #	Description E.g., deeded ROW, easement, access lane, water rights, cemetery, etc.	Proposal ID (Surveyor's Reference)
Chateaugay SF	4	A 1930's Report of Physical Inspection indicated that a telephone line was located along the north side of County Route 2 at the time of purchase	Pro A
Chateaugay SF	4	An electric transmission line owned by National Grid crosses Proposals R and W and easement rights could affect Proposal E. The line is present on easements acquired by Northern New York Utilities, Inc. in 1925. The easement that could affect Pro. E is recorded in 338/583 and the easement for Pro. R is recorded at 338/360.	Pro E, R, W
Chateaugay SF	4	The New York State Police were issued a TRP on 3/8/1971 for a radio relay tower to be built on the north side of New Scriba Road in stand A-13. Our files indicate that construction of the tower was completed by September of that year. The tower is still present, maintained and in use.	
Chateaugay SF	5	An electric transmission line owned by National Grid crosses all three proposals. The easements for the line were acquired by Northern New York Utilities, Inc. in 1925 and 1926 and are recorded in 345/406, 338/583 and 345/96 respectively. No width is stated in the easements.	Pro A, H, K

Table I.I. – Exceptions and Deeded Restrictions			
Facility Name	RA #	Description E.g., deeded ROW, easement, access lane, water rights, cemetery, etc.	Proposal ID (Surveyor's Reference)
Chateaugay SF	5	A survey of Proposal K in 2011 found that an overhead electric line and possibly an underground telephone line were present on the County Route 2 frontage. A private well also straddles the eastern boundary near Route 2.	Pro K
Altmar SF	6	An electric transmission line owned by National Grid crosses all four proposals. The easements for the line were acquired by Northern New York Utilities, Inc. in 1926 and 1927 and are recorded in 345/306, 347/245, 349/549 and 347/245 respectively. No width is stated in the easements.	Pro E, G, J, K
Trout Brook SF	12	33 foot wide private right of way leads northerly from Bremm Road across the portion of Proposal A that is north of the road. The right of way is shown on map 6007 and labeled "reserved by Stevens."	Pro A

Use and Demand Related to Exceptions and Deeded Restrictions

The current electrical transmission line easements that cross the Unit and are owned by National Grid have no stated width or limit in size. This may be a potential issue if in the future the power company would like to expand the width of the existing lines.

Conservation Easement Land

A section of this Unit containing approximately 97 acres is part of the larger Salmon River Corridor Grant of Open Space Conservation Easement lands. The larger easement landholding was obtained in 1993 and has parcels from Pulaski to Redfield along the Salmon River and Salmon River Reservoir. The conservation easement land included in this Unit are co-owned by the DEC and Erie Boulevard Power. The purpose of this easement is to protect and conserve the present state and inherent, natural tangible and intangible values of the property as natural, scenic, aesthetic, recreational and educational resource by restricting development of the property while permitting compatible uses. Specific permitted and

INFORMATION ON THE EASTERN LAKE ONTARIO UNIT

INFRASTRUCTURE

prohibited uses within the easement can be found in the Salmon River Corridor Grant of Open Space Conservation Easement document.

Land Acquisition

Acquisitions of lands in fee and conservation easements have been utilized by the New York State to conserve land for more than a century. 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
- forested lands in underserved areas of the state
- forested lands in areas that are in need of watershed protection

The Department has specific policies and procedure that are followed in acquiring land. For more information on State land acquisition, please see SPSFM page 147 at <http://www.dec.ny.gov/lands/64567.html>.

There has been a recent acquisition from National Grid Power Company that is included within this Unit. This acquisition was part of a larger settlement for violations of air quality standards by the power company at power plants located in western New York. The portion of the acquisition which is included in this Unit totals approximately 430 acres which also includes approximately 147 acres which the DEC had conservation easement rights. The new property was added to the Chateaugay State Forest and has connected Chateaugay State Forest with the Salmon River Falls Unique Area.

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. All infrastructure projects planned or built on State Forests will be developed in accordance with Best Management Practices (BMPs) including the following: Use BMP's for the protection of soil and water resources; Avoid areas where habitats of threatened and endangered species is known to exist; consider aesthetic impact; and apply universal design to incorporate accessibility for people with disabilities (*New York State Strategic Plan for State Forest Management*) For more information on infrastructure policies, please see SPSFM page 157 at <http://www.dec.ny.gov/lands/64567.html>.

Roads, Haul Roads, Trails and Parking

DEC’s GIS data contains an inventory of **public forest access roads (PFAR)**, **haul roads** and multiple-use-trails and parking areas on the unit, including a representation of the allowable uses along each road or trail segment. This Unit has no PFAR’s constructed and only a few short haul roads which were developed for the purpose of forest product removal. The Unit has a total of 12.2 miles of trails which

ADDITIONAL INFORMATION

State Lands Interactive Mapper (SLIM) – An interactive online mapper can be used to create custom maps of recreational trails on this Unit to help people plan outdoor activities. Located at DEC’s Mapping Gateway: <http://www.dec.ny.gov/pubs/212.html>

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)

include hiking, foot and snowmobile trails. There are also two developed parking areas which are located at the trail heads of the Chateaugay Trail system. These parking areas can hold five vehicles each and are used primarily by cross country skiers. Table I.J contains a summary of roads, trails and related infrastructure on the unit.

Table I.J - Existing Access and Parking		
<i>(see Figure 3 for maps)</i>		
Category	Total Amount	Needing Improvement
Public Forest Access Roads	0 mi.	0 mi.
Haul Roads	1 mi.	0 mi.
Trails	12.2 mi.	2 mi.
Stream Crossings		
Bridges	4	2
Culverts	4	0
Related Infrastructure		
Parking Areas / Trailheads	2	0
Gates / Barriers	10	1

Use and Demand on Roads, Haul Roads and Parking Areas

The haul roads found on the Unit were primarily developed as access for forest product removal. Some of these roads are open to public use while others have been barricaded or gated to restrict vehicle

INFORMATION ON THE EASTERN LAKE ONTARIO UNIT

FORMAL AND INFORMAL PARTNERSHIPS AND AGREEMENTS

access. There is minimal demand for more developed parking areas. There are enough informal pull off's and open landings to accommodate the current public use.

Signs / Kiosks

There are a total of 6 State Forest facility identification signs on the unit. These signs are being maintained or replaced as needed. There are currently no information kiosks present on the Unit.

Designated Campsites and Lean-tos

There was a lean-to located on the Chateaugay State Forest along the hiking/skiing trails. This lean-to was used frequently especially in the winter by campers and Boy Scout Troops. Unfortunately the lean-to was burned down in 2005 by vandals and has not been rebuilt. There are no designated or informal campsite areas on the Unit.

Communications Facilities

There is a radio relay tower located on the Chateaugay State Forest, stand # A13, operated by The New York State Police. This tower was installed in 1971 to provide radio coverage for the area and has remained active up to the writing of this plan. This tower is maintained by the New York State Police.

Utility Transmission and Collection Facilities

There are currently two separate electrical transmission lines owned by National Grid Power Company which cross the Unit. These lines were identified in Table I.H and describe their locations on the specific state forest. Each of these transmission lines is authorized through an easement to cross the state land. These lines are high voltage transmission lines which service the Upstate New York area.

There are smaller (lower voltage) lines which serve as electrical distribution lines found along and adjacent to the public roads within the Unit. These lines provide electrical service to the area's residents.

Military Field Exercises

There are two former helicopter landing zones (LZ's) located on the Chateaugay State Forest which were being utilized by the Army Aviation Brigade from Fort Drum, the Army Reserve from Syracuse and the Army Air National Guard from Rochester for training purposes. These areas have not been used since 2000 and currently are not being maintained.

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 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 DEC's Volunteer Stewardship Program. For more information on these and other partnerships, please see SPSFM page 181 at <http://www.dec.ny.gov/lands/64567.html>.

Within this Unit there are is one active Volunteer Stewardship Agreement with the Pulaski Boylston Snowmobile Club. This volunteer agreement is for the purpose of maintaining snowmobile trails by the Club which includes trail grooming, tree pruning or removal and also erosion control if necessary.

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 in the State Lands Interactive Mapper.

Hunting

All of the property within the Unit is open to hunting for both small and big game, game birds and furbearers. The Unit includes various different habitats which provide numerous hunting opportunities. Big game hunters hunt for white-tailed and black bear and small game hunters hunt for waterfowl, grouse, rabbits, squirrels, turkey and fox, coyote or other furbearers. While all of these different game species may be present on these lands, the populations may vary depending upon preferred available habitat. One of the great benefits to sportsmen on these lands is that it is open to the public. This provides access and opportunities for the hunter to enjoy their sport with no cost of land ownership or lease expense.

Fishing

The primary fishery resources on the Unit are trout streams that flow from the foothill of the Tug Hill. The major streams of the Unit are classified as trout waters and also serve as spawning habitat for trout and salmon from Lake Ontario and the Salmon River. There are also numerous smaller streams in the Unit that are Class C(T) and support wild brook trout, but may be too small to attract significant fishing activity. However, these small streams likely serve as brook trout spawning and nursery waters. See Figure 2. for a map showing the streams on the Unit and their classification.

The fishing pressure and demand on the Units streams is seasonal. The waters which provide spawning opportunities for the lake run fish will have heavy fishing pressure during the spawning periods but then receive practically no pressure during the remainder of the year. Similarly, the wild trout waters will receive very little pressure during the steelhead and salmon spawning seasons due to the abundance of fish in other local waters but then receive more use during the remainder of the fishing seasons.

Trapping

Trapping is allowed on all the lands of the Unit. Trapping is regulated by the state's trapping laws. The use of Public land for trapping is high since landowner permissions are not required. The trapping demand is based upon the type of habitat found on the Unit and the popularity of the furbearing species that use those habitats. Species abundance will have a direct correlation to demand in these areas.

INFORMATION ON THE EASTERN LAKE ONTARIO UNIT

RECREATION

Trapping continues to be important and useful in maintaining and managing certain nuisance species. Beavers populations for example, can be managed to reduce the negative effects from beaver dams, such as flooding of forests or the increase in water temperature in trout waters. This sport also helps in reducing the spread of certain disease such as rabies by reducing the raccoon populations.

During the initial public input process of this plan there were numerous requests by the trapping community to limit the development of new trails on the Unit. Their stated concern is that new trail development may affect further restrictions to trapping due to present trapping regulations that restrict trapping within 100 feet of a designated public hiking trail.

Camping

There are no designated, primitive or dispersed camping facilities on the Unit. Camping is allowed on all State Forest Lands following the Departments rules and regulations for State Forest Lands.

Camping on this Unit occurs primarily during the hunting and the salmon fishing seasons. Most primitive camping that occurs on the Unit is found at various access points created from timber harvest operations. Over the last 20 years the demand has remained minimal with very few if any conflicts with other uses.

Foot Trail Use

The foot trail opportunities found on the unit vary. There is a developed trail system on the Chateaugay State Forest which is also used by cross country skiers in the winter. There are also numerous less developed trails utilizing existing roads or **access trails** on each state forest. There are no specific restrictions on these trails that limit or restrict other recreation activities.

The use of the Chateaugay Trail system receives the most use of all the existing trails. Some local people do utilize these trails for exercise and day hikes as well as access for hunting in the spring and fall.

Cross Country Skiing

The only developed cross country ski trail system is located on Chateaugay State Forest. The trail system is a primitive single track trail that totals approximately 6.6 miles in length on the State forest and an additional 1.7 miles that utilizes Beecherville Road, a seasonally maintained town road. The trails are numbered and there are two trail heads which provide access to the system. The trail heads include small parking areas which have been maintained during the winter by the Town of Orwell and also function as snowplow turn-a-round's. This system is used frequently for skiing due to the abundance of snow. The majority of the trail system can be described as beginner level due to the flatness of the topography. This trail system is also used less often for hiking during the non-winter seasons.

Mountain Biking

There are no trails designated specifically for mountain biking use on the Unit. The existing trails have no restrictions to mountain biking use since there is very little mountain biking activity which has occurred. The demand for this use is very low on this Unit and there have been no know conflicts with other users. If mountain biking use were to increase and possible conflicts were to occur, these conflicts would need to be addressed at that time.

Snowmobiling

Snowmobiling on and adjacent to this Unit is a very popular activity. The developed snowmobile trails which cross this Unit are part of a much larger trail system that runs from Pulaski to the Tug Hill region and beyond. There is a total of 3.2 miles of trails located on the Unit but these trails are instrumental in maintaining the connectivity of the larger trail system. The Altmar State Forest has the C5A Corridor trail crossing it which connects the C5 corridor trail from Altmar to Pulaski and then heads north to Sandy Creek and Boylston. The trails located on the Chateaugay State forest are part of the S51 Secondary trails system. The trails on the Chateaugay State Forest connect to Beecherville Road which is a seasonally maintained Town road and also part of the trail system. These trails are maintained by the Pulaski Boylston Snowmobile Club.

Demand for more snowmobile trails is limited but there have been requests to develop a new snowmobile trail on this Unit. The request was made to utilize a large portion of existing skid trails on the Chateaugay State Forest in order to connect Jackson Road and Beecherville Road, thereby minimizing the use of public roads.

The following Table I.K lists the total trail length for a specific trail use within the Unit. Map showing the locations of the trails and other recreational facilities on the different State Forests on the Unit are found in the Appendices and Figures Fig 3.

Trail-based Recreation

Table 11. - Multiple Use Trails	
Use	Length (mi.)
Foot Trail Use	8.9
Cross Country Skiing	6.6
Equestrian	0
Mountain Biking	0
Snowmobile	3.2

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.

The minimally developed recreational opportunities found on this Unit are typical for those found on the majority of other state forests around the state. User demand however may increase due to the close proximity to the Salmon River and the increasing influx of people purchasing property as vacation camps, who are looking to take advantage of the fishing, hunting, snowmobiling, trapping and other recreational opportunities in the area. As more people visit the area and the Unit, those individuals may

INFORMATION ON THE EASTERN LAKE ONTARIO UNIT

UNIVERSAL ACCESS

have an increased expectation for more developed recreational opportunities similar to those found at State Parks.

There currently are no specific recreational user conflicts on the Unit. It is possible that as new recreational opportunities are developed these may encroach or possibly restrict another opportunities. For example, if requests are made to develop new hiking trails, this could restrict and limit trapping within the trail corridors based upon exist conservations laws. There is also the potential that any demand for or development of new recreational facilities may disturb wildlife habitat or adjacent land owners depending upon the activity.

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>.

There are no improved facilities on this Unit which were developed or designed with 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.

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

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

improvements to existing facilities or assets proposed in this UMP are identified in the Proposed Management Actions section.

For copies of any of the above mentioned laws or guidelines relating to accessibility, contact Carole Fraser, DEC Universal Access Program Coordinator at 518-402-9428 or go to <http://www.dec.ny.gov/outdoor/42324.html>

Mineral Resources

Oil, Gas and Solution 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 will evaluate any concerns as they pertain to new natural gas leases on State Forest lands. Consistent with past practice, prior to any new leases, DEC will hold public meetings to discuss all possible leasing options and environmental impacts. A comprehensive tract assessment will 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>.

There are no existing leases, active or inactive wells found on the Unit.

There are no pipelines which transport oil or gas found on the Unit. Pipelines may be constructed on State Forest lands only if a portion of the mineral resources to be transported was extracted from State lands. Pipeline and road development must be in compliance with State Forest tract assessments, the Strategic Plan for State Forest Management, and the Generic Environmental Impact Statement and Supplemental Generic Environmental Impact Statement on the Oil, Gas and Solution Mining Regulatory Program.

Mining

There are no gravel/shale pits or other surface mines located on the Unit.

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

INFORMATION ON THE EASTERN LAKE ONTARIO UNIT

FOREST PRODUCTS

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 New York State Office of Real Property Tax Services or the Office of Oswego County Tax real Property Tax Service. Table I.L list what the taxes are projected to be for State lands in this unit for the 2014 tax year:

Tax Type	Townships					Total
	Albion	Boylston	Orwell	Richland	Sandy Creek	
Township Tax (incl. highway, general, & fire taxes)	\$ 5,761	\$ 7,234	\$ 17,130	\$ 496	\$ 1,833	\$ 32,454
School Tax	\$ 21,069	\$ 11,538	\$ 43,773	\$ 806	\$ 4,451	\$ 81,637
Total	\$26,830	\$ 18,772	\$ 60,903	\$ 1,302	\$ 6,284	\$ 114,091

This projection includes all properties included in the Unit. The tax data was obtained from the New York State Office of Real Property Tax Services and the Office of Oswego County Real Property Tax Service website <http://www.co.oswego.ny.us/rpts.shtml> .

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 what areas are expected to have forest products available for purchase from timber management activities on the unit is found in the Land Management Action Schedules later in this plan.

The New York State Industrial Timber Harvest Production and Consumption Report – 2011 shows that the demand for forest products statewide has seen minor fluctuations over a five year period. A look at historical data of Log Harvest over a ten year period shows a decrease in log harvest by over 300 million board feet statewide. A similar look at the **pulpwood** and **chipwood** over the same ten year period show a minor increase in harvest of 1million tons. Although no specific data can be sited, these trends are mirrored for the local area. With the strains on the economy and consumer confidence, purchasing of

raw material such as log harvests has declined. The decrease in demand has also reduced the value of the products. This has focused area producers to purchase lower value forest products such as pulpwood and chipwood since their value remain relatively low and stable. It is anticipated that these trends will continue to change as both the State wide and local markets and the economy changes.

Non-Timber Forest Products

Non- Timber forest products have been a very small part of the State Forest sales program. The Strategic Plan for State Forest Management discusses this aspect of the Forest Management Program listing the following products being sold from State Forests at one time or another:

- Maple Sap
- Hay
- Shrubs for landscaping

There has been no specific demand for any of these non- timber forest product on this Unit. Occasionally the local office may receive a request to tap a few road side trees, but due to the administrative costs compared to the financial gain these requests have been declined. A recent attempt was made to lease maple tapping rights for 7 acres of State Forest on an adjacent Unit and solicited no buyers. This Unit is also relatively flat with poor winter access limiting any potential tapping opportunities due to the large amounts of snow which normally accumulate in this area.

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. The forest health of this Unit is considered to be in good condition with its variety of native species and natural communities. For more information on forest health, please see SPSFM page 277 at <http://www.dec.ny.gov/lands/64567.html>.

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 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.M is a listing of all the known invasive species and pathogens that are found on the Unit or may pose a potential threat to the Unt.

INFORMATION ON THE EASTERN LAKE ONTARIO UNIT

FOREST HEALTH

Table I.M – Invasive Species, Pests and Pathogens	
Plants	Status
Japanese Knotweed (<i>Fallopia japonica</i>) http://www.invasivespeciesinfo.gov/plants/knotweed.shtml	There is a small population located on the Chateaugay State Forest. It is also very likely that there are other small populations yet to be identified on the Unit.
Glossy Buckthorn (<i>Rhamnus cathartica</i>) http://www.invasivespeciesinfo.gov/plants/buckthorn.shtml	The Sandy Creek State Forest is heavily populated with this species. It would be impractical or financially limiting to eradicate this invasive plant.
Pale Swallowwort (<i>Cynanchum rossicum</i>) http://www.nps.gov/plants/alien/pubs/midatlantic/cyro.htm	There are no known populations on the Unit but it is predicted to be present in small populations that have not been identified.
Giant Hogweed (<i>Heracleum mantegazzianum</i>) http://www.dec.ny.gov/animals/39809.html	This plant has not been detected on the Unit but has been found within the County.
Insects	Status
Forest Tent Caterpillars (<i>Malacosoma disstria</i>) http://www.dec.ny.gov/animals/7111.html	The latest infestation on this Unit was in 2006. There has not been an outbreak of this insect since that time. These insect populations are cyclical and increased populations can remain for 3 to 4 years before they crash. Weather, predation, disease and starvation are all factors which affect the population level. The last infestation affected approximately 1000 acres of upland hardwoods on this Unit.
Sirex Wood Wasp (<i>Sirex Noctilio</i>) http://www.dec.ny.gov/animals/7248.html	Sirex Wood Wasp attacks primarily pines. This introduced insect was found in Oswego County in 2004 (Hoebeke et al. 2005) but has not been found in any conifer plantations on the Unit. This species is rarely a pest in its native areas of Europe, Asia and northern Africa. However in introduced areas it is considered a major pest of pine plantations. All pine species are believed to be at risk, particularly stressed Scots (or Scotch) pine and red pine, as well as eastern white pine. In a pest risk assessment for North America it has been rated a “very high risk” pest (Haugen 1999).
Gypsy Moth (<i>Lymantria dispar</i>) http://www.dec.ny.gov/animals/83118.html	This insect is a non-native from France and is found in very small populations on the Unit with no known outbreaks over the last 25 years. This is most likely due to the lack of the Oak tree species on the Unit which is the preferred host species for the feeding caterpillars.

Table I.M – Invasive Species, Pests and Pathogens

Emerald Ash Borer (<i>Agrilus planipennis</i>) http://www.dec.ny.gov/animals/7253.html	This insect is a potential threat to the Unit. There are confirmed populations 50 miles to the south and 200 miles to the north. This species uses ash trees as a host and in turn kills them. This Unit has a major component of ash in the forest which could be devastating if the Emerald ash borer were to spread throughout the Unit.
Hemlock Woolly Adelgid (<i>Adelges tsugae</i>) http://www.dec.ny.gov/animals/7250.html	This insect was first discovered in New York State in 1985 and is a potential threat to the Hemlock conifer component on this Unit. There have been no confirmed detection on this Unit or local area. These insects are slowly spreading through the southern part of the State. It is hoped that the colder winter temperatures this area receives will hinder the insects spread to the Unit.
Diseases	Status
Beech Bark Disease http://www.na.fs.fed.us/spfo/pubs/fidls/beechnbark/fidls-beech.htm	This disease is found throughout the Unit. Beech trees are still a component of the hardwood forest but many do not reach full maturity without contracting the disease. The effects of this disease have caused a decline or death of the larger, mature beech trees.
Dutch Elm Disease http://forestry.about.com/od/forestdiseases/p/diseased.htm	American Elm trees are a very minor component in the forest cover on this Unit primarily due to this disease. The disease infects the tree through a fungus which clogs the vascular tissues, preventing water movement to the crown which will cause the tree to wilt and die. The effects of this disease have caused a decline or death of the larger, mature elm trees.
Butternut canker http://forestry.about.com/od/foresthealth/p/Butternut-Canker-Disease.htm	Butternut (<i>Juglans cinerea</i>) are being killed throughout its range by the fungus <i>Sirococus clavigneti-juglandacearum</i> . This fungus initially infects trees through the buds, leaf scars and other openings in the bark. As the disease progresses the tree will develop perennial stem cankers that eventually girdle and kill the tree.
Animals	Status
Eurasian boar (<i>Sus scrofa linnaeus</i>) http://www.dec.ny.gov/animals/70843.html	This animal is not known to be present on the Unit but is present in New York State and a potential threat to the native plants and habitat on the Unit. It is hoped that the average winter temperatures and snow depth will limit the spread of this animal to the animal. If found on the unit, removal will be per Bureau of Wildlife guidelines.

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.

SUMMARY OF ECO-REGION ASSESSMENTS

ECO-REGION SUMMARY

II. 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 Eastern Lake Ontario Unit falls primarily within the Northern Appalachian Acadian Eco-Region. A small section of the western edge of the Altmar State Forest, approximately 340 acres, is found within the Great Lakes Eco-Region.

Eco-Region Summary

The following are summaries of The Nature Conservancy's Eco-Regions the Unit is found in and they describe the present character of these regions.

Northern Appalachian – Acadian Ecoregion

The Northern Appalachian – Acadian (NAP) Ecoregion extends over large ecological gradients from the boreal forest to the north and **deciduous** forest to the south (The Nature Conservancy n.d.). The Gaspé Peninsula and higher elevations support taiga elements. At lower elevations and latitudes, there is a gradual shift toward higher proportions of **northern hardwood** mixed-wood species which marks the transition into the Acadian forest. It also supports local endemic species, as well as rare, disjunct, and peripheral populations of arctic, alpine, Alleghenian and coastal plain species that are more common elsewhere. In New York, the primary portion of the NAP Ecoregion consists of the Adirondack Forest Preserve and Tug Hill Plateau.

The forest is a heterogeneous landscape containing varying proportions of upland hardwood and spruce-fir types. It is characterized by long-lived, shade-tolerant conifer and **deciduous** species, such as red spruce, balsam fir, yellow birch, sugar maple, red oak, red maple, and American beech, while red and eastern white pine and eastern hemlock occur to a lesser but significant degree.

There has been a historical shift away from the uneven-aged and multi-generational “old growth” forest toward even-aged and early successional forest types due to human activities. This mirrors the historical trends toward mechanization and industrialization within the forest resource sector over the past century and shift from harvesting large dimension lumber to smaller dimension pulpwood.

For vertebrate diversity, the NAP ecoregion is among the 20 richest ecoregions in the continental United States and Canada, and is the second-richest ecoregion within the temperate broadleaf and mixed forest types. The forests also contain 14 species of confers, more than any other ecoregion within this major habitat type, with the exception of the

Southern Appalachian-Blue Ridge Forests and the Southeastern Mixed Forest.

Characteristic mammals include moose, black bear, red fox, snowshoe hare, porcupine, fisher, beaver, bobcat, lynx, marten, muskrat, and raccoon, although some of these species are less common in the southern parts of the ecoregion. White-tailed deer have expanded northward in the ecoregion, displacing (or replacing) the woodland caribou from the northern realms where the latter were extirpated in the late 1800s by hunting. Coyotes have recently replaced wolves, which were eradicated from this ecoregion in historical times, along with the eastern cougar.

A diversity of aquatic, wetland, riparian, and coastal ecosystems are interspersed between forest and woodland habitats, including floodplains, marshes, estuaries, bogs, fens and peatlands. The ecoregion has many fast-flowing, cold water rocky rivers with highly fluctuating water levels that support rare species and assemblages.

Great Lakes Ecoregion

The Great Lakes (GL) Ecoregion encompasses 234,000 square miles in parts of eight Midwestern states and one Canadian province (The Nature 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, blowdowns, and insect and disease outbreaks in the forested parts of the ecoregion, and fire in the **grasslands** and savannas.

Eco-Region Assessment

This Unit crosses the border between the Great Lakes and Northern Appalachian Eco-Regions. To determine the current landscape conditions an area was selected for analysis which includes portions of both Eco-Regions. The analysis of the surrounding landscape was done using National Land Cover Multi-Resolution Land Characteristics, USGS. 2006 data set from the DEC Master Habitat Database (MHDB). This data was analyzed using Arc **Geographic Information System** (GIS) software. Table II.A shows the Land Use and Land Cover acres and percentage for the landscape surrounding the Eastern Lake Ontario Unit.

SUMMARY OF ECO-REGION ASSESSMENTS

ECO-REGION ASSESSMENT

Table II.A. Land Use and Land Cover for the Landscape Surrounding the Unit.		
Land Use and Land Cover	Approximate Acreage	Percent of Landscape
<i>Forests</i>		
Deciduous Forest	41,482	35.1
Evergreen Forest	8,370	7.1
Woody Wetland	14,295	12.1
Mixed Forest	3,044	2.6
<i>Agriculture</i>		
Pasture / Hay	22,762	19.3
Cultivated Crops	5,236	4.4
<i>Early Successional, Grasslands and Wetlands</i>		
Shrub and Scrub	11,359	9.6
Grassland / Herbaceous	1,570	1.3
Emergent Herbaceous Wetlands	1,404	1.2
<i>Developed</i>		
Developed Open Space	3,843	3.2
Developed Low Intensity	1,007	0.9
Developed Medium Intensity	184	0.2
Developed High Intensity	42	<0.1
<i>Open</i>		
Open Water	3,303	2.8
Barren Land (Rock/Sand/Clay)	158	0.1
Total	118,059	100

Source: Landscape data for the Unit was derived from National Land Cover Multi-Resolution Land Characteristics (2006) data set. For additional information about this data set see: <http://www.mrlc.gov/>. Northern Appalachian – Acadian Ecoregion data is from NYS Strategic Plan for State Forest Management (SPSFM).

Additional information about land cover types in the Salmon River watershed can be found in Salmon River Watershed Natural Resource Assessment, *G. McGee, 2008*. For additional information on the Northern Appalachian – Acadian Ecoregion, see Chapter 2, p. 67 in NYS Strategic Plan for State Forest Management (SPSFM).

Local Landscape Conditions

This Unit is located in the center of the Salmon River Watershed on the western edge of the Tug Hill region in the Northeast portion of Oswego County. The area is mostly forested with the exception of scattered pasture or occasional crop land in the western portion of the Unit. The Unit could be characterized as being at the foothills of the Tug Hill in the transition zone between the more agricultural lands in the Lake Ontario Plains and the heavily forested area of the Tug Hill Plateau.

Observations from the local landscape analysis are as follows:

- A. The Unit and local landscape is in on the western edge of the Tug Hill region and the eastern edge of the Great Lakes Plain region. This area is a transition area between the Great Lakes and the larger Northern Appalachian – Acadian Ecoregions. The landscape is moderately forested consisting of 56% forest cover. The statewide average is 62% (Alerich & Drake, 1995).
- B. 23.7% of the landscape is in agricultural or open land cover. The statewide average is 18%, (Alerich & Drake, 1995). The open lands are almost entirely located on private land and are more abundant west of the Unit lands.
- C. Approximately 12.1% of the landscape is in shrub/scrub or **seedling/ sapling** vegetation. This is greater than that in the surrounding ecoregion. This **cover type** is consistent throughout the landscape but lacking on the Unit itself.
- D. Less than 5% of the landscape is in developed residential/ commercial land cover.
- E. There are no known **old growth** forest areas in the landscape.
- F. Approximately 6.6% of the landscape area consists of lands managed by DEC.
- G. Although there is a healthy percentage of agricultural and shrub lands in the surrounding landscape the areas in the immediate vicinity of the Unit lands is primarily forested and are largely **unfragmented**. The degree of forest **fragmentation** dramatically increases to the west, closer to the lake plain.
- H. Hundreds of open and **forested wetlands** exist throughout the landscape.
- I. While **parcelization** (and the often associated residential development) or new development is evident across the landscape, near the Unit it is most apparent in the areas of Falls Road and Jackson Road in the Town of Orwell.

All of these observations indicate that the landscape near the Unit, except for the limited developed areas noted in item I. above, has a high degree of naturalness and likely has a very good representation of **native species** diversity. The landscape is mainly mid-aged to **mature forest** cover with a modest amount of agricultural and **early successional**, seedling/ sapling cover types.

Habitat Related Gaps

As the Eco-Region Assessment shows this Unit contains a variety different forest types or habitats. Some of these are in abundance while others may be lacking or in decline. The assessment for the area surrounding the Unit identifies a decline in the evergreen and mixed forests habitat cover types. The Department's forest inventory also show a lack in late successional stages on the Unit. This lack of late successional stage forests is also anticipated on private land due to landowners actively timber harvesting once a forest stands reaches financial maturity.

The lack of evergreen forests in the landscape is expected since there are very few conifer plantations found on private lands. This Unit contains an abundance of conifer plantations as well as mixed conifer-

MANAGEMENT AREA GOALS, OBJECTIVES AND ACTIONS

GOAL 1: PROVIDE HEALTHY AND BIOLOGICALLY DIVERSE FOREST ECOSYSTEMS.

hardwood forests. This is the result of the tree planting campaign by the Civilian Conservation Corps during the Great Depression to restore formerly abused lands. These plantations however have a limited life cycle before they reach their biological maturity. Conifer species which are shorter lived like Scotch pine, or that were planted on poor sites are being harvested and converted to more natural mixed hardwood and mixed softwood/hardwood habitats. As a result, the conifer plantations on the Unit will decrease over time. Other plantation species which are longer lived like white pine and planted on better sites will remain longer in softwood cover and possibly even naturally regenerate.

The late stage successional forest habitat is lacking in the local landscape. Due to economic reasons it is unlikely that this lack or gap will be filled on private lands. The majority of private landowners will conduct some kind of timber management once a stand reaches financial maturity which typically removes the necessary trees structure components that make up the late successional stage forests. With a balanced approach to forest management on public lands, portions of this Unit can be managed in a way that maintains and produces structure found in late successional stage forests. There currently is approximately 36% of the Unit identified as protection areas or special management zones that limit harvesting activities. There are also forest stands which are uneven aged but still considered mid succession forest habitat. As these stands increase in age and continue to be managed as uneven aged forests they will never be regenerated all at one time as with even age management. This will allow the option to manage the stands with the late successional characteristics. As these areas increase in age they will also begin to take on the characteristics of late successional stage forest habitat which contain large diameter dead standing trees (**snags**), large diameter deadwood on the ground (coarse woody debris) and large old (**biological legacy**) trees which have survived from a previous ecosystem.. This is a natural process which will occur in time unless other factors, such as weather or disease alter their growth or set back the natural succession process. It is expected that the late successional stage forests will incrementally increase on public lands as tree ages and forest types mature and die creating the structure for this stage.

III. MANAGEMENT AREA GOALS, OBJECTIVES AND ACTIONS

GOAL 1: Provide Healthy and Biologically Diverse Forest Ecosystems.

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

An ecosystem based management strategy will holistically integrate principles of landscape ecology and multiple use management to promote biological diversity, while enhancing the overall health and resiliency of State Forests. In recognition of the fact that forests are dynamic systems, constantly being

MANAGEMENT AREA GOALS, OBJECTIVES AND ACTIONS

GOAL 1: PROVIDE HEALTHY AND BIOLOGICALLY DIVERSE FOREST ECOSYSTEMS.

shaped by the forces of nature, DEC will also apply **adaptive management** techniques and advanced technology to react to insect and disease epidemics, wind and ice storms.

