



Department of
Environmental
Conservation

St. Lawrence Flatlands

UNIT MANAGEMENT PLAN

FINAL

**Towns of Bombay, Brasher, Lisbon, Louisville, Madrid,
Massena, Moira, Norfolk, Stockholm, Waddington,**

Counties of Franklin, St. Lawrence

November 2015

DIVISION OF LANDS AND FORESTS

Bureau of State Land Management, Region 6

6739 US Highway 11

Potsdam, NY 13676

OFFICE OF THE COMMISSIONER

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

MEMORANDUM

NOV 20 2015

TO: The Record
FROM: Basil Seggos, Acting Commissioner 
SUBJECT: St. Lawrence Flatlands UMP

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

St. Lawrence Flatlands

Unit Management Plan

**A planning unit consisting of 10 State Forests and 6 Detached Forest Preserve
Parcels, in St. Lawrence and Franklin Counties**

Prepared by the St. Lawrence Flatlands Unit Management Planning Team:

Aaron Graves	Forester 1 - Team Leader and Author
Michael Contino	Regional Real Property Supervisor
Mark Henry	Conservation Operations Supervisor 2 (Retired)
Rodger Klindt	Biologist 1 - Aquatic
Erik Latremore	Biologist 1 - Habitat
Dan Levy	Forester 1
Eric Mayer	Conservation Operations Supervisor 3
Bruce Robinson	Lands & Claims Adjuster 2
Angelena Ross	Biologist 1 - Ecology
Jay Terry	Forest Ranger 2
Jerry Zaykoski	Regional Minerals Manager

Acknowledgments

The St. Lawrence Flatlands 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:

Timothy Baxter	Forester 1 - Team Leader and Author (Retired)
James Canevari	Forestry Technician 1
Douglas Carlson	Biologist 1 - Aquatic
Mark Craig	Biologist 2 – Ecology (Retired)
Mark Effley	Land Surveyor
John Gibbs	Natural Resource Supervisor
Michael Grove	Real Estate Specialist 1 (Retired)
David Hamelin	Fish & Wildlife Technician 2 (Retired)
Josh Houghton	Natural Resource Planner
Wayne LaBaff	Forest Ranger (Retired)
Kathryn Laubscher	Keyboard Specialist
Mike Lavare	Labor Supervisor (Retired)

Stephen Litwhiler	Citizen Participation Specialist
Patrick Marren	Forester 1
Robert McCuin	Conservation Operations Supervisor 1 (Retired)
Scott Murphy	Forest Ranger
Terry Newvine	Conservation Operations Supervisor 2 (Retired)
David Ochs	Forester 1 (Retired)
Leonard Ollivett	Biologist 2 – Ecology (Retired)
JoEllen Oshier	Keyboard Specialist
Michael Perry	Forester 1 – Team Leader and Author (Retired)
Greg Rutley	Forestry Technician 3
David Smith	Forester 3
Paul Toohey	Conservation Operations Supervisor 3 (Retired)
Blanche Town	Fish & Wildlife Technician 3

Other Contributors:

James Covey	St. Lawrence University Student
Elizabeth Donnelly	St. Lawrence University Student
Nancy Eldblom	Naturalist
Carl Goodrich	Brasher Town Historian
Dawn Howard	St. Lawrence County Soil & Water Conservation District
Anne Johnson	Rare and Endangered Plants Specialist – Fort Drum
Bonnie MaCulloch	Syracuse University Student
Jeffery Miller	St. Lawrence University Student
Jeff O’Donnel	St. Lawrence University Student
Ralph Trumble	St. Lawrence University Student
Robert White	St. Lawrence County Forester (Retired)

Dedication

This Management Plan is dedicated to the hundreds of young men who served in Civilian Conservation Corps (CCC) Camp S-95 in Brasher Falls and Camp S-120 in Brushton. During the nearly eight year tenure of these camps, these men created the framework for the wonderful public resource that we have available today. It is in their names that we honor their dedicated service and the legacy they have provided for future generations.

Memoriam

In memory of the following Department employees who dedicated their careers to the stewardship of these public forests and for their contribution in protecting and enhancing the legacy passed on to them by the CCC's.

Henry Bradford
Harold Canell
George Cook
Dave Corse
Jerome Crump
Mary Ensby
Frank Farquharson
Lloyd Foster
Lawrence Garvey
Henry Beresford
Gordon Griffin
Terry Healey
Glenwood Laramay
William Lavine
James Ruff
Chester Yops

Reginald Ramsdell
Chester Lemay
Elmer Loope
Marvin Nichols
Walter Pratt
Morris Ramsdell Sr.
Morris (Gus) Ramsdell Jr.
Raymond Rivers
Patrick Sovie
Reginald Ramsdell
James Sullivan
Lyle Welch
Francis Wood
Arnold Leggue
Clarence Petty

Special Recognition:

- To: Sr. Forestry Technician David G. Corse for his 32 years of dedicated service as the resident custodian and manager of Brasher State Forest.
- To: The "CC Dam" Association for their rehabilitation of the picnic and camping area, especially Diane Finnie for her efforts as its first caretaker.
- To: Ralph Burnell and Paul Derouchie for their countless hours of volunteer work on trails.

New York State Department of Environmental Conservation
Division of Lands and Forests
Region 6 Sub Office
6739 US Hwy 11,
Potsdam, NY 13676
(315) 265-3090
R6.UMP@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 St. Lawrence Flatlands 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

ST. LAWRENCE FLATLANDS	1
<i>Counties of Franklin, St. Lawrence</i>	1
DEC'S MISSION	4
VISION STATEMENT	4
TABLE OF CONTENTS	5
PREFACE	8
STATE FOREST OVERVIEW.....	8
<i>Legal Considerations</i>	8
MANAGEMENT PLANNING OVERVIEW	8
<i>Public Participation</i>	9
<i>Strategic Plan for State Forest Management</i>	9
DEC'S MANAGEMENT APPROACH AND GOALS	9
<i>Forest Certification of State Forests</i>	9
<i>Ecosystem Management Approach</i>	10
<i>Ecosystem Management Strategies</i>	11
<i>State Forest Management Goals</i>	11
LOCATION MAP.....	13
INFORMATION ON THE ST. LAWRENCE FLATLANDS UNIT	13
STATE LANDS IN THE UNIT	13
<i>DEC Facilities Not Included in this UMP</i>	14
<i>Adjacent Public Lands Not Managed by the Department</i>	15
HIGH CONSERVATION VALUE FORESTS	15
SOILS.....	16
WATER RESOURCES.....	18
<i>Major Streams, Rivers and Water Bodies</i>	20
BIODIVERSITY	20
<i>Common Species</i>	20
<i>Habitat</i>	21
<i>Representative Sample Areas</i>	22
<i>At-Risk Species</i>	26
VISUAL RESOURCES	31
HISTORIC AND CULTURAL RESOURCES	32
<i>History of the Unit</i>	33
<i>Inventory of Resources</i>	37
<i>Archaeological Site Protection</i>	38
<i>Archaeological Research</i>	38
REAL PROPERTY.....	39
<i>Boundary Lines</i>	39
<i>Exceptions and Deeded Restrictions</i>	40
<i>Encroachments</i>	43
<i>Land Acquisition</i>	44
INFRASTRUCTURE	45
<i>Roads and Trails</i>	45
<i>Signs / Kiosks</i>	48
<i>Boating and Fishing Facilities</i>	48
<i>Designated Campsites and Lean-tos</i>	49
<i>Other Facilities</i>	49
<i>Utility Transmission and Collection Facilities</i>	49
<i>Operations Facilities</i>	49
<i>Non-recreational Uses</i>	50

FORMAL AND INFORMAL PARTNERSHIPS AND AGREEMENTS	50
RECREATION	50
<i>Wildlife-related Recreation</i>	51
<i>Camping</i>	53
<i>Water-based Recreation</i>	54
<i>Trail-based Recreation</i>	55
<i>Other Recreational Activities</i>	57
<i>Overall Assessment of the Level of Recreational Development</i>	57
UNIVERSAL ACCESS	58
<i>Application of the Americans with Disabilities Act (ADA)</i>	58
MINERAL RESOURCES	59
<i>Oil, Gas and Solution Exploration and Development</i>	59
<i>Mining</i>	60
SUPPORTING LOCAL COMMUNITIES	60
<i>Tourism</i>	60
<i>Taxes Paid</i>	60
FOREST PRODUCTS.....	61
<i>Timber</i>	61
<i>Non-Timber Forest Products</i>	62
FOREST HEALTH.....	62
<i>Invasive Species</i>	62
<i>Managing Deer Impacts</i>	65
SUMMARY OF ECO-REGION ASSESSMENTS.....	67
ECO-REGION SUMMARY	67
ECO-REGION ASSESSMENT	68
LOCAL LANDSCAPE CONDITIONS	69
MANAGEMENT CHALLENGES ON THE UNIT	70
MANAGEMENT CHALLENGES	70
MANAGEMENT OBJECTIVES AND ACTIONS.....	72
OBJECTIVES	72
<i>Ecosystem Management</i>	72
<i>Resource Protection</i>	73
<i>Infrastructure and Real Property</i>	75
<i>Public/Permitted Use</i>	75
<i>Forest Management and Health</i>	77
TEN-YEAR LIST OF MANAGEMENT ACTIONS	80
<i>Unit-wide Actions</i>	80
FOREST TYPE CODES.....	86
LAND MANAGEMENT ACTION SCHEDULES	88
GLOSSARY.....	179
GLOSSARY	179
BIBLIOGRAPHY.....	182
BIBLIOGRAPHY.....	182
APPENDICES & FIGURES	185
APPENDIX A - SUMMARY OF COMMENTS AND RESPONSES TO THE ST. LAWRENCE FLATLANDS UMP	185
APPENDIX B - STATE ENVIRONMENTAL QUALITY REVIEW (SEQR)	196
<i>Final Supplemental Environmental Impact Statement</i>	198
1.0 Introduction.....	200
2.0 Description of the Proposed Project.....	200
3.0 Potential Impacts and Mitigation	202
4.0 Alternatives Analysis	219

<i>5.0 Comments and Responses to the Draft Supplemental Environmental Impact Statement</i>	234
<i>Bibliography</i>	239
APPENDIX C – PARCEL ACQUISITION HISTORY	241
APPENDIX D – HISTORIC PHOTOS	259
APPENDIX E – ROAD STATUS.....	264
APPENDIX F – COMPREHENSIVE FISH SPECIES LIST	268
APPENDIX G –BLACK ASH MANAGEMENT OUTLINE.....	270
APPENDIX H –ST. REGIS MOHAWK POSITION LETTER	274
APPENDIX I - MEMORANDUM FROM THE ST. REGIS MOHAWK TRIBE REGARDING BRASHER STATE FOREST AND CULTURAL RESTORATION	278
FIGURE 1. – SOIL MAPS	287
FIGURE 2. – HYDROLOGY AND SPECIAL MANAGEMENT ZONE MAPS.....	304
FIGURE 3. – INFRASTRUCTURE AND RECREATION MAPS	321
FIGURE 4. – STAND IDENTIFICATION MAPS	344
FIGURE 5. – CURRENT FOREST COVER TYPE MAPS	399
FIGURE 6. – TOPOGRAPHY AND SLOPE MAPS.....	416
FIGURE 7. – MANAGEMENT DIRECTION MAPS	433
FIGURE 8. – MATRIX FOREST BLOCK AND CONNECTIVITY CORRIDOR MAP	450
FIGURE 9. – DESIGNATED SNOWMOBILE TRAIL MAPS.....	452
FIGURE 10. – MULTI-USE TRAIL ALTERNATIVES MAPS.....	454

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 Detached Forest Preserve. These parcels are managed with different management priorities and are described separately in the **Detached Forest Preserve Parcels** section.

Legal Considerations

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

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

MANAGEMENT PLANNING OVERVIEW

The St. Lawrence Flatlands Unit Management Plan (UMP) is based on a long range vision for the management of Bombay State Forest, Brasher State Forest, Buckton State Forest, Fort Jackson State Forest, Grantville State Forest, Knapp Station State Forest, Lost Nation State Forest, Raymondville State Forest, Sodom State Forest, Southville State Forest, and Detached Forest Preserve parcels located in the towns of Lisbon, Louisville, Massena, and Waddington, balancing long-term ecosystem health with current and future demands. This plan addresses management activities on this unit for the next ten

years, though some management recommendations will extend beyond the ten-year period. Factors such as budget constraints, wood product markets, and forest health problems may necessitate deviations from the scheduled management activities.

Public Participation

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

A summary of public comments received during the preparation of the St. Lawrence Flatlands UMP, as well as Departmental responses, is included as Appendix A.

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.

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 mark of
responsible forestry
FSC® C002027



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.

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.

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 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.

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.

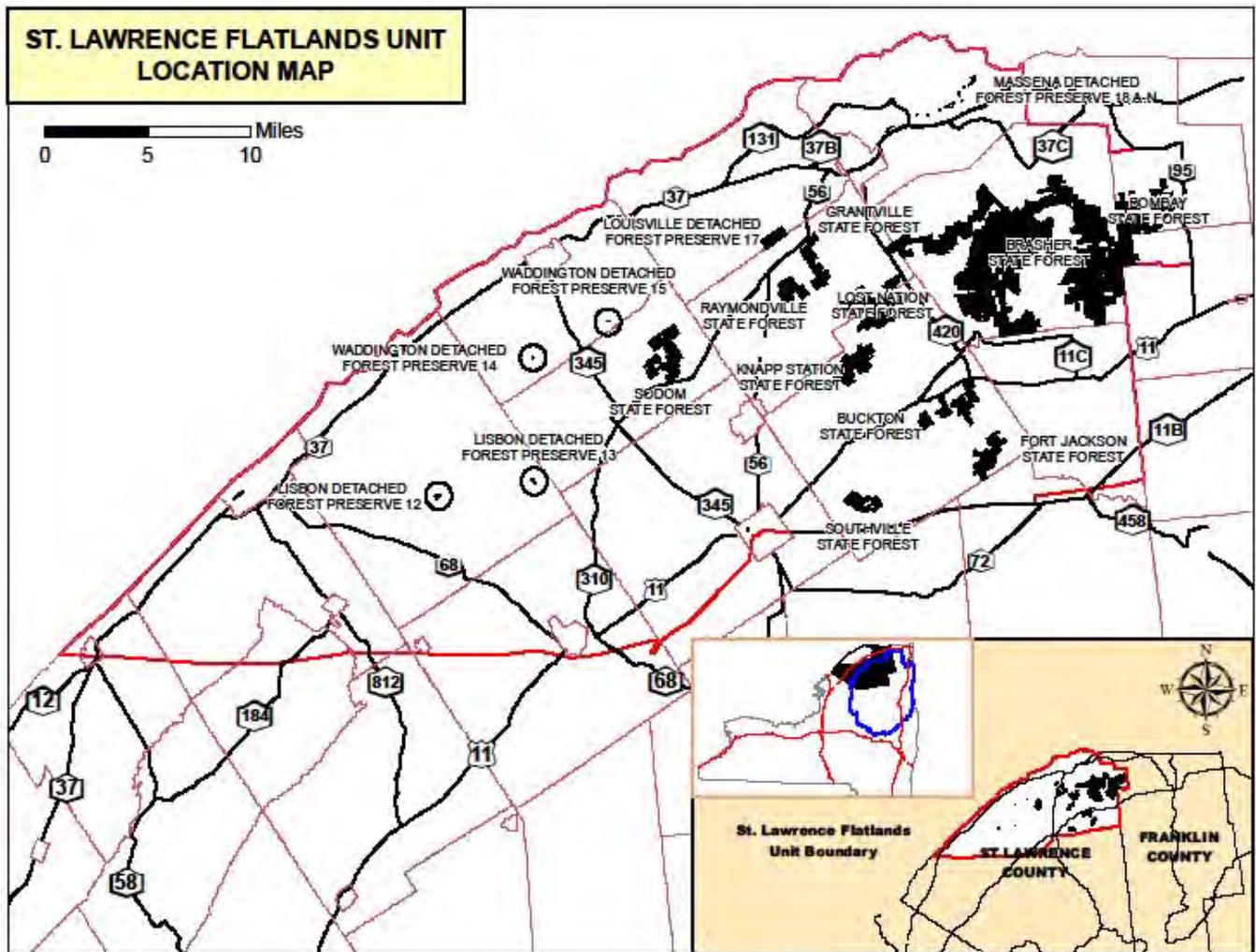
Goal 5 – Provide a Legal Framework for Forest Conservation and Sustainable Management of State Forests

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.

INFORMATION ON THE ST. LAWRENCE FLATLANDS UNIT

LOCATION MAP

LOCATION MAP



INFORMATION ON THE ST. LAWRENCE FLATLANDS 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.

