NEW YORK STATE OF OPPORTUNITY. | Department of Environmental Conservation

GRASS RIVER WILD FOREST

Draft Unit Management Plan

Draft River Area Management Plans

for the

Middle Branch Grass River

and

South Branch Grass River

NYS DEC, REGION 6, DIVISION OF LANDS AND FORESTS

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Preface

The Grass River Unit Management Plan has been developed pursuant to, and is consistent with, relevant provisions of the New York State Constitution, the Environmental Conservation law (ECL), the Executive Law, the Adirondack Park State Land Master Plan ("APSLMP"), Department of Environmental Conservation ("Department") rules and regulations, Department policies and procedures and the State Environmental Quality and Review Act.

The State land which is the subject of this Unit Management Plan (UMP) is Forest Preserve lands protected by Article XIV, Section 1 of the New York State Constitution. This Constitutional provision, which became effective on January 1, 1895 provides in relevant part:

> The lands of the state, now owned or hereafter acquired, constituting the Forest Preserve as now fixed by law, shall be forever kept as wild forest lands. They shall not be leased, sold or exchanged, or be taken by any corporation, public or private, or shall the timber thereon be sold, removed or destroyed.

ECL §3-0301(1)(d) and 9-0105(1) provide the Department with jurisdiction to manage Forest Preserve lands, including the Grass River Unit.

The APSLMP was initially adopted in 1972 by the Adirondack Park Agency ("APA"), with advice from and in consultation with the Department, pursuant to Executive Law §807, now recodified as Executive Law §816. The APSLMP provides the overall general framework for the development and management of State lands in the Adirondack Park, including those State lands which are the subject of this UMP.

Specifically, the APAPSLMP states that:

> ..... the legislature has established a two-tiered structure regarding state lands in the Adirondack Park. The Agency is responsible for long range planning and the establishment of basic policy for state lands in the Park, in consultation with the Department of Environmental Conservation. Via the APSLMP, the Agency has the authority to establish general guidelines and criteria for the management of state lands, subject, of course, to the approval of the Governor. On the other hand, the Department of Environmental Conservation and other state agencies with respect to the more modest acreage of land under their jurisdictions, have responsibility for the administration and management

of these lands in compliance with the guidelines and criteria laid down by the APSLMP.

The APSLMP places State land within the Adirondack Park into the following classifications: Wilderness, Primitive, Canoe, Wild Forest, Intensive Use, Historic, State Administrative, Wild, Scenic and Recreational Rivers, and Travel Corridors, and sets forth management guidelines for the lands falling within each major classification. The APSLMP classifies the lands which are the subject of this UMP as part of the Grass River Unit.

The APSLMP sets forth Guidelines for such matters as: structures and improvements; ranger stations; the use of motor vehicles, motorized equipment and aircraft; roads, jeep trails and state truck trails; flora and fauna; recreation use and overuse; boundary structures and improvements and boundary markings.

Executive Law §816 requires the Department to develop, in consultation with the APA, individual UMPs for each unit of land under the Department's jurisdiction which is classified in one of the nine classifications set forth in the APSLMP. The UMPs must conform to the guidelines and criteria set forth in the APSLMP. Thus, UMPs implement and apply the APSLMPs general guidelines for particular areas of land within the Adirondack Park.

Executive Law §816(1) provides in part that "until amended, the APSLMP for management of state lands and the individual management plans shall guide the development and management of state lands in the Adirondack Park." Thus, the APSLMP and the UMPs have the force of law in guiding Department actions.

This Plan also serves as a River Area Management Plan in accordance with the WSRRS Act (title 27 of Article 15 of the Environmental Conservation Law, and its implementing regulations found in Part 666. of Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York (6 NYCRR.) River area management plans are developed by the Department of Environmental Conservation for river areas designated as Wild, Scenic or Recreational to recommend specific actions to protect and enhance all river corridor resources.