Ecosystem management is a process that considers the total environment, including all living and non-living components. It requires skillful use of ecological, economic, social, political and managerial leadership principles to sustain or restore ecosystem integrity, as well as desired forest uses, products, values and services over the long term. Ecosystem management recognizes that people and their social and economic needs are an integral part of ecological systems. (USBLM 1994)

As the ecosystem management concept is applied through the objectives and actions recommended in this plan, DEC will strive to strike a balance between human needs and ecosystem health. To achieve this, the plan recommends actions that promote biodiversity at the landscape level, as well as healthy, productive, sustainable forest ecosystems.

Objective 1.1 Soil and water quality will be protected by preventing erosion, compaction and nutrient depletion.

Protection of soil and water quality is one of the highest management priorities and is the foundation of sustainable forest management. Since this Unit is located in the watershed of the Salmon River, protecting water quality is important for aquatic habitat and because headwater streams establish the water quality for larger downstream rivers. The Salmon River is one of the most productive tributaries into Lake Ontario and is the basis of a multi-million dollar trout and salmon fishery that has significant importance to the regional economy. The greatest threat to water quality on the Unit is the potential disturbances to any streambed or adjacent area along with any soil erosion flowing into a water body. The following are actions that will strive to protect the soils and waters of the Unit.

Action 1.1.1 Follow the DEC Special Management Zone (SMZ) Guidelines on all areas identified as a special management zone. These SMZ areas consist of **buffer strip** areas surrounding water bodies, streams, wetlands, vernal pools and spring seeps. The buffered areas will have different management action restrictions along with varying buffer widths depending upon the sensitivity of the riparian area designated. A detailed description of the Special Management Zone Guidelines can be found in Strategic Plan for State Forest Management pages 108-109. See Appendix Figure 2. "Special Management Zones and Representative Sample Areas" map.

Action 1.1.2 All timber harvesting and other management activities on the Unit will comply with the NYS publication **Best Management Practices for Water Quality** as outlined in the Strategic Plan for State Forest Management pages 109-111.

Action 1.1.3 Monitor BMP implementation by evaluating control structures after construction to assess effectiveness. A State wide monitoring system is intended to be implemented by 2016 as per the SPSFM pg. 112.

MANAGEMENT AREA GOALS, OBJECTIVES AND ACTIONS

GOAL 1: PROVIDE HEALTHY AND BIOLOGICALLY DIVERSE FOREST ECOSYSTEMS.

Action 1.1.4 Restrict commercial use of water located wholly within the Unit. Wells will not be allowed to be drilled for personal or commercial water extraction.

Action 1.1.5 Protection areas will include 2,229 acres of wetlands and riparian forests. This protection will be formalized by identifying each forest stand with significant wetland or riparian characteristics and limit any activities to occur within those stands that would increase the potential for soil erosion or increased water turbidity. Protection areas may also include areas of steep slopes and inaccessible sites by limiting management actions within the identified stands. The list of forest stands identified as Protection Areas is found in Table III.D – Resource Protection / Natural Areas and can be seen in the Appendices and Figures; Figure 5. “Proposed Management Direction” maps.

Objective 1.2 Provide forest vegetation types or features which are declining or rare in the landscape to enhance wildlife habitat diversity.

State lands in this Unit comprise 5% of the landscape and are unique in that they have stable ownership and can be managed over long time frames for habitat conditions that can complement the surrounding privately owned landscape.

This plan identifies areas suitable to compensate for **gaps** in the Landscape. The landscape analysis used in this planning process indicates that 9.6% of the landscape surrounding the Unit is in early successional shrub/scrub or seedling/ sapling vegetation. Also, due to past demands to clear land and a need for wood products in the late 1800s and early 1900s, there is little to no known late successional forests type in the landscape. Very little of the Unit (33 acres) consists of upland grassland. The Department considers this region of the State to have a low potential for grassland habitat management. As a result, it is not designated as a Grassland Reserve Zone. While the Unit has low potential for grassland habitat management, it can provide **seedling/sapling** early successional habitat and work towards providing late successional forest stands which is frequently lacking on private lands.

Early successional habitat consists of areas dominated by grass or other herbaceous vegetation, shrub lands or young (seedling/sapling) forest cover. The New York State Comprehensive Wildlife Conservation Strategy (CWCS) plan recommends maintaining or increasing the amount of early successional forest and shrub land in the Southeast Lake Ontario Basin. Some of the Species of Greatest Conservation Need identified in the CWCS plan that require early successional habitat include American woodcock, brown thrasher, Canada warbler, ruffed grouse and willow flycatcher.

Late successional habitat consists of forests with mature and older trees, greater than 140 years of age, being dominant in the forest canopy. Late successional forests may have been previously logged but are beginning to develop old growth forest attributes such as large tree size, large downed logs, large snags, cavities and species such as mosses, lichens, fungi and insects that are typically found in old growth forests. This habitat is important since it provides specific habitat conditions that many different species may utilize and that are not found in younger forests. These areas of significantly large and older trees

MANAGEMENT AREA GOALS, OBJECTIVES AND ACTIONS

GOAL 1: PROVIDE HEALTHY AND BIOLOGICALLY DIVERSE FOREST ECOSYSTEMS.

also have social value and are appreciated by many people as places to camp, relax and reconnect with nature.

Action 1.2.1 Increase early successional habitat by conducting **regeneration** harvest treatments on approximately 66 acres over the next ten years.

The Unit also contains approximately 83 acres of existing seedling/sapling , and 295 acres of alder dominated wetlands that are expected to remain in this condition over the next 10 years. Even-aged management using a 120 year **rotation** will be conducted on 2,485 acres of the Unit. These areas, consisting of conifer plantations and native hardwoods will provide early successional forest cover at the time of regeneration. It is expected that approximately 312 acres will be regenerated over the 20 year course of this plan.

Any treatments involving clearcutting will comply with the Department's program policy *ONR-DLF-3 / Clearcutting on State Forests (2011)*. Information on this policy can be found at http://www.dec.ny.gov/docs/lands_forests_pdf/policysclearcutting.pdf.

Action 1.2.2 Increase late successional forest stage on the Unit.

Existing and proposed late successional forests will be protected and developed on forest stands totaling 3442 acres of the Unit. These stands were chosen based upon a number of factors which include visual buffers, inaccessibility, and the protection of sensitive sites surrounding wetlands and riparian areas. The acreage consists of 2287 acres of forested stands that, for the most part, may be excluded from timber harvesting and 1146 acres of stands managed as uneven age forests. See Appendix X "Proposed Management Direction" maps.

Objective 1.3 Protect at-risk species and significant ecological communities.

At-risk species are those species having the New York State legal status of Endangered or Threatened. Significant ecological communities are those unique areas identified by the New York State Natural Heritage Program as being significant due to rarity or high quality status. For additional information on at-risk species and communities, see the SPSFM, Chapter 3, pgs. 115-126.

Action 1.3.1 Protect at-risk species and significant ecological communities, identified by New York State Natural Heritage. This may be accomplished by buffering known occurrences from forestry or recreational management activities or possibly conducting specific management actions which improve or enhance habitat necessary for the species.

Action 1.3.2 Conduct a survey, for rare species or communities by Natural Heritage staff as time and resources become available, of any newly acquired lands and protect any new finds of at-risk species and significant ecological communities identified by New York State Natural Heritage.

MANAGEMENT AREA GOALS, OBJECTIVES AND ACTIONS

GOAL 1: PROVIDE HEALTHY AND BIOLOGICALLY DIVERSE FOREST ECOSYSTEMS.

A review of the State Forest Predicted Richness Overlay GIS data layer shows the *potential* occurrence of five rare plants and one rare insect on the Unit. The species include Roseroot (*Rhodiola integrifolia*), Virginia False Gromwell (*Onosmodium virginianum*), Butterwort (*Pinguicula vulgaris*), Southern Twayblade (*Listera australis*), Mingan Moonwort (*Botrychium minganense*), and the Extra-striped Snaketail (dragonfly) (*Ophiogomphus anomalus*). Sites where these potential occurrences are located will be protected and/or surveyed before any potential site disturbing activities occur.

Action 1.3.3 Maintain and follow all management recommendations for RSA's to protect or enhance the Spruce-Fir Swamp and Shallow Emergent Marsh occurrences designated by the Natural Heritage Program. All management actions proposed near or adjacent to the RSA's currently comply with recommendations for protection. There are no management actions scheduled in this plan which will threaten or alter the current RSA designated areas.

Action 1.3.4 Maintain and protect the HCVF designated areas on the Unit, the Hasto Road Dunes and the portion of the Village of Orwell Municipal Water Supply Watershed on Chateaugay State Forest. These areas will be protected by restricting activities which could degrade or compromise the area.

Action 1.3.4.1 The stands which make up the HCVF Ancient Great Lakes Dune area will be designated as a protection area. This will restrict harvesting and trail development within the stand with the exception of the power line which goes through the area. Currently there is a snowmobile trail which utilizes this power line. Trail use will be restricted to snowmobile's using only the current portions of the trail which lead to and from the power line and the existing power line opening.

Action 1.3.4.2 Safeguard the HCVF Village of Orwell Municipal Water Supply Watershed portion on Chateaugay State Forest protection area that is part of the Town of Orwell's potable water source. Any and all activities within this area will follow all Best Management Practices to minimize any negative effects to the watershed that may be caused by erosion.

Objective 1.4 Conserve and Enhance Fish and Wildlife Habitat.

This plan includes multiple strategies to conserve and enhance fish and wildlife habitat. In addition to the actions listed below, see Objectives 1.1, 1.2 and 1.3 as well as their corresponding actions.

Action 1.4.1 Retain snags, cavity trees, reserve trees, conifers, **coarse woody material (CWM)** and **fine woody material (FWM)** as specified in the Division of Lands and Forests policy for retention on State Forests, *ONR-DLF2 / Retention on State Forests (2011)*.

This policy sets forth guidelines for maintaining or obtaining a minimum number of retention trees within a forest stand. A detailed description of the retention policy may be found at http://www.dec.ny.gov/docs/lands_forests_pdf/policysfretention.pdf.

MANAGEMENT AREA GOALS, OBJECTIVES AND ACTIONS

GOAL 1: PROVIDE HEALTHY AND BIOLOGICALLY DIVERSE FOREST ECOSYSTEMS.

This Department policy addresses the retention of these important habitat structures and features in forest stands that are actively managed for timber production. Retaining these features will maintain the habitat for the wide array of forest wildlife species that depend upon them.

Action 1.4.2 Manage North American Beaver (*Castor canadensis*) where their actions threaten rare species or ecological communities, roads, culverts, trails or other access related infrastructure.

Beaver are an important part of aquatic ecosystems because of their ability to create diverse habitat conditions that are beneficial to a wide array of species. They are an abundant species on the Unit. However, their actions can also have negative impacts to rare species or access infrastructure resulting in the need for costly repairs. Beaver problems will be addressed on a case by case basis after consultation with Bureau of Wildlife staff.

Action 1.4.3 Protect active and inactive (potential alternate) nesting sites for raptors listed as species of Special Concern.

Raptors listed as species of special concern known to nest on the Unit include: sharp-shinned hawk (*Accipiter striatus*), cooper's hawk (*Accipiter cooperii*), northern goshawk (*Accipiter gentilis*) and red-shouldered hawk (*Buteo lineatus*). Each species has specific habitat requirements when nesting. These birds are generally territorial, returning to the same general location yearly. During breeding and nesting season, usually between April and July, human activity near nests may disrupt breeding or cause the adult birds to abandon their nest sites or young. The Bureau of Wildlife staff will be consulted and management activities will be adapted to minimize disturbance to birds that are known to be nesting on the Unit. Adaptive management strategies and actions will be developed and applied on a case by case basis. These strategies may place restrictions on timber harvesting activities and could include: setbacks, no-cut or no disturbance zones, or seasonal restrictions. For recreational uses, actions may include trail closures or rerouting of trails. When specific management strategies for individual species are developed, they will be incorporated into the management plan.

Action 1.4.3.1 Permit licensed falconers to remove only one raptor eyas from the Unit every three (3) years, and in compliance with ECL Article 11 and 6 NYCRR Part 173.

Permits for this activity are issued by the Bureau of Wildlife. Recent observations and consultation with the Bureau of Wildlife staff have shown a failure to fledge eyas the following year after an eyas had been removed from an active nest on two separate removals on the Unit (*Crocoll, 2011*). It is expected that this minor restriction could double the successful eyas numbers over a six year period.

Action 1.4.3.2 Provide and maintain forest stand types acceptable for nesting habitat for northern goshawks on the Unit. Maintain 1,021 acres of a mixed forest type consisting of white pine, hemlock, red pine and hardwood species for the next 10 years. Studies have found a preference for nesting in mixed stands dominated by conifers – hemlock, pine, white cedar and northern hardwoods. (*Speiser R. & Bosakowski T. 1987*). Recent observations of forest stand types of active nesting sites on the Unit are consistent with study conclusions for forest type preferences. (*Crocoll, 2011*)

MANAGEMENT AREA GOALS, OBJECTIVES AND ACTIONS

GOAL 1: PROVIDE HEALTHY AND BIOLOGICALLY DIVERSE FOREST ECOSYSTEMS.

Action 1.4.3.3 Continue to cooperate with the Bureau of Wildlife's effort in monitoring and providing data for research on the status of northern goshawks and other raptors to ensure sustainable populations, and to ensure that our knowledge of the natural history and ecology of these raptors continues to increase.

Action 1.4.4 Evaluate and improve the habitat for brook trout in Pekin Brook to help increase the brook trout population. Any improvements would be subject to State financial constraints and partnering with NGO's such as Trout Unlimited may be feasible to implement anyhabita improvement projects.

During the scoping process of this plan a request was made to increase the brook trout population in Pekin Brook. The stream currently has an adequate population of wild brook trout, as determined by an Eastern Brook Trout Joint Venture survey conducted in 2011. Therefore the Department's Bureau of Fisheries would not entertain the idea of stocking hatchery fish into that wild population.

Objective 1.5 Monitoring of Ecosystem Health

Ecosystems are active and can change slowly over time or quickly from other influences. Periodic monitoring of the Unit is necessary to determine if change is occurring and if it is detrimental or beneficial to the Unit. With limited resources, it is unrealistic to monitor everything that may or can change. We can however monitor key species or community types which are indicators of a healthy ecosystem. Monitoring of forest cover and community types, rare plant & animal species, insect and disease outbreaks and invasive species are the first step in assessing the ecosystem health of the Unit.

Action 1.5.1 Conduct periodic forest inventory of the State Forests within the Unit. The inventory will be updated prior to the 10 year plan update. Forest stands which will require any silvicultural treatments will be analyzed prior to treatment and then be re-inventoried after treatment.

Action 1.5.2 Monitor Rare Species of special concern through efforts available through the New York Natural Heritage Program and develop an action plan as appropriate.

Action 1.5.3 Conduct annual insect and disease aerial surveys. As resources are available the Division will continue to conduct the aerial surveys for the entire state including this Unit.

Action 1.5.4 Monitor invasive species populations and encourage other partners or outside agencies to conduct periodic invasive species assessments of the Unit.

Action 1.5.4.1 When invasive species are found, work to eradicate the population where feasible by approved procedures. This may be accomplished through Regional staff or grant opportunities.

Action 1.5.4.2 Abide by all Federal and State restrictions and regulations as well as Departmental guidelines recommended in the SPSFM for the identification, prioritization and eradication of any invasive species found on the Unit.

MANAGEMENT AREA GOALS, OBJECTIVES AND ACTIONS

GOAL 1: PROVIDE HEALTHY AND BIOLOGICALLY DIVERSE FOREST ECOSYSTEMS.

Objective 1.6 Apply Forest Management Principals and silvicultural systems to maintain or enhance ecosystem health and biodiversity.

Sustainably manage this Unit in a manner that no forest resource is used or removed at a rate greater than the rate at which it is produced, so that the overall resources is maintained or improved. When actively managing forest ecosystems to promote biodiversity and produce forest products, foresters use two silvicultural systems which mimic natural disturbance patterns and help promote biodiversity. The two systems are referred to as even-aged and uneven-aged management.

Even-Aged Silviculture

Even-aged silviculture is a management system that maintains a forest stand where the trees are approximately the same age. This system is desired for creating periods of early successional habitat and other forest development stages beneficial to many plant and animal species. Even-aged silviculture will also promote **natural regeneration of shade intolerant** species such as black cherry, red oak, aspen and white ash. These trees species are also important mast (seed or nut) producers which many wildlife species depend upon for food. This system most often involves several intermediate **thinning** treatments in a stand over time and ends with a regeneration cut at a rotation age. Rotation age is the time between stand establishment and stand maturity with final regeneration harvest. In most cases **intermediate treatments** will have a **cutting interval** of 20 years in even-aged stands. At the end of the rotation, seed cuts are done to establish regeneration. Once the regeneration is established a **release** cut or **overstory removal** will be done to release the new stand of trees. Rotation age on the Unit will vary from 60 to 120 years. Regeneration of even-aged stands will be accomplished using one of three methods: **clearcut, shelterwood** or **seed tree methods**.

The clearcut method is the removal of all trees in a stand at the same time. There are insufficient amounts of desirable advance regeneration present on the ground when the **overstory** trees are removed. After the removal of the overstory trees, **seedlings** become established in several ways. Trees in adjacent stands provide seed that will help establish new growth. The increased sunlight allowed to reach the ground will cause some seeds on the forest floor to germinate and establish new growth. **Coppice** regeneration occurs where some of the trees that are cut sprout at the stump and establish new growth. In clearcuts of two (2) acres and larger the Division of Lands and Forests Program Policy, "ONR/DLF-3 / Clearcutting on State Forests", will be complied with. In clearcuts of 20 acres and larger, **variable patch retention** may be practiced. Variable patch retention involves leaving patches of uncut trees and large individual trees in the clearcut area. The patches provide islands of forest cover as well as seed source in the middle of the clearcut areas. The number and size of patches retained will vary depending on the size of the clearcut. The individual trees and some of the trees in the patch retention areas may blow down over time; these blown down trees will provide two important benefits to the forest ecosystem. First, they will create coarse woody material on the forest floor. Second, they will contribute to the establishment of pit and mound micro-topography. This is especially important in plantations where past agricultural practices had eliminated the natural micro-topography.

MANAGEMENT AREA GOALS, OBJECTIVES AND ACTIONS

GOAL 1: PROVIDE HEALTHY AND BIOLOGICALLY DIVERSE FOREST ECOSYSTEMS.

The shelterwood method is the removal of all trees in a series of two to three treatments. The preparatory cut is done to prepare the **site** for the establishment of regeneration. Preparatory treatments are done to encourage the development of thrifty seed bearing trees, to eliminate undesirable trees or to accelerate the decomposition of favorable humus layers. The seed cut is done to establish regeneration; this involves a heavy cutting that will allow enough light to reach the forest floor and encourage the establishment of tree seedlings. The trees that remain provide seed source and shelter for the establishment of regeneration. The best quality timber trees in the stand are left for this purpose. Finally, the removal cut is done to release tree seedlings when they are established. Most all of the overstory trees are removed in this treatment and a new stand is created.

The seed tree method is the removal of all trees in a series of one or two treatments; this method is similar to the clearcut method except that a few individual trees or groups of trees are left to provide seed source. The remaining trees may or may not be removed once regeneration has become established.

Uneven-aged Silviculture

Uneven-aged silviculture is a management system that maintains at least three or more age groups ranging from seedlings and **saplings** to very large, mature trees; this system promotes a relatively continuous tree **canopy**, and can provide late successional habitat characteristics, such as large diameter trees, more dead or coarse woody material on the forest floor and greater live and dead snag trees. In many ways, uneven aged silviculture mimics the natural process by which older trees grow to maturity, die and are gradually replaced by young seedlings and saplings. Uneven-aged management is commonly referred to as the **selection system**. The selection system uses two different methods, **single tree selection** and **group selection**.

Single tree selection is the selection of individual or very small groups of trees for harvest. Single tree selection tends to favor **shade tolerant** tree species such as hemlock, beech, and sugar maple. Many of these species are long lived. Through this system, a vertical layering of tree **canopy** is created with each layer providing distinct habitat **niches**; this maintains a relatively continuous tree crown canopy, which lessens the impact for plant and animal species that cannot tolerate substantial changes in their habitat.

Group selection is the selection of a group of trees up to 2 acres in size for harvest. This method is used to create openings for the regeneration of shade-intolerant species such as black cherry, red oak and white ash. Group selection allows for greater species diversity in uneven-aged stands.

Many of the uneven-aged stands in this Unit will be managed using a combination of single tree and group selection. Single tree and group selection treatments will occur every 20 to 30 years in uneven-aged stands. In these treatments, trees up to 25" in diameter may be left as **residual** crop trees. Some trees of unique characteristic and size will be left as **biological legacy trees** as determined by the forester and in compliance with the DEC Program Policy, ONR-DLF-2 / Retention on State Forests.

Action 1.6.1 Apply sound silvicultural Practices.

MANAGEMENT AREA GOALS, OBJECTIVES AND ACTIONS

GOAL 1: PROVIDE HEALTHY AND BIOLOGICALLY DIVERSE FOREST ECOSYSTEMS.

Public Lands staff will follow department policies and procedures to insure sound silviculture is practiced on every forest product sale. The following steps and decision making process will be used prior to any silvicultural treatment:

- A pre-harvest inventory is conducted and data is used to develop a treatment prescription.
- Additional data is reviewed to determine if any Special management zones, rare, threatened or endangered plant, animals or other unique habitats may be impacted.
- Evaluate the following State Forest Policies concerning Silvicultural treatments if applicable:
 - ONR-DLF-1 “Plantation Management on State Forests”
http://www.dec.ny.gov/docs/lands_forests_pdf/policysplantation.pdf
 - ONR-DLF-2, Retention on State Forests”
http://www.dec.ny.gov/docs/lands_forests_pdf/policysfrention.pdf
 - ONR-DLF-3, Clearcutting on State Forest”
http://www.dec.ny.gov/docs/lands_forests_pdf/policysclearcutting.pdf
- Review any applicable forest stocking and management guides.
- Silvicultural treatment is prescribed and approved prior to marking.
- A Conceptual Approval report is prepared and approved prior to final sale being advertized or bid.
- Post harvest inventory and report is prepared after harvest to document the results.

Action 1.6.2 Manage the Unit’s forests using silvicultural treatments for all forest cover types at a annual average harvest of 144 acres per year for the 10 year planning period.

Action 1.6.3 Maintain 43% of the Unit in a conifer component comprised of both planted and naturally reproducing **long lived conifer** species. Fifteen percent of the Unit will be maintained as a natural conifer type comprised mainly of stands containing hemlock trees. The remaining 29% of the conifer type will consist of plantations with white pine being the major conifer tree species.

Conifer trees provide a variety of special functions for many species of wildlife. Conifer forests moderate temperature extremes, which can help provide winter thermal cover; help moderate snow depth; provide shelter from wind; and provide escape cover on a year-round basis. Conifer stands provide valuable habitat for many groups of wildlife species, including white-tailed deer, grouse, wild turkey and various species of raptors. In native eastern hemlock stands, the diversity of wildlife species increases with age. This is due to increased diversity of structural habitat in these older stands (DeGraff et al, 1989). For purposes of this assessment, long term conifers are long lived conifer species - specifically eastern hemlock and eastern white pine.

Long term conifer areas are forest stands where the management objective is to maintain at least 50% conifer species in the stand. Species of conifers that will be retained are hemlock and white pine. The long term objective as a guidance in DEC Region 7 has been to maintain a minimum of 20% of each State Forest in conifer cover. This Unit currently contains over 54% conifer cover type of the Units total acreage. This higher percentage of conifer type is due to the Unit’s numerous conifer plantations.

MANAGEMENT AREA GOALS, OBJECTIVES AND ACTIONS

GOAL 1: PROVIDE HEALTHY AND BIOLOGICALLY DIVERSE FOREST ECOSYSTEMS.

This action will reduce the current conifer percentage by 4 percent over the 10 year planning period. Approximately 20 percent, or 1210 acres of white pine stands, of the 54 percent conifer type will be regenerated to naturally seeding of eastern white pine and mixed hardwood type. These treatments will focus on the better stands of white pine with the highest chances of regeneration success. All management of plantations will comply with the Department program policy ONR-DLF-1 / Plantation Management on State Forests (2011). More information on the Plantation Management policy can be found at http://www.dec.ny.gov/docs/lands_forests_pdf/policysplantation.pdf.

Action 1.6.4 During the ten year planning period, begin to convert 249 acres of conifer plantations (4%) to natural hardwood. This **conversion** will focus on the poorer plantation stands and species which are unlikely to regenerate naturally, such as red pine, spruce and larch. This conversion will require intermediate treatments to prepare the stands for proper regeneration and successful conversion to natural hardwoods. Successful conversion of the proposed acreage will require longer time than the 10 year treatment schedule.

Action 1.6.5 Manage 2,494 acres using the even-aged silvicultural systems.

Action 1.6.6 Manage 1,146 acres using the uneven-aged silvicultural systems.

Objective 1.7 Ensure compatibility of recreational activities and facilities with ecosystem sustainability.

State forests are best suited to low impact recreational activities that require a minimum amount of facility development and maintenance. Recreational activities shall not have negative impacts to rare species or ecological communities or cause degradation of the soil, water or vegetation resources on the Unit.

Action 1.7.1 Continue to allow existing compatible recreational uses on the Unit. Allowable compatible recreational uses can be found in the Strategic Plan for State Forest Management, Chapter 5.

Action 1.7.2 Evaluate future proposals for new recreational activities based upon their compatibility with the natural resources on the Unit. Recreational activities which are not compatible with ecosystem sustainability will not be allowed on the Unit.

Action 1.7.3 All development or maintenance of recreational opportunities will follow BMP and permitting guidelines while under construction.

Objective 1.8 Ensure compatibility of oil and gas exploration with ecosystem sustainability.

Any future development of oil or gas related facilities, including but not limited to, access roads, well pads and pipelines shall not impact rare species or ecological communities. Development of such

MANAGEMENT AREA GOALS, OBJECTIVES AND ACTIONS

GOAL 2: MAINTAIN MAN-MADE STATE FOREST ASSETS

facilities will be located to minimize impacts to the natural resources on the Unit. Areas identified in this plan for protection or designated as Natural Areas shall be excluded from surface development activities.

Oil or 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. Prior to any new leases, DEC will hold public meetings to discuss all possible leasing options, including: forgoing leases, leasing with no surface occupancy, and entering leases with proper environmental protections in place. The procedures and guidelines used by the NYS DEC Division of Mineral resources for the leasing process can be found in the SPSFM, Chapter 5, pgs 225-238.

Action 1.8.1 If an interest in oil or gas leasing on the Unit is shown, a hierarchical tract assessment will be conducted and a Public meeting will be scheduled for the purpose of gathering comments prior to any leasing decisions.

GOAL 2: Maintain Man-made State Forest Assets

State Forest assets on this Unit include structures, boundary lines, trails, roads and any other infrastructure or objects. Many of these items need a periodic inspection to make sure they are still in working order, while others need regular maintenance to counteract wear of regular use. It is Departments intent to ensure that all assets on State Forests are adequately maintained to safely perform their intended function. *(SPSFM pg31)*

Objective 2.1 Preserve and Protected Historic and Cultural Resources wherever they occur on the Unit

Historic and archaeological sites located on State Forests, as well as additional unrecorded sites that may exist, are protected by provisions of the New York State Historic Preservation Act (SHPA-Article 14 PRHPL), Article 9 of the Environmental Conservation Law, 6NYCRR Section 190.8 (g) and Section 233 of Education Law. 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). *(SPSFM pg141)*

Action 2.1.1 Follow all standard operating procedures for managing historic and cultural resources once developed and implemented as part of the SPSFM stated actions (HC Action 1).

Action 2.1.2 Implement a systematic and comprehensive archaeological inventory of the Unit as outlined in the SPSFM actions HC Action 2.

MANAGEMENT AREA GOALS, OBJECTIVES AND ACTIONS

GOAL 2: MAINTAIN MAN-MADE STATE FOREST ASSETS

Action 2.1.3 Restrict the removal or disturbance of foundations, stone walls, or any other structure.

Action 2.1.4 Evaluate the historic significance of the existing standing silo on the Altmar State Forest. If permissible either remove or close structure entrance for safety purposes.

Objective 2.2 Maintain and enhance basic infrastructure which includes forest access roads, access trails, haul roads, trails, gates, boat launches, parking areas and associated facilities.

Action 2.2.1 Implement a standard process as identified in the SPSFM (pg 168) for assessing State Forest infrastructure needs and assign maintenance schedule priorities and budgets.

Action 2.2.2 Implement Best Management Practices (BMPs) when constructing or installing any bridge or culvert within a water course. BMP guidelines and any required permit conditions will be followed by all work crews performing the work.

Objective 2.3 Maintain Boundary lines to identify State property and prevent timber theft and encroachments

Action 2.3.1 Repaint the property boundary lines on a seven-year cycle utilizing the DEC's Operations crews. The following is the Boundary Line Maintenance schedule:

<i>State Forest Name/ RA #</i>	<i>Maintenance Year</i>
Chateaugay SF/ Oswego #5	2017
Chateaugay SF/ Oswego #4	2018
Altmar SF/ Oswego #6	2019
Trout Brook SF / Oswego #12	2020
Sandy Creek SF/ Oswego #7	2021

Action 2.3.2 Identify and complete survey requests through the Bureau of Real Property as priorities and budgets allow.

MANAGEMENT AREA GOALS, OBJECTIVES AND ACTIONS

GOAL 3: PROVIDE RECREATIONAL OPPORTUNITIES FOR PEOPLE OF ALL AGES AND ABILITIES

Objective 2.4 Maintain the State Forest and other property identification or informational signs.

Action 2.4.1 Annually assess the condition of the State Forest's kiosks, identification and informational signs. Replace signs as needed or as priorities and budgets permit.

Objective 2.5 This Unit will be managed so that the overall quality of the visual resources is maintained or improved.

Foresters manage many diverse aspects of a forest. Some aspects of forest management are easy to observe and measure, while others are more subjective and may not be measured easily. The visual resource aspect of forest management and the associated benefits to people fall into the latter category. When it comes to aesthetics, people hold different opinions--what may be aesthetically pleasing to some, may not be to others. Often, ecologically responsible management may not initially exhibit the most aesthetically pleasing results. State Forest management practices such as silvicultural and wildlife decisions take many considerations into account. Even so, the visual impact of some of these practices may not be kindly greeted by many people. While it is important for State Forest managers to consider the visual effects of their management actions with respect to recreation and public perception, the ecological health of State Forests must be paramount. *SPSFM, 2011, pg127.*

Action 2.5.1 Follow all guidelines and policies for visual impact assessment and mitigation around timber harvests, mineral extraction sites and infrastructure.

Action 2.5.2 Follow all visual resource protection requirements identified in the DEC policies for retention, plantation management and clearcutting.

Action 2.5.3 Construction materials which are aesthetically pleasing and complement the setting will be used for the construction of any necessary structures or barriers on the Unit.

Action 2.5.4 Place kiosk's providing information on the Unit in locations where appropriate to reduce sign pollution by replacing multiple signs.

GOAL 3: Provide recreational opportunities for people of all ages and abilities

The Eastern Lake Ontario Unit has limited developed recreational opportunities present. As with all State Forests, the traditional, more primitive recreational activities such as hiking or hunting are readily available throughout this Unit. The area is also a popular destination during the winter by cross country skiers and snowmobilers due to the large amounts of lake effect snowfall the area receives. As described

MANAGEMENT AREA GOALS, OBJECTIVES AND ACTIONS

GOAL 3: PROVIDE RECREATIONAL OPPORTUNITIES FOR PEOPLE OF ALL AGES AND ABILITIES

earlier in this plan, all of the developed recreational activities on this Unit center around the Chateaugay State Forest which have both cross country and snowmobile trails. There is also a small section of maintained snowmobile trail on the Altmar State Forest that is part of a corridor trail leading to Pulaski .

Within this Unit there has been no expressed demand for horseback riding or mountain bike riding. It is anticipated the activity may occur occasionally as a very limited dispersed use on these state lands. It is assumed that the intense insect populations as well as distance from major population centers are factors in the limited demand for these activities in this area.

The demand for recreational opportunities has increased as the area has become developed and more popular. As the need for recreational opportunities increases, so does the expectation by the public that the State should provide these on public land. The Department's responsibility is to assess these demands and when feasible, provide and maintain compatible opportunities, while protecting the important natural resources that attract people to the area. Due to limited State funds or staffing the Department will need to rely more upon local volunteers for help in providing these recreational resources. Without this help, the Department may be forced to reduce or close certain recreational opportunities due to lack of maintenance.

Objective 3.1 Insure sustainable use of current recreational opportunities.

As stated above, this Unit includes a number of recreational opportunities which have been developed and currently exist. This objective focuses on the tasks needed to maintain the current opportunities and lessen problems or conflicts which exist while protecting the environmental integrity of the Unit.

Action 3.1.1 Continue to work with the Town of Orwell in maintaining the parking areas for the cross country ski trails on Chateaugay State Forest as town snow plow turnarounds.

Action 3.1.2 Establish and encourage volunteer partnerships to maintain 6.6 miles of cross country/foot trails on the Chateaugay State Forest.

Action 3.1.3 Continue ongoing partnerships with local snowmobile Associations to maintain and improve 3.2 miles of snowmobile trails by issuing **Temporary Revocable Permits** (TRPs) and or volunteer programs.

Action 3.1.4 Highlight volunteer programs to encourage and work with individuals or volunteer groups who are willing to help maintain and enhance recreational assets on the Unit.