INFORMATION ON THE ST. LAWRENCE FLATLANDS UNIT

STATE LANDS IN THE UNIT

<i>Table I.A. – State Lands in the Unit</i>		
Facility Name and Webpage	Deeded Acreage*	GIS Acreage**
Bombay State Forest–FR 2, FR 4 http://www.dec.ny.gov/lands/7999.html	2,920	2,747
Brasher State Forest–SL 1, SL5, SL6, SL 7, SL 10, SL 17 http://www.dec.ny.gov/lands/7999.html	19,782	19,751
Buckton State Forest–SL 31 http://www.dec.ny.gov/lands/80851.html	1,076	1,092
Fort Jackson State Forest–SL 22 http://www.dec.ny.gov/lands/80856.html	937	914
Grantville State Forest–SL 15 http://www.dec.ny.gov/lands/80861.html	776	775
Knapp Station State Forest–SL 11 http://www.dec.ny.gov/lands/80866.html	1,003	1,006
Lost Nation State Forest–SL 9 http://www.dec.ny.gov/lands/80872.html	1,914	1,907
Raymondville State Forest–SL 33 http://www.dec.ny.gov/lands/80835.html	643	641
Sodom State Forest–SL 25 http://www.dec.ny.gov/lands/81591.html	1,424	1,426
Southville State Forest–SL 23 http://www.dec.ny.gov/lands/81237.html	541	551
Detached Forest Preserve Parcels	436	436
Total	31,452	31,246
*Acres based on deeds and survey maps **Acres from GIS State Land Forest Stands coverage or Real Property Maps (Forest Preserve parcels) All plan analysis is based on GIS acreage		

DEC Facilities Not Included in this UMP

There are two Wildlife Management Areas (WMA's) located within the St. Lawrence Flatlands UMP area: Upper and Lower Lakes WMA (Town of Canton) and Wilson Hill WMA (Town of Louisville). They are managed by the DEC Bureau of Wildlife to promote wildlife habitat, game management, and protection of rare and threatened species. For more information about these areas, see the DEC website at <http://www.dec.ny.gov/outdoor/8282.html> . The DEC also maintains several boat launch sites on rivers and lakes throughout the area. For more information about these sites, see the DEC website at <http://www.dec.ny.gov/outdoor/23866.html> .

Adjacent Public Lands Not Managed by the Department

There are several St. Lawrence County Forests located adjacent to state forests in this unit. These include St. Lawrence Co. Forest #1 (adjacent to Sodom State Forest), SLC #11 and #22 (adjacent to Fort Jackson State Forest), SLC #18 (adjacent to Brasher State Forest), and SLC #24 (adjacent to Southville State Forest). These areas are managed by the St. Lawrence County Soil and Water Conservation District. For more information, see their website at <http://www.co.st-lawrence.ny.us/Departments/SoilWater/>.

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.*

Portions of the St. Lawrence Flatlands Unit have been identified as having high conservation value. Acreage totals for designated HCVFs located within the unit can be found in the appropriate sections below. For more information on HCVFs please go to <http://www.dec.ny.gov/lands/42947.html>.

SOILS

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

Table I.B. - Soils (see Figure 1 for maps)		
Facility Name (Stand Type)	Predominant Soil Type(s)	Acres
Upland Hardwoods / Softwoods	Naumburg loamy fine sand	6,435
	Croghan sand	1,947
	Malone loam	1,355
Plantations	Croghan, Adams, Coveytown, and Hogansburg loamy fine sands	4,512
	Adams sand	3,966
	Hogansburg and Grenville soils	821
Lowland Swamps	Au Gres – Scarboro – Croghan association	2,454
	Deford mucky loamy fine sand	1,903
	Borosaprists and Fluvaquents, frequently flooded	950
	Dorval muck	926
	Deford loamy fine sand	737
	Other (50 less common soils)	5,240

The basement rocks of the St. Lawrence Flatlands unit were deposited as sedimentary rocks in the Precambrian period and metamorphosed during a period of mountain building known as the Grenville Orogeny some 1.1 billion years ago. The ancestral Adirondacks were eroded over a period of 585 million years until reduced to an almost flat, sea level surface. This lowland allowed a shallow sea to form. Starting 500 million years ago, the Potsdam Sea occupied the area for about 55 million years. During this time, the Potsdam Sandstone, Theresa Formation and the Beekmantown Group were deposited. These deposits resulted in a brief retreat of the Potsdam Sea before rising sea levels caused an even larger re inundation of sea levels. The Black River and Trenton Groups were deposited during this time. An unconformity exists in the rock record for the next two million years but the region was then above sea level and rather stable in terms of deposits or erosion.

Much of the present landscape is the product of the glacial process. The Laurentide Ice Sheet occupied this area during the Pleistocene Glacial Age while undergoing three major advances and retreats. In Northern New York we see only the latest advance, the Wisconsin. This advance occurred 20,000 years ago and erased evidence of prior movements. With the Laurentide finally retreating, the water from this wasting glacier resulted in the formation of Lake Iroquois somewhere between twelve and thirteen thousand years ago. The removal of the weight which had been associated with the glacier caused the land beneath it to experience isostatic rebound thus eventually draining this inland sea. This rebound is still occurring at a very slow rate. The sand formations in evidence today are the result of shoreline erosion and outflow from ancient Lake Iroquois.

The topography in this area is generally flat with an elevation range from 160 feet above sea level at the Grass River Indian Meadows in Massena, to 580 feet above sea level on Fort Jackson State Forest in the town of Stockholm. The area is best characterized as having a large number and wide disbursement of wetlands interspersed with a series of glacial tills in the forms of eskers and drumlins. Eskers are best described as relatively narrow ridge-like formations while drumlins are hill-like formations resembling the shape of an inverted spoon.

Maps of topography and slope for state forests in this unit are included as Figure 6.

While many different soil types can be found in this large block, the following listing gives the most prevalent soil types found beneath the general forest cover types.

Upland Natural Hardwood and/or Softwood Stands

Naumburg loamy fine sand: A very deep, level and somewhat poorly drained low lime, sandy soil formed in lake laid deposits. The available water capacity is very low and permeability is rapid.

Carbondale muck: Deep, level and very poorly drained muck soil formed in organic residues. The organic soil material is greater than 51 inches thick over any mineral soil material. The available water capacity is high and the permeability is moderate.

Wegatchie silt loam: A very deep, level and poorly to very poorly drained medium lime, silty soil formed in lake laid deposits. The available water capacity is high and the permeability moderately slow.

Fahey loamy fine sand: Very deep, nearly level and moderately well drained. A low lime, sandy and gravely soil formed in wave washed material. The sand and gravel are underlain by loamy glacial till material. The sand and gravel thickness varies from 3 feet to greater than 6 feet. The available water capacity is very low. Permeability is rapid in the upper sand and gravel layer but moderately slow below.

Croghan sand, 0 to 8% slopes: Very deep and nearly level to gently sloping. A moderately well drained, low lime sandy soil formed in lake laid deposits. The available water capacity is very low and permeability very rapid.

Planted Forests

Croghan loamy fine sand: Very deep, nearly level to gentle slope and moderately well drained. Low lime, sandy soil formed in lake laid deposits. Available water capacity is very low and permeability is very rapid.

Adams loamy fine sand, 2 to 8% slopes: Very deep and gently sloping. A well to excessively drained low lime sandy soil formed in out wash. The available water capacity is low to very low. Permeability is rapid in the upper 2 feet and very rapid below that.

Trout River loamy sand, 3 to 8% slopes: A very deep, gently sloping and somewhat excessively drained low lime, sandy and gravelly soil formed in wave washed material. The sand and gravel are underlain by loamy glacial till material. The thickness of sand and gravel varies from 3 feet to greater than 6 feet. Available water capacity is very low and permeability is rapid in the upper section but moderately slow below.

Coveytown loamy fine sand: Very deep, nearly level and somewhat poorly drained medium lime soil. The upper 2 to 3 feet is formed in sandy lake laid deposits and the lower part is loamy glacial till. Available water capacity is very low. Permeability is moderately rapid to rapid in the upper part and moderately slow to moderate in the lower part.

Lowland Swamps

Borosaprists & Fluvaquents, frequently flooded: Nearly level, moderately shallow to very deep and very poorly to somewhat poorly drained soils that are in flood plain areas. Most of these soils have formed in organic material (muck). Some have formed in mineral soil material (sand, silt or clay). These areas are subject to frequent flooding from nearby streams.

Fluvaquents - Udifluvents complex, frequently flooded: Shallow to deep, nearly level, very poorly to well drained, sandy to clayey soils that are in flood plain areas. These areas are subject to frequent flooding from nearby streams.

Maps of soil types found in this unit are included as Figure 1.

WATER RESOURCES

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

Table I.C. – Water Resources (see Figure 2 for maps)		
Watersheds		
Hydrologic unit(s)		-Deer River -Little Salmon River - Lower Grass River -Raquette River -Robinson Creek – Frontal St. Lawrence River - St. Regis River -Salmon River -Sucker Brook-Frontal St. Lawrence River -West Branch St. Regis River
Primary source aquifer		None
		0 ac.
Municipal water supply (serving municipalities of over 5,000 people)		None
		0 ac.
Wetlands		
State Regulated wetland		9,129 ac.
Federal Regulated and Unregulated wetland (less than 12.4 acres)		665 ac.
Streams/Rivers		
Perennial streams/rivers	AA or A	0.0 mi.
	B	24.1 mi.
	C	4.0 mi.
	D	20.4 mi.
Trout streams/rivers	AA (T), A (T), B (T) or C (T)	1.5 mi.
Water Bodies		
Water bodies (open-water ponds and lakes)		9 ac.

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

- 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.

Named Class B perennial streams include the Deer River, Grass River, Raquette River, Redwater Brook, St. Regis River, and the West Branch of the St. Regis River. Named Class C perennial streams include Pike Creek and Squeak Brook. Named Class D perennial streams include Allen Brook, Earls Creek, Lawrence Brook, Plumb Brook, the west branch of Squeak Brook, and Trout Brook.

Maps of hydrology and special management zones found in this unit are included as Figure 2.

Major Streams, Rivers and Water Bodies

There are several important river systems included in this unit. State properties include frontage on the Deer River (4.1 miles), Grass River (2.7 miles), Raquette River (1.3 miles), and St. Regis River (12.5 miles). They are used primarily for recreation including kayaking, canoeing, and fishing. Redwater Pond is popular for fishing and picnicking by users of the surrounding Walter Pratt Memorial Forest in Brasher State Forest.

BIODIVERSITY

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

- “Keep Common Species Common” by maintaining landscape-level habitat diversity and a wide variety of naturally occurring forest-based habitat as well as managing plantations according to DEC natural resources policy.
- Protect and in some cases manage known occurrences and areas with potential to harbor endangered plants, wildlife and natural communities.
- Consider other “at-risk species” whose population levels may presently be adequate but are at risk of becoming imperiled due to new incidences of disease or other stressors.

Common Species

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

INFORMATION ON THE ST. LAWRENCE FLATLANDS UNIT

BIODIVERSITY

- NYS Breeding Bird Atlas Block Numbers 4895B, 4896D, 4996B, 4996D, 5094A, 5094B, 5095A, 5095B, 5095D, 5096A, 5096B, 5096C, 5096D, 5195A, 5195C, 5195D, 5196A, 5196B, 5196C, 5196D, 5197C, 5197D, 5296A, 5296B, 5296C, 5297C, 5297D

More information on the Breeding Bird Atlas can be found at <http://www.dec.ny.gov/animals/7312.html> .

- Herp Atlas Block Names Bombay, Brasher Falls, Brushton, Chase Mills, Hogansburg, Massena, Nicholville, Norfolk, North Lawrence, Parishville, Potsdam, Raquette River

More information on the Herp Atlas, and lists of amphibians and reptiles and their ranges in New York State can be found at <http://www.dec.ny.gov/animals/7140.html> .

- Game Species Harvest Levels WMU Numbers 6A, 6C

Summaries of deer and bear harvests for this area can be found on the DEC’s website at <http://www.dec.ny.gov/outdoor/42232.html> . More information about hunting, trapping, and game management can be found on the DEC’s website at <http://www.dec.ny.gov/outdoor/hunting.html> .

Habitat

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

Vegetative Types and Stages

Table I.D. - Vegetative Types and Stages within the Unit (see Figure 4 for maps)					
Vegetative Type	Acres by Size Class				% of Total
	0 -5 in	6 - 11 in	12+ in	Other	
Natural Forest Hardwood	1,272	7,264	790	--	30
Natural Forest Conifer	279	3,872	1,140	--	17
Plantation Softwoods	203	2,669	5,872	--	28
Plantation Hardwoods	0	0	0	--	0
Wetland	--	--	--	7,231	23
Ponds	--	--	--	91	>1
Open/Brush	--	--	--	23	>1
Other (Roads, Parking lots, etc.)	--	--	--	540	2
Total (Acres)	1,754	13,805	7,802	7,885	100%

Representative Sample Areas-

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>.

Table I.E. – RSAs and Rare Community HCVFs within the Unit				
Community Name	Vegetative Type	Facility Name / Stand Numbers	NYNHP Rank	Acreage
<i>Representative Sample Areas of Commonly Occurring Natural Communities</i>				
Black Ash Wetland	Forested Wetland	Brasher, Bombay, and Lost Nation State Forests	Unlisted	1,470
<i>At-Risk Natural Communities (NYNHP Rank S1, S2, G1, or G2)</i>				
None				0
Total (Acres):				1,470

Black Ash Wetlands

One community type that is especially important in this unit is black ash wetlands. Black ash (*Fraxinus nigra*) grows in seasonally wet swamp hardwood stands, along with red maple, green ash, elms, aspen, yellow birch, and white cedar. It has a narrow range of growing conditions in which it reaches its best form and quality, and it is sensitive to changes in hydrology such as those caused by beaver activity.

Black ash is very important to local Native American culture. Artisans in the Mohawk community use black ash for the construction of pack baskets, utilitarian and ornamental baskets, as well as other items. Basket trees must meet exacting standards, such as being very straight with no limbs on the lower bole, minimum diameter of 10-14", and a uniform growth rate. Very few black ash trees in a given stand meet all these requirements.

There has been increasing concern over the last 30 years that the health of black ash forests is declining, and the number of basket quality trees is also decreasing. In the 1990s a collaborative effort was established between the Mr. Les Benedict of the Akwesasne Taskforce on the Environment, Dr. Michael Bridgen of the New York State Ranger School at Wanakena, NY, and local forestry staff in the Potsdam DEC office to help study black ash on local state forests and improve the management of the black ash resource. Several stands in Brasher State Forest were thinned of competing hardwoods, while keeping carefully selected high quality black ash which will hopefully develop into basket quality trees over time. Better quality black ash stands were also sought out and will be monitored in the future. Seeds from black ash were also collected by Mr. Benedict and Mr. Richard David, from basket quality trees in New York and southern Canada. In partnership with DEC forester Dave Lee at the Saratoga Tree Nursery (more information at <http://www.dec.ny.gov/animals/7127.html>), the seeds were grown into seedlings and then replanted on both state forest sites and on the Akwesasne Mohawk Reserve.

Black ash stands are grouped in the Natural Area category (see description on page 25), which means they will not undergo commercial timber harvesting, and in most cases will receive little active management. Traditional small scale harvesting practices, such as removing individual basket trees will continue, and further improvement thinnings may occur with the goal of improving black ash quality and regeneration. These will be restricted to "light on the land" techniques, such as hand falling all trees, carrying harvested trees to drier ground, and working on frozen ground whenever possible.

Black ash forests in this unit are faced with the prospect of widespread damage from the Emerald Ash Borer, an invasive insect which is located within 30 miles of the unit in southern Canada. It is likely that the insect will be found in this unit within the next 10 years, which could create widespread mortality of black and green ashes. There are currently no known practical means to remove a large Emerald Ash Borer infestation, once it has become established. Silvicultural or herbicide treatments that reduce susceptibility of black ash stands to Emerald Ash Borer damage will be considered if they appear to improve the long term quality and perpetuation of the black ash resource. A Black Ash Management Outline for this unit is included as Appendix G.

Resource Protection Areas

In the course of practicing active forest management, it is important to identify areas on the landscape that are either reserved from management activity or where activity is conducted in such a manner as to provide direct protection and enhancement of habitat and ecosystem functions. For more information on these protective measures, see SPSFM page 85 at <http://www.dec.ny.gov/lands/64567.html>.

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

The identification of large, unfragmented 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. The following areas have been identified to meet demands at the landscape level:

- Matrix Forest Block 21,896 acres
- Forest Landscape Connectivity Corridor 4352 acres

There are two Matrix Forest Blocks which include state properties in this unit. The Brasher State Forest Block includes Bombay State Forest, and most of Brasher State Forest except for the portion west of St. Lawrence County Route 53, encompassing 20,129 acres. The St. Lawrence State Forest Block includes all of Sodom State Forest and the Louisville Detached Forest Preserve parcel, a total of 1,767 acres. Landscape Connectivity Corridors are proposed as routes for wildlife to travel between the larger Matrix Forest Blocks. There are 5 corridors in this unit that cross portions of Buckton, Lost Nation, Raymondville, and Southville State Forests. See Figure 8 for a map of the Matrix Forest Blocks and Forest Landscape Connectivity Corridors in this unit.

Natural Areas are stands which will not receive scheduled management. Stands such as wetlands, stream and river buffers, and forested stands which are marginally wet or inaccessible are included in this category. In general, timber management will be minimal in these areas and they will be allowed to gradually develop late successional characteristics. In the event of natural disturbances such as windstorms, ice storms, or insect and disease outbreaks, salvage harvests of timber will be very limited or will not occur in these areas. Treatments to control invasive species or re-establish a more native species mix will be considered if they improve the long term health and sustainability of the area. Low intensity recreational usage will be allowed. Due in part to a large number of wetlands and limited

access, this unit has a large acreage of stands best suited as Natural Areas. There are over 19,000 acres classified as Natural Areas in this unit, which are summarized in Table III.I.

Habitat Related Demands

There are two categories of habitat that are well represented in this unit, more so than in other regions of the state. There are over 7,000 acres of wetlands, ranging from open water beaver ponds and wet grasslands, to seasonally flooded shrub lands dominated by speckled alder, viburnums, winterberry, and dogwoods. They are especially important not only for resident plants and animals but also for large flocks of migrating waterfowl which use these areas on a seasonal basis. A major goal of future management of this unit will be to maintain the quality of these areas, by preserving existing hydrology and drainage, utilizing Best Management Practices in all timber harvesting and road building activities to minimize sedimentation, and delineating and controlling invasive species such as purple loosestrife and common reed.