Acknowledgements

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I. INTRODUCTION

A. Planning Area Overview

The Grass River Wild Forest (GRWF) Unit Management Plan encompasses approximately 14,000 acres of forest preserve lands in several parcels in an area bounded on the east by State Highway 56, on the south by State Highway 3 and the Oswegatchie River, and the west and north by the Adirondack Park boundary. Most of the lands within the unit are part of the Grass River watershed, thus the name for the overall unit.

This Wild Forest unit is part of a larger management unit, the Grass River Management Unit (GRMU), located in the northwestern corner of the Adirondack Park. It includes the approximately 13,000 acres of Forest Preserve lands and about 107,000 acres of conservation easements located in the Towns of Clare, Clifton, Colton and Fine in St. Lawrence County.

1. Forest Preserve

There are total of 12 Forest Preserve parcels in this unit. Five larger parcels range from about 1300 acres to a little over 6000 acres. Seven smaller parcels range from about 5 acres to approximately 100 acres

2. Easements

There are four large easements on corporate owned lands in the unit; Tooley Pond, Long Pond, Seveys, and Grass River. There is one small family easement, the Silver Lake Easement north of Cranberry Lake. There is also an easement for a trail across the Roaring Brook Tract, a private property formerly owned by Lassiter Inc., which allows for a foot trail connecting the Church Pond and Leonard Pond Forest Preserve parcels. A small portion of the Emporium Easement north of SH 3, though technically in the Grass River unit, is considered in the Cranberry Lake unit since the bulk of the ownership is in that unit.

B. Unit Geographic Information

Much of the derivation of the names of geographic features of the unit is unclear. Many features are probably named after local individuals and families as hinted at through old census records and maps, but direct evidence is hard to come by. Examples of such features include: Lampson Falls, Church Pond and Clarksboro.

The official form or spelling of the name Grass River has, no “e” according to the Geographic Names Information System, which is the nation’s official geographic names database, and is the required usage for all Federal agencies and their contractors.

C. General Location

The Grass River Unit is located in a lesser traveled corner of the Adirondack Park. Good access to the area affords many recreational opportunities, including but not limited to hiking, hunting, trapping and fishing. Popular natural resource destinations contained in the Unit are Lampson Falls, Stone Dam, Leonard Pond, the waterfalls on the Grass River along Tooley Pond Road, Tooley Pond itself and Tooley Pond Mountain.

D. Acreage and Access

All the parcels are in Macomb’s Purchase, either Great Tract 2 (GT2) or Great Tract 3 (GT3).

Forest Preserve Wild Forest Parcels	**Acreage**	**Date Acquired**	**Great Tract**	**Township**	**Lot (s)**
Stone Dam	2,100	1902	GT2	7	2100 Acre Tract
Church Pond	1,912	1982,1950*	GT2	8	34, 35 &36
Leonard Pond	2268	1882,1877	GT2	5	2, 3 & 6
Cranberry Pond	100	1888	GT3	6	2 & 5
Lampson Falls	1,313	1950-1984	GT3	6	25
Town Fine Parcels	51	1900 & 1987	GT3	9	11
Middle Branch	34	1990	GT3	6	15
Tooley Pond	6,141	1999	GT3	10	West Half & SE Quarter
Grass River RR	31	1995, 2001	GT2	4 & 5	7, 8 & Brodie Tract
Grass River Parcel	42	1995, 2001	GT2	5	8
Total	**13,998**				
Easement Tracts	**Acreage**	**Date Acquired**	**Great Tract**	**Township**	**Lot (s)**
Tooley Pond	24,086	1999	GT3	10	West Half & SE Quarter

Long Pond	18,997	1999	GT2	7 & 8	Multiple
			GT3	6	Lot 15
Silver Lake	483	2001	GT2	4	Brodie Tract
Seveys	11,739	2007	GT2	5	Multiple
Grass River	51,950	2007	GT2	4, 5 & 7	Multiple
			GT3	10 & 6	Multiple
Lassiter ROW	12	1989	GT2	5 & 8	3, 35
Total	**107,267**				

1. Forest Preserve Parcels

Stone Dam

The 2100 acre Stone Dam parcel is situated near the center of the unit. The Middle Branch of the Grass River crosses the southwest corner of the parcel. The north and east sides of the parcel are adjacent to the Long Pond CE, and the west and south sides are adjacent to the Grass River CE. The Stone Dam parcel can be accessed from the west via the Dean Road and the haul road on Grass River easement, or from the east via the Long Pond CE tract.