As previously stated, the State's ability to provide the needed funds and staffing to adequately maintain or improve the recreational facilities is limited. Help from volunteers can be instrumental in improving, maintaining or preventing closure of recreation facilities.

MANAGEMENT AREA GOALS, OBJECTIVES AND ACTIONS

GOAL 3: PROVIDE RECREATIONAL OPPORTUNITIES FOR PEOPLE OF ALL AGES AND ABILITIES

Action 3.1.5 Continue to allow dispersed recreation activities for which no trails or amenities exist or will be provided, such as hunting, trapping, horseback riding and mountain biking.

Objective 3.2 Enhance sustainable use of recreational opportunities

Outdoor recreation opportunities are important to the visitors of this Unit. Participating in and enjoying these outdoor activities often helps us appreciate and understand nature better. However, repeated use of the land for recreational purposes can have significant impacts. To minimize these impacts it is necessary to plan, monitor and manage the recreational use of this Unit. Based upon public input and observed demands, actions have been planned which will improve and control recreational use to increase users enjoyment while protecting and maintaining the natural resources.

Action 3.2.1 Review the request by the Redfield Snowmobile Association to develop a new portion of designated motorized trail specifically for snowmobiles located on the Chateaugay State Forest. This will require reviewing the proposed trail location and determining special conditions due to the trail potentially crossing protected wetlands, streams and possibly utilizing private land. Once all concerns are addressed such as necessary permits, potential bridge construction or permissions from effected private lands, the Snowmobile Association would be allowed to begin development of a new trail.

The request was made to utilize state lands to connect Jackson Road and Beecherville Road which would minimize the use of public roads. The request states it would increase safety by reducing use of the public roads and decrease the need to use the Salmon River Reservoir. They also state that it would also increase the local economy by providing better connectivity between Pulaski and the Town of Redfield.

This trail would be designated and maintained for motorized snowmobile recreational use. This designation as motorized use would not restrict use of body gripping traps within 100 feet of this trail.

Action 3.2.2 Look into the possibility of replacing the lean-to previously located on the Chateaugay State Forest. This may require help from volunteers to utilize existing trees on site to build the structure. The lean-to would be built in the same location as the previous lean-to. This project will be contingent upon appropriate funding being available. The previous lean-to was utilized annually by different Boy Scout Clubs during winter camping activities. The clubs continue to camp in the same location during the winter and would benefit from the lean-to being rebuilt.

Action 3.2.3 Develop approximately 1 mile of foot trail from the Salmon River Falls Unique Area's Upper Falls Trail that leads to the Dam Road. This trail will be located up slope from the Salmon River Open Space Conservation Easement on the lands acquired from National Grid.

There is currently a foot trail within the Easement lands but due to poor soils and steep slopes the trail is located in portions of the river bed. This poor trail location causes the trail to be unusable during high water events and also very difficult to maintain. This new trail will allow use during periods of high water.

MANAGEMENT AREA GOALS, OBJECTIVES AND ACTIONS

GOAL 3: PROVIDE RECREATIONAL OPPORTUNITIES FOR PEOPLE OF ALL AGES AND ABILITIES

Objective 3.3 Provide recreational opportunities that are universally accessible and comply with the Americans with Disabilities Act.

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.

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

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

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

Universal access will be provided unless it fundamentally alters the character or recreational programs of the area. This objective strives to maximize accessibility while protecting the natural setting to the greatest extent possible, thereby preserving the fundamental experience for all. A minimal tool

MANAGEMENT AREA GOALS, OBJECTIVES AND ACTIONS

GOAL 3: PROVIDE RECREATIONAL OPPORTUNITIES FOR PEOPLE OF ALL AGES AND ABILITIES

approach will be used to implement this vision, resulting in projects that blend into the natural environment and protect the landscape.

Action 3.3.1 Designate 0.5 miles of existing access trail on Trout Brook State Forest as a Motorized Access Permit for People with Disabilities (MAPPWD) route. A MAPPWD designation permits qualifying people with disabilities to use motor vehicles along specific route for access to programs, such as hunting and fishing on state lands.

This will require the signing and maintenance of the trail along with establishing a parking area large enough for two vehicles with trailers on an existing log landing.

Objective 3.4 Provide and enhance information on the Unit.

This Unit contains recreational opportunities that can be utilized throughout the year at various locations. Some of these opportunities may not be known or apparent to the general public. Each of the opportunities may also have specific rules or regulations. Clear and up to date information is needed to help guide the Units users as to where the opportunities exist as well as the areas restrictions or regulations. This will improve the public's use of the Unit as well as protect the resource from inappropriate use from occurring.

Action 3.4.1 Develop and install four State Forest kiosks which would describe each State Forest in that vicinity, as well as the areas rules and regulations. These would be located either centrally on the State Forest or at an area most used by the public.

Action 3.4.2 Develop brochures describing the trails located on the Chateaugay State Forest.

Action 3.4.3 Develop area specific information and maps to be available on the Department's web page.

Objective 3.5 Address concerns and demand for Off-Highway and All-Terrain Vehicle use on the Unit.

As stated in the SPSFM, off-road motorized recreational activities have grown in popularity over the past two decades. These include four-wheel drive vehicles (also referred to as off highway vehicles or OHVs), ATVs, UTVs and off-road motorcycles. For the discussion of these various vehicles in this plan we will collectively refer to them as OHVs and ATVs. Impacts and issues associated with OHVs are much the same as those associated with ATVs, therefore for the purpose of this plan, DEC policy as regards State Forests will be applied to both vehicle types alike.

MANAGEMENT AREA GOALS, OBJECTIVES AND ACTIONS

GOAL 3: PROVIDE RECREATIONAL OPPORTUNITIES FOR PEOPLE OF ALL AGES AND ABILITIES

Some people own and operate these types of vehicles as a relatively benign means of conveyance to access programs like hunting and fishing. Many off-road enthusiasts, however, enjoy a riding experience that includes characteristics such as challenging mud holes and steep hill climbs, as is often depicted in ATV manufacturer ads and on ATV club web pages. As described in the SPSFM, those types of uses, as well as other attributes of ATV use, are not compatible with State Forest management goals and cannot be successfully managed on State Forest lands.

The Strategic Plan for State Forest Management has stated the following State Forest ATV Policy:

“The mission of the DEC Division of Lands and Forests is “to care for and enhance the lands, forests and natural resources in the State of New York for the benefit of all through the care, custody, and control of State-owned lands, and promotion of the use and protection of all natural resources.” This is a broad mission which reflects that DEC has many other responsibilities beyond satisfying public recreation desires. Rather, recreation opportunities are provided on DEC lands that are compatible with other multiple uses and the ecosystem management approach described previously in this plan.”

*Upon evaluation of past efforts to accommodate ATV use and the many impacts and constraints associated with off road vehicles, **the Department will not permit ATV use on State Forests, except; as may be considered to accommodate a public “connector trail” through the Unit Management Planning process, and; on those **specific routes designated for use by DEC-issued Motorized Access Permit for People with Disabilities (MAPPWD).**** (<http://www.dec.ny.gov/lands/64567.html> page 222.)*

During the development of this plan a request was made by the Oswego County ATV Club Inc. to utilize segments of an existing snowmobile trail and abandoned road located on the southern portion of Chateaugay State Forest as part of their club trail system. This trail would provide a connection from the Stone Quarry Drive to Dam Road. Both town roads are open to ATV use by the Town of Orwell. The requested trail sections are located on and near the southern boundary of the Chateaugay State Forest in the Town of Orwell Oswego County. The total length of the requested portion of trail on State Land is 1 mile. Seven tenths of this is found on the old abandoned Stone Quarry Road and the remaining three tenths go on and off of State land following the existing snowmobile trail.

As outlined in the Strategic Plan for State Forest Management State Forest Policy the Department can consider authorizing ATV use on designated trails or roads on State Forests to accommodate a public connector trail through the Management Planning or similar public process.

The request was received and a draft trail plan was presented for public review and comment. During the public input scoping phase for this plan “The Chateaugay State Forest Draft ATV Connector Trail Plan” (see Appendix C) was presented and a specific public comment meeting was conducted to gather input on this draft trail plan.

The meeting was well attended with 55 people in attendance. There was very little objection to the request with the majority of comments in support of the proposal. The “**Chateaugay State Forest Draft ATV Connector Trail Plan Initial Public Information Meetings Public Input Summary**” was developed and describes the comments received during the meeting this document is found in Appendix B.

MANAGEMENT AREA GOALS, OBJECTIVES AND ACTIONS

GOAL 3: PROVIDE RECREATIONAL OPPORTUNITIES FOR PEOPLE OF ALL AGES AND ABILITIES

The following is a summary of the conditions which must be met before an ATV connector trail can be approved.

1. The trail system must be open to the public.
2. Trail approval would be dependent upon necessary funds or commitment to establish and maintain a sustainable trail.
3. The trail must follow the shortest environmentally acceptable route.
4. The trail location must not compromise the protection of the natural resources of the Unit.
5. The trail must not significantly conflict with neighbors of the State Forest.
6. The trail must not interfere with other established recreational areas.
7. Trial designation will only occur through the UMP or similar process that provides the opportunity for public review and comments.
8. The designation of a Connector Trail must undergo a full SEQRA review of the proposed designation.
9. Any approved Connector trail must be monitored to ensure that legal use does not lead to illegal off-trail use within State Forest lands or on neighboring private property. Should illegal use increase significantly adjacent to any connector trail, that trail will be subject to closure.

For a comprehensive discussion of the Department's policy regarding ATV use on State Forests, please refer to page 213 of the SPSFM at www.dec.ny.gov/lands/64567.html.

During the initial input scoping phase of the plan there were no other specific requests for ATV connector trails made

Action 3.5.1 Designate the 1 mile section of snowmobile trail requested by the Oswego County ATV Club as an ATV Connector trail open to public ATV use once all conditions have been met. This designation will be contingent upon the Oswego County ATV Club meeting the following conditions.

1. The trails that connect to the State Land portion of ATV Connector trail must be open to public use and have permission from the adjoining landowners for ATV use prior to Department authorization. The Department does not want adjoining property owners to feel pressured to allow ATV use on their lands due to a section of State Land potentially being opened for authorized ATV use.
2. The Department will evaluate environmental impacts to the site. If the natural resources cannot sustain continued motor vehicle use by ATVs due to factors such as soil erosion within the travel corridor or into streams, wetlands or water bodies, impacts of ATV traffic outside the travel corridor, or other adverse impacts, the route will not be opened to public ATV access.

MANAGEMENT AREA GOALS, OBJECTIVES AND ACTIONS

GOALS 4: PROVIDE ECONOMIC BENEFITS TO THE PEOPLE OF THE STATE

3. As outlined in the Strategic Plan for State Forest Management, the establishment of this ATV trail cannot conflict with neighbors of State Forests. The Department may approve this proposal only if it does not receive notice from affected private landowners objecting to public ATV use on their respective lands.
4. Public ATV access must be compatible with other public use of the area as authorized by the UMP. If the connector trail is to be authorized, a "Season of Use" will be established in the Final Plan to avoid user conflicts and protect the resource.
5. Roads or trails proposed to be open to public ATV use must be safe for the operation of ATVs, including the posting of appropriate signage for speed limits, stopping, caution and curves.
6. Reasonably feasible measures to prevent illegal ATV use off the proposed route must be identified and effectively implemented
7. Management actions involving public ATV access must also address the need for monitoring, education and enforcement. All public ATV access routes, whether remaining open or being closed, must be monitored on a periodic basis for compliance with the management action. Efforts must be made to inform users where legal and safe public ATV riding opportunities exist

Action 3.5.2 Limited ATV use will be accommodated via consideration of opportunities to enhance access to State Forest recreational programs under DEC's MAPPWD program in this Unit for this planning period. A new MAPPWD designated trail will be developed as previously described in Action 3.3.1 of this plan.

Objective 3.6 Support the traditional recreational uses of state land which include hunting, fishing, trapping, orienteering and viewing of natural resources.

Hunting, fishing, trapping, orienteering and viewing natural resources are all popular traditional recreational opportunities which occur on the Unit. These activities require little or no improvements for their continued use.

Action 3.6.1 Permit all hunting, fishing and trapping opportunities on the Unit in compliance with NYS Fish and Game laws permit.

Goals 4: Provide Economic Benefits to the People of the State

New York's public and private forests contribute over \$8.8 billion annually to the State's economy (North East State Foresters Association, 2007) through forest-based manufacturing and forest-related recreation and tourism. State forests make important contributions to these economic categories resulting in economic benefits to local communities and their larger surrounding areas.

MANAGEMENT AREA GOALS, OBJECTIVES AND ACTIONS

GOALS 4: PROVIDE ECONOMIC BENEFITS TO THE PEOPLE OF THE STATE

Objective 4.1 Provide a steady flow of forest products.

Action 4.1.1 Treat an average of approximately 144 acres each year for the next ten years through timber sales.

Timber sold from the Unit will be purchased by businesses for manufacturing products such as construction lumber, paper, flooring, furniture, veneer, utility poles, pallets and fuel wood. Acres treated will be dependent upon staffing and suitable markets.

Action 4.1.2 Three (3) forest stands have been identified which potentially could be considered for producing maple sap. The initial evaluation for this potential activity has not been confirmed by a field visit. As potential requests are evaluated each stand would also need to be confirmed as to its possible use for sap production. Guidelines used to determine which stands may be acceptable for leasing for sap production have been described in the SPSFM. These guidelines consider other forest users, access limitations, site class and species composition. A listing of the State Forest and stands identified for this action are as follows:

State Forest	Stand Number	Stand Acreage
Chateaugay SF, Oswego RA #4	C-24	10.5
Altmar SF, Oswego RA #6	B-15	9.4
Trout Brook SF, Oswego RA #12	A-18	17.2

Objective 4.2 Provide Property Tax Income to Local Governments and Schools.

Action 4.2.1 Maintain the annual tax payments to local governments and schools.

The State provides annual payments of approximately \$114,091 (projected 2014 payments) in combined town and school taxes on the lands in this Unit.

Objective 4.3 Provide for natural gas and other mineral resource exploration and development while protecting natural resources and quality recreational opportunities.

Natural gas and other mineral resource extraction, exploration or development activities will follow procedures described in the Generic Environmental Impact Statement (GEIS) on oil, gas and solution

MANAGEMENT AREA GOALS, OBJECTIVES AND ACTIONS

GOALS 4: PROVIDE ECONOMIC BENEFITS TO THE PEOPLE OF THE STATE

mining regulatory Program and the Supplemental SGEIS (when appropriate and following adoption) and the NYS Strategic Plan for State Forest Management, Chapter 5, pgs. 225-238. To the extent that the Department adopts regulations pertaining to High-volume hydraulic fracturing natural gas extraction would also be subject to the conditions contained therein.

Action 4.3.1 If lands are nominated for leasing of extraction rights a hierarchical tract assessment process, as described in Action 1.8.1, will be conducted by the NYS DEC Division of Lands & Forests to determine if a lease may be granted and if so what conditions will be placed in the lease.

Objective 4.4 Provide local communities support through forest-based tourism.

Revenues to New York businesses from forest-related recreation and tourism activities totaled \$1.9 billion in 2005 (North East State Foresters Association, 2007). Recreation activities associated with State lands, such as hunting, boating, fishing and snowmobiling, contribute to the local economy through the participant's purchase of supplies, food and lodging.

Action 4.4.1 Develop cooperative partnerships with organizations, individuals or communities to sustain or enhance forest based tourism activities that are consistent with this plan and State forest rules and regulations. Volunteer programs will be used to formalize such partnerships. The Department will also support approved volunteer activities that are consistent with the goals and objectives of this plan.

Action 4.4.2 Promote public awareness using kiosks, brochures, and Department website development to be utilized by local communities.

Action 4.4.3 Continue to allow the lands of this Unit to be utilized by traditional outdoor recreational users for activities such as trapping, hunting, fishing and hiking. The use of Public land for recreational opportunities is essential to the health and well being of the State residents. These recreational activities provide economic benefits to the local area businesses as well as users themselves.

Objective 4.5 Protect rural character and provide ecosystem services and open space benefits to local communities.

The presence of State lands maintains the rural character of much of New York State. Undeveloped lands provide ecosystem services such as wildlife habitat, clean water and clean air. They also provide open space benefits such as public recreational opportunities and places for relaxation and escape from the disruptions and stresses associated with urban areas.

Action 4.5.1 The Department would pursue possible purchases of lands, from willing sellers only, in fee or through conservation easement parcels (in-holdings and parcels bordered on two or three sides

MANAGEMENT AREA GOALS, OBJECTIVES AND ACTIONS

by State lands) that will consolidate State ownership or protect at-risk species or ecological communities. Acquisition of such lands will improve public and administrative access and provide larger consolidated blocks of State land for improved protection of rare species and enhanced recreational opportunities. For more information on the Departments land acquisition priorities please refer to the SPSFM page 149 at <http://www.dec.ny.gov/lands/64567.html>.

Management Action Schedules

The following are four different management action schedules that list the various proposed actions over the course of the next ten years:

- A. Individual Projects Schedule Listed by Priority for 0 to 5 Years.
- B. Individual Projects Schedule Listed by Priority for 6 to 10 Years.
- C. Unit Wide Maintenance & Projects Throughout the Life of the Plan
- D. Land Management Action Schedule.

The individual Projects schedule are listed in priority by Action number with a brief description and work type. The work type description is as follows:

Adm. = Administrative Action requiring staff time prioritization but no additional funding.
 Cap. = Capital and Stewardship projects needing funding and staffing priority.

A. Individual Projects Schedule Listed by Priority for 0 to 5 Years		
Action	Description	Type
Action 3.5.1	Designate the 1 mile section of snowmobile trail requested by the Oswego County ATV Club as an ATV Connector trail open to public ATV use once all conditions have been met.	Adm.
Action 2.1.4	Evaluate the historic significance of the existing standing silo on the Altmar State Forest. If permissible either remove or close structure entrance for safety purposes.	Cap.
Action 3.2.1	Work with the Pulaski Boylston Snowmobile Club to develop a new portion of designated motorized trail specifically for snowmobiles located on the Chateaugay State Forest.	Adm. & Cap.
Action 2.5.4	Place kiosks providing information on the Unit in locations where appropriate to reduce sign pollution by replacing multiple signs.	Cap.
Action 3.3.1	Designate 0.5 miles of existing access trail on Trout Brook State Forest as a MAPPWD route.	Adm. & Cap.
Action 3.4.1	Develop and install four State Forest kiosks which would describe the State Forests in that vicinity, as well as the areas rules and regulations.	Cap.
Action 3.4.2	Develop brochures describing the trails located on the Chateaugay State Forest.	Adm.

MANAGEMENT AREA GOALS, OBJECTIVES AND ACTIONS

MANAGEMENT ACTION SCHEDULES

A. Individual Projects Schedule Listed by Priority for 0 to 5 Years		
Action	Description	Type
Action 3.4.3	Develop area specific information and maps to be available on the Department's web page.	Adm.

B. Individual Projects Schedule Listed by Priority for 6 to 10 Years		
Action	Description	Type
Action 3.2.3	Develop a foot trail from the Salmon River Falls Unique Area's Upper Falls Trail that leads to the Dam Road.	Cap.
Action 3.2.2	Look into the possibility of replacing the lean-to previously located on the Chateaugay State Forest.	Cap.
Action 1.4.4	Evaluate and improve the habitat for brook trout in Pekin Brook to help increase the brook trout population.	Cap.

The projects and actions listed in the following Tables C. Unit Wide Maintenance/ Projects and D. Periodic Maintenance / Projects are in numerical order by action number.

C. Unit Wide Maintenance & Projects Throughout the Life of the Plan		
Action	Description	Type
Action 1.1.3	Monitor BMP implementation by evaluating control structures after construction to assess effectiveness.	Adm.
Action 1.2.1	Increase early successional habitat by conducting regeneration harvest treatments on approximately 66 acres over the next ten years. See Land Management Action Schedules for specific stands to be treated in the ten year period.	Adm.
Action 1.2.2	Increase late successional forest stage on the Unit. See Land Management Action Schedules for specific stands to be identified in the ten year period.	Adm.
Action 1.3.1	Protect at-risk species and significant ecological communities, identified by New York State Natural Heritage.	Adm.
Action 1.3.2	Conduct a survey, for rare species or communities by Natural Heritage staff as time and resources become available, of any newly acquired lands and protect any new finds of at-risk species and significant ecological communities identified by New York State Natural Heritage.	Adm.
Action 1.3.3	Maintain and follow all management recommendations for RSA's to protect or enhance the Spruce-Fir Swamp and Shallow Emergent Marsh occurrences designated by the Natural Heritage Program.	Adm.
Action 1.3.4	Maintain and protect the HCVF designated areas on the Unit, the Hasto Road Dunes and the portion of the Village of Orwell Municipal Water Supply Watershed on Chateaugay State Forest.	Adm.
Action 1.4.2	Manage North American Beaver (<i>Castor canadensis</i>) where their actions threaten rare species or ecological communities, roads, culverts, trails or other access related infrastructure.	Adm.
Action 1.4.3	Protect active and inactive (potential alternate) nesting sites for raptors	Adm.

MANAGEMENT AREA GOALS, OBJECTIVES AND ACTIONS

MANAGEMENT ACTION SCHEDULES

C.Unit Wide Maintenance & Projects Throughout the Life of the Plan		
Action	Description	Type
	listed as species of Special Concern	
Action 1.5.1	Conduct periodic forest inventory of the State Forests within the Unit.	Adm.
Action 1.5.2	Monitor Rare Species of special concern through efforts available through the New York Natural Heritage Program and develop an action plan as appropriate.	Adm.
Action 1.5.3	Conduct annual insect and disease aerial surveys.	Adm.
Action 1.5.4	Monitor invasive species populations and encourage other partners or outside agencies to conduct periodic invasive species assessments of the Unit.	Adm.
Action 1.6.1	Apply sound silvicultural Practices.	Adm.
Action 1.6.2	Manage the Unit's forests using silvicultural treatments for all forest cover types at a annual average harvest of 144 acres per year for the 10 year planning period. See Land Management Action Schedules for specific stands to be treated in the ten year period.	Adm.
Action 1.6.3*	Maintain 43% of the Unit in a conifer component comprised of both planted and naturally reproducing long lived conifer species.	Adm.
Action 1.6.4*	During the ten year planning period, convert 249 acres of conifer plantations (4%) to natural hardwood.	Adm.
Action 1.6.5*	Manage 2,485 acres using the even-aged silvicultural systems.	Adm.
Action 1.6.6*	Manage 1,155 acres using the uneven-aged silvicultural systems.	Adm.
Action 1.7.1	Continue to allow existing compatible recreational uses on the Unit.	Adm.
Action 1.7.2	Evaluate future proposals for new recreational activities based upon their compatibility with the natural resources on the Unit.	Adm.
Action 2.1.1	Follow all standard operating procedures for managing historic and cultural resources once developed and implemented as part of the SPSFM stated actions (HC Action 1).	Adm.
Action 2.1.2	Implement a systematic and comprehensive archaeological inventory of the Unit as outlined in the SPSFM actions HC Action 2.	Adm.
Action 2.2.2	Implement Best Management Practices (BMPs) when constructing or installing any bridge or culvert within a water course.	Adm.
Action 2.3.1	Repaint boundary lines on a seven-year cycle utilizing the DEC's Operations crews.	Adm.
Action 2.3.2	Identify and complete survey requests through the Bureau of Real Property as priorities and budgets allow.	Adm.
Action 2.4.1	Annually assess the condition of the State Forest's kiosks, identification and informational signs.	Adm.
Action 3.1.1	Continue to work with the Town of Orwell in maintaining the parking areas for the cross country ski trails on Chateaugay State Forest as town snow plow turnarounds.	Adm.
Action 3.1.2	Establish and encourage volunteer partnerships to maintain 6.6 miles of cross country/foot trails on the Chateaugay State Forest.	Adm.
Action 3.1.3	Continue ongoing partnerships with local snowmobile Associations to maintain and improve 3.2 miles of snowmobile trails by issuing Temporary Revocable Permits (TRPs) and or volunteer programs.	Adm. & Cap.

MANAGEMENT AREA GOALS, OBJECTIVES AND ACTIONS

MANAGEMENT ACTION SCHEDULES

C.Unit Wide Maintenance & Projects Throughout the Life of the Plan		
Action	Description	Type
Action 3.1.4	Highlight volunteer programs to encourage and work with individuals or volunteer groups which are willing to help maintain and enhance recreational assets on the Unit.	Adm.
Action 4.2.1	Maintain annual tax payments to local governments and schools.	Adm.
Action 4.4.1	Develop cooperative partnerships with organizations, individuals or communities to sustain or enhance forest based tourism activities that are consistent with this plan and State forest rules and regulations.	Adm.
Action 4.5.1	The Department would pursue possible purchases of lands, from willing sellers only, in fee or through conservation easement parcels (in-holdings and parcels bordered on two or three sides by State lands) that will consolidate State ownership or protect at-risk species or ecological communities.	Cap.

D.Land Management Action Schedule

The Land Management Action Schedules are separated into four different tables;

1. Table III. A - Land Management Action Schedule for First Five-Year Period
2. Table III B - Land Management Action Schedule for Second Five-Year Period
3. Table III. C - Stands without Scheduled Management within 10 Years
4. Table III. D - Resource Protection/Natural Areas

The following is the key to describe the items listed in the Land Management Action Schedule.

Forest Type Codes

Natural Forest Types

10 Northern Hardwood	24 Spruce-Fir-Hemlock-White Pine
11 Northern Hardwood-Hemlock	25 Cedar
13 Northern Hardwood-Spruce-Fir	26 Red Pine
12 Northern Hardwood-White Pine	27 Pitch Pine
14 Pioneer Hardwood	28 Jack Pine
15 Swamp Hardwood	29 Tamarack
16 Oak	30 Oak-Pine
17 Black Locust	31 Transition Hardwoods (NH-Oak)
18 Oak-Hickory	32 Other Natural Stands
19 Oak-Hemlock	33 Northern Hardwood-Norway Spruce
20 Hemlock	97 Seedling-Sapling- Natural
21 White Pine	99 Non-Forest
22 White Pine-Hemlock	-99 Null
23 Spruce-Fir	

MANAGEMENT AREA GOALS, OBJECTIVES AND ACTIONS

MANAGEMENT ACTION SCHEDULES

Plantation Types

- 40 Plantation: Red Pine
- 41 Plantation: White Pine
- 42 Plantation: Scotch Pine
- 43 Plantation: Austrian Pine
- 44 Plantation: Jack Pine
- 45 Plantation: Norway Spruce
- 46 Plantation: White Spruce
- 47 Plantation: Japanese Larch
- 48 Plantation: European Larch
- 49 Plantation: White Cedar
- 50 Plantation: Douglas Fir
- 51 Plantation: Balsam Fir
- 52 Plantation: Black Locust

Management Strategy

- Wildlife (WL) Experimental (EXP)
- Recreation (REC)
- Protection (PRO)
- Non-Management (NM)
- Sugar Bush/Maple Tapping (SB)
- Timber Management:
 - Even Age (T-EA)
 - Un-Even Age (T-UE)
 - Non-Silvicultural (T-NS)

- 53 Plantation: Pitch Pine
- 54 Plantation: Misc. Species (Pure)
- 60 Plantation: Red Pine-White Pine
- 61 Plantation: Red Pine-Spruce
- 62 Plantation: Red Pine-Larch
- 63 Plantation: White Pine-Spruce
- 64 Plantation: White Pine-Larch
- 65 Plantation: Scotch Pine-Spruce
- 66 Plantation: Scotch Pine-Larch
- 67 Plantation: Larch-Spruce
- 68 Plantation: Bucket Mixes
- 70 Plantation: Pine-Natural Species
- 72 Plantation: Misc. Hardwood
- 98 Plantation: Seedling-Sapling

Treatment Type

- Harvest (HV)
- Release (RL)
- Salvage (SL)
- Sanitation (SN)
- Thinning (TH)
- Regeneration (RG)
- Habitat Management (HM)
- Sale Stand (SS)

Property / State Forest Identifier:

Chateaugay State Forest, Oswego RA #4
Osw #4

Chateaugay State Forest, Oswego RA #5
Osw #5

Altmar State Forest, Oswego RA #6
Osw #6

Sandy Creek State Forest, Oswego RA #7
Osw #7

Trout Brook State Forest, Oswego RA
#12 Osw #12

Salmon River Conservation Easement
SRCE

MANAGEMENT AREA GOALS, OBJECTIVES AND ACTIONS

MANAGEMENT ACTION SCHEDULES

E.Land Management Action Schedules

Table III.A - Land Management Action Schedule for First Five-Year Period (by State Forest)								
State Forest	Stand	Acres	Forest Type			Management Strategy		Treatment Type
			Current	Post Treatment	Future	Current	Future	
Osw 4	B-5	19.3	40	40	10	T-EA	T-EA	TH
Osw 4	B-6	19.1	40	40	10	T-EA	T-EA	TH
Osw 4	B-12	9.1	10	10	10	T-UE	T-UE	TH
Osw 4	B-13	19.9	41	41	12	T-EA	T-EA	TH
Osw 4	B-48	9.2	41	41	12	T-EA	T-UE	TH
Osw 4	C-41	19.8	40	40	40	T-EA	T-EA	TH
Osw 4	C-9	47.8	10	10	10	T-EA	T-UE	TH
Osw 4	C-10	39.0	10	10	10	T-UE	T-UE	TH
Osw 4	C-11	21.0	10	10	10	T-UE	T-UE	TH
Osw 4	C-12	25.8	10	10	10	T-EA	T-UE	TH
Osw 4	C-22	11.8	10	10	10	T-EA	T-UE	TH
Osw 4	C-23	14.2	10	10	10	T-UE	T-UE	TH
Osw 4	C-15	21.0	40	40	40	T-EA	T-EA	TH
Osw 4	C-16	32.8	41	41	12	T-EA	T-EA	TH
Osw 4	C-18	9.6	41	41	12	T-EA	T-EA	TH
Osw 4	C-24	10.5	70	10	10	T-UE	T-UE	TH
Osw 4	A-14	14.8	40	40	12	T-EA	T-EA	TH
Osw 4	A-18	3.8	47	47	10	T-EA	T-EA	TH
Osw 4	C-51	23.4	40	40	10	T-EA	T-EA	TH

MANAGEMENT AREA GOALS, OBJECTIVES AND ACTIONS

MANAGEMENT ACTION SCHEDULES

Table III.A - Land Management Action Schedule for First Five-Year Period (by State Forest)

State Forest	Stand	Acres	Forest Type			Management Strategy		Treatment Type
			Current	Post Treatment	Future	Current	Future	
Osw 4	C-54	10.7	41	41	12	T-EA	T-EA	TH
Osw 4	B-11.2	10.2	40	40	10	T-EA	T-EA	TH
Osw 4	B-24	49.9	40	40	40	T-EA	T-EA	TH
Osw 4	B-28	11.9	40	40	10	T-EA	T-EA	TH
Osw 4	B-29	21.9	41	41	10	T-EA	T-EA	TH
Osw 4	B-31	2.3	40	40	10	T-EA	T-EA	TH
Osw 5	A-25	7.0	40	40	10	T-EA	T-EA	TH
Osw 5	A-27	13.1	41	41	12	T-EA	T-EA	TH
Osw 5	A-5	16.2	41	41	12	T-EA	T-UE	TH
Osw 5	A-12	10.4	41	41	12	T-EA	T-EA	TH
Osw 5	A-13	15.8	40	10	10	T-EA	T-EA	HV
Osw 5	A-16	2.9	10	10	10	T-EA	T-EA	TH
Osw 6	B-15	9.4	70	70	10	T-EA	T-UE	TH
Osw 6	B-2	15.3	12	12	12	T-EA	T-EA	TH
Osw 7	A-11	7.0	52	52	10	T-EA	EA	TH
Osw 7	A-22	8.2	32	32	32	T-EA	EA	HV
Osw 12	A-12	6.5	45	45	10	T-EA	T-EA	TH
Osw 12	A-16.1	16.9	40	40	10	T-EA	T-EA	TH
Osw 12	A-5	13.3	40	40	40	T-EA	T-EA	TH
Osw 12	A-14	2.4	10	10	10	T-EA	T-UE	TH
Osw 12	A-4.2	4.5	52	52	10	T-EA	T-UE	TH

MANAGEMENT AREA GOALS, OBJECTIVES AND ACTIONS

MANAGEMENT ACTION SCHEDULES

Table III.A - Land Management Action Schedule for First Five-Year Period (by State Forest)

State Forest	Stand	Acres	Forest Type			Management Strategy		Treatment Type
			Current	Post Treatment	Future	Current	Future	
Osw 12	A-6	9.0	48	48	10	T-EA	T-EA	TH
Osw 12	A-13	18.7	41	41	12	T-EA	T-EA	TH
Osw 12	A-7	10.2	45	45	10	T-EA	T-EA	TH
Osw 12	A-11	10.1	45	45	10	T-EA	T-EA	TH
Osw 12	A-18	17.2	10	10	10	T-UE	T-UE	TH
Osw 12	A-16.2	16.5	45	45	33	T-EA	T-EA	TH
		715.2						

Table III.B. - Land Management Action Schedule for Second Five-Year Period (by State Forest)

State Forests	Stand	Acres	Forest Type			Management Strategy		Treatment Type
			Current	Post Treatment	Future	Current	Future	
Osw 4	A-12	19.4	10	10	10	T-EA	T-EA	TH
Osw 4	A-11	73.9	63	70	12	T-EA	T-EA	TH
Osw 4	A-6	25.6	10	10	10	T-UE	T-UE	TH
Osw 4	B-18	34.7	63	63	63	T-EA	T-EA	TH
Osw 4	B-14	22.4	10	10	10	T-EA	T-EA	TH
Osw 4	B-15	1.2	40	10	10	T-EA	T-EA	HV
Osw 4	B-16	7.1	47	10	10	T-EA	T-EA	HV
Osw 4	B-25	3.8	11	11	11	T-EA	T-UE	TH