Another unusually common habitat type in this unit are sawtimber sized white pine stands. The quality of white pine is generally better than other regions of the state, with a reduced incidence of damage caused by white pine weevil, better regeneration of white pine seedlings, and an abundance of sandy soils on which white pine attains its best growth. There are several thousand acres of white pine plantations planted during the CCC era (1934-1941) that are now approximately 18-24" DBH and 75 years old. These stands are currently even aged, with 2 distinct age classes: the sawtimber sized overstory trees, and a layer of seedling and poletimber sized regeneration of pine, maple, and spruce species. These stands will slowly be converted to uneven aged stands, by periodic partial harvests which open the overstory and establish new age classes of trees, while maintaining a significant amount of the original overstory. This will help address a shortage of uneven aged forests in the unit, while also perpetuating a significant conifer cover across the landscape.

There are also many hundred acres of naturally occurring white pine stands in the unit. Many of these areas are on marginally wet drainage, with a canopy of large scattered sawtimber sized white pine trees, and an understory of swamp hardwood poletimber. These areas are in general unsuitable for timber harvesting due to poor drainage, and will be left as Natural Areas to develop and regenerate without active management.

This ecoregion has a shortage of some habitat types, especially native grassland communities and early successional shrublands. Many of the state properties in the unit were originally in these categories when acquired in the 1930s, 1940s, and 1960s, but have since advanced to later successional stages such as poletimber and sawtimber sized forests. Grasslands cannot easily be re-established on areas which have succeeded to forests. However, any future state land acquisitions that contain grasslands or shrublands should be considered for periodic mowing, brush cutting, or other activities to postpone succession and maintain early successional habitat.

There is also a shortage of late successional (>140 yrs old) forests in this unit. Many of the current state forests were cleared for agriculture before state acquisition. The oldest stands in the unit are generally

plantations ranging from 70 to 80 years old, with some scattered older native trees in less accessible areas and on marginal sites. A goal of this plan will be to increase the percentage of late successional stands over time, by removing from timber management stands which are: wet or marginally wet, inaccessible, prone to windthrow or other post-harvest deterioration, or which contain locally rare or threatened habitat types. Approximately 12,469 acres of forest has been included in the Natural Areas category, which will receive minimal timber management now or in the future.

An excellent summary of native plants that occur in this area can be found in *Plants of St. Lawrence County, NY: An Annotated Checklist of Vascular Flora* by Nancy Eldblom and Anne Johnson.

At-Risk Species

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

Investigation included the following:

- A formal plant survey was conducted on this Unit in 2007 by the New York Natural Heritage Program.
- Element Occurrence Records for the New York Natural Heritage Program's Biological and Conservation Data System were consulted for information.
- Consultation of NHP species guides.
- Consultation of the NYS Comprehensive Wildlife Conservation Strategy

Table I.F. lists the species confirmed or predicted on the State Forests and Forest Preserve parcels that comprise this Unit and in the larger landscape, as well as their required habitats.

INFORMATION ON THE ST. LAWRENCE FLATLANDS UNIT

BIODIVERSITY

Table I.F. - At-Risk Species*				
Species Name	NYNHP Rank	Habitat	Record Source	NYS Status
Confirmed or Predicted within the Unit				
Animals				
Indiana Bat (<i>Myotis sodalis</i>)	S1	Forest	SF PRO (PRED)	E SGCN
Birds				
American Bittern (<i>Botaurus lentiginosus</i>)	S4	Wetland	BBA (CONF)	PSC SGCN
Bald Eagle (<i>Haliaeetus leucocephalus</i>)	S2S3B,S2N	River	NHEO (CONF)	T SGCN
Black Tern (<i>Chlidonias niger</i>)	S2B	Wetland	NHEO (CONF)	E SGCN
Common Nighthawk (<i>Chordeiles minor</i>)	S4	Forest	BBA (CONF)	PSC SGCN
Cooper's Hawk (<i>Accipiter cooperii</i>)	S4	Forest	BBA (CONF)	PSC SGCN
King Rail (<i>Rallus elegans</i>)	S2B	Wetland	SF PRO (CONF)	T SGCN
Least Bittern (<i>Ixobrychus exilis</i>)	S3B, S1N	Wetland	NHEO (CONF)	T SGCN
Northern Goshawk (<i>Accipiter gentilis</i>)	S4B, S3N	Forest	BBA (CONF)	PSC SGCN
Northern Pintail (<i>Anas acuta</i>)	S2	Wetland	BBA (CONF)	GAME SGCN
Osprey (<i>Pandion haliaetus</i>)	S4	River	BBA (CONF)	PSC SGCN
Pied-billed Grebe (<i>Podilymbus podiceps</i>)	S3B, S1N	Wetland	NHEO (CONF)	T SGCN
Red-shouldered Hawk (<i>Buteo lineatus</i>)	S4	Forest	BBA (CONF)	PSC SGCN
Sharp-shinned Hawk (<i>Accipiter striatus</i>)	S4	Forest	BBA (CONF)	PSC SGCN
Upland Sandpiper (<i>Bartramia longicauda</i>)	S3B	River	NHEO (CONF)	T SGCN
Whip-poor-will (<i>Caprimulgus vociferous</i>)	S4	Forest	BBA (CONF)	PSC SGCN

INFORMATION ON THE ST. LAWRENCE FLATLANDS UNIT

BIODIVERSITY

Fish				
Blackchin Shiner <i>(Notropis heterodon)</i>	S1	River	SF PRO (PRED)	U SGCN
Eastern Sand Darter <i>(Ammocrypta pellucida)</i>	S2	River	NHEO (CONF)	T SGCN
Iowa Darter <i>(Etheostoma exile)</i>	S2	River	NHEO (CONF)	U SGCN
Lake Sturgeon <i>(Acipenser fulvescens)</i>	S1S2	River	NHEO(CONF)	T SGCN
Mooneye <i>(Hiodon tergisus)</i>	S1	River	NHEO (CONF)	T SGCN
Northern Brook Lamprey <i>(Ichthyomyzon fossor)</i>	S1	Stream	NHEO (CONF)	U
Mollusks				
Black Sandshell <i>(Ligumia recta)</i>	S2S3	River	SF PRO (PRED)	U SGCN
Yellow Lampmussel <i>(Lampsilis cariosa)</i>	S3	River	NHEO (CONF)	U SGCN
Dragonflies				
Brook Snaketail <i>(Ophiogomorphus aspersus)</i>	S2	River	NHEO (CONF)	U SGCN
Extra-striped Snaketail <i>(Ophiogomorphus anomalus)</i>	S1	River	NHEO (CONF)	PSC SGCN
Rapids Clubtail <i>(Gomphus quadricolor)</i>	S1S2	River	SF PRO (PRED)	U SGCN
Reptiles				
Blanding's Turtle <i>(Emys blandingii)</i>	S2S3	Wetland	NHEO (CONF)	T SGCN
Plants				
Alpine Cliff Fern <i>(Woodsia alpina)</i>	S1	Cliff	SF PRO (PRED)	E
Arctic Rush <i>(Juncus trifidus)</i>	S2	Cliff	SF PRO (PRED)	T
Auricled Twayblade <i>(Listera auriculata)</i>	S1	Wetland	SF PRO (PRED)	E
Balsam Willow <i>(Salix pyrifolia)</i>	S2S3	Wetland	NHEO (CONF)	T

INFORMATION ON THE ST. LAWRENCE FLATLANDS UNIT

BIODIVERSITY

Brown Bog Sedge (<i>Carex buxbaumii</i>)	S2	River	NHEO (CONF)	T
Hill's Pondweed (<i>Potamogeton hillii</i>)	S2	Wetland	SF PRO (PRED)	T
Hooker's Orchid (<i>Platanthera hookeri</i>)	S1	Forest	SF PRO (PRED)	E
Lake-cress (<i>Neobeckia aquatica</i>)	S2	Wetland	NHEO (CONF)	T
Dwarf Sand-cherry (<i>Prunus pumila var depressa</i>)	S2	Grassland	SF PRO (PRED)	T
Meadow Horsetail (<i>Equisetum pratense</i>)	S2	Forest	NHEO (CONF)	T
Mingan Moonwort (<i>Botrychium minganense</i>)	S1	Forest	SF PRO (PRED)	E
Northern Reedgrass (<i>Calamagrostis stricta</i>)	S2	Wetland	SF PRO (PRED)	T
Northern Bog Aster (<i>Symphyotrichum boreale</i>)	S2	Wetland	SF PRO (PRED)	T
Pink Wintergreen (<i>Pyrola asarifolia ssp. Asarifolia</i>)	S2	Forest	NYNH (CONF)	T
Rhodora (<i>Rhododendron canadense</i>)	S2	Wetland	NHEO (CONF)	T
Riverweed (<i>Podostemum ceratophyllum</i>)	S2	River	SF PRO (PRED)	T
Roseroot (<i>Rhodiola rosea</i>)	S1	Cliff	SF PRO (PRED)	E
Sartwell's Sedge (<i>Carex sartwellii</i>)	S1	Wetland	SF PRO (PRED)	T
Scarlet Indian-paintbrush (<i>Castilleja coccinea</i>)	S1	Grassland	NHEO (CONF)	E
Slender Marsh Bluegrass (<i>Poa paludigena</i>)	S1	Wetland	SF PRO (PRED)	E
Small Bur-reed (<i>Sparganium natans</i>)	S2	Wetland	NHEO (CONF)	T

INFORMATION ON THE ST. LAWRENCE FLATLANDS UNIT

BIODIVERSITY

Smooth Cliff Brake (<i>Pellaea glabella</i> ssp. <i>glabella</i>)	S2	Cliff	SF PRO (PRED)	T
Southern Twayblade (<i>Listera australis</i>)	S1	Wetland	SF PRO (PRED)	E
Southern Yellow Flax (<i>Linum medium</i> var. <i>texanum</i>)	S2	Grassland	NYNH (CONF)	T
Virginia False Gromwell (<i>Onosmodium</i> <i>virginianum</i>)	S1	Grassland	SF PRO (PRED)	E
Whorled Mountain-mint (<i>Pycnanthemum</i> <i>verticillatum</i> var. <i>verticillatum</i>)	S1S2	Grassland	NHEO (CONF)	T
Confirmed or Predicted in the Landscape and May Be Affected by State Forest Management				
Birds				
Golden Winged Warbler (<i>Vermivora chrysoptera</i>)	S4	Grassland	BBA (CONF)	PSC SGCN
Grasshopper Sparrow (<i>Ammodramus</i> <i>savannarum</i>)	S4	Grassland	BBA (CONF)	PSC SGCN
Horned Lark (<i>Eremophila alpestris</i>)	S5	Grassland	BBA (CONF)	PSC SGCN
Loggerhead Shrike (<i>Lanius ludovicianus</i>)	S1	Grassland	BBA (CONF)	E SGCN
Northern Harrier (<i>Circus cyaneus</i>)	S3	Grassland	BBA (CONF)	T SGCN
Sedge Wren (<i>Cistothorus platensis</i>)	S2	Grassland	BBA (CONF)	T SGCN

*Defined as NYNHP rank S1, S2, S2-3, G1, G2 or G2-3 OR identified as an SGCN

Key to Codes

BBA - Breeding Bird Atlas

(PRED) - Predicted Species

(CONF) - Confirmed Species

NHEO – Natural Heritage Element Occurrence GIS Layer

NYNH – NY Natural Heritage Program: Biodiversity Inventory of Regions 5 and 6

SF PRO – State Forest Predicted
Richness Overlay GIS coverage

Status

E - Endangered Species (New York)

T - Threatened Species (New York)

PSC - Protected, Special Concern Species (New York)

SGCN - Species of Greatest Conservation Need

U - Unlisted (New York)

GAME - Game Species (New York)

Several species of fish listed as either State Endangered (E) or Threatened (T) have been reported in the Raquette River and St. Regis River watersheds. Eastern Sand Darter (E) and Lake Sturgeon (T) have both been reported in DEC surveys in the vicinity of the UMP. Mooneye (T) have been reported at the downstream portions of the St. Regis River. Lake Sturgeon have been stocked in the lower Raquette and St. Regis Rivers in an effort to bolster populations in an attempt to de-list the species.

American chestnut (*Castanea dentata*) was once a common and valuable tree for its rot resistant timber and chestnuts which were eaten by both wildlife and people. Unfortunately, an invasive fungal disease was introduced into North America around 1904 which quickly spread throughout the northeastern states, killing almost all mature chestnut trees by the 1930s. Fort Jackson State Forest still contains a small population of chestnut sprouts, which grow to a few inches in diameter and then succumb to the chestnut blight fungus. Another uncommon tree species in this unit is Hackberry (*Celtis occidentalis*), which has at least 1 specimen growing on Knapp Station State Forest. It is not rare on a statewide level, but it is very uncommon in this area.

Northern Goshawk (*Accipiter gentilis*) is a forest dwelling hawk which is often encountered hunting or nesting on state forests in this unit. In recent years, forestry staff have observed at least 12 active goshawk nests in this unit, primarily in sawtimber sized white pine, larch, and red pine plantations. Current management practice for protecting goshawk habitat is to survey any stands scheduled for timber harvesting before marking begins, locate any active or older inactive stick nests, place uncut buffers around each nest, and restrict harvesting to times which are outside of goshawk nesting season (August 1 to February 28th).

This unit is also known to host at least two active Great Blue Heron (*Ardea herodias*) rookeries, located on Bombay and Brasher State Forests. Both rookeries are situated in large wetland complexes which are in remote sections of these forests.

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. For information on the protection of visual resources, please see SPSFM page 81 at

<http://www.dec.ny.gov/lands/64567.html>.

The most scenic part of this unit is the over 20 miles of frontage on the Deer, Grass, Raquette, and St. Regis Rivers. These areas provide tremendous opportunity for the development of recreational trails to allow the public to access and enjoy the natural beauty and wild character of these state forests.

HISTORIC AND CULTURAL RESOURCES

Prior to the first white settlements, St. Lawrence County was occupied by the Iroquois Confederacy. The St. Lawrence Flatlands unit lies within the area that was claimed and occupied by the Mohawk Nation-Keepers of the Eastern Door. Native American Settlement in this area has been documented up to 5,000 years ago. In addition to these settlements, the area was widely used by the Mohawks for hunting, fishing and travel along the St. Regis and Deer River corridors.

The State owned parcels within this management unit lie within what is referred to as the “Original Ten Townships of St. Lawrence County”. This large parcel of land was purchased in 1787 by wealthy land speculator Alexander Macomb who in turn began selling off portions to secondary speculators.

The history of the town of Brasher is representative of the settlement and development of this area. Settlers began to arrive in this area following the Revolutionary War. Agricultural and lumbering activities marked the beginning of this era. In 1809, Brooklyn land speculator Philip Brasher acquired title to the land within this area. The first sawmill was built in 1815 near the mouth of the Deer River at what would later become Brasher Iron Works. Helena, the town’s first settlement, was established in 1817 on land owned by Joseph Pitcairn and named for Pitcairn’s daughter Helen. In 1820, Helena became the site of the first permanent home built in what was soon to become the Town of Brasher. In 1823, the first store was built in Helena which was a most welcomed relief to the inhabitants who up until then, had to trek to Cornwall Ontario in order to obtain their supplies. The town’s first post office was built in Helena in 1827. Helena was also home to a grist mill, a customs house, a hotel and a tannery.

In 1825, a large forested parcel of land was removed from the Town of Massena in order to establish the Town of Brasher. The principal Hamlet of Brasher Falls was then established along a stretch of rapids near the juncture of both branches of the St. Regis River. This mile long stretch of rapids served as the water source for a number of large manufacturing ventures during the early to mid-19th Century. Beginning with a dam and sawmill which were constructed in 1826, Brasher Falls soon hosted a stone gristmill, a shingle mill, a woolen mill, a starch factory, a hotel, an additional sawmill and a farm implement factory started in 1852 by Davis & Company from Maine and subsequently taken over by P.E Kennehan in the mid 1870's. Kennehan Agricultural Works was a world known manufacturer of plows and various other farm implements up until the 1960's. At one time, the hamlet also featured a covered bridge.

The third settlement of Brasher Center was established in 1832 along the St. Regis River approximately four miles downstream from Brasher Falls.

INFORMATION ON THE ST. LAWRENCE FLATLANDS UNIT

HISTORIC AND CULTURAL RESOURCES

The town of Brasher held a unique historical place in the early days of the iron making industry in New York State. Unlike the traditional sources of raw material typically found in rocks and hills, the swamps and river banks in the Brasher area were home to a slowly forming sedimentary material known as bog iron. In 1835, land owner Joseph Pitcairn persuaded well known iron maker Stillman Fuller to examine the area and construct a furnace if practical. The present hamlet of Brasher Iron Works was born, when in 1835, construction of Fullers' blast furnace was begun along the banks of the Deer River just upstream from Helena. Beginning with its startup in the fall of 1836, the furnace ran in one continuous blast for 15 months before the first stoppage. By late 1837 when the second blast was completed, Stillman Fuller sold out to an Isaac Skinner from Buffalo New York. Mr. Skinner, who was known to have a streak of bad luck when it came to fires, suffered a total loss to his Brasher operation on two separate occasions prior to 1843. An onsite accident resulting in fire also significantly destroyed the business in 1843 as did an explosion in 1856. After repeatedly rebuilding, a forest fire in May of 1857 brought an end to the furnace and iron making process at Brasher Iron Works. Although a machine shop and foundry was then constructed on this site, it too succumbed to a fire in 1887 thus bringing an end to the iron industry at this small community.