Church Pond

The Church Pond parcel is on the eastern side of the unit, near SH 56. It is a rectangular shape, with the long dimension oriented east to west, containing a little less than 2000 acres. An easement for a ten foot wide foot trail, from SH 56 to the parcel, was acquired in 1950 from Hamilton Ferry. The trail, on the west side of SH 56, crosses wetlands in Fox Marsh, and is quite wet and boggy. Due to these conditions it has been abandoned. A new trail to Church Pond will be required to access this parcel.

Leonard Pond

The Leonard Pond parcel is about 1750 acres on the eastern side of the unit, north of Seveys Corner. It is bounded on the east by State Highway 56, on the west by the Seveys CE, and on the north and south by private parcels. The rest of this parcel extends across State Highway 56 to the Raquette River and is part of the Raquette River Wild Forest.

There is an inholding of private land that extends westward from State Highway 56 to the southeastern shore of Leonard Pond, where there are several camps. Less than one quarter of the shore line is privately owned.

Cranberry Pond

The 100 acre Cranberry Pond parcel is located at the center of the northern section of the unit, and is completely surrounded by the Grass River CE. The White Road, (a seasonal town road) crosses the parcel.

Lampson Falls

The Lampson Falls parcel contains roughly 1300 acres in the northwest corner of the unit. It abuts the Downerville State Forest and is near the Degrasse State Forest. The Grass River is the dominant feature, most notably Lampson Falls on the South Branch. Harper's Falls on the North Branch is also a well known feature. Both locations are popular with public users.

Middle Branch

The Middle Branch parcel is approximately 34 acres and located just north of the Dean Road on the west side of County Route 27 and provides access to the Middle Branch of the Grass River upstream of Lampson Falls**.** A short canoe carry leads to a launch site. Its west boundary abuts the Adirondack Park Blue Line and Degrasse State Forest, while its north and south boundaries are adjacent to private lands.

Town of Fine Parcels

There are three small parcels in the southwest section of the unit that are separated from each other and isolated from any other Forest Preserve Land.

East of the hamlet of Fine is a thirty acre parcel adjacent to County Route 27. Its use is limited because of its size and location. There is a utility line running along the portion of the property adjacent to Co. Rt. 27, and there are no signs indicating it is Forest Preserve lands. This parcel needs to be surveyed.

Two very small pieces in the north part of the town need to be surveyed and have the boundaries painted and posted. One parcel is about five acres and the other about fifteen.

Grass River Railroad

The Grass River Railroad parcel is approximately 100 acres, consisting of a strip of land 66 feet wide and about 12 miles long. It extends from just west of the hamlet of Conifer northwest across the Massawepie Mire and then across SH 3 into this unit and nearly to Silver Lake. Approximately 3 miles or roughly 22 acres of the rail road parcel are in this unit. The Grass River Railroad parcel crosses the South Branch of the Grass River three times as it winds from Conifer to Cranberry Lake, making one crossing on this unit, but the bridge is gone at that location.

The Grass River Parcel is connected to the old rail bed adjacent to the north side of SH 3, which contains about 41 acres.

The Grass River Railroad parcel needs to be surveyed.

Tooley Pond

This six thousand acre parcel is basically a ½ to 1 mile wide strip of land along the South Branch of the Grass River. The Tooley Pond Road forms the boundary in three sections. The Tooley Pond CE is also adjacent. A sixteen mile section of the South Branch of the Grass River meanders within this parcel, and includes seven major waterfalls: Copper Rock Falls, Rainbow Falls, Bulkhead Falls, Flat Rock Falls, Twin Falls, Sinclair Falls, and Basford Falls.