MANAGEMENT AREA GOALS, OBJECTIVES AND ACTIONS

MANAGEMENT ACTION SCHEDULES

Table III.B. - Land Management Action Schedule for Second Five-Year Period (by State Forest)								
State Forests	Stand	Acres	Forest Type			Management Strategy		Treatment Type
			Current	Post Treatment	Future	Current	Future	
Osw 4	B-26	4.5	10	10	10	T-EA	T-UE	TH
Osw 4	B-10	3.3	10	10	10	T-EA	T-UE	TH
Osw 4	B-9	56.0	10	10	10	T-UE	T-UE	TH
Osw 4	B-27	8.7	32	32	32	T-UE	T-UE	TH
Osw 4	C-37	5.9	41	41	12	T-EA	T-UE	TH
Osw 4	C-43	4.4	41	41	12	T-EA	T-UE	TH
Osw 4	C-42	5.6	41	41	12	T-EA	T-UE	TH
Osw 4	C-47	23.8	41	41	12	T-EA	T-UE	TH
Osw 4	C-46	47.5	12	12	12	T-EA	T-UE	TH
Osw 4	C-38	75.8	10	10	10	T-EA	T-UE	TH
Osw 5	A-20	38.3	41	41	12	T-EA	T-EA	TH
Osw 5	A-19	25.0	41	41	12	T-EA	T-EA	TH
Osw 5	A-22	33.5	40	10	10	T-EA	T-UE	HV
Osw 6	A-20	25.9	63	63	12	T-EA	T-EA	TH
Osw 6	A-12	24.9	41	41	12	T-EA	T-EA	TH
Osw 6	A-17	3.1	54	54	12	T-EA	T-EA	TH
Osw 7	A-4	8.9	41	41	12	T-EA	T-EA	TH
Osw 7	A-7	5.1	40	40	10	T-EA	T-EA	TH
Osw 7	A-10	22.9	41	41	12	T-EA	T-EA	TH
Osw 12	A-4.1	23.4	10	10	10	T-EA	T-UE	TH
Osw 12	A-9	12.0	10	10	10	T-UE	T-UE	TH

MANAGEMENT AREA GOALS, OBJECTIVES AND ACTIONS

MANAGEMENT ACTION SCHEDULES

Table III.B. - Land Management Action Schedule for Second Five-Year Period (by State Forest)								
State Forests	Stand	Acres	Forest Type			Management Strategy		Treatment Type
			Current	Post Treatment	Future	Current	Future	
Osw 12	A-3	3.8	10	10	10	T-UE	T-UE	TH
Osw 12	A-1	8.7	10	10	10	T-UE	T-UE	TH
Osw 12	A-35	28.4	10	10	10	T-EA	T-UE	TH
Osw 12	A-38	8.7	10	10	10	T-EA	T-UE	TH
Osw 12	A-30.2	12.9	10	10	10	T-EA	T-UE	TH
Osw 12	A-40	10.4	11	11	11	T-UE	T-UE	TH
Osw 12	A-39	6.5	10	10	10	T-UE	T-UE	TH
		726.0						

Table III.C. - Stands without Scheduled Management within 10 Years (by State Forest)				
State Forests	Stand	Acres	Forest Type	
			Current	Future
Osw 4	A-2	79.8	10	10
Osw 4	A-4	22.9	10	10
Osw 4	A-7	102.0	10	10
Osw 4	A-8	13.4	10	10
Osw 4	A-9	15.9	47	10
Osw 4	A-15	5.6	70	10
Osw 4	B-1	36.7	40	10

MANAGEMENT AREA GOALS, OBJECTIVES AND ACTIONS

MANAGEMENT ACTION SCHEDULES

Table III.C. - Stands without Scheduled Management within 10 Years (by State Forest)				
State Forests	Stand	Acres	Forest Type	
			Current	Future
Osw 4	B-30	29.0	97	10
Osw 4	B-35	7.2	54	10
Osw 4	B-37	32.0	60	12
Osw 4	B-45	19.0	10	10
Osw 4	B-50	18.7	40	10
Osw 4	C-1	20.5	40	10
Osw 4	C-2	9.7	97	10
Osw 4	C-3	17.1	60	12
Osw 4	C-7	20.0	67	10
Osw 4	C-13	8.0	32	32
Osw 4	C-28.1	46.7	60	12
Osw 4	C-28.2	12.8	60	12
Osw 4	C-29	18.7	11	11
Osw 4	C-30	7.0	10	10
Osw 4	C-31	9.9	10	10
Osw 4	C-32	21.5	12	12
Osw 4	C-33	7.5	70	12
Osw 4	C-34	8.2	32	32
Osw 4	C-35	24.6	41	12
Osw 4	C-36	67.2	60	12
Osw 4	C-44	49.4	10	10
Osw 4	C-48	17.2	10	10

MANAGEMENT AREA GOALS, OBJECTIVES AND ACTIONS

MANAGEMENT ACTION SCHEDULES

Table III.C. - Stands without Scheduled Management within 10 Years (by State Forest)

State Forests	Stand	Acres	Forest Type	
			Current	Future
Osw 4	C-49	16.3	10	10
Osw 4	C-50	3.5	10	10
Osw 4	C-55	11.6	60	12
Osw 4	C-56	32.2	60	12
Osw 4	C-58	4.2	41	12
Osw 4	C-59	23.9	60	12
Osw 4	C-60	57.5	41	12
Osw 4	C-64	99.9	40	40
Osw 4	D-1	55.9	69	69
Osw 4	D-3	10.6	40	40
Osw 4	D-8	42.8	40	40
Osw 5	A-15	55.1	70	12
Osw 5	A-17	15.9	10	10
Osw 5	A-18	28.9	10	10
Osw 5	A-23	15.9	10	10
Osw 5	A-24	46.4	10	10
Osw 5	A-29	70.1	10	10
Osw 6	A-1	38.8	12	10
Osw 6	A-2	8.6	11	11
Osw 6	A-3	8.0	11	11
Osw 6	B-6	15.0	60	12
Osw 6	B-7	10.2	60	10

MANAGEMENT AREA GOALS, OBJECTIVES AND ACTIONS

MANAGEMENT ACTION SCHEDULES

Table III.C. - Stands without Scheduled Management within 10 Years (by State Forest)				
State Forests	Stand	Acres	Forest Type	
			Current	Future
Osw 6	A-10	9.8	11	11
Osw 6	A-14	8.4	10	10
Osw 6	A-18	14.7	11	11
Osw 6	A-24	32.6	41	12
Osw 6	A-26	26.0	10	10
Osw 6	A-29	11.9	40	10
Osw 6	B-23	25.2	41	12
Osw 6	B-24	3.9	54	12
Osw 7	A-1	17.9	32	10
Osw 7	A-2	28.1	32	10
Osw 7	A-3	25.8	70	10
Osw 7	A-5	36.9	70	12
Osw 7	A-6	12.9	97	10
Osw 7	A-12	58.8	60	12
Osw 7	A-13	24.7	41	12
Osw 7	A-14	29.3	97	10
Osw 12	A-19	3.2	40	10
Osw 12	A-20	5.7	47	10
Osw 12	A-21	11.2	47	10
Osw 12	A-22	6.1	10	10
Osw 12	A-23	10.7	41	12
Osw 12	A-24	29.1	41	12

MANAGEMENT AREA GOALS, OBJECTIVES AND ACTIONS

MANAGEMENT ACTION SCHEDULES

Table III.C. - Stands without Scheduled Management within 10 Years (by State Forest)

State Forests	Stand	Acres	Forest Type	
			Current	Future
Osw 12	A-27	14.4	32	10
Osw 12	A-28	14.7	41	12
Osw 12	A-29	8.5	10	10
Osw 12	A-30.1	26.8	11	11
Osw 12	A-32	24.0	10	10
Osw 12	A-34	4.3	45	33
Osw 12	A-36	17.0	70	12
Osw 12	A-37	47.1	63	12
Osw 12	A-43	6.6	48	10
Osw 12	A-44.1	16.3	10	10
Osw 12	A-44.2	4.5	10	10
Osw 12	A-45.1	7.8	41	12
Osw 12	A-45.2	5.4	40	10
		2189.8		

MANAGEMENT AREA GOALS, OBJECTIVES AND ACTIONS

MANAGEMENT ACTION SCHEDULES

Table III.D - Resource Protection/Natural Areas (by State Forest)			
State Forests	Stand	Acres	Forest Type
Osw 4	A-1	18.1	32
Osw 4	A-3	36.1	11
Osw 4	A-5	13.9	41
Osw 4	A-10	3.1	10
Osw 4	A-13	14.6	32
Osw 4	A-16	6.4	32
Osw 4	A-17	3.7	99
Osw 4	B-2	3.4	32
Osw 4	B-3	5.9	10
Osw 4	B-4	8.7	10
Osw 4	B-7	16.8	32
Osw 4	B-8	8.4	40
Osw 4	B-11.1	42.3	70
Osw 4	B-17	4.2	32
Osw 4	B-19	4.0	99
Osw 4	B-20	33.8	69
Osw 4	B-21	17.5	11
Osw 4	B-22	9.5	10
Osw 4	B-23	12.8	32
Osw 4	B-33	4.3	32
Osw 4	B-34	4.9	54
Osw 4	B-36	5.8	46

MANAGEMENT AREA GOALS, OBJECTIVES AND ACTIONS

MANAGEMENT ACTION SCHEDULES

Table III.D - Resource Protection/Natural Areas (by State Forest)			
State Forests	Stand	Acres	Forest Type
Osw 4	B-38	2.5	99
Osw 4	B-39	13.2	10
Osw 4	B-40.1	15.6	10
Osw 4	B-40.2	6.5	11
Osw 4	B-41	6.8	97
Osw 4	B-42.1	5.6	10
Osw 4	B-42.2	26.0	99
Osw 4	B-43	29.6	10
Osw 4	B-44	2.4	41
Osw 4	B-46	10.5	41
Osw 4	B-47	23.9	32
Osw 4	B-49	2.1	10
Osw 4	B-51	16.1	41
Osw 4	B-52	16.2	41
Osw 4	C-3	24.2	32
Osw 4	C-6	10.9	32
Osw 4	C-8	4.4	99
Osw 4	C-14	31.2	99
Osw 4	C-17	15.8	14
Osw 4	C-19	16.5	70
Osw 4	C-20	37.8	24
Osw 4	C-21	147.6	32

MANAGEMENT AREA GOALS, OBJECTIVES AND ACTIONS

MANAGEMENT ACTION SCHEDULES

Table III.D - Resource Protection/Natural Areas (by State Forest)			
State Forests	Stand	Acres	Forest Type
Osw 4	C-25	1.9	46
Osw 4	C-26	12.3	40
Osw 4	C-27	3.0	70
Osw 4	C-39	20.6	32
Osw 4	C-40	9.2	99
Osw 4	C-45	59.6	99
Osw 4	C-52	4.0	10
Osw 4	C-53	3.3	99
Osw 4	C-57	8.8	21
Osw 4	C-61	2.6	99
Osw 4	C-62	13.4	68
Osw 4	C-63	23.7	11
Osw 4	C-65	6.3	99
Osw 4	C-66	5.7	99
Osw 4	D-2	42.5	10
Osw 4	D-4	11.5	11
Osw 4	D-5	1.6	32
Osw 4	D-6	3.6	10
Osw 4	D-7	7.0	10
Osw 4	D-9	62.4	10
Osw 4	D-10	25.4	11
Osw 4	D-11	27.5	99

MANAGEMENT AREA GOALS, OBJECTIVES AND ACTIONS

MANAGEMENT ACTION SCHEDULES

Table III.D - Resource Protection/Natural Areas (by State Forest)			
State Forests	Stand	Acres	Forest Type
Osw 4	D-12	72.9	11
Osw 4	D-13	15.0	10
Osw 4	D-14	3.0	69
Osw 4	D-15	31.8	10
Osw 4	D-16	2.3	70
Osw 4	D-17	2.9	69
Osw 5	A-32	4.1	41
Osw 5	A-33	5.2	11
Osw 6	A-4	1.8	11
Osw 6	A-5	1.9	69
Osw 6	A-6	21.1	11
Osw 6	A-7	9.3	11
Osw 6	A-8	5.8	99
Osw 6	A-9	10.7	11
Osw 6	A-11	4.7	20
Osw 6	A-13	10.9	11
Osw 6	A-15	17.2	11
Osw 6	A-16	5.9	11
Osw 6	A-19	15.9	11
Osw 6	A-21	7.1	41
Osw 6	A-22	16.2	32
Osw 6	A-23	7.3	11

MANAGEMENT AREA GOALS, OBJECTIVES AND ACTIONS

MANAGEMENT ACTION SCHEDULES

Table III.D - Resource Protection/Natural Areas (by State Forest)			
State Forests	Stand	Acres	Forest Type
Osw 6	A-25	8.0	11
Osw 6	A-27	13.4	41
Osw 6	A-28	4.9	10
Osw 6	B-2	27.0	11
Osw 6	B-3	10.6	12
Osw 6	B-4	4.2	99
Osw 6	B-5	14.7	12
Osw 6	B-8	7.0	11
Osw 6	B-9	27.1	11
Osw 6	B-10	6.1	12
Osw 6	B-11	29.9	42
Osw 6	B-12	11.0	41
Osw 6	B-13	18.7	10
Osw 6	B-14	14.8	11
Osw 6	B-16	44.7	11
Osw 6	B-17	12.3	10
Osw 6	B-18	44.6	10
Osw 6	B-18	140.1	11
Osw 6	B-20	15.5	11
Osw 6	B-21	7.9	11
Osw 6	B-22	5.9	32
Osw 6	B-25	12.4	99

MANAGEMENT AREA GOALS, OBJECTIVES AND ACTIONS

MANAGEMENT ACTION SCHEDULES

Table III.D - Resource Protection/Natural Areas (by State Forest)			
State Forests	Stand	Acres	Forest Type
Osw 7	A-8.1	7.0	10
Osw 7	A-8.2	7.5	32
Osw 7	A-9	4.8	52
Osw 7	A-15	28.2	46
Osw 7	A-16	52.4	10
Osw 7	A-17	13.0	46
Osw 7	A-18	3.8	40
Osw 7	A-19	53.8	70
Osw 7	A-20	11.7	32
Osw 7	A-21	29.1	11
Osw 7	A-23	35.5	32
Osw 12	A-2	7.0	32
Osw 12	A-8	2.2	11
Osw 12	A-10	1.4	32
Osw 12	A-15	19.6	32
Osw 12	A-17	19.0	11
Osw 12	A-25	10.1	32
Osw 12	A-26	31.4	32
Osw 12	A-31	3.8	11
Osw 12	A-33	8.4	11
Osw 12	A-41	6.1	11
Osw 12	A-42	5.6	69

MANAGEMENT AREA GOALS, OBJECTIVES AND ACTIONS

Table III.D - Resource Protection/Natural Areas (by State Forest)			
State Forests	Stand	Acres	Forest Type
SRCE	CE-1	24.0	99
SRCE	CE-2	41.4	32
SRCE	CE-3	34.2	32
	Total Acres	2394.5	

Bibliography

Alerich, C. L. and Drake D. A. 1995. Forest Statistics for New York: 1980 and 1993. U.S. Forest Service Northeast Forest Experiment Station Resource Bulletin NE-132

Clark, George Tisdale. (1946) Historical Sketch of Oswego, Tenth Publication of the Oswego Historical Society. Palladium-Times, Inc., Oswego, NY. pp 89-96.

Crocoll, Scott T. (2011) Personal communications, NYS DEC Division of Fish, Wildlife & Marine Resources, Albany, NY

Faust, Ralph M, (1954) The Story of Oswego County

Generic Environmental Impact Statement on the Oil, Gas and Solution Mining Regulatory Program (GEIS), NYSDEC, 2012. <http://www.dec.ny.gov/energy/45912.html>

McGee, Gregory, Salmon River Watershed Natural Resource Assessment. State University of New York College of Environmental Science and Forestry, 2008.
http://www.dec.ny.gov/docs/regions_pdf/srwasa.pdf

New York State 2nd Breeding Bird Atlas 2008. NYS DEC Albany, New York.

New York State Forestry Best Management Practices for Water Quality, Field Guide 2000. NYS DEC. Albany, New York

New York State Comprehensive Wildlife Conservation Strategy Plan (2005), NYS DEC, NYS OPRHP, NYS DOS, Albany, NY. <http://www.dec.ny.gov/animals/30483.html>

New York State Department of Environmental Conservation. Protection of Waters Program Web Site, Classification of Waters, 2012. <http://www.dec.ny.gov/permits/6042.html>

BIBLIOGRAPHY

New York State Department of Environmental Conservation. Strategic Plan for State Forest Management, 2010. (SPSFM) <http://www.dec.ny.gov/lands/64567.html>

New York State Historic Preservation Act of 1980, New York State Office of Parks, Recreation & Historic Preservation, Albany, NY. <http://nysparks.state.ny.us/shpo/environmental-review/state-regulations.aspx>

New York State Office of Parks, Recreation and Historic Preservation. The New York State Statewide Comprehensive Outdoor Recreation Plan 2009-2013, 2008. <http://nysparks.state.ny.us/recreation/trails/statewide-plans.aspx>

North East State Foresters Association. The Economic Importance and Wood Flows from New York's Forests, 2007. <http://www.nefainfo.org/publications/2007%20Publications/NEFAEconomicImportNY.pdf>

ONR-DLF-1/Plantation Management on State Forests (March 21, 2011), NYS DEC Program Policy, Albany, NY. http://www.dec.ny.gov/docs/lands_forests_pdf/policysplantation.pdf .

ONR-DLF-2/Retention on State Forests (March 21, 2011), NYS DEC Program Policy, Albany, NY. http://www.dec.ny.gov/docs/lands_forests_pdf/policysfrention.pdf .

ONR-DLF-3/Clearcutting on State Forests (March 21, 2011), NYS DEC Program Policy, Albany, NY. http://www.dec.ny.gov/docs/lands_forests_pdf/policysclearcutting.pdf .

Perry, Justin (2012) Personal communication. NYSDEC Bureau of Lands & Forests, Albany, NY.

Rapparlie, D. F. et al. (1981) Soil Survey of Oswego County, New York. USDA in Association with Cornell Agriculture Experiment Station, Ithaca, NY.

Region 7 Recreation Master Plan for State Forests & Unique Areas (Draft). 2001. NYS DEC Albany, New York.

Salmon River Corridor Grant of Open Space Conservation Easement (1993), Niagra Mohawk Power Corporation & New York State Department of Environmental Conservation, Syracuse, NY.

Salmon River Corridor Open Space Conservation Easement Management Plan (2009), Niagara Mohawk Properties, Inc. & New York State Department of Environmental Conservation, Syracuse, NY

Sampson, Harold E. (1971) Tug Hill Country: Tales from the Big Woods, North Shore Publishing; pp 65.

Speiser R. & Bosakowski T. (1987) Nest Site Selection by Northern Goshawks in Northern New Jersey and Southern New York, *The Condor* 89:357-394, Published by The [Cooper Ornithological Society](#).

Species of Greatest Conservation Need, New York State Department of Environmental Conservation, <http://www.dec.ny.gov/animals/9406.html>

State Environmental Quality Review Act (1995), New York State Department of environmental Conservation, Albany, NY. <http://www.dec.ny.gov/regs/4490.html>

Strategic Plan for State Forest Management, 2010. NYS DEC Albany, New York.

Supplemental Generic Environmental Impact Statement on the Oil, Gas and Solution Mining Regulatory Program (SGEIS), NYSDEC, 2012. <http://www.dec.ny.gov/energy/47554.html>

Tug Hill Commission. The Tug Hill Forest: Contributing to a Regional Economy and a Way of Life. 2003. <http://www.tughill.org/PublicationAndReferences/IssuePapers/TheTugHillForestContributingToRegionalEconomyandWayofLife2003.pdf>

Unpaved Forest Road Handbook (2004) NYS DEC Division of Lands and Forests, Albany, New York.

USGS, National Multi-Resolution Land Characteristics 2001 (MRLC2001) Image Processing Procedure Revised 01/09/2006 http://landcover.usgs.gov/pdf/image_preprocessing.pdf

Wolford, Glenn (2010) Personal communication. NYSDEC Bureau of Real Property, Syracuse, NY.

Glossary

Access trails - temporary unpaved roads which do not provide all weather access within the Unit. They are not designed for long term and repeated use by heavy equipment. These corridors were originally built for the seasonal removal of forest products by skidding to landings or other staging areas. Built 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. (G)

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

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

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

Best Management Practices (BMP's) - 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. (C)

Biological diversity (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. (K)

Biological legacy - an organism, living or dead, inherited from a previous ecosystem; biological legacies often include large trees, snags, and down logs left after timber harvesting. (C)

Buffer strip - 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. (C)

Chipwood - low grade or small diameter logs used to make paper products and is processed into wood chips.

Clearcut - 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. (K)

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

Cohort - a population of trees that originate after some type of disturbance. (E)

Community – **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. (F) (K)

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

Coppice - stems originating primarily from vegetative reproduction; e.g. the production of new stems from stumps, roots or branches. (C)

Corridor - a linear strip of land identified for the present or future location of a designed use within its' boundaries. *Examples:* recreational trails, transportation or utility rights-of-way. When referring to wildlife, a corridor may be a defined tract of land connecting two or more areas of similar management

GLOSSARY

or habitat type through which a species can travel from one area to another to fulfill any variety of life-sustaining needs. (C)

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

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

Cutting interval - the number of years between treatments in a stand. (E)

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

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

Early successional habitat - 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. (K)

Ecoregion - sometimes called a **bioregion**, is an [ecologically](#) and geographically defined area that is smaller than an [ecozone](#) and larger than an [ecosystem](#). Ecoregions cover relatively large areas of land or water, and contain characteristic, geographically distinct assemblages of natural [communities](#) and [species](#). (J)

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

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

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

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

Fine Woody Material (FWM) - any piece of small woody material or tree branches on the ground in forest stands or in streams. (C)

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

Forest type - a community of trees defined by its vegetation, particularly its dominant vegetation as based on percentage cover of trees. (C)

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

Fragmentation - **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 that remain in areas of younger-aged forest. (C) (K)

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

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

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

Grassland - land on which the vegetation is dominated by grasses, grass like plants or forbs. (C)

Group selection - a type of **uneven-aged forest** management where 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 shade tolerant regeneration and larger openings providing conditions suitable for more shade intolerant regeneration —note 2. the management unit or stand in which regeneration, growth, and yield are regulated consists of an aggregation of groups. (E) (K)

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

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

Haul roads - permanent, unpaved roads which are not designed for all-weather travel, but may have hardened or improved surfaces with artificial drainage. They are built according to best management practices primarily for the removal of forest products, providing limited access within the unit by log trucks and other heavy equipment. These roads may or may not be open for public motor vehicle use, depending on management priorities and objectives. They may serve as recreational access corridors, but are not maintained according to specific standards or schedules. (I)

Herpetofauna - the reptiles and amphibians of a particular region, habitat, or geological period.

GLOSSARY

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

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

Landscape - 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. (K)

Landscape ecology - the study of the distribution and abundance of elements within landscapes, the origins of these elements, and their impacts on organisms and processes. (K)

Late successional - 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. (K)

Legacy tree - a tree, usually mature or old-growth, that is retained on a site after harvesting or natural disturbance to provide a biological remnant. (C)

Long lived conifer - conifers that are capable of living 135 years or more on forest sites in Central New York. Tree species typically include eastern hemlock, eastern white pine, Norway spruce and northern white cedar. (E)

Mature Forest – 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.

Mid successional - forests that are pole-sized or larger, with relatively open understories. (K)

Motorized Access Permit 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.

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

Multiple use trails - are trails which have more than one use such as a snowmobile trail in the winter and a foot trail in the summer. They can also be recreational trails which utilize existing roadways used for timber management or other administrative purposes.

Native species - indigenous species that are normally found as part of a particular ecosystem. (C)

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

Niche - 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. (K)

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

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

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

Overstory removal - the cutting of trees constituting an upper canopy layer to release adequate desirable advanced regeneration in the understory. (K)

Parcelization - 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. (H)

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

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

Public Forest Access Roads (PFAR)- permanent, unpaved roads which may be designed for all-weather use depending upon their location, surfacing and drainage. These roads provide primary access for administration and public use within the unit. The design standards for these roads are those of the Class A and Class B access roads as provided in the Unpaved Forest Road Handbook (8/74). As a general guideline, sufficient access is typically achieved when 1 mile of PFAR is developed for each 500

GLOSSARY

acres of state land, and no position within the Unit lies more than 1 half mile from a PFAR or public highway. (G) (I)

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

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

Refugia - An area that has escaped ecological changes occurring elsewhere and so provides a suitable habitat for relict species

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

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

Residual - trees remaining after any type of treatment. (C)

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

Rotation - the period of years between stand establishment and regeneration as designated by management decisions. (H)

Sapling - trees that are generally 1 and 5 inches diameter at breast height. (E)

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

Seedling - a young tree originating from seed that is less than 1 inch in diameter. (A)

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

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

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

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

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

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

Single tree selection - a type of uneven-aged forest management where 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 — synonym individual tree selection. (K)

Site - 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. (C)

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

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

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

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

State Forest / State Reforestation Area - lands owned by the State of New York, administered by the Department of Environmental Conservation Division of Lands & Forests, and authorized by Environmental Conservation Law to be devoted to the establishment and maintenance of forests for watershed protection, the production of timber and other forest products, and for recreation and kindred purposes. These forests shall be forever devoted to the planting, growth, and harvesting of such trees and may also be leased for the discovery and removal of oil and gas, provided that such leases do not interfere with the accomplishment of those purposes previously listed (*ECL Sections 9-0501 and 9-0507*). (E)

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

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

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

GLOSSARY

GLOSSARY REFERENCES

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

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

Universal access - 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. (K)

Variable patch retention - 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. (K)

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

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

GLOSSARY REFERENCES

(A). Audubon-New York. Wildlife and Forestry in New York Northern Hardwoods: A Guide for Forest Owners and Managers. Audubon-New York. Albany, NY.

(B). Gelburd, Diane. Implementing Ecosystem Based Assistance for the Management of Natural Resources in the Soil Conservation District. USDA SCS.

(C). Helms, John A. 1998. *The Dictionary of Forestry*. Society of American Foresters, Bethesda, MD.

(D). Nyland, Ralph D. 2002, 1996. *Silviculture: Concepts and Applications*. 2nd ed. McGraw-Hill. New York, NY.

(E). New York State Department of Environmental Conservation (NYSDEC). Division of Lands and Forests. Internal references.

(F). Reshke, Carol. 1990. Ecological Communities of New York State. NYSDEC.

(G). 2004 State Forest Infrastructure Development Handbook. NYS DEC, Bureau of State Land Management.

(H). Biodiversity Project Working Group 2004, Terms and definitions.

(I). 2004 Unpaved Forest Road Handbook. NYS DEC, Bureau of State Land Management.

(J) Wikipedia, the free encyclopedia 2010.

GLOSSARY REFERENCES

(K) Strategic Plan for State Forest Management, 2010. NYS DEC. Albany, New York.

APPENDICES & FIGURES

APPENDIX A - SUMMARY OF COMMENTS DURING PUBLIC SCOPING SESSIONS

Appendices & Figures

Appendix A - Summary of Comments During Public Scoping Sessions

Starting on June 5, 2013 three separate Public Scoping sessions were held for the purpose of gathering public input to help guide the decision making process for the Eastern Lake Ontario Unit Management Plan. Also on this date a Public Comment meeting was held to provide the public the opportunity to comment on the “Chateaugay State Forest Draft ATV Connector Trail Plan”, which is part of this management Unit. The Department also allowed 30 days for input and comments to be given for both meeting topics. The following are summaries of both public meetings and comments received.

Scoping Summary for the Eastern Lake Ontario Management Unit.

The Eastern Lake Ontario Public Scoping sessions were conducted in three open house formats, starting at 10am, 2pm, and 6pm, each lasting 2 hours. Twenty one individuals signed in and thirteen comments were received. The following is a summary of the comments received and have been consolidated into selected topics for length and clarity.

New Snowmobile Trail Request

Six comments were received requesting the development of a new snowmobile trail on the Chateaugay State Forest. These individuals have requested this trail to improve a safe route around the north side of the Salmon River Reservoir while minimizing the use of County and Town roads which are currently used. This trail would also increase better access and encourage economic development by allowing a more direct connection from the Pulaski Orwell area to Redfield and the Tug Hill trail systems. The Redfield Snowmobile Association has received numerous request by club members to develop a new trail to address the issues described. The Redfield Snowmobile Association has visited the proposed location and believe they could utilize existing skid trail for a large portion of the trail if permission were given.

One comment was received sharing concerns that a new snowmobile trail through the proposed area would encourage more use during hunting season which would increase the likely hood of trespassing by hunters on to their private land.

This request has been addressed in Action 3.2.1 .

Concerns about Restrictions to Trapping

Four comments were received concerning the sport of trapping and how new trails would affect trapping opportunities on public lands. One comment stated that the information provided for the scoping did not adequately promote trapping and its importance, historically, commercially, recreationally and ecologically on State lands. All comments share major concerns over the

**APPENDIX B - SUMMARY DOCUMENT FOR THE CHATEAUGAY STATE FOREST DRAFT ATV
CONNECTOR TRAIL PLAN**

development of any new trails which would restrict the use of body gripping traps within 100 feet of any public maintained trail. Each comment requests the department take into consideration the concerns and restrictions which would affect trappers when making any decisions. The comments emphasize the desire to maintain and protect the current trapping opportunities allowed on public lands.

These comments are addressed in Action 3.2.1 and Action 4.4.3.

Habitat Improvements

Two comments were received concerning the natural habitat and current conditions.

One comment requests keeping the Unit as native and natural as possible. This request has been addressed in Action 1.1.5 by protecting sensitive areas.

The second comment requested harvesting of pine plantations and replanting to increase and improve the habitat for snow shoe hare. This request is addressed in Action 1.2.1 and Action 1.6.3.

Fish Stocking

A comment was received requesting the stocking of Peking Brook with brook trout. This comment was addressed in Action 1.7.4.

**Appendix B - Summary Document for the Chateaugay State Forest Draft ATV
Connector Trail Plan**

**Chateaugay State Forest Draft ATV Connector Trail Plan
Initial Public Information Meeting
Public Input Summary**

Purpose

This document provides a brief summary of the public comments received concerning the Chateaugay State Forest Draft ATV Connector Trail Plan. As such, it summarizes the comments received from individuals and groups that have participated in the public participation process by providing written public comments or attending the public information meeting held on June 5, 2013. The DEC greatly appreciates the time and input that participants bring to the planning process.

Background

In January 2013, the New York State Department of Environmental Conservation (DEC) received a formal request for an ATV connector link crossing Chateaugay State Forests for an ATV trail. The Department's Strategic Plan for State Forest Management has outlined criteria for

APPENDICES & FIGURES

APPENDIX B - SUMMARY DOCUMENT FOR THE CHATEAUGAY STATE FOREST DRAFT ATV CONNECTOR TRAIL PLAN

evaluating potential connector trails. As part of the evaluation process, the DEC has sought public comments to the requested draft connector trail plan.

Public participation is an important and necessary part of the planning process. DEC manages State Forests for many recreational and ecosystem based values and services such as biodiversity, clean water, wildlife habitat, and many recreational uses.

The public was invited to participate through public information notices, press releases, newspaper articles, and direct mailing to about 150 potentially affected stakeholders, adjoining landowners, nearby residents, town officials, recreational groups, and DEC Adopt-A-Natural Resource volunteers. On June 5, 2013 a public comment meeting was held at the Salmon River Hatchery to explain the requested ATV connector trail on State land, the Department's decision making process and accept comments concerning the proposed connector trail prior to the Department's final decision. The public comment period for this plan ended July 8, 2013.

Summary

The public meeting was attended by 45 registered and approximately 10 unregistered attendees. The meeting started out with opening remarks and DEC staff introductions by Ken Lynch, the DEC Region 7 Regional Director. A brief overview of the draft plan was presented by Dan Sawchuck, Forester 1. The public comment portion of the meeting was handled by Diane Carlton, Regional 7 Citizen Participation Specialist. After all public comments were received there was a brief question and answer period and then the meeting was adjourned.

There were three different ways the public was encouraged to participate.

1. Public comment during the comment portion of the meeting.
2. Written comments by letter, email and cards provided by the Department at the meeting and during the comment period.
3. Personal communication with staff by phone or at the meeting

There were 20 comments gathered from stakeholders during the designated comment period. There were nine public comments, three comment cards and two personal communication comments with individuals received during the public meeting. The DEC also received six written letters by mail or email addressing the proposed connector trail. Of the 20 comments, sixteen were in support of the proposed trail, three were not in favor of the proposal and one was

APPENDIX B - SUMMARY DOCUMENT FOR THE CHATEAUGAY STATE FOREST DRAFT ATV CONNECTOR TRAIL PLAN

a statement of company policy that no ATV's are allowed on their land. Those making comment included concerned citizens, four adjoining landowners to State Land, three were elected officials and one represented the Oswego County Department of Community Development Tourism and Planning.

Summary of the comments gather to date.