History of the Unit

Laws passed by the State of New York in 1929 and 1931 provided authorization for the Conservation Department to purchase available properties for reforestation purposes. The first purchase in Brasher was in 1932 for a 67 acre parcel located adjacent to the Redwater Dam area. The majority of purchases had been completed by the early 1940's but additional acquisitions have been made up to and including the present time. A record of land acquisitions can be found in Appendix C.

Perhaps the most significant piece of local history in terms of relevance to the present character of this forest is the Civilian Conservation Corps (CCC). Established in 1933 by President Franklin D. Roosevelt, the purpose of this program was to provide employment during the Great Depression to thousands of young men on conservation related projects throughout the nation. Camp S-95 was established in Brasher on May 15th, 1934 on government lands that had been purchased from James McNulty. This camp was situated on what is now the site of the DEC Maintenance Facility off the Vice Road.

The Brasher camp and another nearby camp in Brushton (Camp S-120), were just two of approximately 2,600 camps throughout the nation. It was the task of the U.S. Army to enroll, feed, clothe and provide medical care to the enrollees while Local/State personnel were in charge of all field projects. The Brasher work camp generally consisted of between 140 and 150 unmarried men between the ages of 17

INFORMATION ON THE ST. LAWRENCE FLATLANDS UNIT

HISTORIC AND CULTURAL RESOURCES

and 28. Staff consisted of 2 Army Officers, a Project Superintendent, 5 Cooks, a Medical Officer, a dozen or more technical staff to oversee field projects and 8-10 Foremen including such occupations as Blacksmiths, Mechanics and Equipment Operators. During the nearly eight year tenure of this camp, enrollees established two tree nurseries and spent in excess of 27,000 man days planting over 8 million tree seedlings. In order to protect these and other trees within the forest, 126 water reservoirs were constructed for use in the event of a forest fire. This was a massive undertaking as each of these hand dug and rock lined water holes measured 25 feet across and 10 feet in depth. Several miles of old farm and log roads were upgraded as was the construction of new roads. Approximately 50 miles of access lanes were cleared around plantations in order to provide accessibility in the event of a fire. Nearly 150 miles of boundary line surveys were done and over 50 miles of barbed wire fencing was erected in order to prevent damage to the young forest from adjacent livestock. Improvement thinnings were carried out on about 1,200 acres of natural forests and *Ribes* eradication efforts took place on nearly 10,000 acres of land in order to prevent a deadly disease common to white pine trees. The popular camping and picnic facility presently located at Redwater Dam was constructed as a CCC building project from 1935 to 1938. DEC personnel have continued on for 60 years as stewards of this wonderful forest but there is little doubt that the present character of this area is a testimonial to the dedication and hard work of the Civilian Conservation Corps. Upon the disbanding of the CCC's, this camp was then used by the Army to house German and Italian prisoners during World War II.

In addition to the forests, other reminders of the CCC and later eras can still be found today. Most of the waterholes created during the CCC era were later filled in for safety reasons, but there are still at least 2 remaining in Brasher State Forest. There were extensive forest fires in the Brasher area and throughout northern New York in 1941. In 1950 the Sand Hill fire tower was established in the western portion of Brasher State Forest, on the present State Highway 420. This was an 80' metal tower with an accompanying observer's cabin, which were staffed periodically during times of high fire hazard and drought. The station was not used often and was officially closed in 1959, and the tower was taken down around 1961. The observer's cabin was moved to the DEC maintenance facility in Brasher Falls. All that remains at the site today are the cement footers for the tower and cabin.

There are also several historical photos dating from the CCC era which are included as Appendix D.

During the CCC era, there were several important figures who worked hard to establish the state forests we have today. Walter F. Pratt (1905-1956) was a 1927 graduate of the New York State College of Forestry at Syracuse University. He was appointed forester for St. Lawrence County (District 7) of the Conservation Department in 1932. During his tenure, he oversaw the acquisition of nearly 46,000 acres of state forest throughout the county, as well as the planting of many thousand acres of plantations, construction of the major truck trails and recreation trails, and he assisted private landowners with forest management on their lands. Mr. Pratt passed away at the age of 51, and his co-workers and the surrounding community later dedicated the Walter F. Pratt Memorial Forest near North Lawrence in his honor. This area is located in Brasher State Forest, on the first Reforestation Area acquired under his leadership in 1932. This site is now home to the popular Redwater Dam picnic and camping area.

INFORMATION ON THE ST. LAWRENCE FLATLANDS UNIT

HISTORIC AND CULTURAL RESOURCES

Clarence Petty (1905-2009) was appointed the first Camp Superintendent at the Brasher Falls CCC Camp in 1934. In 1935 he became the Camp Superintendent at the newly established Brushton CCC Camp located east of Dickinson Center in Franklin County. He supervised large groups of workers who surveyed the newly purchased state forests, planted trees, built roads, and conducted white pine blister rust control work to remove plants which harbor the disease. He worked extensively throughout the state forests in northern St. Lawrence and Franklin counties. In his later career he would become an important influence in the Conservation Department and later the Department of Environmental Conservation, where he was a strong advocate for conservation and protection of the Adirondack Park.

Detached Forest Preserve Parcels

Included in this unit are 6 parcels of Detached Forest Preserve, which are properties classified as Forest Preserve but located outside the Catskill or Adirondack Park boundaries. These properties range in size from 3 to 350 acres. They are not managed for timber production and have relatively poor access with no developed trails or facilities, but do provide ample wildlife habitat and watershed protection values. These detached forest preserve parcels were owned by the state before the Adirondack Park was created and were in Forest Preserve counties where forested lands acquired by the state became Forest Preserve lands. Eventually the Adirondack Park Blue Line was established, within which state lands acquired would become Forest Preserve, while outside new acquisitions would become other categories of DEC lands such as state forests or wildlife management areas. Many of these properties reverted to state ownership after tax sales, or due to foreclosure of mortgages.

The following is a list of the Detached Forest Preserve parcels in the St. Lawrence Flatlands Unit:

<u>Parcel</u>	<u>Town</u>	<u>Acreage</u>	<u>Name</u>	<u>Deed Recorded</u>
FP SL 12	Lisbon	20.38	Lisbon FP	3/24/1900
FP SL 13	Lisbon	11.74	Lisbon FP	1/25/1892
FP SL 14	Waddington	7.0	Waddington FP	3/24/1900
FP SL 15	Waddington	3.4	Waddington FP	3/24/1900
FP SL 17	Louisville	350.3	Louisville Swamp	Mortgage foreclosure 1907
FP SL 18	Massena	43.4	St. Regis Reservation- Grass River Indian Meadows	Conveyed by treaty 2/21/1845

FP SL 12 This property is located approximately midway between the Swamp and Hatch Roads, and is located over 3,300' from either road. It is surrounded by private land and is inaccessible. It is recommended that this property be sold or otherwise transferred from DEC jurisdiction.

FP SL 13 This property is located approximately 2,200' north of the Fisher Road. It is surrounded by private land and is inaccessible. It is recommended that this property be sold or otherwise transferred from DEC jurisdiction.

FP SL 14 This property is located approximately 1,500' north of St. Lawrence County Route 31, northwest of the hamlet of Chipman. It is surrounded by private land and is inaccessible. It is recommended that this property be sold or otherwise transferred from DEC jurisdiction.

FP SL 15 This property is located approximately 740' west of the Hardscrabble Road. It is surrounded by private land and is inaccessible. The parcel was surveyed by the DEC and is depicted on map #8687, dated September 27, 1970. Jurisdiction of this property was transferred by executive order, dated June 30, 1971, from the Division of Lands and Forests to the Division of Fish and Wildlife, to be dedicated to wetland protection purposes.

FP SL 17 The Louisville Swamp is by far the largest of the detached forest preserve parcels at 350 acres. It is located approximately 1,800' east of St. Lawrence County Route 39. It is surrounded by private land and is inaccessible. Attempts were made in past years to acquire adjacent parcels that were for sale which would provide public access, but the acquisitions were unsuccessful. Continuing attempts should be made to improve access by acquiring adjacent land from willing sellers, or possibly by acquiring a right of way to this parcel.

FP SL 18 The Indian Meadows are a series of 24 parcels which are located along the Grass River in the town of Massena. This land was acquired by the State of New York on February 21, 1845 at a Treaty of Purchase with the St. Regis Indians. The parcels vary in size from 0.12 acre to 15 acres. The 15 acre parcel (18-N), as well as another 2.93 acre parcel (18-M), were apparently acquired at some point by the Seaway Development Corporation. It also appears that there may be utility lines crossing parcels 18-J (0.35 ac.) and 18-K (1.5 ac.). According to file record notations, the location of several parcels may be impossible to determine due to erosion and dredging work done long ago in conjunction with development of the Alcoa power canal. It is recommended that these parcels be sold or otherwise transferred from DEC jurisdiction.

Proposals have been made in the past to dispose of these parcels as provided in Article 2 Section 24 of the Public Lands Law and Article XIV, section 3(2) of the New York State Constitution. Providing the State continues to retain ownership, there are no management issues that can be addressed until such time as the locations of these parcels can be determined through survey.

The above parcels have been included in summaries of soils, habitat types, wetlands, and wildlife. They have been collectively classified as wetlands, since most of the acreage is composed of wetland shrubs or open wetlands on muck soils. There are no roads, trails, buildings, or other infrastructure on these parcels. Their best use is for wetland protection and wildlife habitat. A general location map of the Detached Forest Preserve parcels is included in Figure 3 – Infrastructure and Recreation.

INFORMATION ON THE ST. LAWRENCE FLATLANDS UNIT

HISTORIC AND CULTURAL RESOURCES

The following parcel was originally managed by the Conservation Department, a predecessor of the Department of Environmental Conservation, but has since been transferred to another state agency:

Parcel	Town	Acreage	Name	Property Transferred to NYS
FP SL 9	Oswegatchie	13.1	Eel Weir State Park	12/21/1932

FP SL 9 This parcel was transferred to the Department of Parks effective September 1, 1967. It has since been developed as a recreational area featuring 28 campsites and is known as Eel Weir State Park. It is now managed by the Office of Parks, Recreation, and Historic Preservation. More information about this property can be found on the OPRHP website at <http://nysparks.com/parks/>. This property is not managed by the Department of Environmental Conservation, and will not be included further in this plan.

Inventory of Resources

The term cultural resource encompasses a number of categories of human created assets including structures, archaeological sites and related artifacts. It also may denote areas of significant importance to local and/or tribal communities. For more information on protection of historic and cultural resources, please see SPSFM page 139 at <http://www.dec.ny.gov/lands/64567.html>.

There are no known major historical sites located on state properties in this unit. There are many remnants of the agricultural past of our state forests, including cellar holes, house foundations, water wells, and stone walls. These features are identified before any timber harvesting takes place in the area, to minimize disturbance of these features and preserve them for the future.

There are potentially remnants of past Native American use of this area, such as fishing sites, village sites, or scattered artifacts such as arrowheads or pottery shards. Any such features will be protected as they become known.

The term cultural resource encompasses a number of categories of human created resources including structures, archaeological sites and related resources. The Department is required by the New York State Historic Preservation Act (SHPA) (PRHPL Article 14) and SEQRA (ECL Article 8) 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.

On lands managed by the Division of Lands and Forests, the number of standing structures is generally limited due to the nature of land use. Often those that remain are structures that relate to the Department's land management activities such as fire towers, "ranger" cabins and related resources. Fire towers as a class of resources, have been the subject of considerable public interest over the last decade. The majority of surviving fire towers have been found eligible for inclusion in the State and National Registers of Historic Places and a number of towers were formally listed in the Registers in 2001. For state agencies, Register listing or eligibility are effectively the same; obligating the Department

to treat these resources appropriately and requiring that special procedures be followed should it be necessary to remove or otherwise affect these resources.

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

The quality of the site inventory information varies a great deal in all respects. Very little systematic archaeological survey has been undertaken in New York State, especially on public lands. Therefore all current inventories must be considered incomplete. Even fewer sites have been investigated to any degree that would permit their significance to be evaluated. Many reported site locations result from 19th century antiquarian information, artifact collector reports that have not been field verified. Often very little is known about the age, function or size of these sites. This means that reported site locations can be unreliable or be polygons that encompass a large area. Should systematic archaeological inventory be undertaken at some point in the future it is very likely that additional resources will be identified.

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.

Archaeological Site Protection

The archaeological sites located within this land unit as well as additional unrecorded sites that may exist on the property are protected by the provisions of the New York State Historic Preservation Act (SHPA - Article 14 PRHPL), Article 9 of Environmental Conservation Law and Section 233 of Education Law. No actions that would impact these resources are proposed in this Unit Management Plan. Should any such actions be proposed in the future they will be reviewed in accordance with SHPA.

Unauthorized excavation and removal of materials from any of these sites is prohibited by Article 9 of Environmental Conservation Law and Section 233 of Education Law.

Archaeological Research

The archaeological sites located on this land unit as well as additional unrecorded sites that may exist on the property will be made available for appropriate research. All future archaeological research 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 different research questions.

REAL PROPERTY

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

Boundary Lines

<i>Table I.G. – Status of Boundary Lines</i>			
Facility Name	Length of Boundary (mi.)	Length Needing Maintenance	Length Needing Survey
Bombay State Forest-FR 2	15.36	15.36	15.36
Bombay State Forest -FR 4	7.24	7.24	7.24
Brasher State Forest -SL 1	23.56	4.38	4.38
Brasher State Forest -SL 5	24.32	2.90	2.90
Brasher State Forest -SL 6	28.60	3.19	3.19
Brasher State Forest -SL 7	12.23	0.75	0.75
Brasher State Forest -SL 10	27.33	5.85	5.85
Brasher State Forest -SL 17	10.82	1.14	1.14
Buckton State Forest -SL 31	14.59	0.90	0.90
Fort Jackson State Forest -SL 22	10.11	0.45	0.45
Grantville State Forest -SL 15	9.36	0.26	0.26
Knapp Station State Forest -SL 11	11.88	1.07	1.07
Lost Nation State Forest -SL 9	17.85	4.77	4.77
Raymondville State Forest -SL 33	5.77	0.88	0.88
Sodom State Forest -SL 25	15.17	2.66	2.66
Southville State Forest -SL 23	7.68	0	0
Detached Forest Preserve Parcels	12.38	12.38	12.38
Totals	254.25	64.18	64.18

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

There is a large backlog of state acquisitions in this unit that are in need of boundary surveys. There was a member of the DEC Real Property staff based in St. Lawrence County for many years, but since his retirement in 1995 there has been a reduction in the amount of time available to do surveying fieldwork in this unit. The boundaries of the following parcels cannot be adequately painted or signed until they have been surveyed:

INFORMATION ON THE ST. LAWRENCE FLATLANDS UNIT

REAL PROPERTY

<u>State Forest</u>	<u>Ref. Area</u>	<u>Parcel Name</u>	<u>Acreage</u>	<u>Year Acquired</u>
Brasher SF	1	Warner	97.2	2006
Brasher SF	6	Prop G-2 / Champion	8.0	1999
Brasher SF	7	Johnston & Mitchell	50.0	2002
Brasher SF	10	Luczkiewicz	39.1	2001
Brasher SF	17	Saler & Spivak	47.0	2005
Fort Jackson SF	22	Prop H / Cree	41.5	1992
Lost Nation SF	9	Prop P/ SLC 4H Lot	16.0	1990
Lost Nation SF	9	Prop Q / SLC 4H Lot	9.0	1993
Lost Nation SF	9	Prop R / Maginn 4H Lot	1.0	1994
Lost Nation SF	9	Caza 4H Lot	1.0	2001
Lost Nation SF	9	McWilliams 4H Lot	1.0	2001

In addition, all 6 parcels of Detached Forest Preserve in this unit are in need of survey and their boundary lines cannot be marked at the present time.

A summary of the parcel acquisition history in this unit is included as Appendix C.