Several short, informal trails lead from the Tooley Pond Road to the river and there is a marked loop trail that goes to the top of Tooley Pond Mountain. Use of the trails seems to be increasing as the area becomes better known.

Canoeing conditions range from flat water to Class V falls. Paul Jamieson recommends in Adirondack Canoe Waters: North Flow that intermediate to advanced skills are most appropriate for kayak or canoe users. Scouting is often required to determine safe courses to run rapids or choose to carry around. May and early June, when water levels are high, is the best time for trips. Stretches of the river can be nearly impassable during the drier part of summer.

2. Conservation Easement Tracts

These conservation easement tracts either have recreation management plans (RMP) or have Interim Recreation Plans (IRMP) completed, or RMPs in the works, some of which may be completed before the UMP for Grass River Wild Forest is done. Either the IRMP or the completed RMP is referenced in the appendices. A brief description of these tracts is included here because they are so integral to connections between the Grass River Wild Forest tracts, and there will be trail connections proposed between the fee and easement tracts in the UMP and the RMPs. In addition, these areas will be referenced, as appropriate, as plans for the Forest Preserve lands are discussed in this UMP, and will be shown on maps of the area so the relationship between the Forest Preserve and easement lands is clear.

Grass River

The Grass River Conservation Easement is approximately 51,000 acres. This easement allows public access to these lands for: snowmobiling, hiking, bicycling and other non-motorized activities on designated routes or trails, and fishing, canoeing/kayaking and trapping on and along the North and Middle Branches of the Grass River as well as some other water bodies, motorized use on designated roads, and camping at designated locations. Details of the use of this easement are outlined in Appendix F.

Tooley Pond

This tract is roughly 24,000 acres, was formerly owned by Champion International but is now owned by Heartwood Forestland Fund III LLP. It is located in the western part of the unit, and essentially surrounds the Tooley Pond Forest Preserve parcel, which splits this easement into three pieces. The defining geographic feature of the Tooley Pond tract is the meandering 16 mile stretch of the South Branch of the Grass River. Secondary roads connect to this tract from the Tooley Pond Road to provide further access.

This tract is open for all public recreational uses. This CE was amended in 2012 to allow lease camps to remain, and allow public hunting year round starting in 2012. Current public motor vehicle access is over the Spruce Mountain and Allen Pond Roads, and the town maintained Tooley Pond Road. There's also a spur road from the Lake George Road that leads to a small parking area. Additional roads may be opened to the public, as discussed later in this UMP.There are several snowmobile trails, mostly on logging roads. The many logging roads are open for non-motorized use. Details of the use of this easement are outlined in Appendix I.

Long Pond

Situated in the northeast section of the unit is the Long Pond CE, containing approximately 19,000 acres. Public access by motor vehicle is by the main east-west haul road that extends from SH 56 through the tract nearly to the Stone Dam Forest Preserve parcel. Many secondary roads connect to this main haul road.

This tract is open for most public recreation uses including hunting. Roughly 40 miles of road and trails are open for public motor vehicle and/or ATV use, and there are five accessible primitive tent sites. Several miles of snowmobile trails cross the parcel. About four miles of the upper end of the North Branch of the Grass River is on this tract. The generally low water levels combined with many boulders in the channel make it unattractive for canoeing or kayaking most of the year.

Details of the use of this easement are outlined in Appendix H.

Seveys

The Seveys tract is located in the southeast corner of the GRMU, and includes about 11,739 acres. There is limited pubic recreational access, snowmobile trails being the primary recreation use allowed, along with an access corridor to the Raquette River east of SH 56, which is part of the Raquette-Boreal Management Unit.

Details of the use of this easement are outlined in Appendix G.