<u>COMMENTS RECEIVED</u>
Type of Communication: Public Comments during Comment meeting.
Oswego County Department of Community Development, Tourism and Planning has a solid history with the Oswego County ATV Club with maintaining over 100 miles of trails within the county. The Club promotes responsible and safe use to over 1000 club members, both visitors and residents of Oswego County. We support the proposed ATV connector trail to help improve the local economy through tourism dollars as long as it does not have any adverse environmental impact.
As a member of the Oswego County Sportsman Federation my main concern is the impact of the trail proposal on hunting, fishing and trapping. I support the trail as long it does not restrict hunting or trapping.
As president of the Pulaski Boylston Snowmobile Club, we share approximately 15 miles of trail with the Oswego County ATV Club. They take excellent care of these sections of trails and I am in favor of this proposed trail.
As a both a member of the Pulaski Boylston Snowmobile Club and the Oswego County ATV Club I support this trail opening. We work hand in hand together to maintain the trails and we need more multiuse trails. Most of the trail is on private land and I would like to eventually see it all on State land to avoid private land. The State land is the peoples land and it can't always be forever wild and shouldn't have it all forever wild. With proper management some parts of State land should be open up for use.
I support the trail proposal because I hunt, fish, trap, ride ATV's and snowmobiles. I use state land for trapping and hunting and ATV use is one more thing that allows me to use state land. I also feel that the ATV club does an excellent job in maintaining the trails.
A comment or request was made concerning a different area than the ATV proposal. The request concerns the Eastern Lake Ontario UMP Unit. The Redfield Snowmobile Association would like a trail across the Chateaugay State Forest from the Jackson Road to Beecherville Road for use by snowmobiles to make it safer by getting sleds off of the roads in that area..
Type of Communication: Written Comments by Cards, mail and email.
I encourage you to approve the Chateaugay State Forest Draft ATV Connector Trail Plan for the Oswego County ATV Club. We as a family enjoy riding the ATV Club trail systems every

APPENDICES & FIGURES

APPENDIX B - SUMMARY DOCUMENT FOR THE CHATEAUGAY STATE FOREST DRAFT ATV

CONNECTOR TRAIL PLAN

summer. I can assure you that the Club will live up to all their promises. I belong to other clubs for access trails, and this club is by far the most organized. As far as the trails being policed, it is rare that we are not stopped and asked to see our club stickers when we are riding the trails. We are all good people who by the way pay taxes and spend money in Oswego County and we deserve access to our State land.

The proposed connector trail is presently a snowmobile trail, and previously used by ATV's. I understand and appreciate the DEC's concerns. As a hunter, hiker, fisherman and ATV recreational individual, I think it would be a wonderful thing for the DEC to allow ATV access on this Connector Trail. The Oswego County ATV Club is here for the community, not just their own personal needs.

I am a landowner with land at the end of Falls Road. The Oswego Snowmobile / ATV trail passes through my property. At this time I believe it would be advantageous to me as a landowner and the community in general for that section of trail to be reopened for public use. Unless some dramatic new information comes to light to change it my position is favorable for the proposal.

I am a member of the Oswego County ATV Club and I would appreciate it if you could open trails within the Chateaugay State Forest. I think we should be able to use State land like others. The ATV Club maintains the trails that we currently use and would maintain any new trails that open. It would also cut down on illegal riding through the area because the club has its own patrols that run routinely on all trails they access.

The website for the ATV Club states that it has "more than 100 mile of trails", why would they need more? Allowing them to use State land sets a terrible precedent, What's to prevent other clubs from seek additional trails? It will be difficult to kick them off at a later date once they are established. Not to mention environmental concerns such as topsoil erosion, disruption to habitats and senseless fuel usage along with increased hydrocarbon pollution.

My concern regards the opening of land to ATV use. I acknowledge that ATV recreation is valuable to some, my concern is the damage ATV's have on trails, plant and animal habitat. Many times it is difficult to control use once it is allowed. Personally, I like to keep the Unit Management Plan to non-motorized use so people can enjoy nature. Once areas are damaged, it takes much time and resources to bring them back. Also, ATV use seems to be more damaging to land compared to snowmobile use.

We own 23.5 acres on County Route 2, about a ¼ mile from the Dam Road in Orwell and as you know, we are surrounded by Chateaugay State Forest. My husband and I are thoroughly opposed both for now and forever to ATV, off-trail bikes, or any motorized vehicle. In our opinion this will spoil the forest and bring noise pollution. It will upset the game and pristine nature of the forest. This forest does not need snowmobile trails or any motorized vehicle polluting it. The gas and oil and trash that will most likely be left behind will spoil the pristine nature, beauty and tranquility of the forest.

I strongly support this proposal. ATV Trails provide regional tourism opportunities and allow outdoor enthusiasts the ability to enjoy our natural resources, In addition to enabling riders the opportunity to enjoy the outdoors, ATV use has significant economic impact on our local economy. According to a

APPENDIX B - SUMMARY DOCUMENT FOR THE CHATEAUGAY STATE FOREST DRAFT ATV CONNECTOR TRAIL PLAN

<p>study published by the New York State Tug Hill Commission, it is estimated that ATV tourism contributes approximately \$35 million into the regional economy both directly and indirectly.</p> <p>In our area ATV enthusiasts take great pride in protecting our natural resources and often participate in many outdoor activities such as hunting, and fishing. Connecting these trails will give riders greater opportunities to explore different areas, enjoy our natural resources while participating in an activity they enjoy.</p> <p>Lastly I have been impressed with the work the Oswego County ATV Club has done with their trail located in Oswego County. Their organization has been a good steward for ATV activity in county. They maintain over 100 miles of trails and take great pride to ensure the trails are well maintained and family oriented. Their club works diligently to ensure that the surrounding natural resources are protected. In Closing, I Strongly support the connective trail as proposed. There are a number of benefits in moving forward on this project and I urge the DEC to approve the connective trail. – <i>State Assemblyman William A. Barclay</i></p>
<p>Two years ago, with the cooperation of Mr. Cronk, we re-routed the ATV trail that crossed our land. The trail originally went through a low, wetland area, and considerable erosion was the result. We re-routed the trail to the higher and drier part of our property. I have no objections to the AATV club’s use of this new trail at their own risk.</p>
<p>Type of Communication: Personal communication with staff by phone or at the meeting</p>
<p>The National Grid Power Company has a policy of no ATV use on their company lands.</p>
<p>I allow the ATV trail on my property and think the State should open up the proposed section.</p>
<p>Type of Communication: Both public comment and written correspondence.</p>
<p>As President of the Oswego County ATV Club, I think we all have a right to use State land, we are part owners too. I requested and support this trail and would like to work with the DEC to see it open.</p>
<p>I would like to strongly urge the Department of Environmental Conservation to develop a public ATV connector trail through a portion of Chateaugay State Forest in Oswego County. Oswego County is working closely with groups like the Oswego County ATV club to expand the Central New York’s tourism economy and bring more visitors into the area who will shop at our stores, eat at our restaurants, and stay at our local hotels and bed and breakfasts. Using an abandoned road and snowmobile trail located in the southern portion of the Chateaugay State Forest to connect Stone Quarry Drive to Dam Road, two roads open to ATV use, will provide an important link in the Oswego County’s trail network. In this case the use of the trail would not compromise the protection of the natural resources of the Unit, conflict with neighbors or interfere with other established recreational uses. In fact, the development of a designated connector trail would reduce ATV usage of non-designated areas in the state forest while expanding opportunities in the area. By working together to diversify and expand Oswego County’s four-season tourism economy, we can help bring more jobs</p>

APPENDICES & FIGURES

APPENDIX B - SUMMARY DOCUMENT FOR THE CHATEAUGAY STATE FOREST DRAFT ATV CONNECTOR TRAIL PLAN

and visitors to Central New York while improving the quality of life for our residents. - ***State Senator
Patty Ritchie***

The ATV Trail system crosses quite a bit of my land. I am also the County Legislator for this area and a member of the ATV and Snowmobile club. I enjoy seeing the snowmobiles and four wheelers use this trail and I would hate to see them go away. I know this activity brings people to the area and when they are here they buy a little bit of something now and then and it adds to our economy. I support this proposal and have no objections to their designated trails crossing my land. – ***County Legislator
Milferd Potter***

Please note: Listing of these comments does not imply any endorsement, agreement or disagreement by the DEC. The comments are listed to show the many viewpoints and ideas received during the public participation phase. As such, this document does not include a response section. The final decision on the implementation of the Chateaugay State Forest Draft ATV Connector Trail Plan will include this comment summary and a response section. The comments have, in some cases, been edited for length and clarity.

Appendix C - Chateaugay State Forest Draft ATV Connector Trail Plan

In January 2013, the New York State Department of Environmental Conservation (DEC) received a formal request for an ATV connector link crossing a State Forests for an ATV trail. As part of the evaluation process, the DEC is seeking public comments to the requested connector trail proposal.

The Oswego County ATV Club Inc. has requested to utilize segments of an existing snowmobile trail and abandoned road located on the southern portion of Chateaugay State Forest as part of their club trail system. This trail would provide a connection from Stone Quarry Drive to Dam Road--both roads are open to ATV use by the Town of Orwell. The requested trail sections are located on and near the southern boundary of Chateaugay State Forest in the Town of Orwell, Oswego County. The total length of the requested portion of trail on state land is approximately one mile. Seven-tenths of this is found on the old abandoned Stone Quarry Road and the remaining three- tenths go on and off of state land following the existing snowmobile trail.

Evaluation Process

As outlined in the Strategic Plan for State Forest Management (<http://www.dec.ny.gov/lands/64567.html>), the DEC can authorize ATV use on designated trails or roads on State Forests. The following excerpts are from the strategic plan:

STRATEGIC PLAN FOR STATE FOREST MANAGEMENT

Based on evaluation of past efforts to accommodate ATV use and the many impacts and constraints associated with off road vehicles, the Department will not permit ATV use on State Forests , except:

- *as may be considered to accommodate a “connector trail” through Unit Management Planning or a similar public process; and*
- *on those specific routes designated for use by DEC-issued Motorized Access Permit for People with Disabilities (MAPPWD).*

APPENDICES & FIGURES

APPENDIX C - CHATEAUGAY STATE FOREST DRAFT ATV CONNECTOR TRAIL PLAN

Connector Trails

In the event another entity is establishing a legitimate public ATV trail system on lands adjacent to a State Forest, and a State Forest is needed to serve as a connecting link, or in the event that a State Forest road or trail could serve to connect already designated ATV trails open to the public, DEC will evaluate and consider the proposal.

Any such trail proposal must comply with state law, department policy and regulations. If it is determined to be environmentally compatible, a connecting trail could be established on the State Forest. This would be dependent on the availability of sufficient funds and support to establish and maintain a sustainable trail.

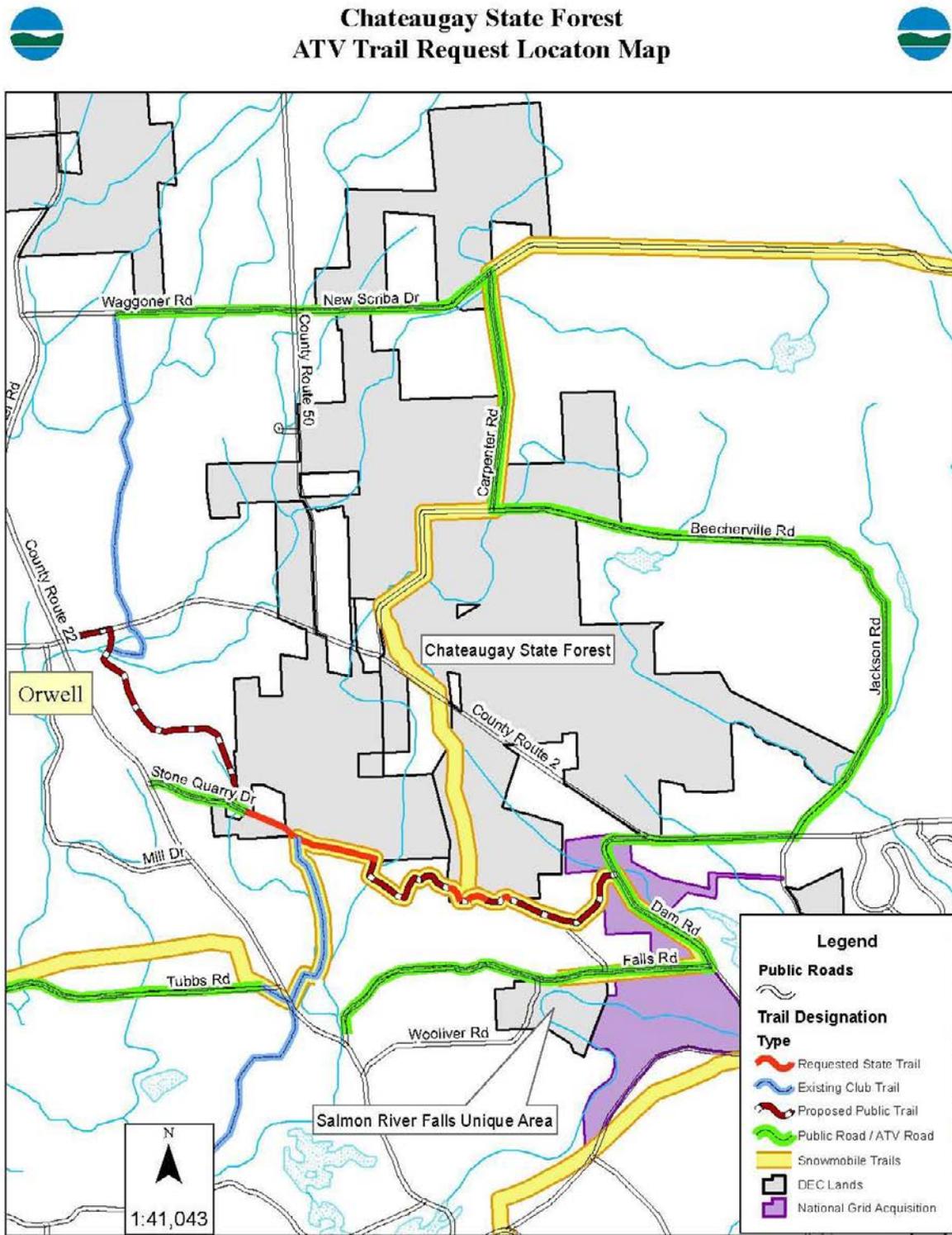
The State Forest based connector trail, if approved, must follow the shortest environmentally acceptable route available. The inclusion of a connector trail in a UMP and the subsequent establishment of any such trail could only occur if it does not compromise the protection of the natural resources of the Unit, significantly conflict with neighbors of State Forests, nor interfere with other established recreational areas. Such designation shall only occur through the amendment or adoption of a UMP or another process which provides similar opportunities for public review and comments and full SEQRA review of the proposed designation.

Connector trails will be monitored to ensure that legal use does not lead to illegal off-trail use within State Forest lands. Should illegal use increase on the State Forest adjacent to any connector trail, that trail will be subject to closure.

To meet the requirement that a legitimate public ATV system be adjacent to the State Forest, the Oswego County ATV Club has agreed to designate portions of its club trail system as public trail, utilizing private lands and towns roads posted for ATV use. The proposal by the Oswego County ATV Club identifies that the proposed public trail would run from the Village of Orwell to Stone Quarry Drive to Dam Road. The remainder of the ATV public trail system consists of designated town roads open to the public and signed for ATV use; they are as follows: Falls Road to Dam Road to County Route 2 to Jackson Road to Beecherville Road to Carpenter Road, to New Scriba Drive and Wagoner Road

The map below shows the requested trail segments on State land in red, the proposed public ATV trail system designated in green (town roads) and hashed red (private lands to be open to public ATV use).

APPENDIX C - CHATEAUGAY STATE FOREST DRAFT ATV CONNECTOR TRAIL PLAN



APPENDICES & FIGURES

APPENDIX C - CHATEAUGAY STATE FOREST DRAFT ATV CONNECTOR TRAIL PLAN

DEC will consider compatibility with the Strategic Plan for State Forest Management, and concerns of neighbors and the community. DEC will also evaluate impacts and necessary stipulations for such authorization on state lands. If authorized, the final plan will include the needed stipulations to address concerns for: environmental impacts, compatibility with other uses, safety issues, maintenance needs, preventing illegal off road ATV use, and providing education and needed enforcement.

Natural Resource Protection: If the natural resources cannot sustain continued motor vehicle use by ATVs due to factors such as: soil erosion within the travel corridor or into streams, wetlands or water bodies; impacts of ATV traffic outside the travel corridor; or other adverse impacts, the route will not be opened to public ATV access.

A review of existing natural resource information available to the Department, which includes the Natural Heritage Data Base, State Classified Wetlands, Federal Wetlands inventory, Stream classifications, Archeological sites, State Forest Special Management Zone data, and the State Forests Predicted Richness Overlays PRO's data, has been made. On Chateaugay State Forest there were no occurrences found from this review which intersect or may be affected by the trail, with the exception of where the abandoned town road crosses a mapped federal wetland. In this area the abandoned road crosses a mapped freshwater forested/shrub wetland. The road surface is firm, and there is a short, low lying area which may be flooded during high rain events.

Should this process of evaluation determine that approval of the connector trail can be acceptable to the Department, the trail segments on state forests will have to be filled and hardened to prevent erosion. This work will have to be completed prior to authorization to open the trail. The work will only be authorized through DEC's Temporary Revocable Permit process.

Compatibility with neighboring Private Property: As outlined in the Strategic Plan for State Forest Management, the establishment of this ATV trail cannot conflict with neighbors or state forests. To consider approving this proposal, the Department must not receive notice from affected private landowners objecting to public ATV use on their respective lands. Also, any stipulations that any landowner may request must be evaluated with regard to the request being reasonable and applicable to the entire connector trail.

Compatibility with other public use: Public ATV access must be compatible with other public use of the area as authorized by the Unit Management Plan (UMP). If the connector trail is to be authorized, a season of use will be established in the Final Plan to avoid user conflicts and to protect the resource.

Public Safety: Roads or trails proposed to be open to public ATV use must be safe for the operation of ATVs, including the posting of appropriate signage for speed limits, stopping, caution and curves. If authorization is acceptable, the Final Plan will establish the road surface standards to be maintained, or rehabilitated and maintained. The plan would also establish required signage standards to be maintained in the authorization.

APPENDIX C - CHATEAUGAY STATE FOREST DRAFT ATV CONNECTOR TRAIL PLAN

Illegal off-road ATV use: Reasonably feasible measures to prevent illegal ATV use off the proposed route must be identified and effectively implemented.

Education and Enforcement: Management actions involving public ATV access must also address the need for monitoring, education and enforcement. All public ATV access routes, whether remaining open or being closed, must be monitored on a periodic basis for compliance with the management action. Efforts must be made to inform users where legal and safe public ATV riding opportunities exist. These would be outlined in the Final Plan and would be accomplished through providing adequate signage, unit brochures and maps, and increased enforcement patrols.

SEQR:

Evaluation of a proposed ATV trail outside of the Unit Management Planning process must go through the State Environmental Quality Review (SEQR) process. This will include preparing the Environmental Assessment Form (EAF) and subsequent paperwork to those findings for the impacts to State Land.

Next Steps:

This is a separate process from the development of the Eastern Lake Ontario Unit Management Plan (ELOPUMP). Decisions made in this process will be incorporated into the ELOUMP.

The Department will take the following steps before a Final Plan or determination will be made public.

- Review public comments and prepare recommendations with accompanying Environmental Assessment and draft Final Plan/Determination
- Release Final Plan

Comments to the Proposed ATV Connector Trails consideration may be submitted to: NYS DEC, Attn: Daniel Sawchuck, Salmon River Fish Hatchery, 2133 County Rte 22, Altmar, NY 13302 or by email to: djsawchu@gw.dec.state.ny.us. Comment must be received by: July 8, 2013.

APPENDICES & FIGURES

APPENDIX D - STATE ENVIRONMENTAL QUALITY REVIEW (SEQR)

Appendix D - 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]).

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

APPENDIX E – FISH SPECIES FOUND ON THE UNIT

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

Appendix E – Fish Species Found on the Unit

<i>Fish Species Found on the Unit</i>	
<u>Common Name</u>	<u>Scientific Name</u>
Atlantic Salmon	<i>Salmo Salar</i>
Blacknose Shiner	<i>Notropis heterolepis</i>
Bluntnose Minnow	<i>Pimephales notatus</i>
Bridle Shiner	<i>Notropis bifrenatus</i>
Brook Trout	<i>Salvelinus fontinalis</i>
Brown Bullhead	<i>Ameiurus nebulosus</i>
Brown Trout	<i>Salmo trutta</i>
Central Mudminnow	<i>Umbra limi</i>
Chinook Salmon	<i>Oncorhynchus tshawytscha</i>
Coho Salmon	<i>Oncorhynchus kisutch</i>
Common Shiner	<i>Luxilus cornutus</i>
Creek Chub	<i>Semotilus atromaculatus</i>
Cutlip Minnow	<i>Exoglossum maxillingua</i>
Eastern Blacknose Dace	<i>Rhinichthys atratulus</i>
Emerald Shiner	<i>Notropis atherinoides</i>
Fantail Darter	<i>Etheostoma flabellare</i>
Golden Shiner	<i>Notemigonus crysoleucas</i>
Johnny Darter	<i>Etheostoma nigrum</i>

APPENDICES & FIGURES

APPENDIX F - LISTS OF AMPHIBIANS AND REPTILES, BREEDING BIRDS AND MAMMALS FOUND ON OR IN THE VICINITY OF THE UNIT.

<i>Fish Species Found on the Unit</i>	
<u>Common Name</u>	<u>Scientific Name</u>
Longnose Dace	<i>Rhinichthys cataractae</i>
Mottled Sculpin	<i>Cottus bairdii</i>
Rainbow Darter	<i>Etheostoma caeruleum</i>
Rainbow Trout/ Steelhead	<i>Oncorhynchus mykiss</i>
Redside Dace	<i>Clinostomus elongatus</i>
Rock Bass	<i>Ambloplites rupestris</i>
Slimy Sculpin	<i>Cottus cognatus</i>
Spottail Shiner	<i>Notropis hudsonius</i>
Tessellated Darter	<i>Etheostoma olmstedii</i>
White Sucker	<i>Catostomus commersonii</i>

Appendix F - Lists of Amphibians and Reptiles, Breeding Birds and Mammals found on or in the vicinity of the Unit.

New York State Amphibian and Reptile Atlas Project, 1990-1999

The following amphibian and reptile species were reported in atlas survey blocks containing the Unit.

Salamanders	
Common Name	Scientific Name
Red-spotted Newt	<i>Notophthalmus v. viridescens</i>
<u>Common Mudpuppy</u>	<i>Necturus maculosus</i>

APPENDIX F - LISTS OF AMPHIBIANS AND REPTILES, BREEDING BIRDS AND MAMMALS FOUND ON OR
IN THE VICINITY OF THE UNIT.

Salamanders	
Common Name	Scientific Name
Spotted Salamander	<i>Ambystoma maculatum</i>
Northern Dusky Salamander	<i>Desmognathus fuscus</i>
Allegheny Dusky Salamander	<i>Desmognathus ochrophaeus</i>
Northern Redback Salamander	<i>Plethodon c. cinereus</i>
Northern Spring Salamander	<i>Gyrinophilus p. porphyriticus</i>
Northern Two-lined Salamander	<i>Eurycea bislineata</i>

Toads and Frogs	
Common Name	Scientific Name
Eastern American Toad	<i>Bufo a. americanus</i>
Gray Tree Frog	<i>Hyla versicolor</i>
Northern Spring Peeper	<i>Pseudacris c. crucifer</i>
Bullfrog	<i>Rana catesbeiana</i>
Green Frog	<i>Rana clamitans melanota</i>

APPENDICES & FIGURES

APPENDIX F - LISTS OF AMPHIBIANS AND REPTILES, BREEDING BIRDS AND MAMMALS FOUND ON OR IN THE VICINITY OF THE UNIT.

Toads and Frogs	
Common Name	Scientific Name
Mink Frog	<i>Rana septentrionalis</i>
Wood Frog	<i>Rana sylvatica</i>
Northern Leopard Frog	<i>Rana pipiens</i>
Pickerel Frog	<i>Rana palustris</i>

Reptiles	
Common Name	Scientific Name
Bog Turtle*	<i>Glyptemys muhlenbergii</i>
Common Musk Turtle	<i>Sternotherus odoratus</i>
Eastern Box Turtle	<i>Terrapene carolina</i>
Slider	<i>Trachemys scripta</i>
Painted Turtle	<i>Chrysemys picta</i>
Snapping Turtle	<i>Chelydra serpentina</i>
Spiny Softshell	<i>Apalone spinifera</i>
Spotted Turtle	<i>Clemmys guttata</i>
Wood Turtle	<i>Glyptemys insculpta</i>
Common Gartersnake	<i>Thamnophis sirtalis</i>
Dekay's Brownsnake	<i>Storeria dekayi</i>
Eastern Ribbonsnake	<i>Thamnophis sauritus</i>

APPENDIX F - LISTS OF AMPHIBIANS AND REPTILES, BREEDING BIRDS AND MAMMALS FOUND ON OR
IN THE VICINITY OF THE UNIT.

Reptiles	
<i>Common Name</i>	<i>Scientific Name</i>
Milksnake	<i>Lampropeltis triangulum</i>
Northern Watersnake	<i>Nerodia sipedon</i>
Red-bellied Snake	<i>Storeria occipitomaculata</i>
Ring-necked Snake	<i>Diadophis punctatus</i>
Smooth Green Snake	<i>Liochlorophis vernalis</i>

***Federal Threatened Species List**

2000 – 2005 Breeding Bird Atlas Data, Atlas Blocks 4281A, 4281B, 4282B, 4282C, 4282D, 4381A, 4381B, 4381C, 4381D, 4382C			
Common Name	Scientific Name	Breeding Status	NY Legal Status
Alder Flycatcher	<i>Empidonax alnorum</i>	CO	P
American Crow	<i>Corvus brachyrhynchos</i>	CO	GS
American Goldfinch	<i>Spinus tristis</i>	CO	P
American Kestrel	<i>Falco sparverius</i>	CO	P
American Redstart	<i>Setophaga ruticilla</i>	CO	P
American Robin	<i>Turdus migratorius</i>	CO	P
American Woodcock	<i>Scolopax minor</i>	PO	GS
Bald Eagle	<i>Haliaeetus leucocephalus</i>	PR	I
Baltimore Oriole	<i>Icterus galbula</i>	CO	P
Bank Swallow	<i>Riparia riparia</i>	CO	P

APPENDICES & FIGURES

APPENDIX F - LISTS OF AMPHIBIANS AND REPTILES, BREEDING BIRDS AND MAMMALS FOUND ON OR IN THE VICINITY OF THE UNIT.

2000 – 2005 Breeding Bird Atlas Data, Atlas Blocks 4281A, 4281B, 4282B, 4282C, 4282D, 4381A, 4381B, 4381C, 4381D, 4382C			
Common Name	Scientific Name	Breeding Status	NY Legal Status
Barn Swallow	<i>Hirundo rustica</i>	CO	P
Barred Owl	<i>Strix varia</i>	PR	P
Belted Kingfisher	<i>Megaceryle alcyon</i>	CO	P
Black-and-white Warbler	<i>Mniotilta varia</i>	CO	P
Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>	CO	P
Blackburnian Warbler	<i>Dendroica fusca</i>	CO	P
Black-capped Chickadee	<i>Poecile atricapillus</i>	CO	P
Black-throated Blue Warbler	<i>Dendroica caerulescens</i>	CO	P
Black-throated Green Warbler	<i>Dendroica virens</i>	CO	P
Blue Jay	<i>Cyanocitta cristata</i>	CO	P
Blue-headed Vireo	<i>Vireo solitarius</i>	CO	P
Blue-winged Teal	<i>Anas discors</i>	PR	GS
Blue-winged Warbler	<i>Vermivora pinus</i>	PO	P
Bobolink	<i>Dolichonyx oryzivorus</i>	CO	P
Broad-winged Hawk	<i>Buteo platypterus</i>	CO	P
Brown Creeper	<i>Certhia americana</i>	CO	P
Brown Thrasher	<i>Toxostoma rufum</i>	PO	P
Brown-headed Cowbird	<i>Molothrus ater</i>	CO	P
Canada Goose	<i>Branta canadensis</i>	CO	GS
Canada Warbler	<i>Wilsonia canadensis</i>	CO	P

APPENDICES & FIGURES

APPENDIX F - LISTS OF AMPHIBIANS AND REPTILES, BREEDING BIRDS AND MAMMALS FOUND ON OR
IN THE VICINITY OF THE UNIT.

2000 – 2005 Breeding Bird Atlas Data, Atlas Blocks 4281A, 4281B, 4282B, 4282C, 4282D, 4381A, 4381B, 4381C, 4381D, 4382C			
Common Name	Scientific Name	Breeding Status	NY Legal Status
Cedar Waxwing	<i>Bombycilla cedrorum</i>	CO	P
Chestnut-sided Warbler	<i>Dendroica pensylvanica</i>	CO	P
Chimney Swift	<i>Chaetura pelagica</i>	CO	P
Chipping Sparrow	<i>Spizella passerina</i>	CO	P
Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	CO	P
Common Grackle	<i>Quiscalus quiscula</i>	CO	P
Common Loon	<i>Gavia immer</i>	PO	P-SC
Common Merganser	<i>Mergus merganser</i>	CO	GS
Common Raven	<i>Corvus corax</i>	PO	P
Common Yellowthroat	<i>Geothlypis trichas</i>	CO	P
Cooper's Hawk	<i>Accipiter cooperii</i>	CO	P-SC
Dark-eyed Junco	<i>Junco hyemalis</i>	CO	P
Downy Woodpecker	<i>Picoides pubescens</i>	CO	P
Eastern Bluebird	<i>Sialia sialis</i>	CO	P
Eastern Kingbird	<i>Tyrannus tyrannus</i>	CO	P
Eastern Meadowlark	<i>Sturnella magna</i>	CO	P
Eastern Phoebe	<i>Sayornis phoebe</i>	CO	P
Eastern Screech-Owl	<i>Megascops asio</i>	PO	P
Eastern Towhee	<i>Pipilo erythrophthalmus</i>	CO	P
Eastern Wood-Pewee	<i>Contopus virens</i>	CO	P
European Starling	<i>Sturnus vulgaris</i>	CO	UnP

APPENDICES & FIGURES

APPENDIX F - LISTS OF AMPHIBIANS AND REPTILES, BREEDING BIRDS AND MAMMALS FOUND ON OR IN THE VICINITY OF THE UNIT.

2000 – 2005 Breeding Bird Atlas Data, Atlas Blocks 4281A, 4281B, 4282B, 4282C, 4282D, 4381A, 4381B, 4381C, 4381D, 4382C			
Common Name	Scientific Name	Breeding Status	NY Legal Status
Field Sparrow	<i>Spizella pusilla</i>	PR	P
Golden-crowned Kinglet	<i>Regulus satrapa</i>	PR	P
Grasshopper Sparrow	<i>Ammodramus savannarum</i>	PO	P-SC
Gray Catbird	<i>Dumetella carolinensis</i>	CO	P
Great Blue Heron	<i>Ardea herodias</i>	CO	P
Great Crested Flycatcher	<i>Myiarchus crinitus</i>	CO	P
Great Horned Owl	<i>Bubo virginianus</i>	CO	P
Green Heron	<i>Butorides virescens</i>	CO	P
Hairy Woodpecker	<i>Picoides villosus</i>	CO	P
Hermit Thrush	<i>Catharus guttatus</i>	CO	P
Hooded Merganser	<i>Lophodytes cucullatus</i>	PO	GS
Hooded Warbler	<i>Wilsonia citrina</i>	CO	P
House Finch	<i>Carpodacus mexicanus</i>	CO	P
House Sparrow	<i>Passer domesticus</i>	CO	UnP
House Wren	<i>Troglodytes aedon</i>	CO	P
Indigo Bunting	<i>Passerina cyanea</i>	CO	P
Killdeer	<i>Charadrius vociferus</i>	CO	P
Least Flycatcher	<i>Empidonax minimus</i>	CO	P
Magnolia Warbler	<i>Dendroica magnolia</i>	CO	P
Mallard	<i>Anas platyrhynchos</i>	CO	GS

APPENDICES & FIGURES

APPENDIX F - LISTS OF AMPHIBIANS AND REPTILES, BREEDING BIRDS AND MAMMALS FOUND ON OR
IN THE VICINITY OF THE UNIT.

2000 – 2005 Breeding Bird Atlas Data, Atlas Blocks 4281A, 4281B, 4282B, 4282C, 4282D, 4381A, 4381B, 4381C, 4381D, 4382C			
Common Name	Scientific Name	Breeding Status	NY Legal Status
Marsh Wren	<i>Cistothorus palustris</i>	PO	P
Mourning Dove	<i>Zenaida macroura</i>	CO	P
Mourning Warbler	<i>Oporornis philadelphia</i>	CO	P
Nashville Warbler	<i>Vermivora ruficapilla</i>	PR	P
Northern Flicker	<i>Colaptes auratus</i>	CO	P
Northern Goshawk	<i>Accipiter gentilis</i>	CO	P-SC
Northern Parula	<i>Parula americana</i>	PO	P
Northern Rough-winged Swallow	<i>Stelgidopteryx serripennis</i>	PO	P
Northern Saw-whet Owl	<i>Aegolius acadicus</i>	PO	P
Northern Waterthrush	<i>Seiurus noveboracensis</i>	PR	P
Osprey	<i>Pandion haliaetus</i>	PO	P-SC
Ovenbird	<i>Seiurus aurocapilla</i>	CO	P
Pied-billed Grebe	<i>Podilymbus podiceps</i>	PO	I
Pileated Woodpecker	<i>Dryocopus pileatus</i>	CO	P
Pine Warbler	<i>Dendroica pinus</i>	CO	P
Purple Finch	<i>Carpodacus purpureus</i>	CO	P
Red-breasted Nuthatch	<i>Sitta canadensis</i>	CO	P
Red-eyed Vireo	<i>Vireo olivaceus</i>	CO	P
Red-shouldered Hawk	<i>Buteo lineatus</i>	CO	P-SC
Red-tailed Hawk	<i>Buteo jamaicensis</i>	CO	P

APPENDICES & FIGURES

APPENDIX F - LISTS OF AMPHIBIANS AND REPTILES, BREEDING BIRDS AND MAMMALS FOUND ON OR IN THE VICINITY OF THE UNIT.