Exceptions and Deeded Restrictions

<i>Table I.H. – Exceptions and Deeded Restrictions</i>			
Facility Name	RA #	Description E.g., deeded ROW, easement, access lane, water rights, cemetery, etc.	Proposal ID (Surveyor's Reference)
Bombay State Forest	FR 2	None	--
Bombay State Forest	FR 4	None	--
Brasher State Forest	SL 1	Reserved ROW over parcel 15' square, SW corner of lot 109	A
Brasher State Forest	SL 1	15' wide ROW	B
Brasher State Forest	SL 5	Reserved right to regulate water levels for water or electric power	D
Brasher State Forest	SL 5	Road ROW for People of NYS	E
Brasher State Forest	SL 5	Reserved ROW 3 rods wide	K

INFORMATION ON THE ST. LAWRENCE FLATLANDS UNIT

REAL PROPERTY

Table I.H. – Exceptions and Deeded Restrictions			
Facility Name	RA #	Description E.g., deeded ROW, easement, access lane, water rights, cemetery, etc.	Proposal ID (Surveyor's Reference)
Brasher State Forest	SL 5	Qualified reservation of mineral rights	R
Brasher State Forest	SL 5	Reserved right to use well and parcel of land 100'x150' to water livestock	V
Brasher State Forest	SL 5	Pole line easement	Z
Brasher State Forest	SL 5	Easement for two power transmission lines 2800' along south end of Vice Rd.	Z
Brasher State Forest	SL 6	Reserved ROW 20' wide	D
Brasher State Forest	SL 6	One power transmission line 650' along County Route 53	L
Brasher State Forest	SL 6	Qualified reservation of mineral rights	Q
Brasher State Forest	SL 6	Reserved mine and minerals rights	V
Brasher State Forest	SL 7	Reserved road access to private parcel (see also L. 902 P. 86)	K
Brasher State Forest	SL 7	Mine and mineral reservation	R
Brasher State Forest	SL 10	Dry hydrant installed at St. Regis Fishing Access Site by the Helena Fire Dept. under DEC permit.	D
Brasher State Forest	SL 10	Reserved use of one rod wide winter road	G
Brasher State Forest	SL 10	One power transmission line 1700' along North end of Vice Road	H
Brasher State Forest	SL 10	Qualified reservation of mineral rights	V
Brasher State Forest	SL 10	Reserved water power rights and qualified mineral rights	W
Brasher State Forest	SL 17	Reserved use of roads on N and W sides of deeded parcel	C
Brasher State Forest	SL 17	Reserved 2 rod wide ROW along the south line of parcel	G
Buckton State Forest	SL 31	Reserved ROW across conveyed parcel	B
Buckton State Forest	SL 31	Reserved ROW across conveyed parcel	D
Buckton State Forest	SL 31	Reserved use of roads adjoining or lying within conveyed parcel	G
Fort Jackson State Forest	SL 22	Subject to easement granted to Northern Development Corp. for operation and maintenance of electric lines	H

INFORMATION ON THE ST. LAWRENCE FLATLANDS UNIT

REAL PROPERTY

Table I.H. – Exceptions and Deeded Restrictions			
Facility Name	RA #	Description E.g., deeded ROW, easement, access lane, water rights, cemetery, etc.	Proposal ID (Surveyor's Reference)
Grantville State Forest	SL 15	Easement and ROW to NY Central Railroad	A
Grantville State Forest	SL 15	Easement and ROW to St. Law. Transmission Co. for power line	B
Grantville State Forest	SL 15	Easement and ROW to St. Law. Transmission Co. for a power line. Easement to St. Law. Valley Power Co. of flow rights. ROW also reserved by Grantor.	C
Knapp Station State Forest	SL 11	Reserved mine and mineral rights	G
Knapp Station State Forest	SL 11	Excepting rights of others, if any, in and to all ponds, streams, highways, roads, public utility easements, transmission lines, telephone lines or ROWs affecting the conveyed parcel	H
Lost Nation State Forest	SL 9	Excepting a ROW as granted in a lease dated 1928 and recorded at L. 249 P. 326	F
Lost Nation State Forest	SL 9	Power line 2400' along Vankennen Road	J
Lost Nation State Forest	SL 9	People of NYS have a deeded ROW to the subject parcel	L
Lost Nation State Forest	SL 9	Easement to Niagara Mohawk Power Corp. and NY Telephone Co.	P
Lost Nation State Forest	SL 9	Reserved rights of others, if any, to all ponds, streams, highways, roads, public utility easements, transmission or telephone lines	Caza 4H lot
Raymondville State Forest	SL 33	Grantor reserved a farm road ROW across conveyed parcel. Also easement granted to St. Law. Transmission Co.	A
Raymondville State Forest	SL 33	Conveyance subject to rights of others, if any, in and to all ponds, streams, highways, roads, public utility easements, and transmission of telephone lines affecting described parcel	G
Sodom State Forest	SL 25	Reserved ROW across conveyed parcel	C

Table I.H. – Exceptions and Deeded Restrictions			
Facility Name	RA #	Description E.g., deeded ROW, easement, access lane, water rights, cemetery, etc.	Proposal ID (Surveyor's Reference)
Sodom State Forest	SL 25	Grantor reserved mine and mineral rights. Also subject to an existing easement for telephone and telegraph lines	D
Sodom State Forest	SL 25	Grantor reserved mine and mineral rights plus a ROW across the conveyed parcel	E
Sodom State Forest	SL 25	Grantor reserved mine and mineral rights	F
Southville State Forest	SL 23	None	--

Use and Demand Related to Exceptions and Deeded Restrictions

The State Forests in this unit are often interspersed with private properties that are bordered or completely surrounded by state property. Vehicular access to these properties is often available either through frontage on a public road or DEC maintained road open to motor vehicles, or through a deeded right of way held by the private landowner across state property. The Department works with landowners and local highway superintendents to try and maintain and improve these legal access routes whenever possible.

There are other private parcels, especially hunting camps, where the parcel has no legal vehicular access to the property, but an existing logging trail or haul road not posted open to motor vehicles is being driven to access the property. In some cases this has caused rutting and damage to low standard seasonal roads and trails that are not suited to all weather vehicular use. Vehicles driving on roads and trails not suitable for this use continue to create ongoing damage and problems throughout this unit.

Encroachments

Well marked boundary lines that are readily identifiable to the public reduce unintentional trespass. However, encroachments onto State Forest lands do sometimes occur. Such issues requiring resolution are listed in the following table.

Table I.I. – Encroachments			
Facility Name	RA #	Description	Proposal ID (Surveyor's Reference)
Brasher State Forest	1	Boundary lines of private inholding do not agree with survey proposal maps.	F

INFORMATION ON THE ST. LAWRENCE FLATLANDS UNIT

REAL PROPERTY

Brasher State Forest	1	Boundary lines of private inholding do not agree with survey proposal maps.	S
Brasher State Forest	1	Monuments have been disturbed and boundary line appears to have been moved along private inholding.	AA
Brasher State Forest	5	Adjacent landowner is using a trail across state forest to access a camp. No deeded ROW. May have an implied ROW since the property was excepted out when the SF parcel was acquired.	R
Brasher State Forest	6	Adjacent landowner is using a trail across state forest to access a camp. No deeded ROW.	U
Brasher State Forest	6	Access to a large section of State Forest is in dispute due to a public road relocation.	W
Brasher State Forest	17	Adjacent landowner is using a trail across state forest to access a camp. No deeded ROW.	B
Buckton State Forest	31	Adjacent landowner is using a trail across state forest to access a camp. No deeded ROW.	F
Raymondville State Forest	33	Monuments disturbed and possible encroachment by adjoiner.	C
Sodom State Forest	25	Adjacent landowner is using a trail across state forest to access a camp. No deeded ROW.	F
Sodom State Forest	25	Private landowner has a deeded ROW to property, but the access trail being used is at a different location.	C

Land Acquisition

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

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

- forested lands in areas that are in need of watershed protection

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

INFRASTRUCTURE

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

Maps of infrastructure and recreational facilities in this unit are included as Figure 3.

Roads and Trails

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

Table I.J. – Existing Access and Parking (see Figure 3 for maps)		
Category	Total Amount	Needing Improvement
Public Forest Access Roads	20.6 mi.	7.7 mi.
Haul Roads	16.4 mi.	14.5 mi.
Trails	43.2 mi.	42.0 mi.
Stream Crossings		
Bridges	5	2
Culverts	12	12
Related Infrastructure		
Parking Areas / Trailheads	3	0
Gates / Barriers	10	2

Additional Information on Roads and Trails

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).

Use and Demand on Roads, Haul Roads and Parking Areas

Roads open to motor vehicles in this unit are frequently used by the general public to access state properties for hunting, fishing, trapping, recreation, timber harvesting, and accessing privately owned parcels that are located near state forests. There is a need for several gates located on major Public Forest Access Roads in Bombay and Brasher State Forests, which will be closed during the spring mud season to protect DEC maintained roads from rutting.

More parking areas are needed at trailheads so that recreational users do not need to park on the edge of public roads. This is especially true of areas which currently contain few good winter parking areas located on plowed roads, such as Buckton, Fort Jackson, and Raymondville State Forests.

Road Classification

Roads are divided into the following classes, based upon intended use and standards of construction.

Public Forest Access Roads - These roads are permanent, unpaved roads which may be designed for all weather use depending upon their location, surfacing and drainage. 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 (8/08). For more information, see the DEC website at http://www.dec.ny.gov/docs/lands_forests_pdf/sfunpavedroad.pdf.

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

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

Town and County Roads - Town and County roads also serve as access to and through the unit. In the case of certain roads in the Town of Brasher, the question of whether they were owned by the State or the Town had been unresolved for many years. Given the uncertainty of the ownership or legal status it may at some point become necessary to petition a court for a declaratory judgment to resolve this matter. However, in the interim the Department and the Town of Brasher have developed a mutual understanding with respect to the legal status of these roads. On June 20th 2001, a Town of Brasher Board meeting was held for the purpose of finalizing a "road agreement" between the DEC and the

Town. This “road agreement” is an understanding between the DEC and the Town of Brasher as to which roads are considered to be owned by the Town and which ones are considered to be State/DEC roads. It is understood that this is an agreement only. At some point in time, a court of law may be petitioned for legal determination of ownership of these roads. The “road agreement” and list of roads indicating agreed upon jurisdictional status can be found in Appendix E.

The Town of Brasher had expressed the intention to pursue a “Qualified Abandonment” procedure on many of these roads back in 2001, but has not as yet made any progress with this issue. Qualified Abandonment status would legally enable the State to assist in or assume maintenance on any of these roads. Any revisions to Appendix E which might result from this, will be included as part of the Unit Management Plan review and update process.

Also included in Appendix E is a Certificate of Qualified Abandonment from the Town of Stockholm dated 1979 for several roads crossing state forests in this unit: Brookdale-Jenkins Corners Road (Lost Nation State Forest), Club Road (Buckton State Forest), and Sheldon Road (Fort Jackson State Forest).

There are several roads in this unit that did not exist at the time of state acquisition of these properties, and were later constructed by the Civilian Conservation Corps in the 1930s or early 1940s, or by the Conservation Department or Department of Environmental Conservation in later years. The following roads and trails (and likely others) were constructed by New York State:

Location	Name	Years of Construction
Bombay SF	Pike Brook Haul Rd	1938-39
Brasher SF	Camp / Larue PFAR	1930s
Brasher SF	Hastings Falls Haul Rd	1973-74
Brasher SF	Railroad Bed PFAR	1940
Brasher SF	Redwater / CC Dam PFAR	1938-39
Brasher SF	McCarthy PFAR	1930s?
Brasher SF	Wilson PFAR	1970s

In addition to the projects above, the CCC’s and Conservation Department engaged in major re-construction and upgrades to the Bush Road in Brasher State Forest in 1940 and 1948.

On St. Lawrence Reforestation Area #6 (Brasher State Forest), there is an issue with access between the State Forest and County Highway 53. The St. Lawrence County Highway Department relocated the roadway in 1939. In 1939, the lands that the State later acquired fronted, and had access to that highway. When the highway was relocated, a gap existed between the new roadway and the lands in question. New York State acquired the bulk of the lands in question in 1942, however, one parcel

remained as private property, and this parcel was accessed via a small "woods road" which ran from the old County roadbed, through the State lands, to the private parcel. There is no legal right-of-way described in the deed which conveyed a right-of-way across State lands to anyone via this "woods road." New York State acquired this private parcel of land in 1993. Given the fact that the private owners had used the "woods road" to access their land for many years, both before and after the State acquired title, and in so doing, crossed the gap between the old and new roadway, it is safe to presume that a case can be made for a prescriptive right-of-way, which would now extend to NY State. In any case, the existing "woods road" that best provides access to all of the state land parcel, at present, does not physically extend all the way to the County Highway. This issue needs to be resolved, so that DEC can utilize the existing "woods road" roadway to access these lands for a variety of purposes, including the sale and removal of forest products. The lands in question do front upon County Highway 53 in a location approximately 850 feet northeast of the old existing "woods road". It may be possible to construct a new roadway in that location to provide road access to the parcel. The construction of a new roadway would be an expensive last resort to providing road access to the parcel; it would be more productive to resolve this issue and utilize the existing "woods road."

Any road work being done by the Town adjacent to State Land which involves work that will extend beyond the current ditch line, will require the issuance of a Temporary Revocable Permit by the DEC.

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

Signs / Kiosks

There are a total of 20 state forest signs and 0 kiosks on the unit.

There is a need for several kiosks in this unit to improve public awareness of the recreational facilities available on state forests, as well as the history and stewardship of these public lands.

This plan proposes the following new kiosks in this unit:

Brasher SF RA 5 Vice Road	Kiosk near the DEC headquarters showing a trail map of the area, sign in register, pamphlets, and a history of the CCC Camp formerly located on this site.
Brasher RA 1 Redwater PFAR	Kiosk at the CC Dam campground showing a trail map of the area, sign in register, pamphlets, and regulations for the camping and picnic area.
Southville State Forest	Kiosk at the trailhead for the hiking / ski trails showing a trail map of the area, sign in register, pamphlets, and history of the area.

Boating and Fishing Facilities

There is a car top boat launch located on the St. Regis River in Brasher State Forest, north of Brasher Center. Boating and fishing facilities as well as their use and demand are discussed under Recreation.

Designated Campsites and Lean-tos

There are three areas in Brasher State Forest that contain designated campsites. On the Camp / Larue Public Forest Access Road there is one campsite with a fire ring. On the Vice Road there are two campsites located along the St. Regis River. There are 20 campsites at the Redwater / CC Dam facility along with picnic areas and day use facilities. There are currently no lean-tos in this unit. Camping facilities, as well as their use and demand are discussed under Recreation.

Other Facilities

There is a field weather station located at the Brasher Falls Maintenance Facility which is monitored by the New York State Forest Rangers. It is used to record temperature, precipitation, humidity, and wind speed, which are important for monitoring forest fire danger, as well as tracking the long term weather patterns in the area.

Utility Transmission and Collection Facilities

The **MA1**, **MA2**, and **MSU** electric transmission lines cross the southeastern portion of Sodom State Forest. These lines occupy an easement granted to the New York Power Authority. The **Dennison Colton 4 & 5** 115,000 volt electric transmission line operated by National Grid crosses both Raymondville and Grantville State Forests. The **Bombay-Nicholville 23** 34,500 volt electric transmission line operated by National Grid crosses Reforestation Area 5 along the Vice Road in Brasher State Forest.

Operations Facilities

The Brasher Falls Maintenance Facility is located on the Vice Road in Brasher State Forest. It consists of a complex of buildings which serve as the home facility for several operations staff who maintain boundary lines, roads, signs, gates, and other infrastructure on DEC properties in this unit. It also serves as the only DEC vehicle maintenance facility for St. Lawrence County.

The following is a list of the structures located at the Brasher Falls Maintenance Facility:

<u>Structure</u>	<u>Size</u>
Shop	3,216 square feet
Fire Control Building	576 square feet
Pole Barn 1 / Storage 1	2,400 square feet
Pole Barn 2 / Storage 2	4,368 square feet
Grader Shed	816 square feet
Office / Observer's Cabin	448 square feet
Oil House	384 square feet
Pole Barn	1,800 square feet

INFORMATION ON THE ST. LAWRENCE FLATLANDS UNIT

FORMAL AND INFORMAL PARTNERSHIPS AND AGREEMENTS

Ranger Building 576 square feet

Weather Station 10 square feet

Non-recreational Uses

Military Field Exercises

There are currently no requests for military training on this unit. Other state forests in the county are sometimes used for training by local college Reserve Officer Training Corps (ROTC) units. The ROTC unit is typically issued a Temporary Revocable Permit for a 2 week or shorter period in which they practice orienteering and tactical training.

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 Adopt-A-Natural Resource Program (AANR). In 2013, the Adopt-A-Natural Resource Program was succeeded by the Volunteer Stewardship Agreements Program (VSA). For more information on these and other partnerships, please see SPSFM page 181 at <http://www.dec.ny.gov/lands/64567.html>.

There are currently four such AANR agreements in place on this unit:

The "CC Dam Association for maintenance of the Redwater picnic and camping facility.

The Youth Conservation Corps for general conservation related activities on State Forest land.

The St. Lawrence County Snowmobile Association for maintenance and grooming of trails.

The Akwesasne Task Force on the Environment for silvicultural activities aimed at perpetuating and propagating Black Ash.

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.

Wildlife-related Recreation

Hunting

Hunting is a major recreational use within the area including hunting for deer, turkey, ruffed grouse, waterfowl and small game species. Summaries of deer and bear harvests for this area can be found on the DEC's website at <http://www.dec.ny.gov/outdoor/42232.html> .

The less severe winter conditions normally encountered within the St. Lawrence Transition zone do not generally result in the winter yarding of deer to the same extent as what normally occurs in the more forested western Adirondack Foothills zone. Still, some yarding does occur and there are two known yarding areas within the Brasher Forest that exceed 200 acres in size.

Hunting is allowed throughout this unit, with the exception of areas that are marked with "Safety Zone – No Shooting" signs near houses or other structures.

During the public review and comment process for this UMP, several sportsmen commented that they would like to see habitat management directed toward game species such as woodcock and ruffed grouse. These species require early successional forest habitat, such as sapling and poletimber hardwood stands, which are relatively uncommon in this unit. Most forests in this unit are either coniferous or larger diameter sawtimber sized hardwoods.

Management guidelines for woodcock (Sepik et al, 1996) recommend periodic patch clearcuts to provide various stages of forest succession including: recently harvested areas or fields (used for singing and roosting grounds), young sapling hardwood stands and alders (for foraging), and poletimber hardwoods (for nesting and brood rearing). Such areas might be managed on a 40 year rotation, with successive 4 acre blocks cut at 10 year intervals. This would provide continuous cover in each successive stage, located nearby the other needed cover types.