Silver Lake

Silver Lake CE is on about 500 acres in the southwest part of the unit, near Cranberry Lake. The state acquired the easement primarily to obtain a route for a public snowmobile trail. Details of the use of this easement are outlined in Appendix J.

Lassiter

A 50' wide easement was acquired to provide a connection between the Leonard Pond and Church Pond Forest Preserve parcels on what is known as the Roaring Brook Tract, formerly owned by Lassiter Inc.

E. General Access

Public access to these lands is primarily from SH 56 and SH 3. Access to the Long Pond CE tract, and the Church Pond and Leonard Pond parcels is via SH 56. The Cranberry Pond, Middle Branch and Lampson Falls parcels have county and town roads that provide access. Both the Tooley Pond parcel and the Tooley Pond CE tract can be accessed via the Tooley Pond Road, a town road which follows the South Branch of the Grass River.

F. General History

Like most of the northwestern Adirondacks, the Tooley Pond parcel remained largely unexplored until the second half of the nineteenth century. The early history of the lands of which this unit is a part were concerned primarily with land speculation, from around the end of the Revolutionary War to the mid 1800's, when logging began in the area.

Relevant historical events that directly affected these lands are as follows:

1863	Clifton Iron Ore Company founded
1866	Clarksboro, on the South Branch of the Grass River, was founded and named after George C. Clark; iron furnace, sawmill and railroad to East DeKalb constructed
1868	Town of Clifton formed by act of State legislature
1870	Road from Clarksboro to Cranberry Lake constructed
1880	Town of Clare formed by act of State legislature
1906	New Bridge founded by Robert W. Higbie Co. as a logging and mill town
1912	Emporium Forestry Company, Conifer, NY established
1912	Grass River RR extended to Cranberry Lake from Conifer
1913	Tooley Pond Mountain Fire tower built
1915	Grass River RR chartered as a common carrier

1917	Emporium Forestry Company constructed a sawmill at Cranberry Lake
1925	St. Regis Paper Co. purchased land from Robert W. Higbie Co.
1927	Emporium Forestry Company closes the Cranberry Lake mill
1942	Hanna Ore Co. opens mine and builds railroad to Newtown Falls
1952	Clifton Mines closed
1971	Fire tower closed on Tooley Pond Mountain
1985	St. Regis Paper Co. and Champion International Corp. merge

1. Lampson Falls

Lampson Falls is one of the earliest developed sites in the planning area. Rogersons map dated 1858 indicates a building at Lampson Falls labeled “Russell and Allen’s Sawmill”. Harper Falls is not labeled as such, but the words “water power” denotes the spot.

The various spellings of the name Lampson are used according to the map or document that the cited information is taken from. Lampson Falls were named for either John or Stephen Lampson, early residents.

The 1865 St. Lawrence Atlas labels a building at Lampson Falls “S. Mill and Shingle Mill” and a nearby building “J. S. Lamson.” The “S. Mill” produced barrel staves for slack cooperage. The Lampson Mill Road is shown to extend across the river above the falls and joined the present Backus Road leading to Russell. The deed for the state owned Malone Tract refers to this road as “the road leading from Palmerville to Lamson Mills”.

In February 1900 Caroline Lamson conveyed the “Lampson Mill Property” with sawmill to Murray N. Ralph. Soon thereafter the mill closed down and the site was abandoned. The state acquired the land over the period from 1954-1984.

2. Tooley Pond Mountain Fire Tower

In 1913, a wooden fire tower was built on Tooley Pond Mountain, (elevation 1,782') in Clare. In 1919, a steel fire tower replaced the original wooden structure. In 1971, the DEC closed the tower, which was located on St. Regis Paper Company land.

Students from SUNY ESF Ranger School at Wanakena dismantled the fire tower. Over a twenty-year period Ranger School faculty, student volunteers, and alumni moved, restored and rebuilt the tower on Cathedral Rock, (elevation, 1,700'). Construction was completed in 2000.