2000 – 2005 Breeding Bird Atlas Data, Atlas Blocks 4281A, 4281B, 4282B, 4282C, 4282D, 4381A, 4381B, 4381C, 4381D, 4382C			
Common Name	Scientific Name	Breeding Status	NY Legal Status
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	CO	P
Rock Pigeon	<i>Columba livia</i>	CO	UnP
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>	CO	P
Ruby-throated Hummingbird	<i>Archilochus colubris</i>	CO	P
Ruffed Grouse	<i>Bonasa umbellus</i>	CO	GS
Savannah Sparrow	<i>Passerculus sandwichensis</i>	CO	P
Scarlet Tanager	<i>Piranga olivacea</i>	CO	P
Sharp-shinned Hawk	<i>Accipiter striatus</i>	CO	P-SC
Song Sparrow	<i>Melospiza melodia</i>	CO	P
Sora	<i>Porzana carolina</i>	PO	GS
Spotted Sandpiper	<i>Actitis macularius</i>	CO	P
Swainson's Thrush	<i>Catharus ustulatus</i>	PR	P
Swamp Sparrow	<i>Melospiza georgiana</i>	CO	P
Tree Swallow	<i>Tachycineta bicolor</i>	CO	P
Tufted Titmouse	<i>Baeolophus bicolor</i>	CO	P
Turkey Vulture	<i>Cathartes aura</i>	PO	P
Veery	<i>Catharus fuscescens</i>	CO	P
Vesper Sparrow	<i>Pooecetes gramineus</i>	PO	P-SC
Warbling Vireo	<i>Vireo gilvus</i>	PR	P
White-breasted Nuthatch	<i>Sitta carolinensis</i>	CO	P

APPENDICES & FIGURES

APPENDIX F - LISTS OF AMPHIBIANS AND REPTILES, BREEDING BIRDS AND MAMMALS FOUND ON OR IN THE VICINITY OF THE UNIT.

2000 – 2005 Breeding Bird Atlas Data, Atlas Blocks 4281A, 4281B, 4282B, 4282C, 4282D, 4381A, 4381B, 4381C, 4381D, 4382C			
Common Name	Scientific Name	Breeding Status	NY Legal Status
White-throated Sparrow	<i>Zonotrichia albicollis</i>	CO	P
White-winged Crossbill	<i>Loxia leucoptera</i>	PR	P
Wild Turkey	<i>Meleagris gallopavo</i>	CO	GS
Willow Flycatcher	<i>Empidonax traillii</i>	PR	P
Wilson's Snipe	<i>Gallinago delicata</i>	PR	GS
Winter Wren	<i>Troglodytes troglodytes</i>	PR	P
Wood Duck	<i>Aix sponsa</i>	CO	GS
Wood Thrush	<i>Hylocichla mustelina</i>	PR	P
Yellow Warbler	<i>Dendroica petechia</i>	CO	P
Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	CO	P
Yellow-billed Cuckoo	<i>Coccyzus americanus</i>	PR	P
Yellow-rumped Warbler	<i>Dendroica coronata</i>	CO	P
Yellow-throated Vireo	<i>Vireo flavifrons</i>	CO	P

Breeding Status Codes

CO = Confirmed Breeder

PR = Probable Breeder

PO = Possible Breeder

NY Legal Status Codes

P = Protected

P-SC = Protected, Special Concern

T = Threatened

Un = Unprotected

GS = Game Species

APPENDICES & FIGURES

APPENDIX F - LISTS OF AMPHIBIANS AND REPTILES, BREEDING BIRDS AND MAMMALS FOUND ON OR IN THE VICINITY OF THE UNIT.

List of Mammals - Upper Salmon River Unit NY Gap Analysis Data-EMAP Hexagon 354 & 384			
#	Common Name	Scientific Name	Model Status
1	American Beaver	<i>Castor canadensis</i>	Predicted & Confirmed
2	Big Brown Bat	<i>Eptesicus fuscus</i>	Predicted & Confirmed
3	Black Bear	<i>Ursus americanus</i>	Predicted
4	Bobcat	<i>Lynx rufus</i>	Predicted
5	Common Muskrat	<i>Ondatra zibethicus</i>	Predicted & Confirmed
6	Common Raccoon	<i>Procyon lotor</i>	Predicted
7	Coyote	<i>Canis latrans</i>	Predicted & Confirmed
8	Deer Mouse	<i>Peromyscus maniculatus</i>	Predicted & Confirmed
9	E. small-footed Myotis	<i>Myotis leibii</i>	Predicted
10	Eastern Chipmunk	<i>Tamias striatus</i>	Predicted & Confirmed
11	Eastern Cottontail	<i>Sylvilagus floridanus</i>	Predicted & Confirmed
12	Eastern Gray Squirrel	<i>Sciurus carolinensis</i>	Predicted
13	Eastern Pipistrelle	<i>Pipistrellus subflavus</i>	Predicted
14	Eastern Red Bat	<i>Lasiurus borealis</i>	Predicted
15	Fisher	<i>Martes pennanti</i>	Predicted
16	Gray Fox	<i>Urocyon cinereoargenteus</i>	Predicted & Confirmed
17	Hairy-tailed Mole	<i>Parascalops breweri</i>	Predicted
18	Hoary Bat	<i>Lasiurus cinereus</i>	Predicted & Confirmed
19	House Mouse	<i>Mus musculus</i>	Predicted
20	Indiana Myotis	<i>Myotis sodalis</i>	Predicted
21	Least Shrew	<i>Cryptotis parva</i>	Predicted
22	Little Brown Myotis	<i>Myotis lucifugus</i>	Predicted & Confirmed
23	Long-tailed Weasel	<i>Mustela frenata</i>	Predicted

APPENDIX F - LISTS OF AMPHIBIANS AND REPTILES, BREEDING BIRDS AND MAMMALS FOUND ON OR
IN THE VICINITY OF THE UNIT.

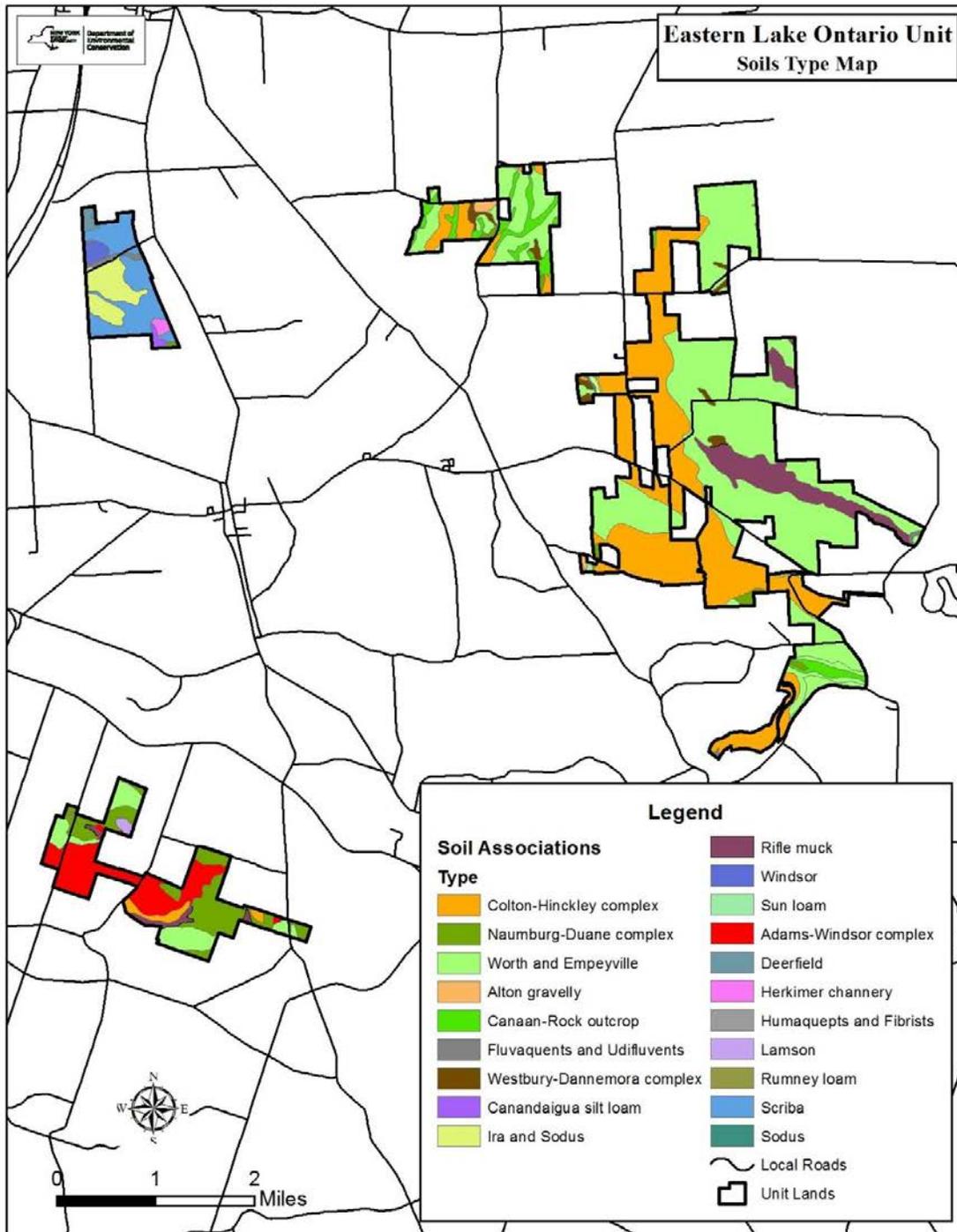
List of Mammals - Upper Salmon River Unit NY Gap Analysis Data-EMAP Hexagon 354 & 384			
#	Common Name	Scientific Name	Model Status
24	Masked Shrew	<i>Sorex cinereus</i>	Predicted & Confirmed
25	Meadow Jumping Mouse	<i>Zapus hudsonius</i>	Predicted & Confirmed
26	Meadow Vole	<i>Microtus pennsylvanicus</i>	Predicted & Confirmed
27	Mink	<i>Mustela vison</i>	Predicted & Confirmed
28	N. Short-tailed Shrew	<i>Blarina brevicauda</i>	Predicted & Confirmed
29	Northern Flying Squirrel	<i>Glaucomys sabrinus</i>	Predicted & Confirmed
30	Northern Myotis (Keen's Myotis)	<i>Myotis septentrionalis</i>	Predicted & Confirmed
31	Norway Rat	<i>Rattus norvegicus</i>	Predicted & Confirmed
32	Porcupine	<i>Erethizon dorsatum</i>	Predicted
33	Pygmy Shrew	<i>Sorex hoyi</i>	Predicted
34	Red Fox	<i>Vulpes vulpes</i>	Predicted & Confirmed
35	Red Squirrel	<i>Tamiasciurus hudsonicus</i>	Predicted & Confirmed
36	River Otter	<i>Lutra canadensis</i>	Predicted & Confirmed
37	Short-tailed Weasel (Ermine)	<i>Mustela erminea</i>	Predicted & Confirmed
38	Silver-haired Bat	<i>Lasiurus noctivagus</i>	Predicted
39	Smoky Shrew	<i>Sorex fumeus</i>	Predicted & Confirmed
40	Snowshoe Hare	<i>Lepus americanus</i>	Predicted
41	Southern Bog Lemming	<i>Synaptomys cooperi</i>	Predicted
42	Southern Flying Squirrel	<i>Glaucomys volans</i>	Predicted
43	Southern Red-backed Vole	<i>Clethrionomys gapperi</i>	Predicted & Confirmed
44	Star-nosed Mole	<i>Condylura cristata</i>	Predicted
45	Striped Skunk	<i>Mephitis mephitis</i>	Predicted
46	Virginia Opossum	<i>Didelphis virginiana</i>	Predicted
47	White-footed Mouse	<i>Peromyscus leucopus</i>	Predicted

APPENDICES & FIGURES

APPENDIX F - LISTS OF AMPHIBIANS AND REPTILES, BREEDING BIRDS AND MAMMALS FOUND ON OR IN THE VICINITY OF THE UNIT.

List of Mammals - Upper Salmon River Unit NY Gap Analysis Data-EMAP Hexagon 354 & 384			
#	Common Name	Scientific Name	Model Status
48	White-tailed Deer	<i>Odocoileus virginianus</i>	Predicted & Confirmed
49	Woodchuck	<i>Marmota monax</i>	Predicted
50	Woodland Jumping Mouse	<i>Napaeozapus insignis</i>	Predicted
51	Woodland Vole	<i>Microtus pinetorum</i>	Predicted

Figure 1. - Soils Map



APPENDICES & FIGURES

FIGURE 2 – WATER RESOURCES AND SPECIAL MANAGEMENT ZONE MAPS

Figure 2 – Water Resources and Special Management Zone Maps

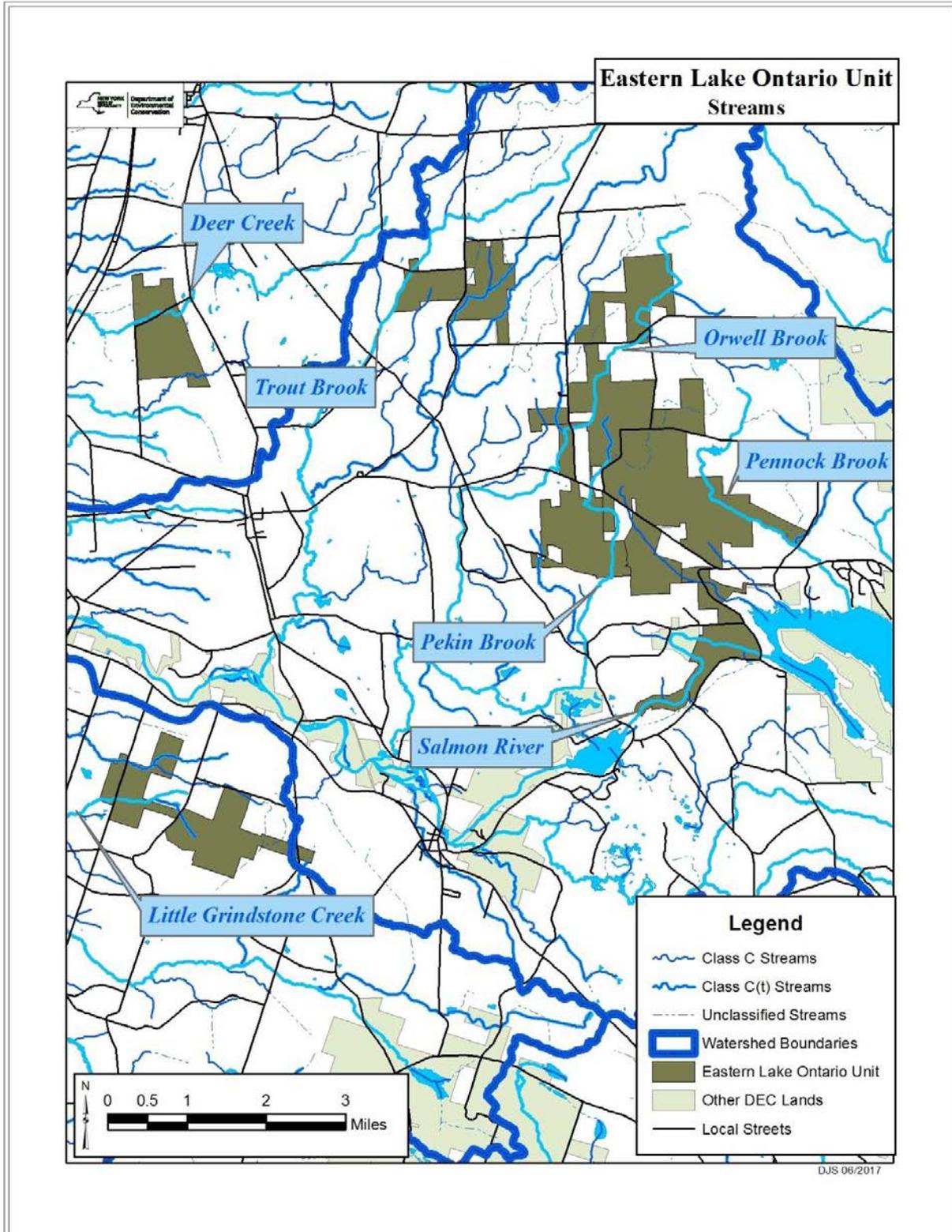
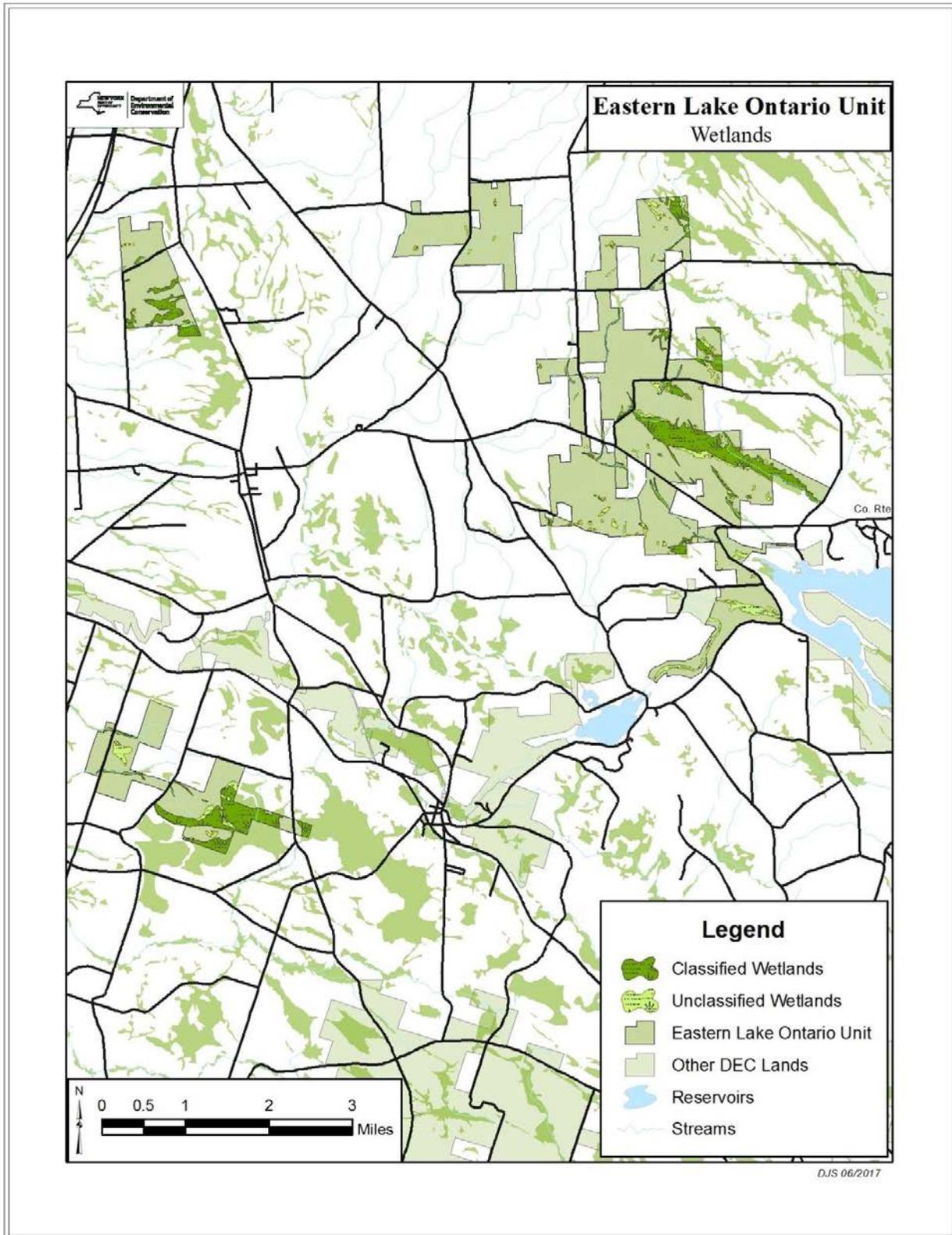


FIGURE 2 – WATER RESOURCES AND SPECIAL MANAGEMENT ZONE MAPS



APPENDICES & FIGURES

FIGURE 2 – WATER RESOURCES AND SPECIAL MANAGEMENT ZONE MAPS

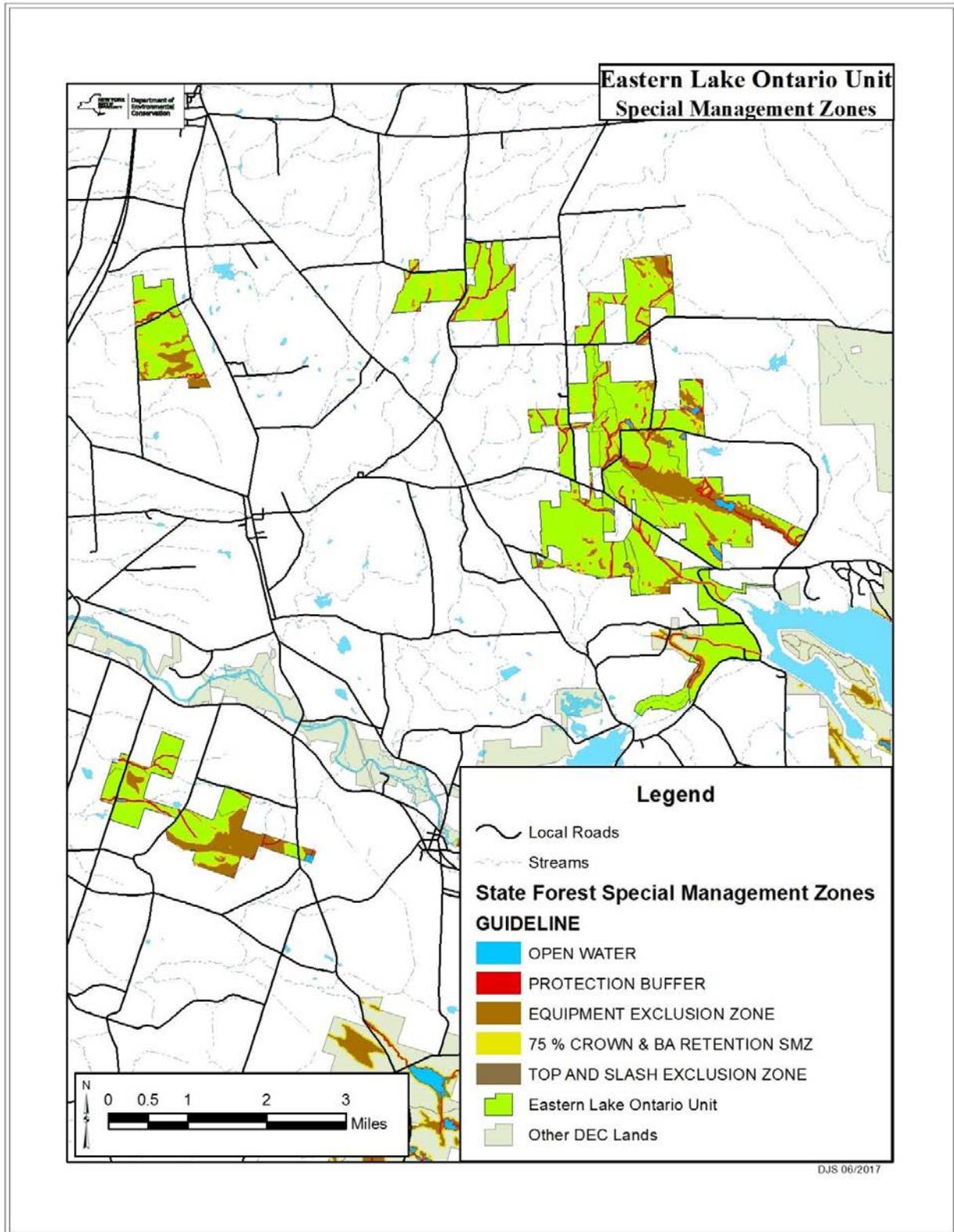
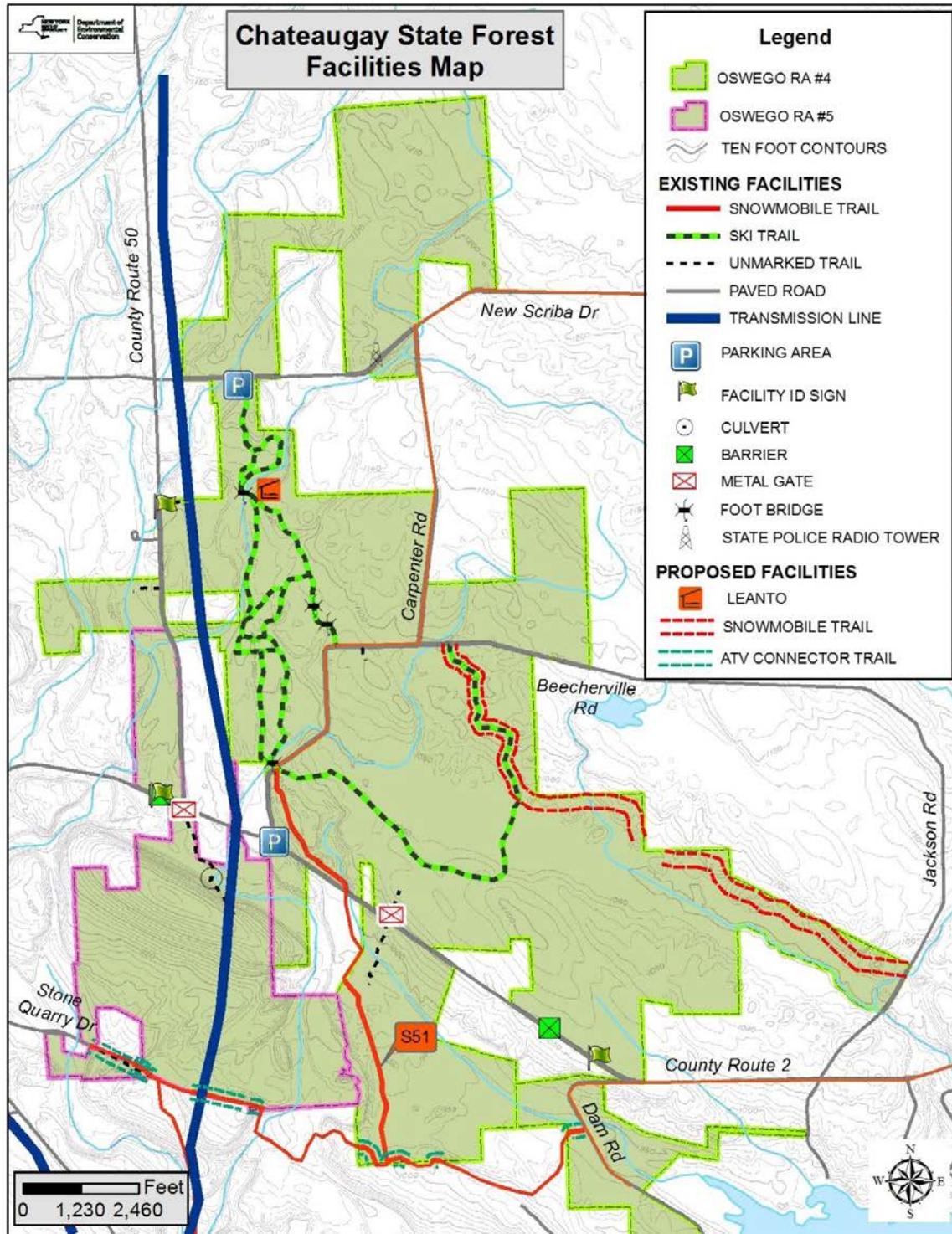