Guidelines for ruffed grouse management (Gullion, 1996) recommend similar periodic patch clearcuts to promote the growth of aspen, which is a major food source for grouse. Ruffed grouse need aspen in three age classes: sapling stands 4 to 15 yrs old (for brood cover), sapling and small pole stands 6 to 25 years old (for fall and spring cover), and older aspen stands (for food and as wintering and nesting cover). Areas with a high percentage of aspen in the overstory would be harvested in a series of patch clearcuts 1 to 20 acres in size, managed on a 30 year rotation, with a harvest made in successive patches every 10 years. Aspen may also be regenerated by patch clearcutting individual aspens to promote regeneration through root sprouts, which would provide an increase in aspen in localized parts of larger stands.

One of the difficulties of managing for ruffed grouse in this unit is the relative scarcity of aspen. It typically occurs as a scattered large sawtimber tree, mixed with other hardwood species or conifers. In

July 2014, a biologist from the Ruffed Grouse Society, along with the local DEC forester toured several locations in Brasher and Fort Jackson State Forests to give recommendations for potential management for ruffed grouse and other wildlife species needing early successional habitat. The conclusions were that there is certainly the potential for forest management to promote ruffed grouse, but it may be challenging to find extensive areas of existing aspen to convert to even-aged management.

One of the recommendations of this plan will be that stands scheduled for timber harvests will be considered for management as woodcock or ruffed grouse habitat, if stand analysis indicates that aspen and other needed species are present.

Fishing

Fishing opportunities exist on the St. Regis River, Deer River, Redwater Pond and some of the tributaries. Smallmouth bass, walleye and muskellunge offer the most popular fishing in the rivers while panfish and largemouth bass attract anglers to Redwater Pond. Several access points for small boats and canoes are shown on the Figure 3 map and other informal spots are found at bridge crossings. One of the proposals in this plan is the construction of three Parking Areas, located near the St. Regis and Deer Rivers, to provide better access to the water. The locations for these proposed installations can be found in the Infrastructure and Recreation Maps included as Figure 3.

Most of the state parcels in this unit reside within 3 sub basins of the St. Lawrence watershed: the Raquette, St. Regis, and Salmon Rivers. Total area for all 3 watersheds is approximately 2,543 square miles, of which the state managed parcels occupy about 48 square miles (1.9%). In general the lower sections of these watersheds are characterized as having a low gradient and a mix of forest, agriculture and wetland. State parcels are all within 3 identified ecozones; the St. Lawrence Plains, St. Lawrence Transition, and the Malone Plains.

Aquatic resources are somewhat limited. There are several permanent ponds, lakes or impounded waters within the general UMP boundary. None of these resources however are located within state owned parcels and are therefore not intensively managed or controlled by the state.

Lotic (flowing water) resources are comprised of a range of waters from small intermittent streams to portions of major rivers. The general UMP boundary incorporates portions of two major rivers, the Raquette and St. Regis, and a portion of the Salmon River watershed. Specific state parcels tend to border small reaches of the larger rivers (Raquette, St. Regis, Deer) while some of the smaller streams are entirely contained within public lands. A total of 90 different streams bearing Fisheries Information Numbers (FIN) can be identified in or abutting state parcels in the UMP, 12 are significant enough to bear names. In general the gradient is low compared to the upper reaches of the watersheds resulting in relatively slow moving water. There are a number of impoundments in the area which are generally related to hydroelectric production.

Fishery resources are classified and managed as cool water. Primary sport fish are walleye, muskellunge, northern pike, and smallmouth bass. These fish are found in the larger streams and rivers where

summer temperatures tend to be moderate. Cold water species, brown and brook trout, have been collected during routine fisheries surveys in the vicinity of the state forest parcels making up the UMP.

There is no intensive fishery management done within the St. Lawrence Flatlands unit. Stocking of approximately 16,000 salmonids (brown, brook, and rainbow trout) occurs higher in the St. Regis watershed on an annual basis. A small percentage of these fish have been found to drop down and end up within the unit in the St. Regis River. No information is available on catch or harvest rates of fish within the region, however, it does not have a reputation as a significant fishery. In general the Statewide Angling Regulations apply to all waters of the unit, with the exception that special St. Lawrence County regulations do not allow catch and release of Black Bass during the closed season.

Relatively few fisheries surveys (19) have been completed either on or in the vicinity of state owned parcels incorporated in the unit. In general the low number of survey events is due to limited fishery resources and access. Relevant fishery resources are primarily found in the larger streams. A total of 69 fish species have been found within the watersheds at elevations below 800 feet. They are listed in Appendix F.

Trapping

Trapping is a popular pastime in this unit. The large wetland complexes spread throughout the area support healthy populations of muskrat, beaver, mink, and river otter. Upland areas support populations of red fox, bobcat, coyote and fisher. Trapping is often necessary to control the large beaver population in this area, which often dam road culverts and cause localized flooding problems.

Viewing Natural Resources

Trails in Southville State Forest are especially popular for hiking, skiing, and snowshoeing along the west branch of the St. Regis River. There are also excellent viewing opportunities along the major river corridors in Brasher State Forest (Deer and St. Regis Rivers), Buckton State Forest (West Branch of St. Regis River), Fort Jackson State Forest (West Branch of St. Regis River), and Grantville State Forest (Raquette River).

There are reports of occasional moose sightings in Brasher State Forest. Moose appear to be increasing in numbers in this unit, although the population is low and they range over a wide area.

Camping

Camping is allowed anywhere on State Forests except that, as directed under 6 NYCRR section 190.3 (b), camping is prohibited within 150 feet of any road, trail, spring, pond or other body of water except at camping areas designated by the Department. In addition, 6 NYCRR section 190.4(a), prohibits camping in one location for four nights or more except under permit and 6 NYCRR section 190.4(e), prohibits a group of 10 or more individuals from camping on State lands at any time except under permit.

The Redwater Dam facility, which is located in the Walter F. Pratt Memorial Forest off County Route 55, is a very popular camping and picnic facility which has been adopted by the CC Dam Association under

the Adopt-A-Natural Resource Program. Information on this site and other designated camping or picnic sites in the St. Lawrence Flatlands Unit are as follows:

1. Redwater Dam

10 acre man made pond impounded by an embankment, concrete spillway, wing walls and low level outlet works.

20 camp sites-each with a parking space, picnic table, fire place or fire ring.

2 of the campsites are universally accessible with a parking space, picnic table, fire place or fire ring, and a shared universally accessible privy.

6 pit privies plus an accessible Port-A-John.

2 day use picnic areas with tables, fireplaces and parking areas.

2. Camp/Larue Public Forest Access Road

One camping site with a fire ring. This site has a large cleared area that serves as one of the two primary parking or staging areas for incoming recreationalists and contains a register booth for users of the forest.

3. Vice Road

Two campsites located along the St. Regis River. Both sites currently have a fire pit.

The Redwater Dam camping area is very popular for camping and picnicking from May through September. The other campsites in Brasher State Forest receive occasional use by weekend campers and hunters. There has been an increased interest from the public in establishing primitive campsites and possibly a lean-to on other state forests in this unit.

Water-based Recreation

There are several important river systems included in this unit. State properties include frontage on the Deer River (4.1 miles), Grass River (2.7 miles), Raquette River (1.3 miles), and St. Regis River (12.5 miles). They are used primarily for recreation including kayaking, canoeing, and fishing. Redwater Pond is popular for fishing and picnicking by users of the surrounding Walter Pratt Memorial Forest in Brasher State Forest. The St. Regis River is accessible from a car top boat access site located on County Route 53 north of Brasher Center on Brasher State Forest.

This plan also proposes construction of three new parking areas and Canoe Launches / Fishing Access Sites adjacent to the St. Regis River in Buckton State Forest and the Deer River in Brasher State Forest, to promote public access to these river corridors. There has been increasing interest in water based recreation in this unit, including canoeing, kayaking, and fishing.

Trail-based Recreation

<i>Table I.L. – Multiple Use Trails*</i>	
<i>(See Figure 3 for maps)</i>	
Use	Length (mi.)
Foot Trail Use	80.2
Cross Country Skiing	80.2
Equestrian	80.2
Mountain Biking	80.2
Snowmobile	43.7

* Length available for each use includes use on PFAR and Haul roads; does not include municipal roads. This includes 20.6 miles of PFAR, 16.4 miles of haul roads, and 43.2 miles of trails not open to motor vehicles.

There is a large network of multiple use trails located in Brasher State Forest. These trails originated as a mixture of former public roads, roads created by the state during the CCC era, and woods roads created for timber harvesting or fire suppression. During the 1970s and 1980s, many of these roads and trails were opened for snowmobile and cross country skiing use, and were maintained in conjunction with the local snowmobile clubs. During the 1980s and 1990s, many trails were opened for horse riding, as well as ATV use. Due to maintenance concerns, ATV usage was gradually curtailed and is no longer permitted on trails or roads in this unit.

There are parking areas located along the southern portion of the Camp / Larue PFAR near the DEC Brasher Falls Maintenance Facility.

Trails in the St. Lawrence Flatlands unit receive steady usage year round, by people enjoying motorized and non-motorized recreation, as well as hunters and campers. The large trail system in Brasher State Forest is generally in poor condition, due to statewide resource constraints for trail maintenance and improvement. An effort is being made to improve the condition of the most popular trails, by improving signage, brushing and widening overgrown trails, providing trailhead parking, and providing maps and web pages to promote the trail system. New information kiosks are proposed as part of this plan, to be placed at trailheads in Brasher and Southville State Forests.

In addition to the state maintained multiple use trails in this unit, the Town of Stockholm also owns a multiple use trail along the former Rutland Railroad right-of-way which passes through Knapp Station State Forest. There are also several trails available on St. Lawrence County #18, which is located adjacent to Brasher State Forest.

Maps of roads, trails, and recreational facilities are included as Figure 3 – Infrastructure and Recreation Maps.

Foot Trail Use

There are extensive multiple use trails available for hiking in Brasher, Fort Jackson, and Southville State Forests. The potential exists to create several miles of scenic hiking and mountain biking trails along river corridors in Brasher, Buckton, and Fort Jackson State Forests. Interest in non-motorized recreation has increased in the last 10 years, with many people pursuing recreational opportunities such as hiking for both exercise and to observe nature.

Cross Country Skiing

There is a large system of multiple use trails in Brasher State Forest which are open to cross country skiing. This includes 26.3 miles of PFAR's and Haul Roads, and 31.8 miles of trails. Southville State Forests contains a 2.5 mile loop trail which is popular for skiing and snowshoeing. Raymondville State Forests contains a 1.0 mile skiing trail located off the Grantville Road. In addition, all of the Public Forest Access Roads and Haul roads in the unit are available for skiing. Interest in cross country skiing has been steady through recent years, although it is generally focused on the areas mentioned above. Some users have expressed an interest in establishing ski trails on other State Forests in the unit that have little infrastructure, such as Buckton and Grantville State Forests.

Equestrian

This has been another popular activity on the St. Lawrence Flatlands Management Unit. As authorized by 6 NYCRR section 190.8(n). The riding, driving or leading of horses will be permitted anywhere on State lands under the jurisdiction of the Department of Environmental Conservation unless otherwise prohibited by law, regulation, posted notice or this subdivision. 6 NYCRR Section 190.8(n)(3) directs that no person shall ride or permit a horse on designated snowmobile trails and cross-country ski trails that are covered with ice or snow.

There is a large network of multiple use trails in Brasher State Forest that were originally created as horse, skiing, and hiking trails. These trails are still used by both individual riders and larger organized group events. Many of the trails have suffered from a lack of maintenance and poor signage in recent years, and an effort is being made to rehabilitate and improve the most popular trails to promote continued usage.

Some riders have expressed a wish to have a large horse friendly trail system established in Brasher State Forest, which would include amenities such as hitching posts, stabling facilities, and watering troughs.

Mountain Biking

This recreational activity does not currently occur to a large extent on this unit although some use has been noted on Public Forest Access Roads and Haul Roads. Mountain bikes are allowed anywhere on State Forests except where prohibited by sign.

Mountain biking in general has been increasing in popularity during the last 10 years. Riders often seek out challenging trails featuring hills, frequent elevation changes, picturesque scenery, and lengths of

several miles. The potential exists for creating several miles of mountain bike trails in this unit, especially along river corridors in Brasher, Buckton, and Fort Jackson State Forests.

Snowmobiling

Snowmobiles are allowed anywhere on State Forest roads or trails when covered by snow unless specifically posted against that use. Snowmobiles are prohibited by sign from using designated cross-country ski trails within the St. Lawrence Flatlands Management Unit (6 NYCRR Section 190.8[d]). Two state snowmobile corridor trails (7E, 7F) and several secondary trails (71, 72, 75, 75A, S75) cross properties in this management unit, including portions of Bombay, Brasher, Buckton, and Fort Jackson State Forests. Maps of designated snowmobile trails in the unit are included as Figure 9.

Most snowmobiling occurs on the main Public Forest Access Roads, Haul Roads, and various seasonal public roads that allow for many miles of uninterrupted snowmobiling throughout Brasher and Bombay State Forests. Snowmobiling is generally very popular, but recent winters have often been relatively warm with frequent thawing, which has caused shortened and unpredictable snowmobiling seasons.

Off-Highway and All-Terrain Vehicle Use

This UMP addresses possible All-Terrain Vehicle (ATV) use on state forest land. For a comprehensive history of ATV use on State Forests, please refer to page 213 of the *Strategic Plan for State Forest Management* at www.dec.ny.gov/lands/64567.html.

For more information on ATV use in this unit, see Appendix B.

Other Recreational Activities***Orienteering***

There are currently no requests for this activity in this unit.

Dog Training / Field Trials

There are currently no requests for this activity in this unit.

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.

In general, there has been a peaceful coexistence of most recreational and trail user groups. Some non-motorized trail users, such as hikers, mountain bikers, and skiers, have expressed a preference for trails which are relatively remote and not open to motorized users such as cars, ATVs, or snowmobiles, due to safety concerns as well as reduced noise.

Trail placement and maintenance in this unit requires careful planning to avoid wet soils, intermittent streams, and vernal pools, which are frequently encountered across the landscape. Once established,

trails require regular maintenance and may require periodic closing during wet weather to prevent rutting. This is especially true of roads and trails open to motor vehicles.

This unit includes several large state forests which have few developed recreational facilities or infrastructure, such as designated trails, campsites, lean-to's, parking areas, or river access points. A significant number of new recreational opportunities could be expanded in this unit, while both maintaining user satisfaction and preserving the wild character of these forests.

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>.

The Walter F. Pratt Memorial Forest in Brasher State Forest features 2 accessible campsites designed for camper trailers, as well as an accessible privy. There are also two accessible picnic sites with tables located on nearby Redwater Pond. Information about accessible recreation facilities in Brasher State Forest can be found at <http://www.dec.ny.gov/lands/7999.html#access> .

Application of the Americans with Disabilities Act (ADA)

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

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

Consistent with ADA requirements, the Department incorporates accessibility for people with disabilities into the planning, construction and alteration of recreational facilities and assets supporting them. This UMP incorporates an inventory of all the recreational facilities or assets supporting the programs and services available on the unit, and an assessment of the programs, services and facilities on the unit to determine the level of accessibility provided. In conducting this assessment, DEC employs guidelines

which ensure that programs are accessible, including buildings, facilities, and vehicles, in terms of architecture and design, transportation and communication to individuals with disabilities.

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

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

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

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>.

Sand, gravel and Dolostone rock mining occur within the St. Lawrence Flatlands Unit. These mines are commercial operations that provide sand, gravel and Dolostone for construction aggregate purposes. Although no mines occur within State Forest lands within the unit there is a reclaimed sand and gravel pit (Mine # 60918) within the Brasher State Forest boundaries. This facility provided material for road maintenance within the Brasher State Forest boundary. Under Article 7 of the New York Consolidated Laws / Public Lands, any citizen of the United States may apply for permission to explore and/or extract any mineral on State lands. However, current Department policy is to decline any commercial mining application(s) associated with State Forest lands. The Department may occasionally mine small quantities of sand and gravel for use on state facilities such as access roads, parking lots or recreational trails. Should those actions be anticipated there will be an evaluation regarding the need for a permit. Further information may be found at the Department’s website or with the Division of Mineral Resources.

Existing leases on the unit:

Table I.M. – Current Oil and Gas Leases				
Facility Name	Contract #	Lessee	Acreage	Towns
None				

Active wells on the unit:

- None

Inactive wells on the unit:

- None

Mining

Gravel/shale pits and other surface mines

- There are no currently active gravel pits on this unit. A small gravel pit located on the Wilson Public Forest Access Road in Brasher State Forest was retired and reclaimed in 2012.
- Under Article 7 of the New York consolidated Laws/Public Lands, any citizen of the United States may apply for permission to explore and/or extract any mineral on State lands. However, current Department policy is to decline any commercial mining applications(s) associated with lands in this 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>.

There is potential for partnering with local communities to promote the recreational opportunities in this unit, particularly snowmobiling, hiking, cross country skiing, horse riding, mountain biking, and canoeing / kayaking. The town of Stockholm Economic Development Committee has expressed interest in developing the St. Regis River corridor for recreational pursuits such as fishing, paddling, and mountain biking.

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 and Forest Preserve parcels are also subject to taxation for county purposes. Most unique areas and multiple use areas are exempt from taxation. All of these lands are assessed as if privately owned.