Clare

The town of Clare was formed from the townships of Pierrepont and Clifton. It officially became a township in December, 1880. Clare, supposedly named for a County in Ireland, was once a busy community with a blacksmith shop, cheese factory, church, hotel, a post office, a barrel or stave factory at Lampson Falls, a tavern, stores, three schools, and many thriving farms.

In 1886 Clarksboro, near Twin Falls, was settled as a mining town, built for the Clifton Mining Co. which was incorporated as part of the Clifton Iron Co. In 1864 Myers Steel and Wire Co. was incorporated to operate a blast furnace and forges to manufacture steel from the mine's iron ore. A railroad was started in 1866 to run to East Dekalb. Later the line was ultimately extended to the Clifton Mines (Kudish, 1985).This railroad was made completely of wood except for strap iron nailed to the maple rails. Workers were paid $1.25 a day. At that time about 700 people lived in Clarksboro, but by 1874 only 200 were left. Clarksboro contained an iron furnace and a water-powered sawmill. For much of its history, timber production was the primary use of the property. Two miles west, Dannemora Steel Mines started a mine but, abandoned it. In 1941 Hanna Coal and Ore Co., operated it until December 1951 when it closed down the mines.

Newbridge, located where the Tooley Pond Road currently crosses the Grass River, was a lumbering settlement with 50 families, begun in 1906 when Milo Woodcock of Edwards brought in a portable saw mill and sawed lumber for the buildings. Newbridge was founded for employees of the Robert W. Higbie Lumber Company, which connected Newbridge to Newton Falls with a railroad that operated until 1919 (this line was rebuilt and extended to the Clifton Mines site by Hanna Coal and Ore Co. in 1941). The mill became one of the largest around with an output of 3 to 4 million board feet a year.

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II. Inventory, Use, and Capacity to Withstand Use

A. Natural Resources

1. Physical

a. Geology

The major geologic formation in the Grass River Unit is called the fall zone. This zone is a transition from the St. Lawrence River valley, known as the Grenville or Northwest lowlands, and the terraces of the Adirondack foothills. The fall zone is a belt, about 8-10 miles wide, parallel to and southeast of the Grenville lowlands. In St. Lawrence County this belt lies between the Grenville lowlands and the Childwold terrace, but to the north and south the terrace is absent and the fall zone merges directly into the Adirondack mountain section. It is distinguished from the lowlands by a distinct increase in the slope of both the upland surfaces and the valleys. Because of the steepness, this belt is where waterfalls are concentrated and are sufficiently common to characterize the topography, although still waters are found here and falls occur in other topographic regions. The maximum relief generally ranges from 300 to 400 feet. The decline of the major river valleys within this belt averages about 60 feet per mile, whereas across the Grenville lowlands to the northwest the decline averages about 25 feet per mile, and across the Childwold terrace to the southeast only about 12-25 feet per mile. These figures are averages along straight lines parallel to the general direction of decline of the topography as a whole.

The predominant rock underlying the belt is granite gneiss. Metasedimentary rocks of the Grenville series are below that.

b. Soils

All soils are formed by the chemical and physical breakdown of parent materials combined with the addition of organic material. However, like most of the Adirondacks, the soil composition within the Grass River Wild Forest is vastly different from the bedrock underneath. Most are derived from glacial deposits that have been moved and deposited as glaciers advanced and retreated. Soils across the unit vary widely in degree of slope, depth to bedrock, stoniness and drainage. General meso-soil maps for the planning area are available from the Adirondack Park Agency. These depict broad soil associations relative to a particular landscape type. The maps portray soil associations as patterns of similar soils based on their properties and constituents.

These are useful in the management of large forested areas and watersheds, but are not suitable for planning areas less than forty acres in size. For specific projects in small areas, such as the placement of trails, parking facilities, camping areas, etc., detailed on-site soil surveys may be required.