FIGURE 3. – INFRASTRUCTURE AND RECREATION MAPS

Figure 3. – Infrastructure and Recreation Maps



APPENDICES & FIGURES

FIGURE 3. – INFRASTRUCTURE AND RECREATION MAPS

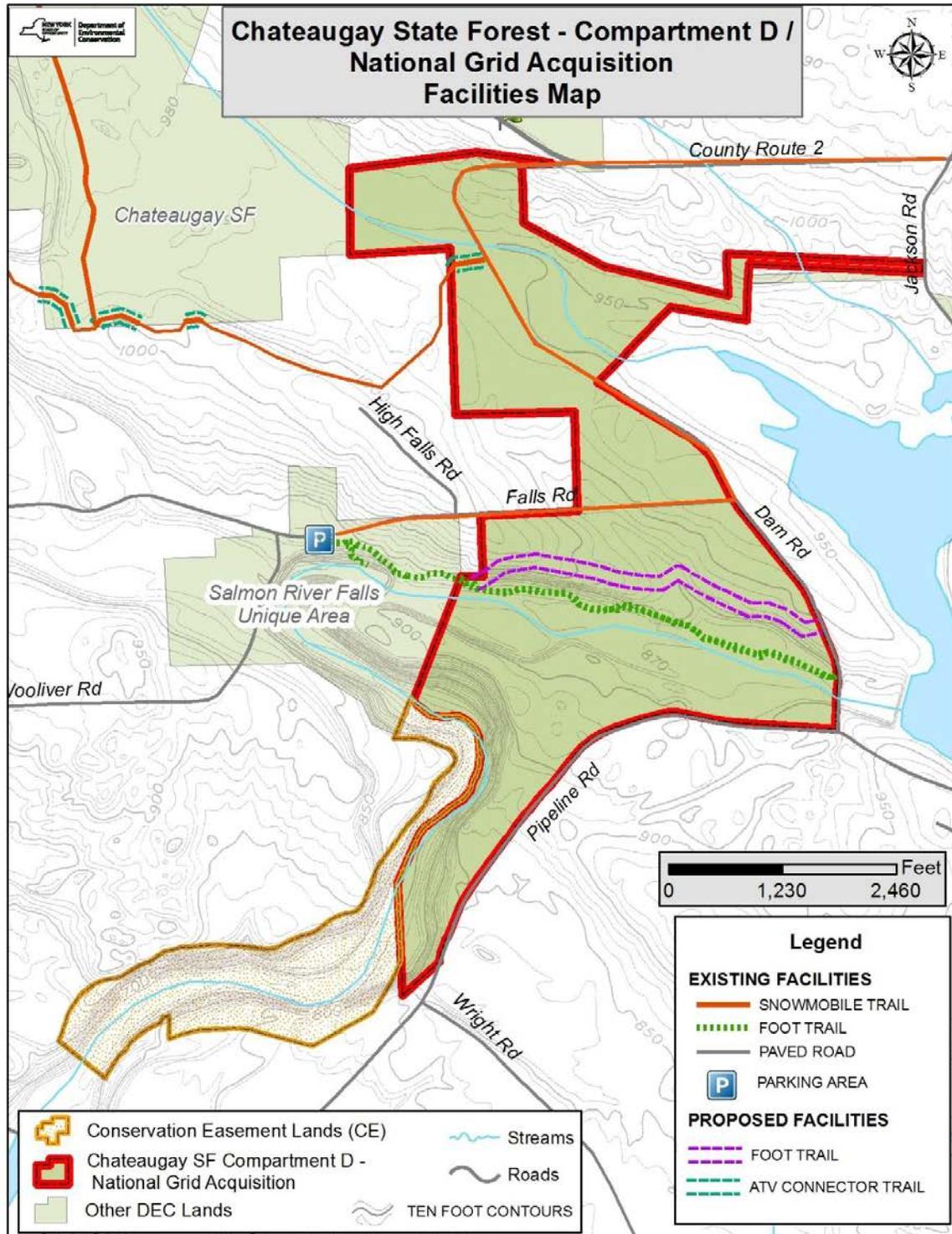
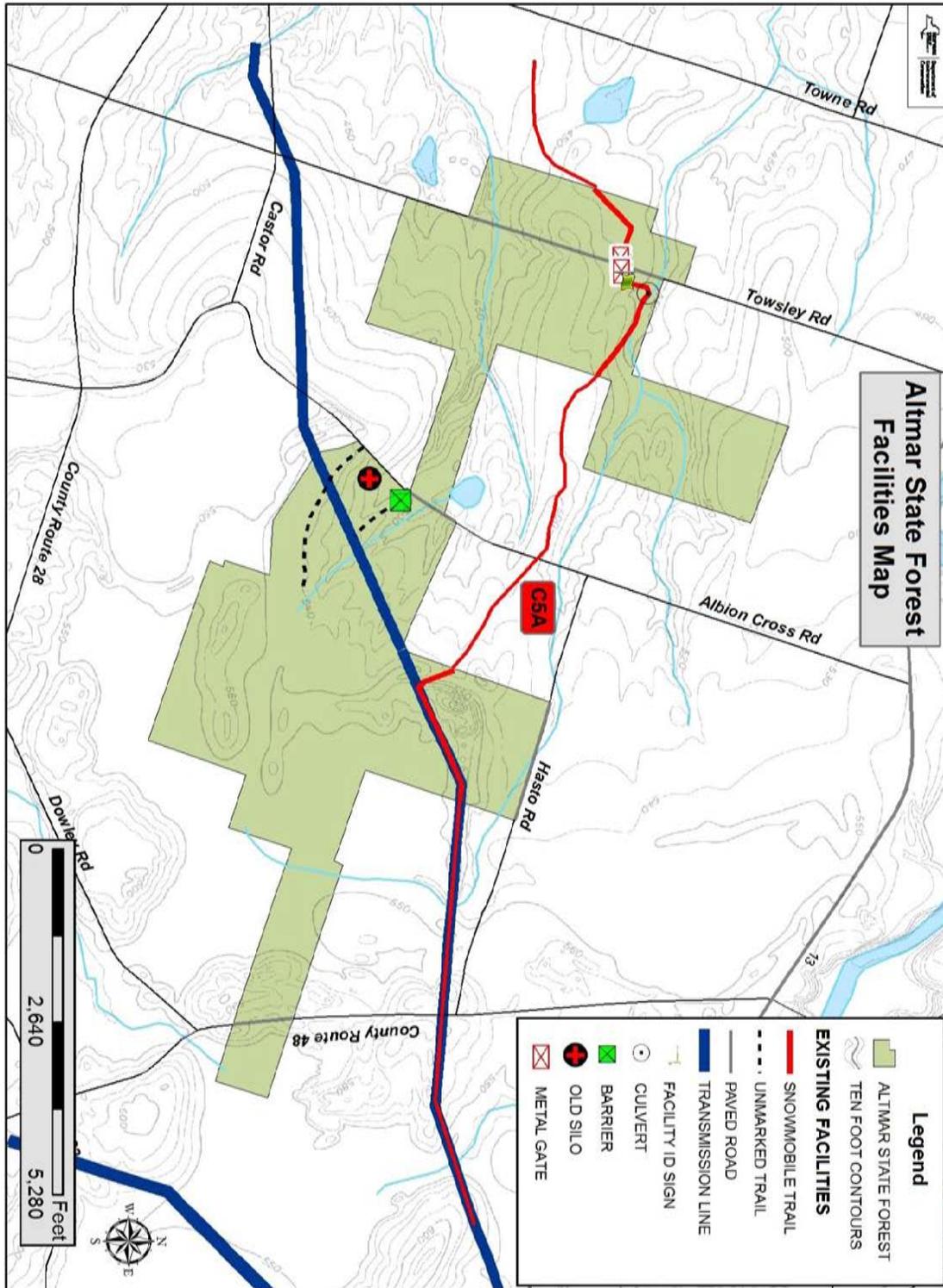
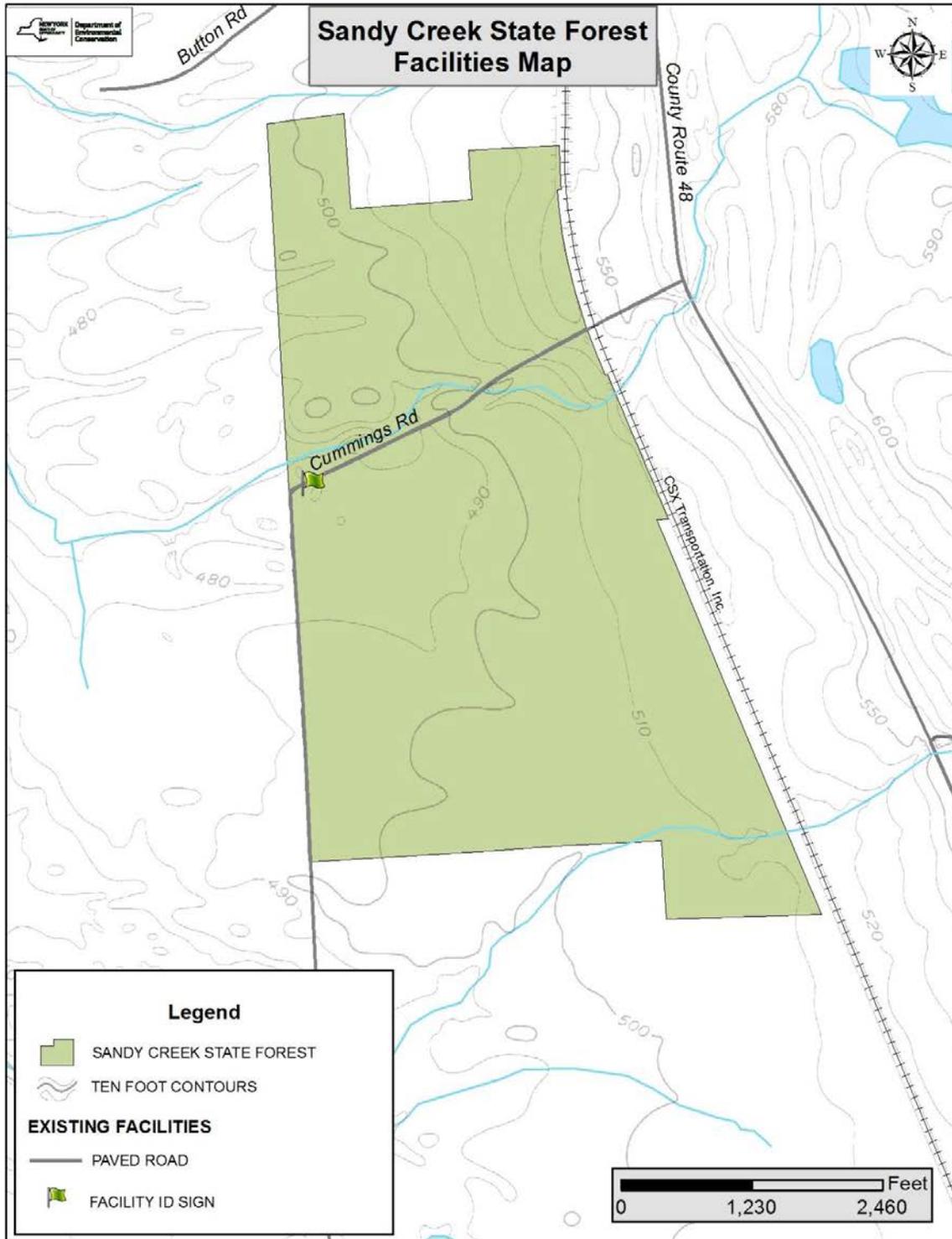
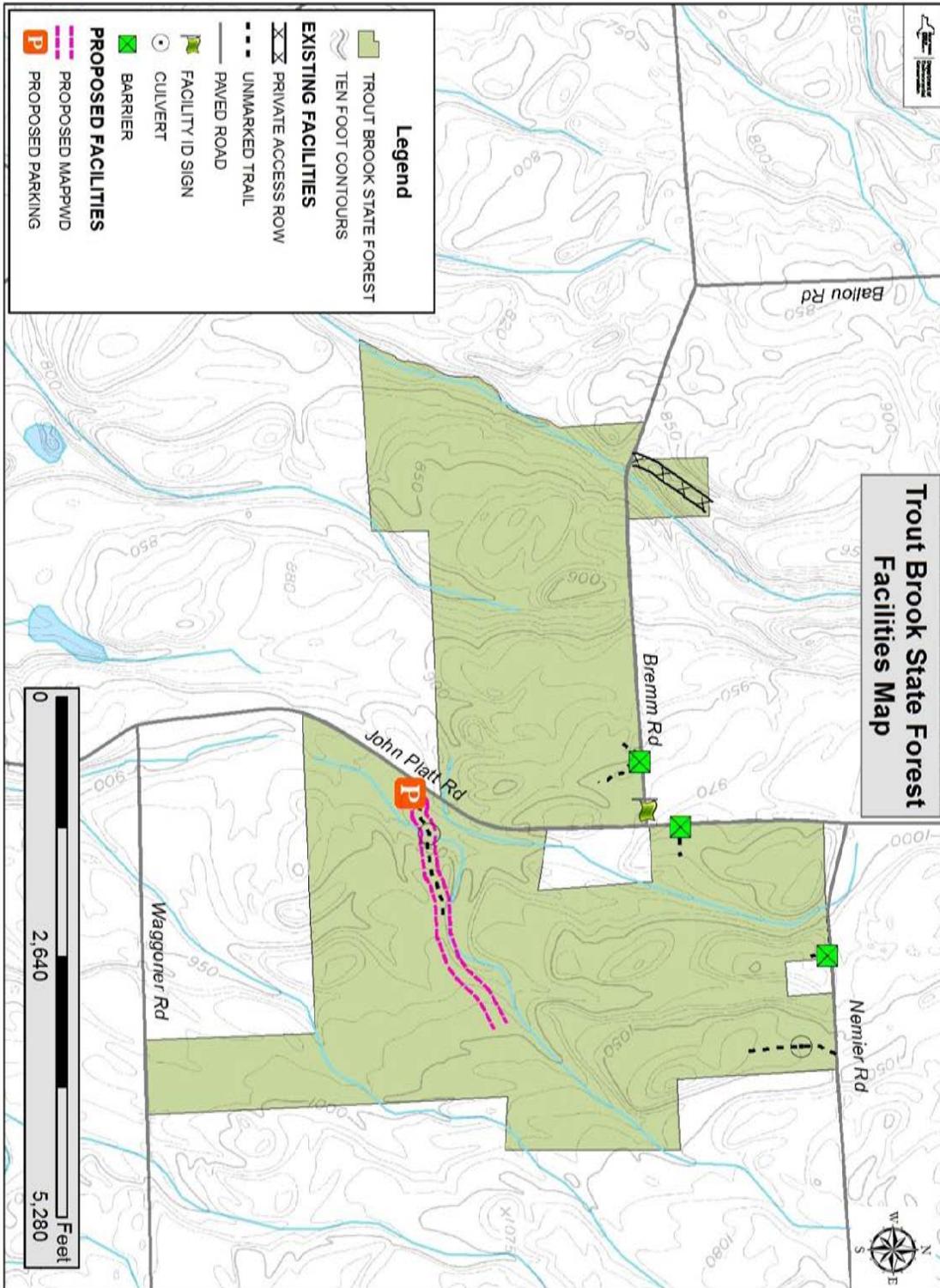


FIGURE 3. – INFRASTRUCTURE AND RECREATION MAPS



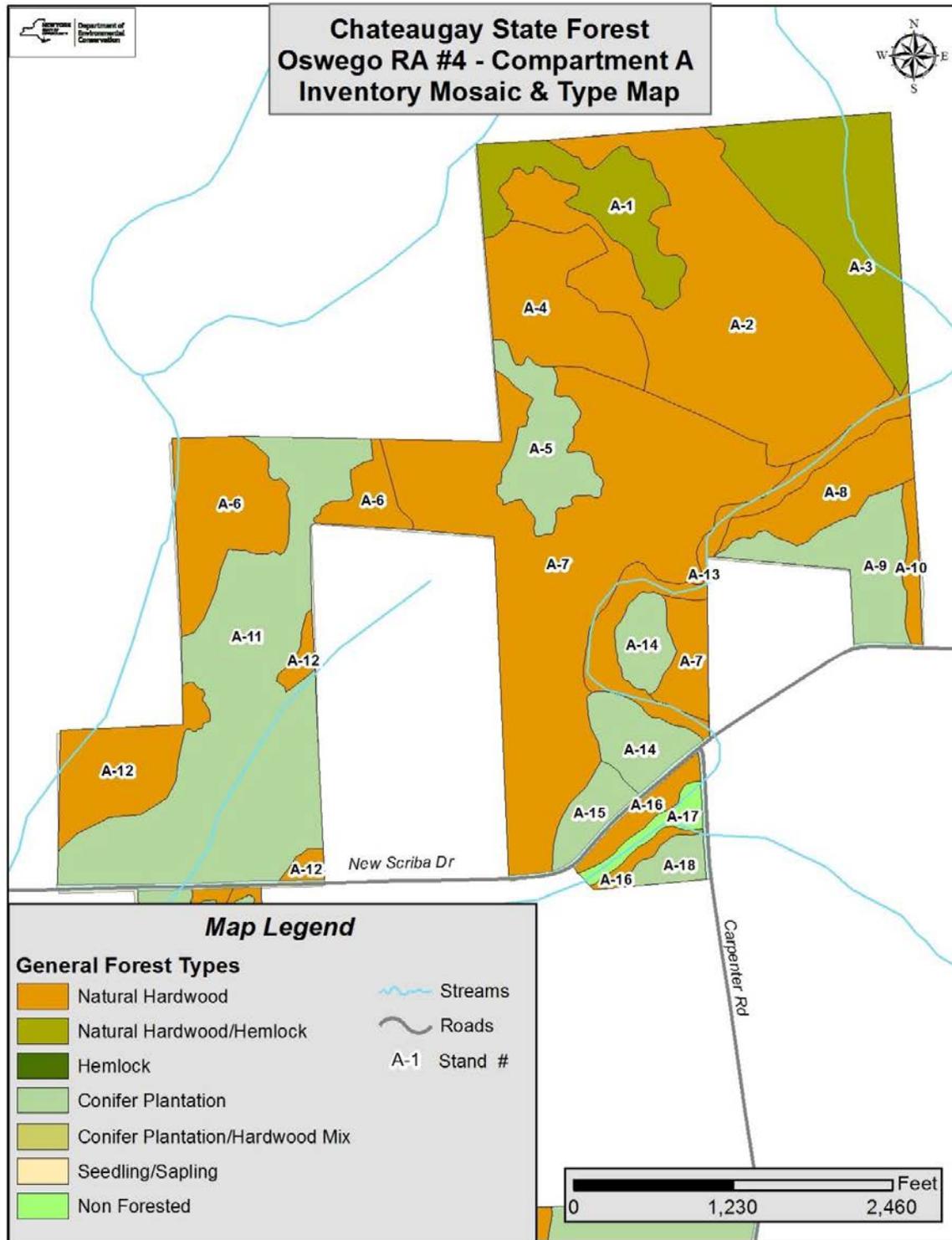


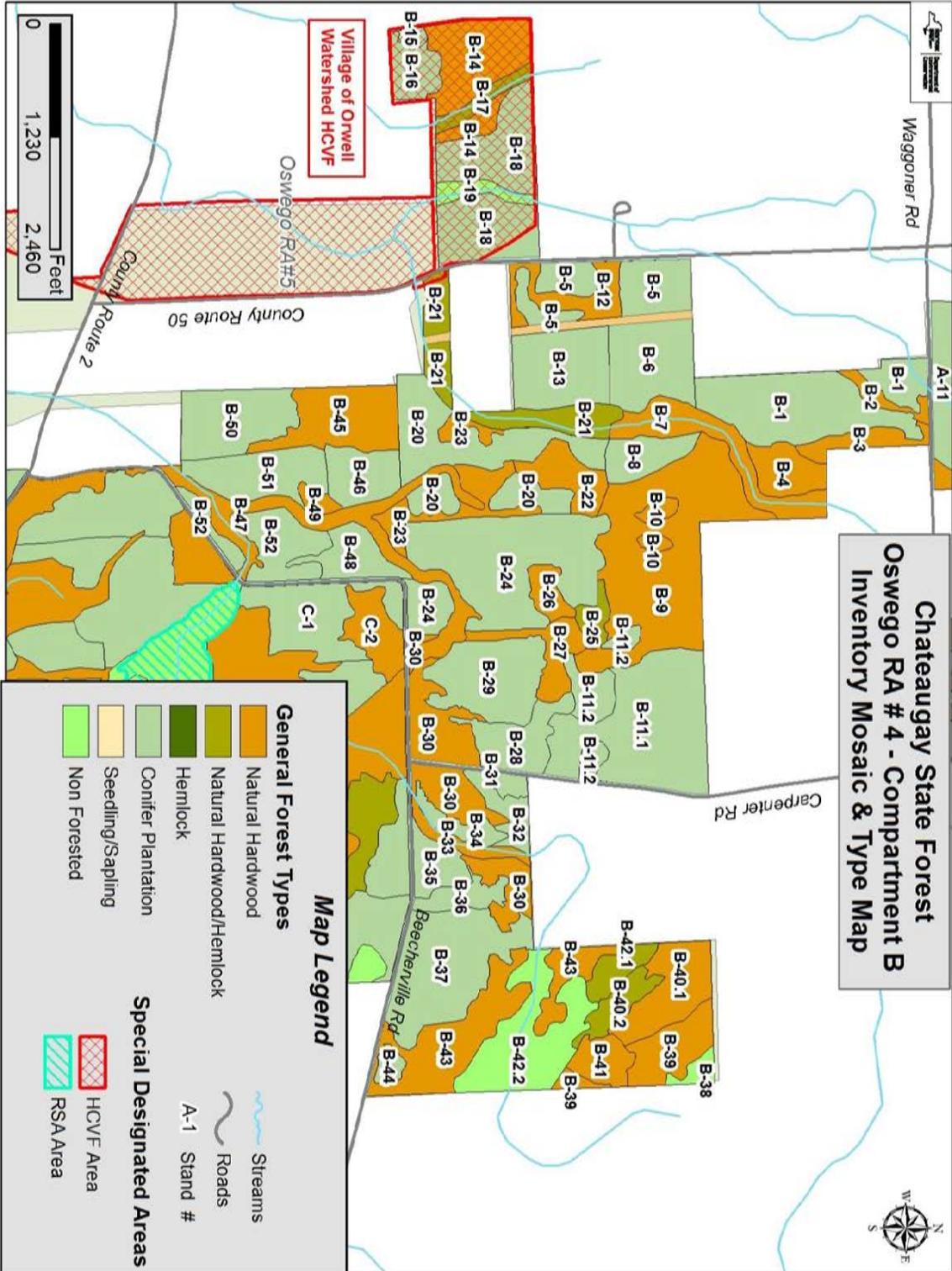


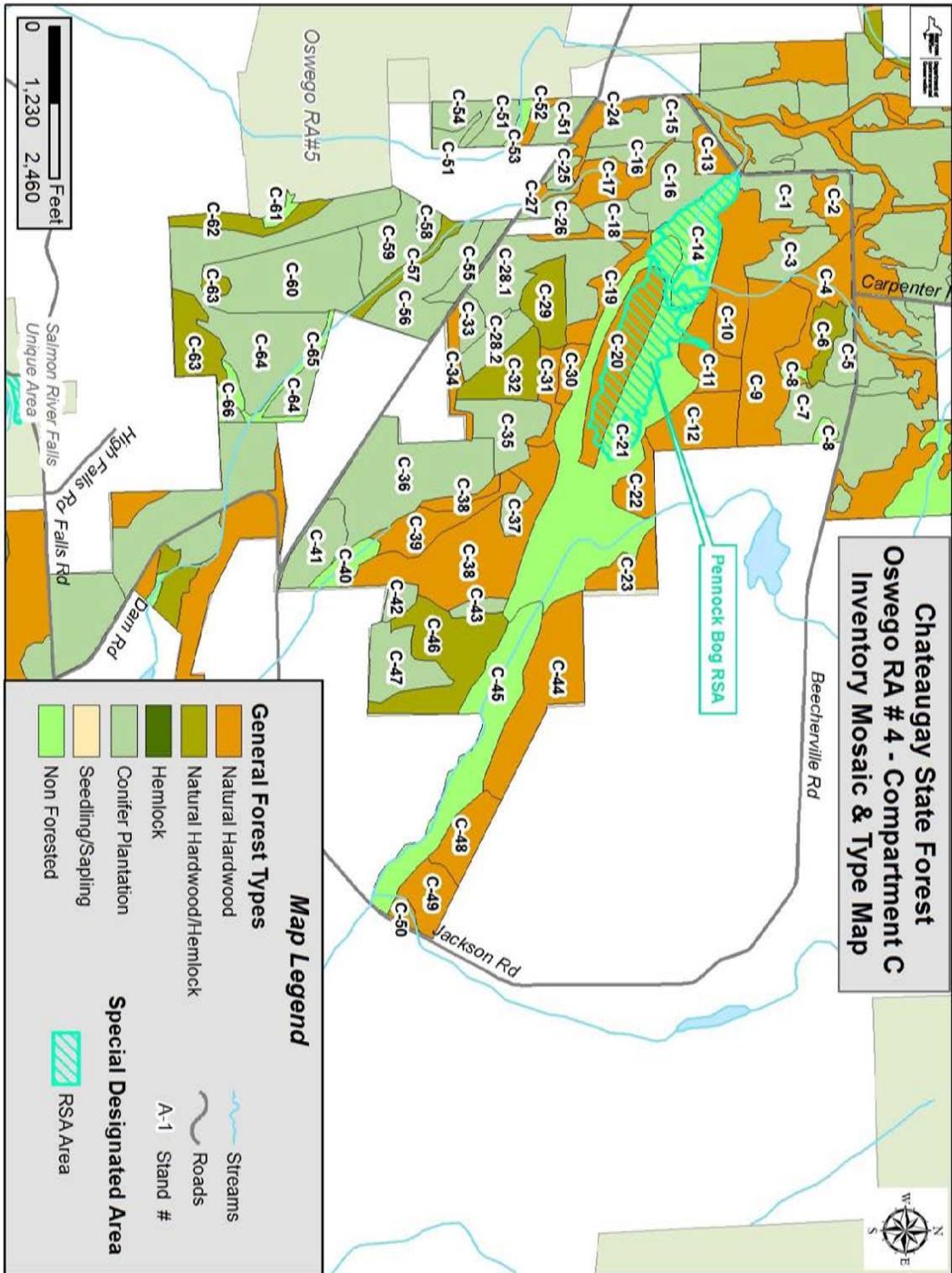
APPENDICES & FIGURES

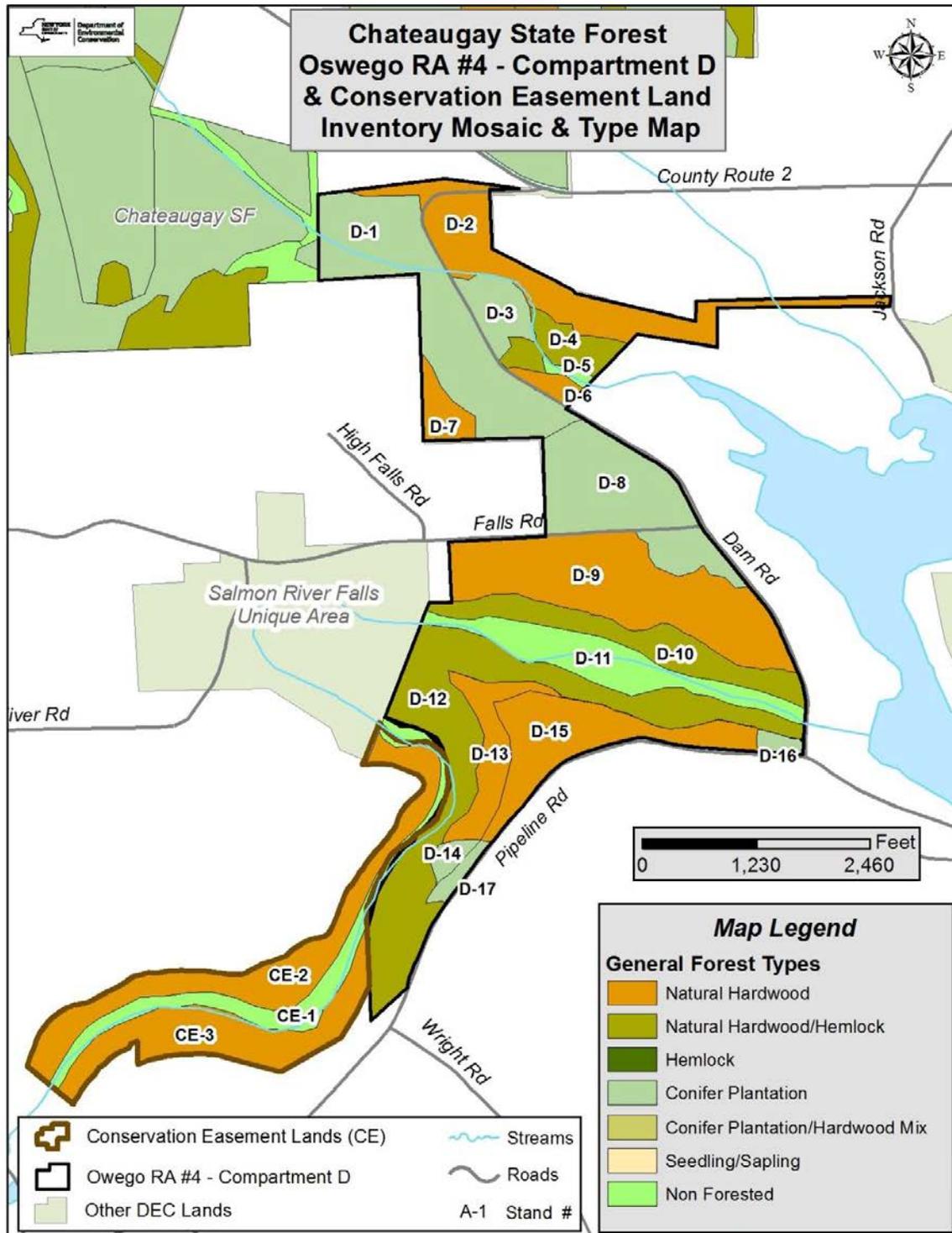
FIGURE 4. – CURRENT FOREST TYPE AND FOREST STAND IDENTIFICATION NUMBER MAPS

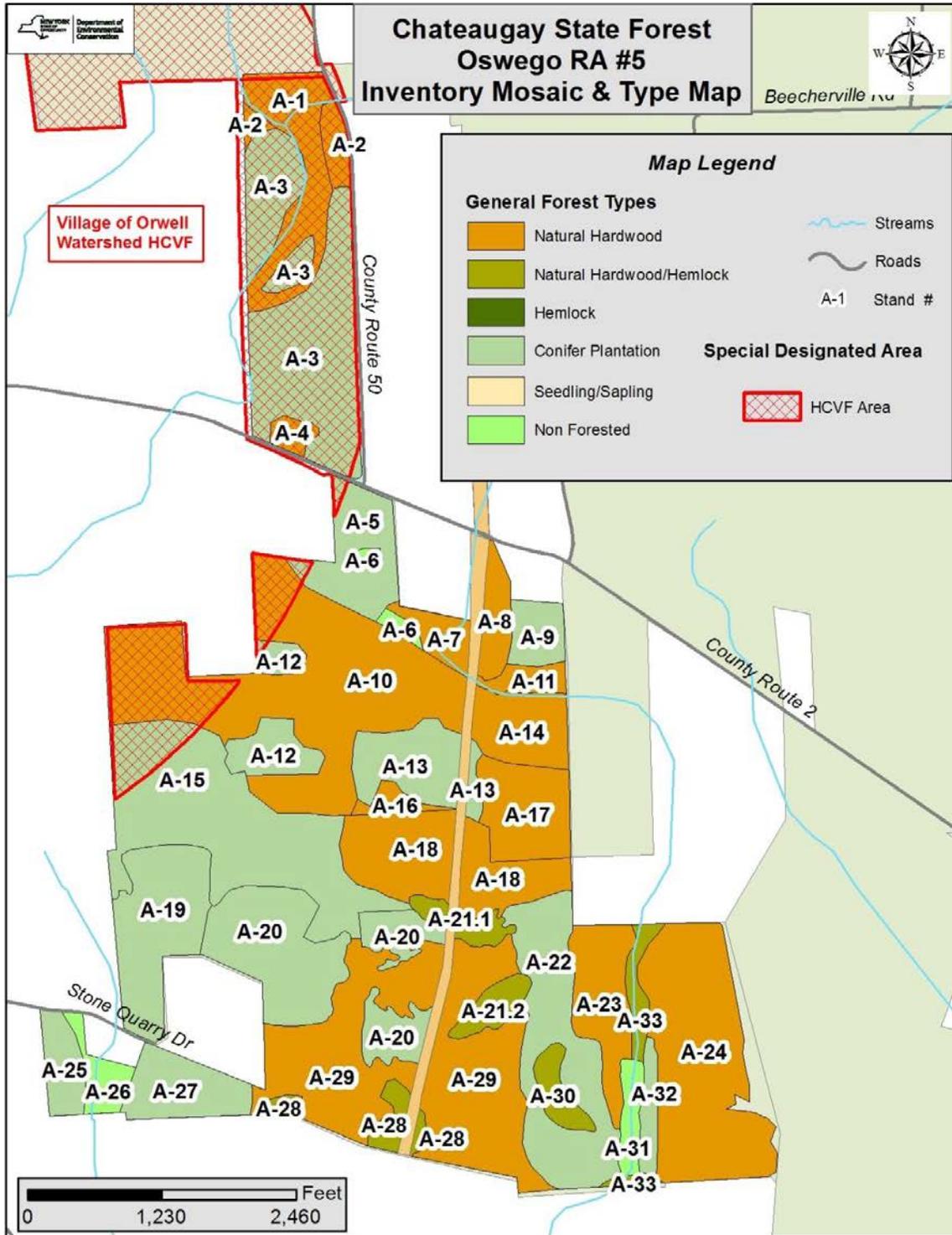
Figure 4. – Current Forest Type and Forest Stand Identification Number Maps