Detailed tax information can be obtained by contacting the Franklin County Department of Real Property Tax Services (<http://franklincony.org/content/Departments/View/14>) or the St. Lawrence County Real Property Department (<http://www.co.st-lawrence.ny.us/Departments/RealProperty/>). The following taxes are projected for State lands in this unit for the 2013 tax year:

- Township Tax (incl. highway, general, fire taxes) for all Towns: \$71,627.11

Franklin Co.: Bombay - \$4,705.72 Moira - \$1,753.47

St. Lawrence Co.: Brasher - \$45,894.94 Madrid - \$4,972.94 Lisbon - \$31.75

Louisville - \$122.98 Massena - \$177.50 Norfolk - \$4,984.83 Stockholm - \$8,964.56
Waddington - \$18.42

- Total School Tax for all districts: \$263,462.92 (Totals are from 2012-13 tax year)

Franklin Co.: Brushton-Moira - \$5,651.54 Salmon River - \$24,510.73

St. Lawrence Co.: Brasher Falls - \$184,241.83 Lisbon - \$126.27

Madrid-Waddington - \$3,209.88 Massena - \$4,594.84 Norwood-Norfolk - \$35,142.21

Potsdam - \$5,985.62

- Total County Tax (including charge backs): Franklin Co.- \$110.56 St. Lawrence Co. - \$10,548.55

FOREST PRODUCTS

Timber

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

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

This unit has a long history of producing forest products for the local community. Forestry Technician Dave Corse was based at the Brasher Falls field headquarters for over 30 years and provided the local community with sales of fire wood, cedar posts, black ash, pulpwood, and small lots of pine sawtimber. In recent years, there has been a steady demand for firewood and small pine lots, which are still offered for sale on a limited basis. There has been an increase in sales of white pine and red pine sawtimber, and red pine utility poles, due to the abundance of sawtimber sized pine stands planted during the CCC era that are now reaching maturity. There are also many plantations which are in need of improvement pulp thinnings, but the closure of most nearby pulp mills within the last 30 years has made it increasingly difficult to sell low quality pulpwood.

This plan identifies 4,360 acres of stands suitable for timber harvesting within the next 10 years, as well as 7,485 additional acres that may be suitable for harvesting more than 10 years in the future. These additional stands will be evaluated further during the next update of this management plan.

Stand Identification maps are included as Figure 4. Maps of Current Forest Cover Type are included as Figure 5. Maps of Management Direction for forest stands are included as Figure 7.

Non-Timber Forest Products

In addition to timber and firewood, forests are valuable for the many non-timber resources they provide. Members of the Mohawk Nation use the forest for hunting and fishing, as well as collection of medicinal plants, berries, mushrooms, and sweet grass which are all important in their traditional culture. A position letter from the St. Regis Mohawk Tribe regarding the management plan for Brasher State Forest is included as Appendix H. A memorandum from the St. Regis Mohawk Tribe regarding Brasher State Forest and Cultural Restoration is included as Appendix I.

FOREST HEALTH

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

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.N. – Invasive Species, Pests and Pathogens	
Plants	Status
Common Reed (<i>Phragmites australis</i>)	It occurs in a patchy distribution throughout wetlands in the unit.
Common Buckthorn (<i>Rhamnus cathartica</i>)	Common along roads and near houses. Difficult to eradicate once established.
Honeysuckle (<i>Lonicera</i> spp.)	Some understory infestations near old house sites and along powerlines.
Japanese Knotweed (<i>Fallopia japonica</i>)	Infrequently found near old house sites and along waterways.
Pale Swallow-wort (<i>Vincetoxicum rossicum</i>)	Currently rare but is becoming more common in disturbed areas along roads and powerlines. Spreads quickly once established.
Purple Loosestrife (<i>Lythrum salicaria</i>)	Common in wetlands and roadside ditches.
Insects	Status

INFORMATION ON THE ST. LAWRENCE FLATLANDS UNIT

FOREST HEALTH

Table I.N. – Invasive Species, Pests and Pathogens	
Emerald Ash Borer (<i>Agrilus planipennis</i>)	Currently is within 30 miles of St. Lawrence Co. in the United Counties of Leeds and Grenville, Ontario, Canada. It will likely be confirmed locally within the next several years. It has the potential to cause widespread and devastating mortality in wetlands dominated by green and black ash. Sampling using lure traps has been conducted yearly since 2009 but no Emerald Ash Borers have been found in this unit.
Pine False Webworm (<i>Acantholyda erythrocephala</i>)	This insect has caused locally significant defoliation and mortality of Scotch and White Pines in Fort Jackson State Forest and areas to the south and east. It was first reported locally in 1981 and populations have fluctuated greatly, with a particularly large outbreak between 1987 and 1996. Insect damage has been low since that time.
Pine Shoot Beetle (<i>Tomicus piniperda</i>)	This insect is native to Europe and was first discovered in New York State in 1992. It can infest all of the locally growing pine species, especially Scotch and red pines. St. Lawrence County is currently under a quarantine due to the pine shoot beetle which restricts the transport of pine trees and logs during certain times of the year.
Sirex Wood Wasp (<i>Sirex noctilio</i>)	Confirmed in nearby Jefferson Co. on the Fort Drum Military Reservation. Tends to cause mortality of low vigor pine trees in stands which are overstocked or are otherwise experiencing growing stresses. Sampling using lure traps was conducted in 2006 but no Sirex Wood Wasps were found in this unit.
White Pine Weevil (<i>Pissodes strobi</i>)	Common in both natural and planted white pine stands. Insect feeding kills the topmost leader which causes the tree to grow in a twisted and crooked manner. Less damage occurs to young pine seedlings when they are grown under conditions of partial shade during early development.
Diseases	Status
Beech Bark Disease	This disease is caused by the interaction of an invasive beech scale insect (<i>Cryptococcus fagisuga</i>) which feeds on the bark surface, and the fungi <i>Nectria coccinea</i> var. <i>faginata</i> and <i>Nectria galligena</i> which form cankers in the scale feeding area. Most beech trees become infected and die when they reach 6-12" DBH, resulting in large beech sprout thickets which grow for 5-20 years and then are killed back by the disease. A small number of beech trees grow to sawtimber size without becoming diseased and appear to show some resistance to infection.

Table I.N. – Invasive Species, Pests and Pathogens	
Butternut Canker (<i>Sirococcus clavigignenti-juglandacearum</i>)	This fungal disease is very common and it is rare to find sawtimber sized Butternut trees that do not show signs of injury. Butternut is uncommon on our State Forests but is present in some areas.
Dutch Elm Disease (<i>Ophiostoma ulmi</i>)	Dutch elm disease has had a severe negative impact on both American and Slippery elms which once dominated wetlands in this unit. Most trees become infected and die when they reach 8-14" DBH, with some trees infrequently reaching 20 to 30" DBH before succumbing.
Scleroderris Canker (<i>Gremmeniella abietina</i>)	This is a fungal disease affecting primarily red pine plantations. There was a high incidence of defoliation and mortality of red pine during the 1960s and 1970s, but damage has been low in recent years. The St. Lawrence Flatlands Unit is currently under a quarantine due to Scleroderris Canker.
White Pine Blister Rust (<i>Cronartium ribicola</i>)	Common in both natural and planted white pine stands. It is often more prevalent on wetter sites where high water tables impede rooting and high atmospheric moisture promotes transmission of the fungal spores.
Animals	Status
Feral Swine	There have not been any reported cases of feral swine on the properties in this unit, but they are increasing in numbers and may become established in the area.

Efforts have been made within the last 5 years to delineate and treat some invasive plant species, such as Japanese Knotweed and Pale Swallow-wort. They are currently found in isolated patches, and there is still the possibility of eradication by herbicide application. Aquatic invasive plants such as Common Reed and Purple Loosestrife should also be delineated and monitored, although this has not yet been feasible due to staffing constraints. A summer intern or field technician assigned to map and eradicate invasive species would be of great benefit in this unit.

Natural Disturbances

There are periodic natural weather disturbances which may cause localized damage to forests and infrastructure. In this area, the most frequent disturbances in the last 100 years have been periodic ice storms and windstorms. A major ice storm which occurred during January of 1998 caused widespread damage throughout northern New York State, southern Canada, and New England. Trees were coated with several inches of ice which caused limbs to break or caused trees to snap at the main stem. Most of the forests in this unit suffered different degrees of damage due to this storm, and many hardwoods have suffered permanent damage to their quality and future timber value.

Managing Deer Impacts

There is limited ability to manage deer impacts using silvicultural systems. The most effective method of keeping deer impacts in line with management objectives is to monitor impacts while working with the Division of Fish, Wildlife and Marine Resources to observe and manage the herd. On properties where deer are suspected of impacting values and objectives associated with biodiversity and timber management, such impacts must be inventoried and assessed. For more information on managing deer impacts, please see SPSFM page 291 at <http://www.dec.ny.gov/lands/64567.html>.

There are localized areas on state forests in this unit where deer browse is very high and may be impeding the regeneration of some preferred browse species, such as sugar maple, yellow birch, and red maple. There is a need in this unit to better map areas that are suffering from poor regeneration due to deer browse, and document the intensity of deer browse by use of fenced deer enclosures or deer density surveys.

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 St. Lawrence Flatlands UMP falls within the St. Lawrence – Champlain Valley Eco-Region.

ECO-REGION SUMMARY

The St. Lawrence – Champlain Valley (SL-CV) Ecoregion includes vast stretches of fertile land, rich woodlands, vibrant wetlands, dramatic cliffs, one of the continent's largest rivers, the St. Lawrence, and the continent's sixth largest lake, Lake Champlain (Thompson 2002). The ecoregion hosts a number of endemic species as well as more widespread species at the edges of their ranges. It provides critical habitat for migratory birds, breeding grassland birds, and wintering raptors.

Because of its fertile soils, relatively mild climate, and stunning scenery, the ecoregion has been used by humans for at least 10,000 years, and very heavily for the last 300. Some of the species that once occurred in the ecoregion have been extirpated, either throughout the east or in the ecoregion alone. Others are in decline or otherwise vulnerable. The upland and wetland natural communities of the region have been reduced in many cases to small, isolated fragments that harbor exotic species and have lost much of their integrity. The lakes, ponds, rivers, and streams that define this ecoregion are compromised by pollution and damming. Conservation of this region's biological diversity will be a challenge.

Several key threats to the biological diversity of the ecoregion were identified. These threats include water flow manipulation, landscape fragmentation, invasive exotic species, intensive agriculture, intensive forestry, a weak conservation ethic in the human population overall, and pollution of all kinds. Abating these threats will require creative approaches and hard work. Restoration of ecological systems and their component species will be vital to success in conserving both the uplands and the aquatic features of the ecoregion. Influencing public policy in the areas of water management, agriculture, forestry, and transportation will be crucial. Deep and committed partnerships in all these endeavors will be more important than ever to be successful in achieving the goals for the SL-CV.

ECO-REGION ASSESSMENT

<i>Table II.A. Land Use and Land Cover for the Landscape Surrounding the St. Lawrence Flatlands Unit</i>		
Land Use and Land Cover	Approximate Acreage	Percent of Landscape
Mixed Forest	6,977	18
Crop Land and Pasture	2	>1
Conifer Forest	5,927	15
Shrub and Brush Range Land (includes seedling/sapling type)	5,285	13
Residential	7,760	20
Commercial & Services	3,834	10
Transportation & Utilities	1,402	3
Other Urban/Built-up Land	2,184	5
Mixed Urban/Built-up Land	639	2
Strip Mines, Quarries & Gravel Pits	1,031	2
Lakes	47	>1
Reservoirs	3	>1
Forested Wetland	4	>1
Non-forested Wetlands	219	1
Industrial	1,589	4
Other Agricultural Land	393	1
Old Growth	0	0
Streams and Canals	1,655	4
Other	799	2
Total	39,750	100

LOCAL LANDSCAPE CONDITIONS

The local landscape consists of a patchwork of farms, small woodlots, and rural communities. In general the state properties in this unit provide a higher percentage of sawtimber sized forests, larger contiguous ownership, and less development of roads and infrastructure than the surrounding privately owned landscape. Due to these factors, state forests may be better able to fill landscape gaps such as later successional forests, habitat for species which need larger territories or more uninterrupted interior forest habitat (such as hermit thrushes or goshawks), and forest structural characteristics which take long periods to develop (such as large diameter snags and coarse woody debris). Connectivity corridors along the major watercourses in the unit may provide opportunities that are not available on smaller adjacent private parcels.

MANAGEMENT CHALLENGES ON THE UNIT**MANAGEMENT CHALLENGES**

The St. Lawrence Flatlands management unit is quite different from other large public landholdings in New York State. It is located in the flat St. Lawrence Plains region near the St. Lawrence River, with extensive wetland complexes and other areas of seasonally flooded soils covering over 7,200 acres, or approximately 23% of the state land included in this unit.

Timber management has generally been confined to drier sandy soils that are within a mile or less of a maintained road. There are many pine plantations and hardwood stands which are inaccessible due to wetlands, or because an existing public road is unusable due to beaver flooding or general lack of maintenance. Attempts are made to continually improve the road system by having loggers upgrade roads to access previously unreachable stands. This also provides access for hunters and other recreational users.

Many stands have been grouped into the Natural Areas category due to their unsuitability for timber management due to wet soils, poor access, or because they represent uncommon or sensitive forest types. The percentage of Natural Areas in this unit is generally much higher than in other management units, but these stands do provide large contiguous areas of relatively undisturbed habitat which are uncommon in the surrounding landscape

Recreational use has always been an important feature in this unit. In addition to hunting, fishing, trapping, canoeing, and camping, many people enjoy the large network of recreational trails and roads open for hiking, biking, cross country skiing, snowshoeing, horse riding, and snowmobiling.

Brasher State Forest contains a network of over 50 miles of state maintained roads and trails open to recreational use. In general, the main Public Forest Access Roads are in good condition and receive yearly grading and mowing. Secondary Haul Roads are not actively maintained but are still in generally good condition and receive maintenance as needed. Many of the recreational trails are in poor condition and need attention. In the past, there have been several state employees based at the Brasher Field Headquarters who were available to do routine and regular trail maintenance. Over the last 10 years, staffing has dropped from 4 Operations field staff to 2.

Many trails in Brasher State Forest are in need of brushing, improved signage, improved parking at trailheads, and re-routing of sections impacted by beaver flooding. This plan will identify those trails that are most enjoyed by recreational users, and will seek to rehabilitate and improve trail conditions in the unit.

Many recreational users would like to see a network of ATV trails established in this unit. ATVs were previously allowed on Brasher State Forest from the 1980s through 2008, with trails gradually being

closed due to poor maintenance, increased use of undesignated illegal trails, and widespread rutting and mud on wet trails.

Current DEC guidelines limit ATV usage on State Forests to 2 scenarios. Trails can be opened to persons with disabilities through the DEC-issued Motorized Access Permit for People with Disabilities (MAPPWD) program. Permit holders are only allowed to ride ATVs on trails signed as open to ATVs under the MAPPWD program.

A second option is for a “Connector Trail” open to ATVs which crosses a state forest on a single defined route. The connector trail must follow the shortest environmentally acceptable route. Trails designated for ATV use should be dry, and have a minimal impact on wetlands, streams, and rare or unusual plant and animal species. The connector trail must provide a link in a larger public trail system on lands adjacent to the State forest, such as a cross county multiple use trail.

For more information about ATVs in this unit, see Appendix B.

MANAGEMENT OBJECTIVES AND ACTIONS

OBJECTIVES

Ecosystem Management

<i>Table III.A. –Ecosystem Management Objectives and Actions</i>	
Objective	Actions
Statewide Management	
SM I – Implement SPSFM in UMPs	Management actions and policies proposed in this unit are in compliance with the Strategic Plan for State Forest Management.
Active Forest Management	
AFM I – Apply sound silvicultural practices	Silvicultural practices are guided by prescriptions created for each stand prior to harvest. Sales are closely monitored during harvest to ensure compliance with Best Management Practices (BMP's). Maintaining forest health, vigor, and sustainable harvesting are integral parts of all state forest management.
AFM II – Use harvesting plans to enhance diversity of species, habitats & structure	Future management will promote a diversity of habitats by increasing the percentage of older forests, gradually converting even aged white pine plantations to uneven aged stands with several age classes, and creating scattered early successional stands across the landscape by harvesting mature red pine and Scotch pine plantations and converting them to seedling pine and hardwood forests.
AFM III – Fill ecoregional gaps to maintain and enhance landscape-level biodiversity	Shrublands and fields will be maintained by mowing or brush cutting to postpone succession to forest. Later successional forests >140 years old will eventually develop as pine plantations continue to age and develop late successional characteristics.

Table III.A. –Ecosystem Management Objectives and Actions

Objective	Actions
AFM IV – Enhance matrix forest blocks and connectivity corridors where applicable	Matrix Forest Blocks in Brasher, Bombay, and Sodom State Forests will be managed with an emphasis on forest contiguity, and new acquisitions which enhance these blocks will be considered. Connectivity corridors may be enhanced by selected acquisitions which link isolated state forest parcels.
AFM V – Practice forest and tree retention on stands managed for timber	Forest and tree retention will be practiced in all silvicultural treatments, especially regeneration harvests which convert red pine and Scotch pine plantations to more native species mixes.

Resource Protection

Table III.B. –Resource Protection Objectives and Actions

Objective	Actions
Soil and Water Protection	
SW I – Prevent erosion, compaction and nutrient depletion	Special management zones will be maintained around sensitive natural features. Harvesting will be limited to dry or frozen ground conditions. Best Management Practices will be used to protect water quality.
SW II – Identify and map SMZ’s and highly-erodible soils	Special management zones have been created around state and classified wetlands, classified and unclassified streams, rivers, and seep / spring areas. Stands with many vernal pools or seasonally wet conditions will receive minimal or no timber management.
At-Risk Species and Natural Communities	
ARS I – Protect ARS&C ranked S1, S2, S2-3, G1, G2 or G2-3 where present	Known locations of rare or threatened species are protected by special management zones. Areas proposed for timber harvesting are searched for RTE species before marking begins.