Soil names are usually reflective of their dominant characteristics followed by a list of minor components and limitations. For example, frequently observed soil series in the Grass River Wild Forest unit include:

- **Potsdam Series:** The Potsdam series consists of very deep, well drained soils on till plains. They are nearly level to steep soils formed in a water deposited mantel that overlies dense till. Permeability is moderate in the layers above the substratum and slow in the substratum. Slope ranges from 3 to 60 percent. Mean annual temperature is 44 degrees F, and mean annual precipitation is 40 inches.

  Drainage and Permeability: Well drained. The potential for surface runoff is low to very high. Permeability is moderate in the layers above the substratum and slow in the substratum.

  Use and Vegetation: Woodlots contain sugar maple, American beech, black ash, white ash, hophornbeam, eastern hemlock, red oak, and eastern white pine.

- **Tunbridge Series:** The Tunbridge series consists of moderately deep well drained soils on glaciated uplands. They formed in loamy glacial till. Permeability is moderate or moderately rapid. Slope ranges from 0 to 75 percent.

  Drainage and Permeability: Well drained. Permeability is moderate or moderately rapid.

  Use and Vegetation: Most areas are wooded. The common trees are American beech, white ash, yellow birch, paper birch, northern red oak, sugar maple, eastern white pine, hemlock, red spruce, white spruce, and balsam fir. A few areas have been cleared and are primarily used for hay and pasture. Some cleared areas are used for cultivated crops.

- **Dawson Series:** The Dawson series consists of very deep very poorly drained soils formed in herbaceous organic material 16 to 51 inches thick overlying sandy deposits in depressions on outwash plains, lake plains, ground moraines, end moraines and flood plains. Permeability is moderately slow to moderately rapid in the organic material and rapid in the sandy material. Slopes range from 0 to 2 percent.

Use and Vegetation: Very little commercial use is made of these soils, because of the extreme acidity, shallowness of the organic deposit, and the high water table. Tree vegetation is sparse with black cranberries, laurel, leatherleaf, sphagnum mosses, and blueberries.

- **Adams Series:** The Adams series consists of very deep, somewhat excessively drained soils formed in glacial-fluvial or glacio-lacustrine sand. They are found on outwash plains, deltas, lake plains, moraines, terraces, and eskers. Permeability is rapid or very rapid. Slope ranges from 0 to 70 percent.

  Drainage and Permeability: Somewhat excessively drained. Runoff is slow to medium. Permeability is rapid or very rapid in the surface layer and upper part of the subsoil and very rapid in the lower part of the subsoil and substratum.

  Use and Vegetation: Extensive areas are idle and support aspen, birch and pine seedlings or sweet fern, spirea, and brambles. Un-cleared areas support maple, beech, spruce, and pine. Farmed areas are used mainly for hay or pasture with limited acreage of corn and small grain.

c. Terrain/Topography

Detailed information on area topography can be found on the following USGS topographic maps.

Brothers Pond	Tooley Pond
Albert Marsh	Stark
West Pierrepont	Cranberry Lake
Newton Falls	South Edwards
Oswegatchie	Fine
Childwold	Degrasse

Elevation ranges from over 1860' on Baldface and Little Blue Mountains, while Tooley Pond Mountain and Spruce Mountain are each over 1780'. The lowest elevation of about 720' is below Harper's Falls where the North Branch of the Grass River crosses the Park boundary. The major water features are the three branches of the Grass River, North, Middle and South. There are also some large flat water areas with marshes and meandering watercourses.

d. Water

Waters in the unit comprise portions of the Grass River and the Oswegatchie River watersheds, both part of the greater St. Lawrence River Drainage Basin. The main feature of the unit is the Grass River. The North, Middle and South branches each flow through one of the Forest Preserve parcels of the Grass River Wild Forest. The longest is the meandering sixteen mile stretch of the South Branch which bisects the Tooley Pond parcel. Numerous tributaries flow into these branches where they flow thru Forest Preserve lands.

Water quality is generally satisfactory with low productivity and fertility typical to the area. Unlike the Five Ponds Wilderness Area located to the south of this tract, acidification does not appear to be a limiting factor.