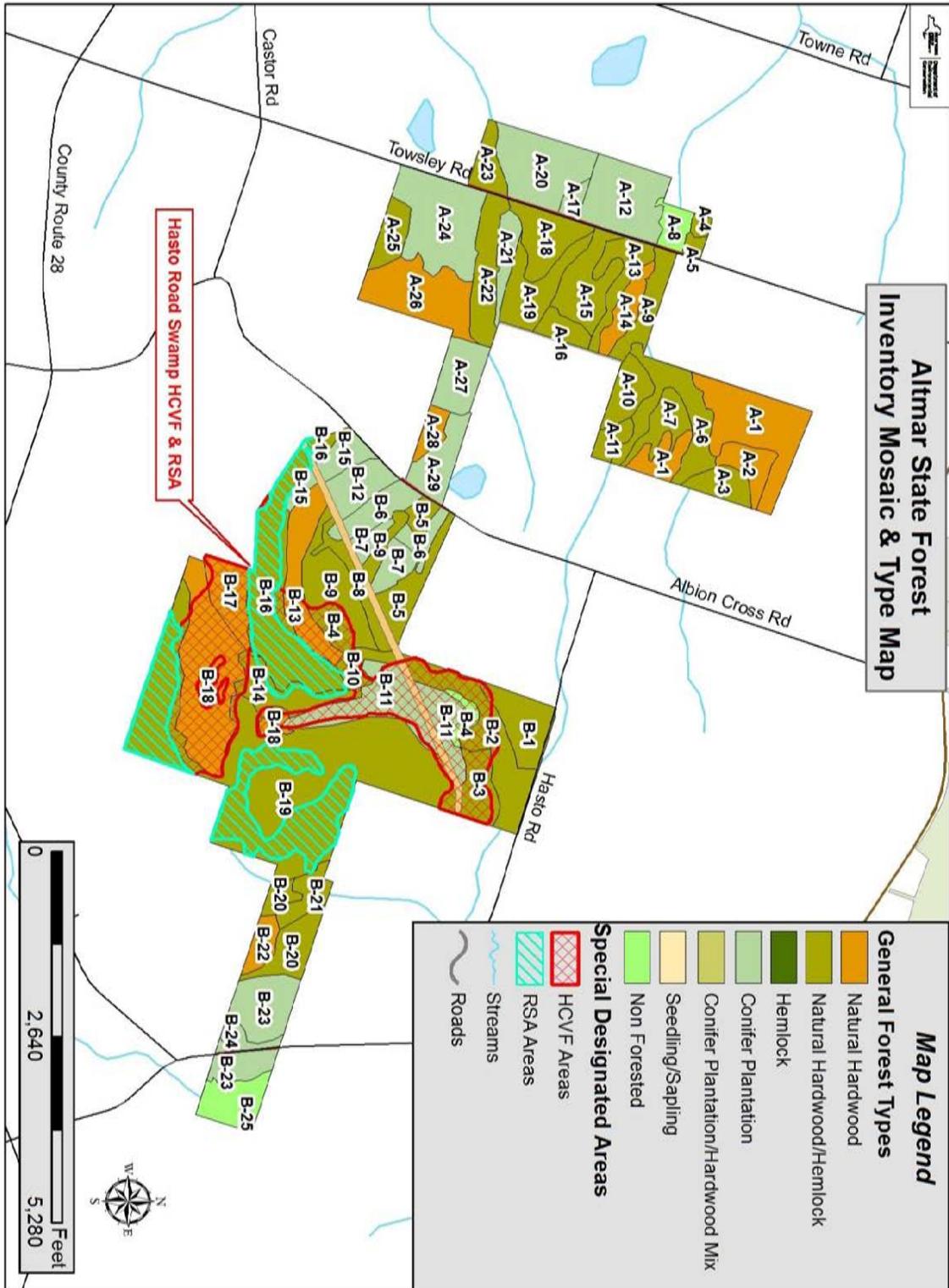


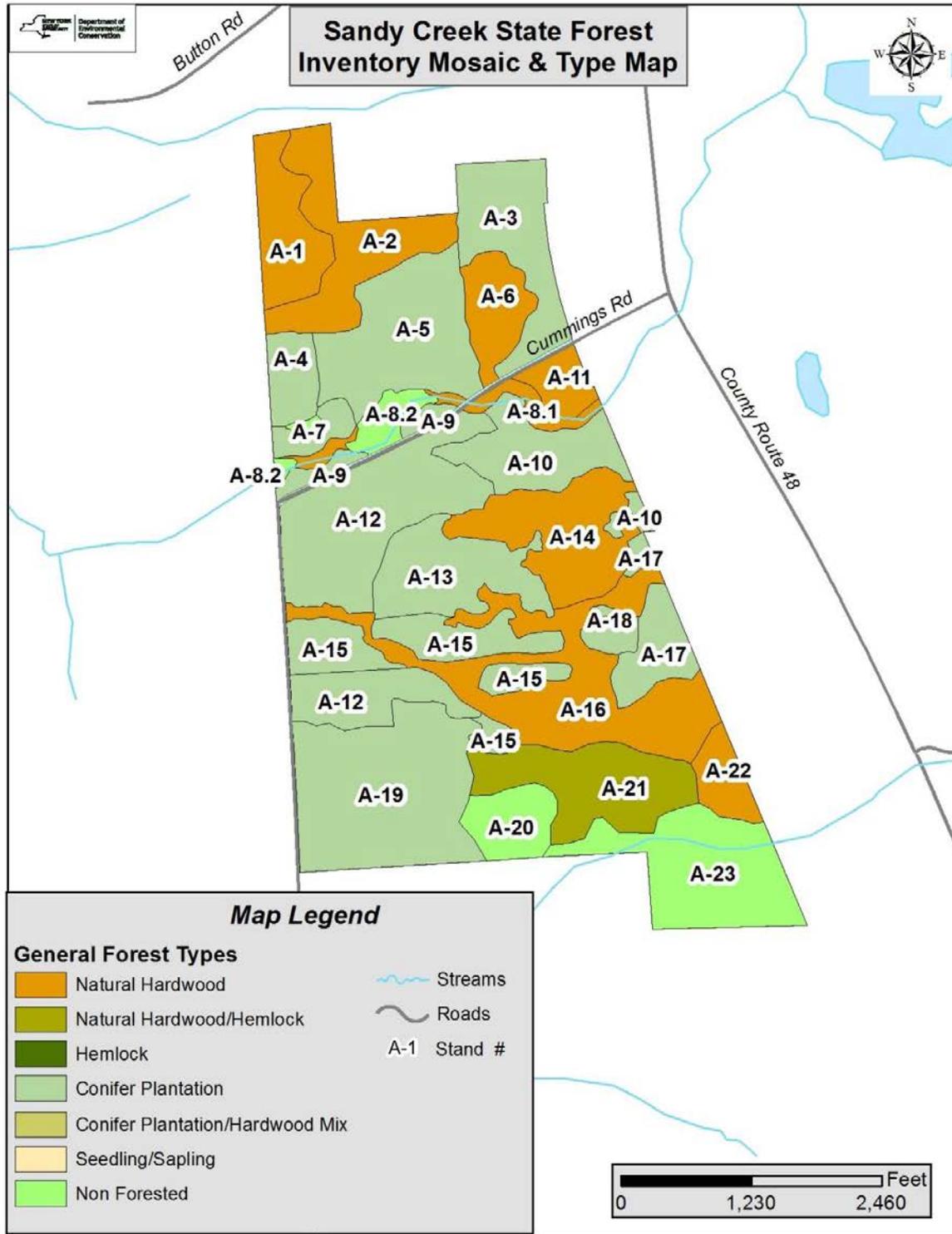


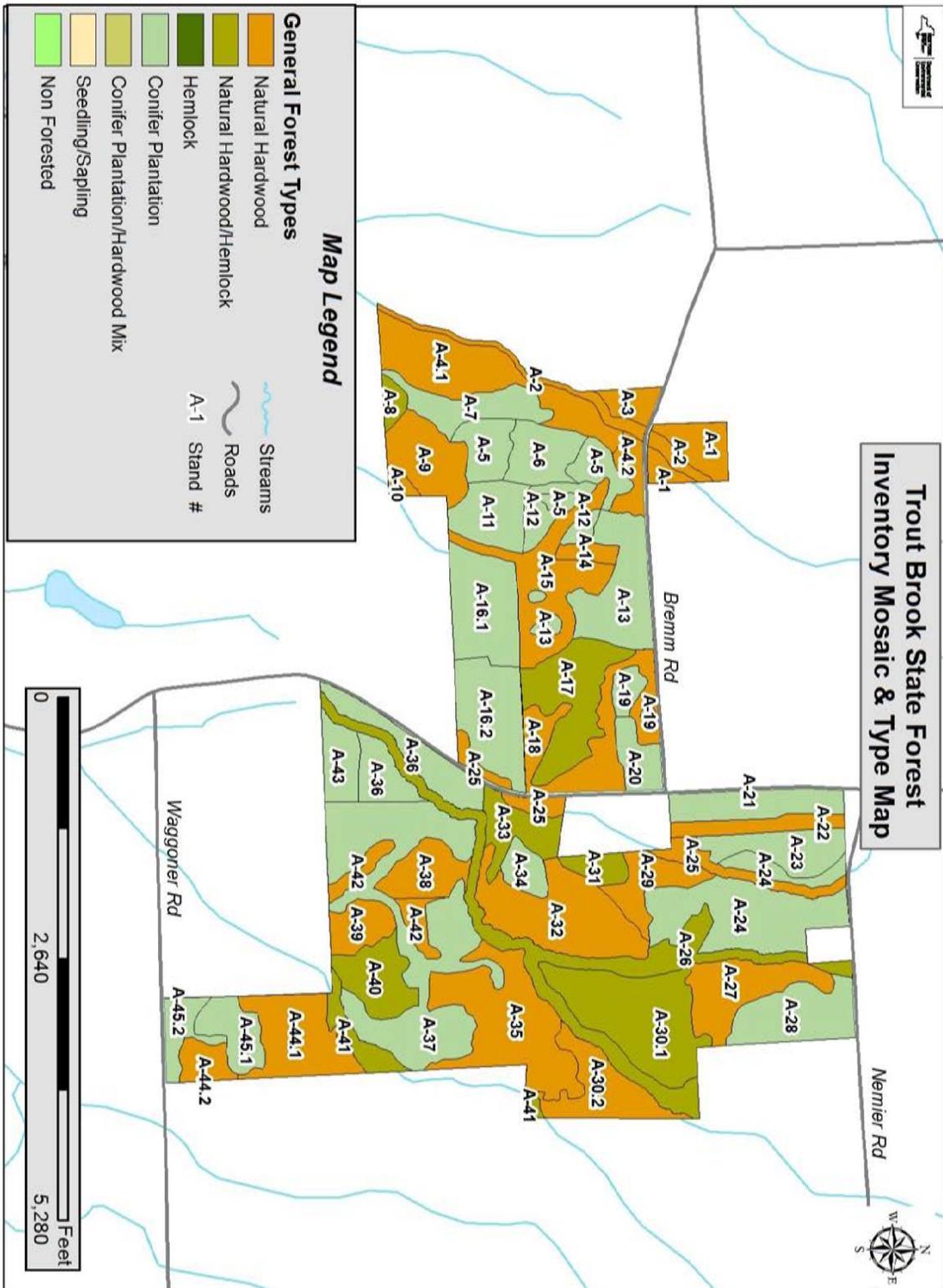












APPENDICES & FIGURES

FIGURE 5. – MANAGEMENT DIRECTION MAPS

Figure 5. – Management Direction Maps

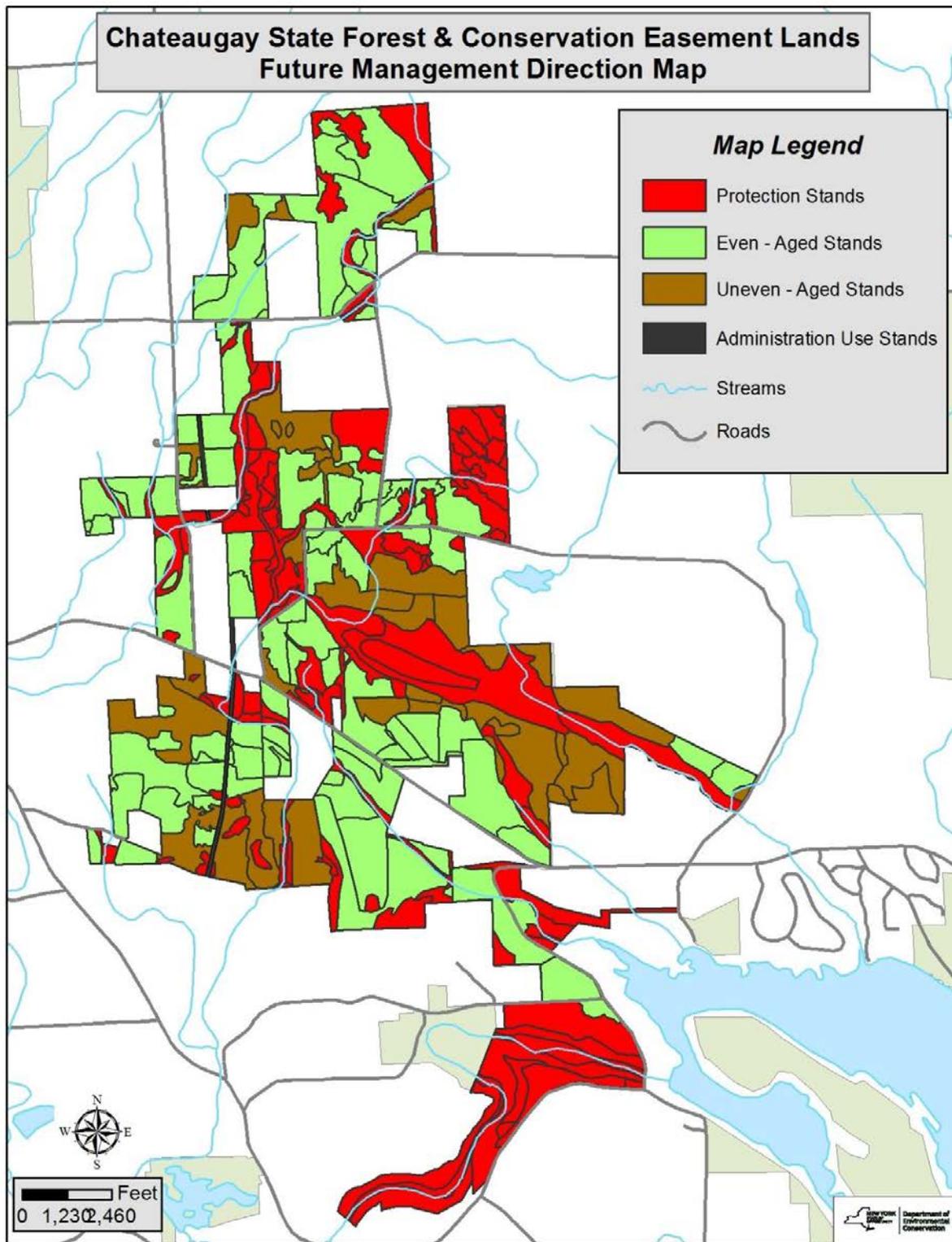
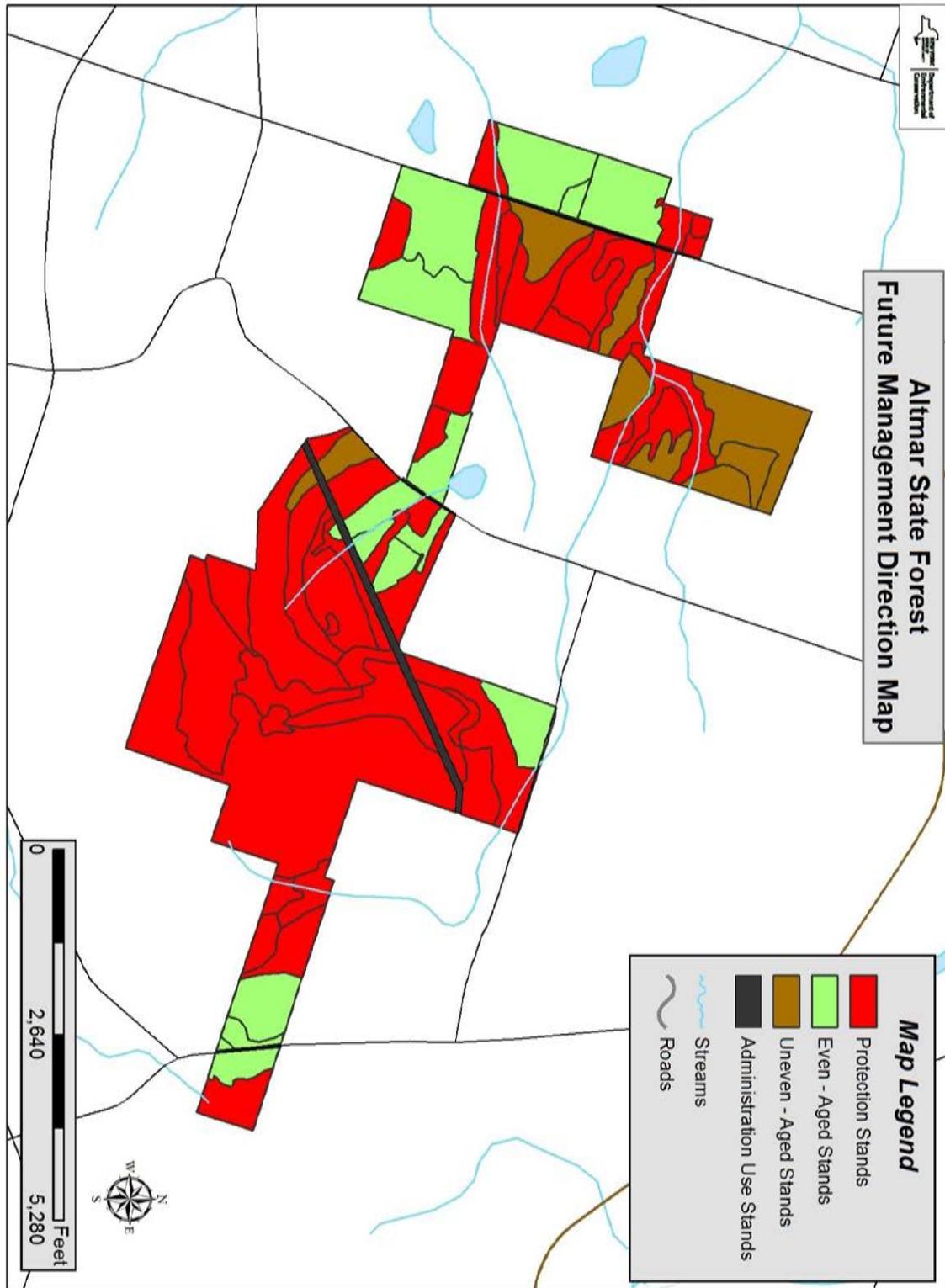


FIGURE 5. – MANAGEMENT DIRECTION MAPS



APPENDICES & FIGURES

FIGURE 5. – MANAGEMENT DIRECTION MAPS

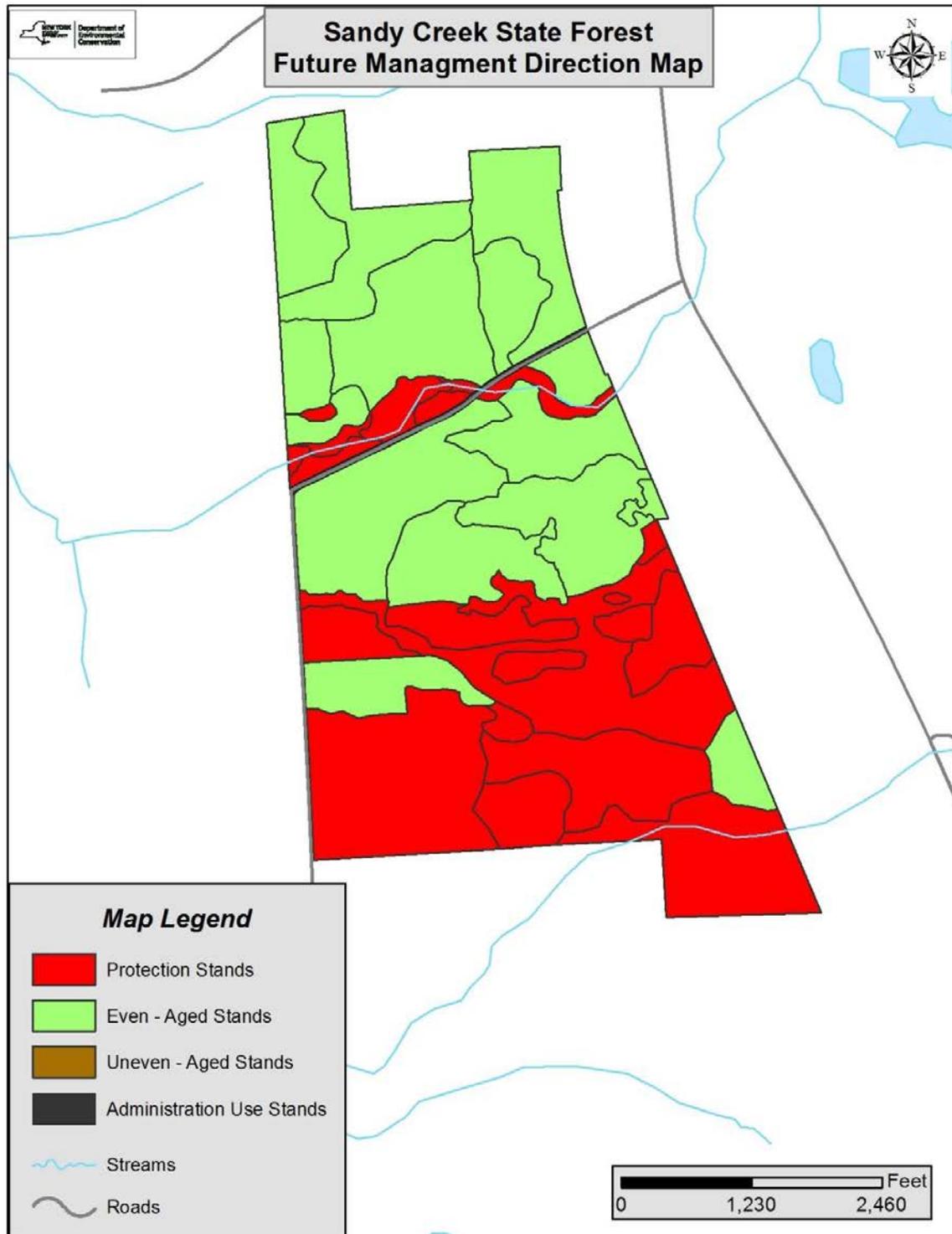
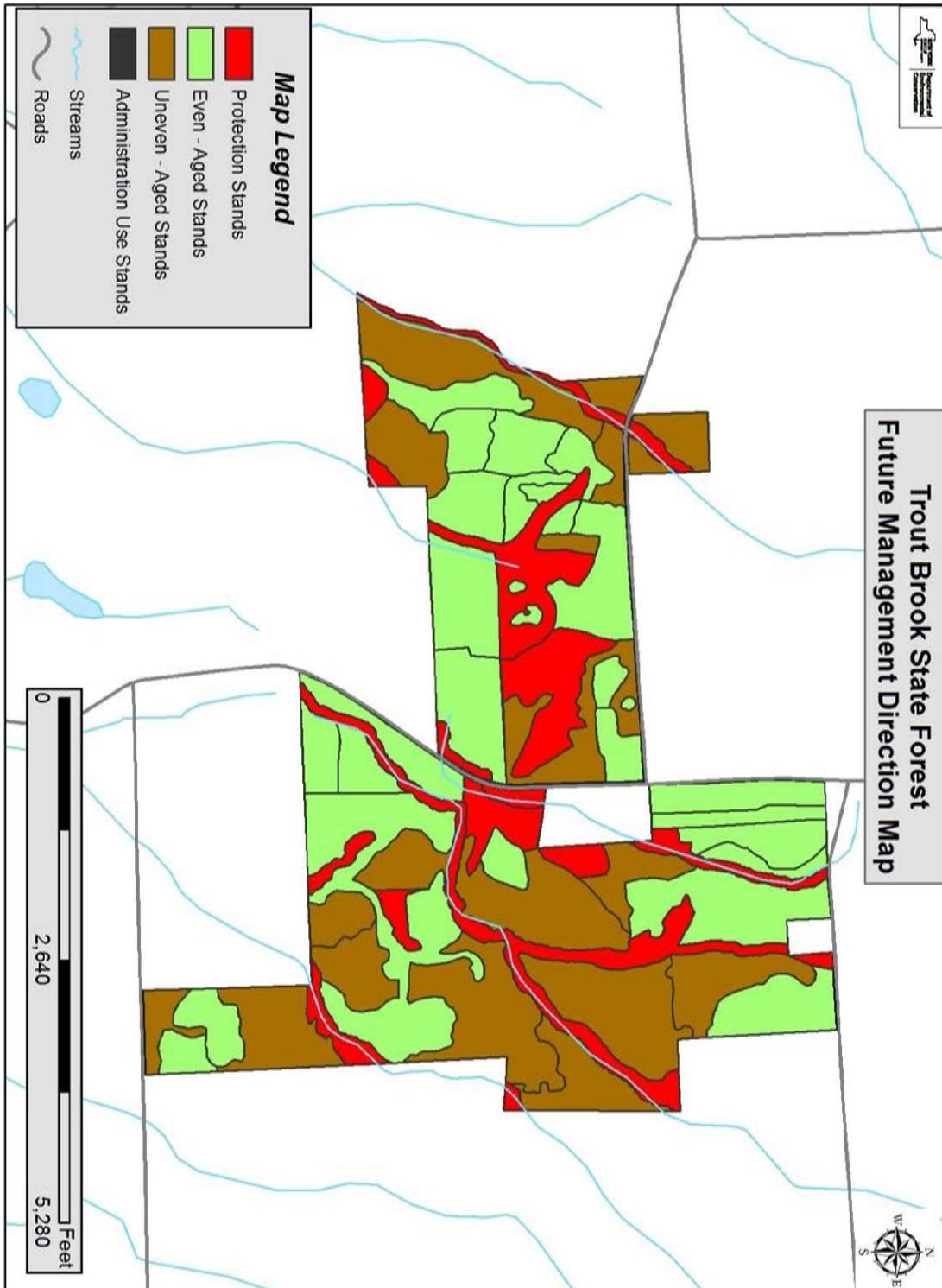


FIGURE 5. – MANAGEMENT DIRECTION MAPS



APPENDICES & FIGURES

FIGURE 6. – MANAGEMENT ACTION SCHEDULE MAPS

Figure 6. – Management Action Schedule Maps

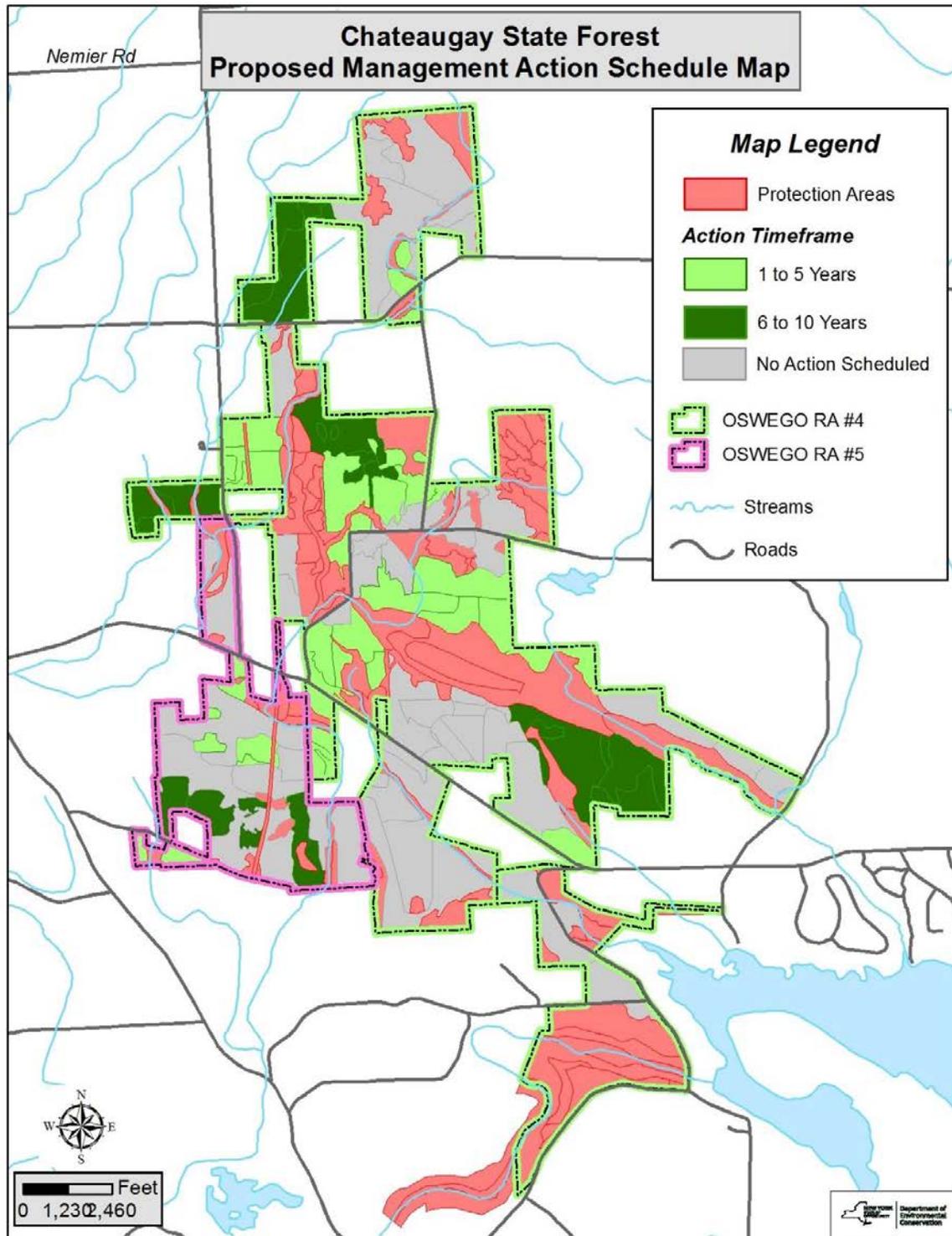
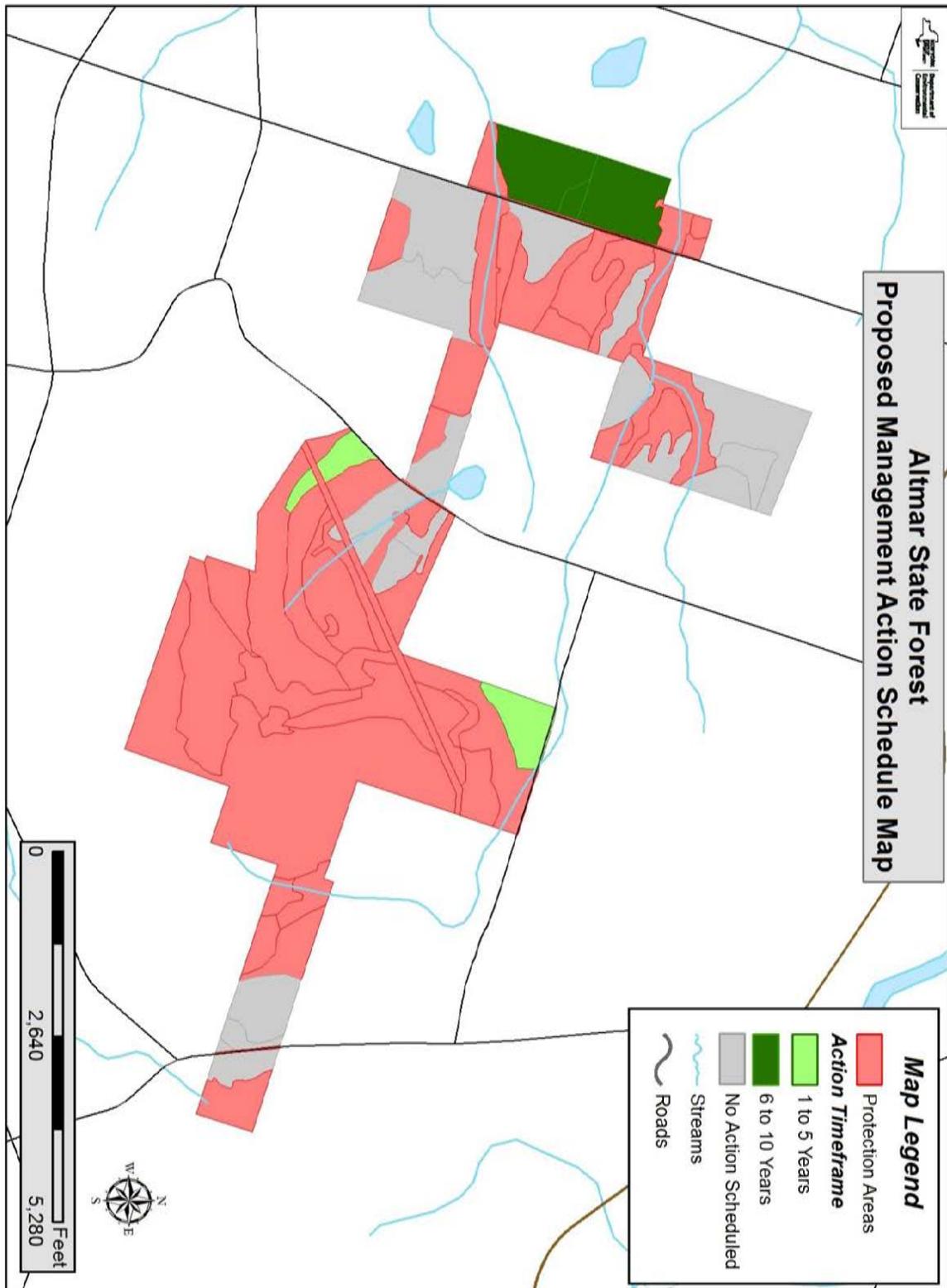


FIGURE 6. – MANAGEMENT ACTION SCHEDULE MAPS



APPENDICES & FIGURES

FIGURE 6. – MANAGEMENT ACTION SCHEDULE MAPS

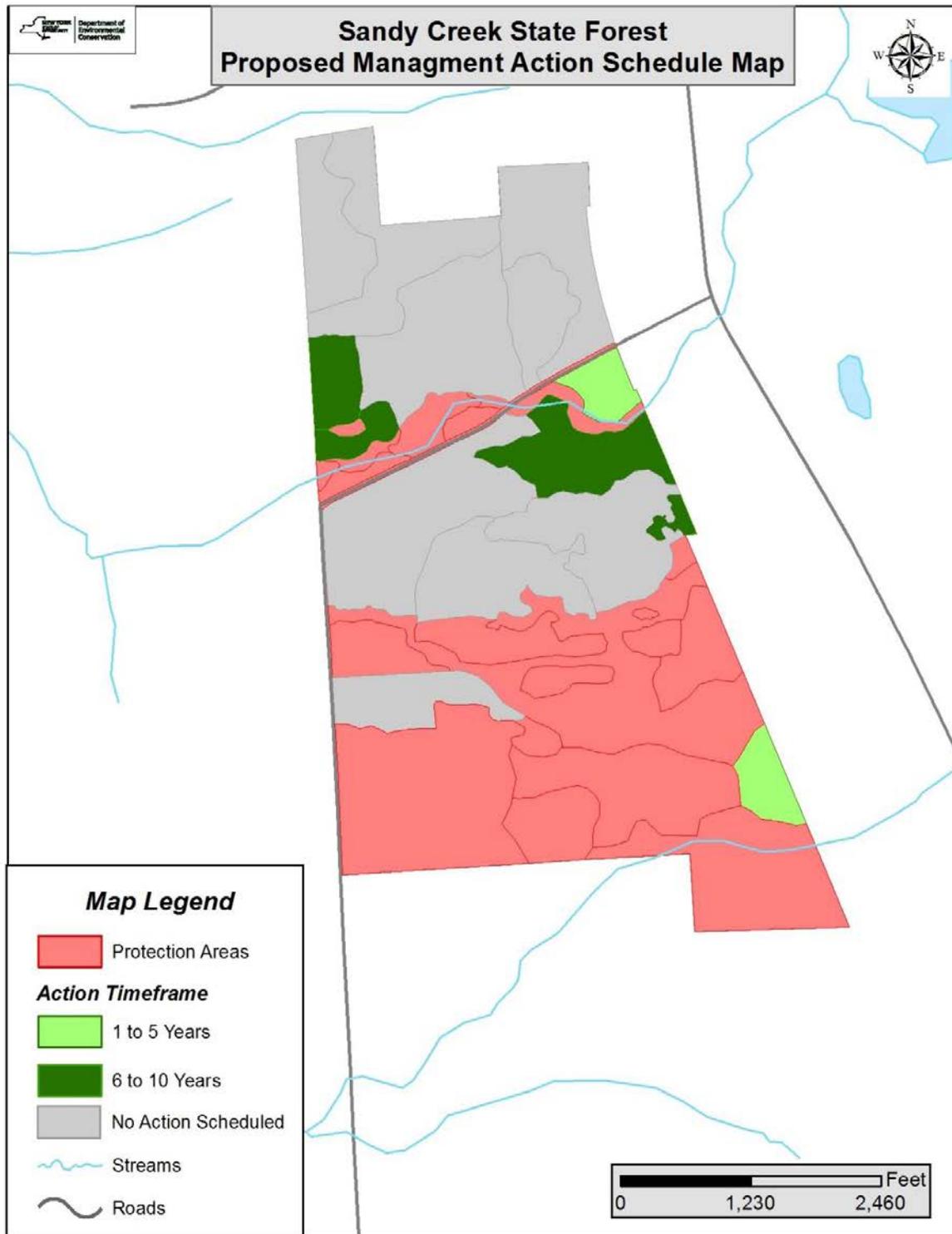


FIGURE 6. – MANAGEMENT ACTION SCHEDULE MAPS