Table III.B. –Resource Protection Objectives and Actions	
Objective	Actions
ARS II – Conduct habitat restoration and promote recovery of declining species	Habitat needs of declining species will be considered in all management actions in this unit. In addition, Lake Sturgeon have been stocked in the lower reaches of the St. Regis and Raquette Rivers.
ARS III - Consider protection and management of Species of Greatest Conservation Need	Many SGCN occupy wetlands and corridors located along streams and rivers, which are already protected by special management zones. Species such as northern goshawk are monitored for nesting activity, and any nearby timber harvesting or construction is scheduled to avoid goshawk disturbance.
Visual Resources and Aesthetics	
VR I – Maintain or improve overall quality of visual resources	Corridors along major streams and rivers have been removed from active timber management. Aesthetics are considered in all silvicultural prescriptions.
VR II – Use natural materials where feasible	Wood and stone are used for building projects whenever possible.
VR III – Lay out any new roads/trails to highlight vistas and unique natural features	Hiking and mountain biking trails are proposed along scenic river corridors in Brasher, Buckton, and Fort Jackson State Forests.
VR IV – Develop kiosks to provide education and reduce sign pollution	Kiosks are proposed for major recreational areas in Brasher and Southville State Forests.
Historic and Cultural Resources	
HC I – Preserve and protect historic and cultural resources wherever they occur	Features such as building foundations, wells, stone walls, and CCC waterholes are identified before any nearby timber harvesting occurs, and uncut buffers are used to minimize disturbance.
HC II – Inventory resources in GIS and with OPRHP	Historic features will be identified and added to the State Lands Assets GIS layer.

Infrastructure and Real Property

<i>Table III.C. –Infrastructure and Real Property Objectives and Actions</i>	
Objective	Actions
Boundary Line Maintenance	
BL I – Maintain boundary lines	Boundary lines will be maintained throughout the unit on a 5-year maintenance schedule.
BL II – Address encroachments and other real property problems	Requests have been made to survey encroachments, re-establish missing monuments, and survey recently acquired state forest parcels.
Infrastructure	
INF I – Provide and maintain public forest access roads, access trails, haul roads, parking areas, and associated appurtenances	Roads, trails, and infrastructure on this unit will be maintained on an as needed basis. New parking areas and recreational trails are proposed on State Forests which currently contain little developed infrastructure.
INF II – Upgrade, replace or relocate infrastructure out of riparian areas where feasible	Infrastructure will not be located near riparian areas, except for non-motorized recreational trails and river access points.
INF III – Resolve issues of uncertain legal status or jurisdiction	The status of former public roads and maintenance responsibilities will be discussed as part of the planning process.
INF IV – Prevent over-development	Planning and development will focus on maintaining the rural and wild character of properties in this unit.

Public/Permitted Use

<i>Table III.D –Public / Permitted Use Objectives and Actions</i>	
Objective	Actions
Universal Access	
UA I – Use minimum tool approach to provide universal access to programs	New facilities proposed in this plan will be built to universally acceptable stands whenever possible.
Formal and Informal Partnerships and Agreements	
PRT I – Collaborate with local organizations and governments to reach mutual goals	The Department will work with local governments and recreational organizations to promote access and responsible use of state managed properties.

Table III.D –Public / Permitted Use Objectives and Actions	
Objective	Actions
PRT II – Consider full range of impacts associated with VSAs and recurring TRPs	VSA’s and TRP’s will continue to be evaluated to ensure that they provide a net benefit to the experience of all users of state properties in this unit.
Recreation	
REC I – Accommodate public use while preventing illegal activity, reducing impacts and enhancing public safety	Forest Ranger staff will continue to patrol properties in this unit and enforce all applicable laws and regulations. The public will be informed of low intensity use standards such as “leave no trace” camping.
REC II – Provide public recreation information	Recreational opportunities in this unit will be publicized by creation of new informational kiosks in the unit, as well as development of public web pages for each state forest in the unit.
REC III – Inventory recreational amenities and schedule recreation management actions	Existing facilities and trails are inventoried in this plan, as well as the creation of proposed new trails, parking areas, and other infrastructure.
REC IV – Enhance fish & game species habitat	Techniques to improve game management will be considered whenever possible. For example, harvests might promote early successional habitat for grouse or rabbits, or protect areas known to serve as winter deer yards.
Off-Highway and All-Terrain Vehicle Use	
ATV I – Enhance recreational access by people with disabilities under the MAPPWD program	There are 2 proposed MAPPWD accessible ATV trails located on Bombay and Brasher State Forests.
ATV II – Consider requests for ATV connector routes across the unit	Requests for ATV connector routes will be evaluated on a case by case basis.
Mineral Resources	
MR I – Provide for mineral exploration and development while protecting natural resources and recreation	There are currently no proposals for mineral exploration or development in this unit.
Supporting Local Communities	
LC I – Provide revenue to New York State and economic stimulus for local communities	Timber harvesting will continue on state forests in this unit, to provide both jobs and forest products for the local community.

Table III.D –Public / Permitted Use Objectives and Actions	
Objective	Actions
LC II – Improve local economies through forest-based tourism	Recreational opportunities will be maintained or increased throughout this unit. Kiosks and web pages created for state forests in the unit will improve publicity of available trails and facilities.
LC III – Protect rural character and provide ecosystem services to local communities.	Properties will be managed to maintain their rural and minimally developed characteristics.

Forest Management and Health

Table III.E. –Forest Management and Health Objectives and Actions	
Objective	Actions
Forest Products	
FP I – Sustainably manage for forest products	Timber management is practiced in carefully selected stands in this unit, to improve forest vigor and health, promote a diversity of tree species and age classes, and provide forest products needed by the community.
FP II – Educate the public about the benefits of silviculture	Informational signs are posted near the landing on all timber sales offered through a bid process, which include sale objectives and contact information for the forester supervising the sale.
Plantation Management	
PM I – Convert plantation stands to natural forest conditions where appropriate	Species which are non-native (Scotch pine, Japanese and European Larch) or which do not naturally regenerate well in this area (red pine) will slowly be replaced by white pine and native hardwood forests.
PM II – Artificially regenerate plantations where appropriate	Plantations are gradually being converted to forests with a variety of species and age classes. White pine and red spruce seedlings are sometimes planted underneath existing red pine plantations in order to enhance natural regeneration.
Forest Health	

Table III.E. –Forest Management and Health Objectives and Actions	
Objective	Actions
FH I – Use timber sales to improve forest health and the diversity of species	Improvement thinnings are used to reduce tree overcrowding, remove crooked and diseased trees, create canopy gaps which allow the development of tree regeneration, and sustain early successional species which would otherwise decline in numbers.
FH II – Protect the unit and surrounding lands from introduced diseases and invasive plant and animal species	Forests are monitored for invasive plant species such as pale swallow-wort and Japanese knotweed, and selected areas are treated by limited herbicide application.
Managing Deer Impacts	
DM I – Monitor impacts of deer browsing on forest health and regeneration	Deer browse is monitored by tree regeneration surveys conducted during forest inventory mapping, and pre-timber harvest regeneration surveys.
DM II – Address issues of over-browsing	Over-browsing of tree regeneration by deer will be addressed locally by promoting a higher deer harvest in areas with a demonstrated pattern of excessive browse. The Deer Management Assistance Program (DMAP) may be used to issue more deer harvesting permits in areas with high deer populations.
Fire Management	
FM I – Support Forest Rangers in controlling the ignition and spread of wildfires	Timber sales require the lopping of tree branches and slash to minimize the threat of wildfire. Timber harvesting may be suspended during periods of extreme drought. The Forest Rangers have established a weather station for monitoring local conditions at the Brasher Falls field headquarters.
FM II – Maintain naturally occurring fire-dependent communities	There are no known fire dependent communities located in this unit.
Carbon Sequestration	
CS I – Keep forests as forests, where appropriate	Forests in this unit will be maintained in tree cover for the long term. Periodic timber management will promote a diversity of tree species, sizes, and age classes across the larger landscape.

Table III.E. –Forest Management and Health Objectives and Actions

Objective	Actions
CS II – Enhance carbon storage in existing stands	The proportion of later successional forests >140 years will gradually increase, creating a long term carbon storage in these forests.
CS III – Keep forests vigorous and improve forest growth rates	Periodic thinning will reduce overstocking and remove diseased and defective trees. An example of this would be an improvement thinning in a white pine plantation, which would focus on removing crooked trees damaged by the white pine weevil and trees weakened by infection with white pine blister rust.
CS IV – Sequester carbon in forest products	Carbon will be sequestered in wood which is harvested for production of sawtimber and utility poles, and in the late successional forests.

TEN-YEAR LIST OF MANAGEMENT ACTIONS**Unit-wide Actions****Action 1**

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

Action 2

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

Action 3

Improve maintenance and signage of 43.2 miles of designated recreational trails.

Action 4

Annually grade and mow 20.6 miles of public forest access roads.

Action 5

Annually mow or brush 16.4 miles of haul roads.

Action 6

Maintain infrastructure such as signs, gates, kiosks, and parking areas as needed.

Action 7

Maintain and upgrade existing roads and trails whenever possible in conjunction with timber management.

Action 8

Conduct periodic timber management on a total of 4,360 acres of forest in this unit. Of these proposed harvests, 3,879 acres will be thinnings, and 481 acres will be regeneration harvests that convert existing red and Scotch pine plantations to stands of native hardwood and conifer seedlings and saplings.

Action 9

Maintain 11 acres of early successional stands by periodic mowing or brush cutting. Additionally, stands scheduled for harvest will be considered for management as early successional wildlife habitat for species such as woodcock and ruffed grouse.

Action 10

MANAGEMENT OBJECTIVES AND ACTIONS

TEN-YEAR LIST OF MANAGEMENT ACTIONS

Maintain 19,390 acres classified as Natural Areas. Of these, 12,469 acres are forest and 6,921 acres are non-forest (wetlands, streams, rivers, road and trail corridors, utility corridors, etc.).

Action 11

Monitor invasive species and practice control with limited herbicide application.

Action 12

Purchase properties for addition to State Forests in this unit, especially those that improve access to state managed properties, provide enhanced recreational opportunities, contain habitat for rare, threatened, or endangered species, or that enhance existing Matrix Forest Blocks or Forest Landscape Connectivity Corridors.

Bombay State Forest (Fr. RA 2) Actions

Boundary line maintenance (2016)

Forest stand inventory (2020)

Install 4 new gates on Pike Brook Haul Road (2), Leach Access Trail, and the Railroad Bed PFAR

Install 2 new area signs on Cold Springs Road and the Railroad Bed PFAR

Inspect and repair bridge on Railroad Bed PFAR

Designate 0.9 mile of the Leach Access Trail as a CP3 / MAPPWD Trail open to ATV use with a permit

Restore CCC waterhole near Cold Springs Road or Pike Brook Haul Road

Bombay State Forest (Fr. RA 4) Actions

Boundary line maintenance (2016)

Forest stand inventory (2022)

Brasher State Forest (St. Law RA 1) Actions

Boundary line maintenance (2014, 2019)

Forest stand inventory (2022)

Install 2 new gates on Pascal Haul Road

Install new kiosk at the Redwater Camping Area

Install new lean-to at Redwater Camping Area

MANAGEMENT OBJECTIVES AND ACTIONS

TEN-YEAR LIST OF MANAGEMENT ACTIONS

Designate 2.5 miles of Pascal Haul Road as a CP3 / MAPPWD Trail open to ATV use with a permit

Upgrade 2.5 miles of Pascal Haul Road to PFAR standards

Install new Canoe Launch / Fishing Access Site and 2 car parking area on Shady City Road (Deer River)

Install new Canoe Launch / Fishing Access Site and 2 car parking area on St. Law. County Route 55 (Deer River)

Maintain campsites, picnic tables, privies, and fire rings at the Redwater Camping Area, in co-operation with the CC Dam Association

Inspect and rehabilitate Redwater Dam impoundment

Survey and paint boundary lines of Warner parcel (97.2 ac)

Brasher State Forest (St. Law RA 5) Actions

Boundary line maintenance (2017, 2022)

Forest stand inventory (2020)

Replace 2 gates on Camp / Larue PFAR

Install new kiosk at Brasher Falls maintenance facility

Upgrade parking areas and campsites on Camp / Larue PFAR to include picnic tables, outhouses, and amenities for a horse staging area (hitching rails, etc.)

Upgrade proposed multi-use Connector Trail through Brasher State Forest

Brasher State Forest (St. Law RA 6) Actions

Boundary line maintenance (2015, 2020)

Forest stand inventory (2022)

Install 5 new gates on Bush PFAR, McCarthy PFAR, Wilson PFAR (2), and the Hastings Falls Haul Road

Restore CCC waterhole near Buckley Haul Road

Survey and paint boundary lines of Proposal G-2 / Champion parcel (8.0 ac)

Upgrade 1.0 mile of Hastings Falls Haul Road to PFAR standards

Upgrade proposed multi-use Connector Trail through Brasher State Forest

Brasher State Forest (St. Law RA 7) Actions

MANAGEMENT OBJECTIVES AND ACTIONS

TEN-YEAR LIST OF MANAGEMENT ACTIONS

Boundary line maintenance (2018, 2023)

Forest stand inventory (2020)

Install new gate on Railroad Bed PFAR

Inspect and repair bridge on Railroad Bed PFAR

Inspect and repair 2 culverts on Railroad Bed Access Trail

Survey and paint boundary lines of Johnston & Mitchell parcel (50.0 ac)

Brasher State Forest (St. Law RA 10) Actions

Boundary line maintenance (2014, 2019)

Forest stand inventory (2020)

Install 2 new gates on the Bush PFAR and Hastings Falls Haul Road

Upgrade 1.1 mile of Hastings Falls Haul Road to PFAR standards

Survey and paint boundary lines of Luczkiewicz parcel (39.1 ac)

Brasher State Forest (St. Law RA 17) Actions

Boundary line maintenance (2014, 2019)

Forest stand inventory (2020)

Install new Canoe Launch / Fishing Access Site and 4 car parking area on Quinnell / Deer River Road (Deer River)

Survey and paint boundary lines of Saler & Spivak parcel (47.0 ac)

Buckton State Forest (St. Law RA 31) Actions

Boundary line maintenance (2015, 2020)

Forest stand inventory (2019)

Upgrade the southernmost 0.9 mile of Buckton Haul Road to PFAR standards

Install a new 2 car parking area on the Buckton Haul Road and a 0.5 mile trail to the river (West Branch of St. Regis)

Fort Jackson State Forest (St. Law RA 22) Actions

MANAGEMENT OBJECTIVES AND ACTIONS

TEN-YEAR LIST OF MANAGEMENT ACTIONS

Boundary line maintenance (2018, 2023)

Forest stand inventory (2017)

Upgrade 0.4 miles of the northern section of the Barrett Road, in co-operation with the Town of Stockholm

Install a new 2 car parking area on Barrett Road

Upgrade an existing 0.9 mile recreation trail leading to the West Branch of the St. Regis River.

Survey and paint boundary lines of Proposal H / Cree parcel (41.5 ac)

Grantville State Forest (St. Law RA 15) Actions

Boundary line maintenance (2015, 2020)

Forest stand inventory (2021)

Knapp Station State Forest (St. Law RA 11) Actions

Boundary line maintenance (2015, 2020)

Forest stand inventory (2017)

Replace area sign and sign standard on Cook Road

Lost Nation State Forest (St. Law RA 9) Actions

Boundary line maintenance (2014, 2019)

Forest stand inventory (2017)

Survey and paint boundary lines of 5 new parcels (28.0 ac)

Raymondville State Forest (St. Law RA 33) Actions

Boundary line maintenance (2014, 2019)

Forest stand inventory (2021)

Install new 2 car parking area on Grantville Road

Sodom State Forest (St. Law RA 25) Actions

Boundary line maintenance (2014, 2019)

Forest stand inventory (2021)

MANAGEMENT OBJECTIVES AND ACTIONS

TEN-YEAR LIST OF MANAGEMENT ACTIONS

Relocate and upgrade 1.4 miles of the former Crump Road, in co-operation with the town of Madrid

Southville State Forest (St. Law RA 23) Actions

Boundary line maintenance (2015, 2020)

Forest stand inventory (2020)

Install new 4 car parking area on West Stockholm – Southville Road

Install new information kiosk on West Stockholm – Southville Road

Detached Forest Preserve Parcel (St. Law FP 12, 13, 14, 15, 17, 18) Actions

Survey and paint boundary lines of all properties

Purchase property from willing sellers adjacent to the Louisville Swamp FP parcel to provide access

Sell or dispose of isolated properties or otherwise transfer from DEC jurisdiction

FOREST TYPE CODES**Natural Forest Types**

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

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
- 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

Management Strategy

- Wildlife (WL) Experimental (EXP)
- Recreation (REC)
- Protection (PRO)
- Non-Management (NM)
- Sale Stand (SS)
- Timber Management:
 - Even Age (T-EA)
 - Un-Even Age (T-UE)

Non-Silvicultural (T-NS)

MANAGEMENT OBJECTIVES AND ACTIONS

FOREST TYPE CODES

Treatment Type

Harvest (HV)

Release (RL)

Salvage (SL)

Sanitation (SN)

Thinning (TH)

Regeneration (RG)

Habitat Management (HM)