A total of 214 ponded waters have been identified within the planning area boundaries. These waters all lie in the St. Lawrence watershed, primarily in the Grass and Oswegatchie rivers watersheds. A few waters are in the Raquette River watershed. Most of these are small and on private land. There are 67 waters on Forest Preserve or conservation easement lands in the unit, of which 14 are named in the NYS DEC or ALSC databases.

- **Church Pond:** The North Branch of the Grass River originates from Church Pond and the more than 300 acres associated with Fox Marsh.
- **Cranberry Pond:** This small pond, tributary to the North Branch of the Grass, is surrounded by northern hardwood deciduous forest and marshlands. The Grass River easement tract completely surrounds the small Forest Preserve parcel that is adjacent to the pond.
- **Leonard Pond:** The Leonard Pond parcel is the only part of the unit that has waterbodies that drain into the Raquette River system.
- **Tooley Pond:** This forty-six acre pond is located off the Tooley Pond Road and is a popular bass fishing site. Recent upgrades to the site include: car-top boat launch waterway access and parking space, picnic area, primitive tent site and universal access privy.
- **Stone Dam:** The Middle Branch of the Grass River cuts across the southwest corner of this parcel, where the “splash dam” was located. The river is classified “Scenic” under the NYS Wild, Scenic and Recreational Rivers Act, (WS&RRA).
- **Grass River:** The three branches of the Grass River are the main water resources in the area, and each touches some of the Forest Preserve lands. Waterfalls are numerous and the largest is Lampson Falls below the confluence

of the South and Middle Branches. The Tooley Pond Forest Preserve parcel includes a series of falls on the South Branch of the Grass. Many of these falls were harnessed for their water power in the past, but these facilities are no longer in place. All three branches are classified Scenic Rivers under the W,S & RRA, except for a portion of the South Branch. The South Branch, from the confluence with the outlet of Allen Pond to the western edge of the Tooley Pond parcel and beyond to theAdirondack Park boundary is designated as Recreational.The Main Branch, from the confluence of the South and Middle Branches, is classified as a Study River, which includes the portion that Lampson Falls is on.

e. Wetlands

Wetlands provide many benefits which include:

- *Flood and Storm Water Control*: They absorb, store, and slow down the movement of rain and snow melt water, minimizing flooding and stabilizing water flow.
- *Surface and Groundwater Protection*: Wetlands often serve as groundwater discharge sites, maintaining base flow in streams and rivers and supporting ponds and lakes.
- *Erosion Control*: Wetlands slow water velocity and filter sediments, protecting reservoirs and navigational channels. They also buffer shorelines and agricultural soils from water erosion.
- *Pollution Treatment and Nutrient Cycling*: Wetlands cleanse water by filtering out natural and many man-made pollutants. Organic materials are also broken down and recycled back into the environment where they support the food chain.
- *Fish and Wildlife Habitat*: Wetlands are one of the most productive habitats for feeding, nesting, spawning, resting and cover for fish and wildlife. Wildlife benefit from the diversity of plants and micro-climates that result from the edge effect caused by the light regime. Deer wintering yards are found in the shelter of conifer stands and depressions where wetlands also occur.
- *Public Enjoyment*: Wetlands provide areas for recreation, education and research.

The State Legislature passed the Freshwater Wetlands Act (FWA or Act) in 1975 with the intent to preserve, protect and conserve freshwater wetlands and their benefits, consistent with the general welfare and beneficial economic, social and agricultural development of the state. The DEC has prepared maps of freshwater wetlands

throughout New York. These maps are available from the DEC, Town Clerk Offices, and even online at http://www.dec.ny.gov/animals/38801.html.

See Appendix S for the Hydrology map.

f. Air Resources/Climate

Air Resources and Atmospheric Deposition

The effects of various activities on Grass River Unit air quality have not been sufficiently measured nor determined. Air quality and visibility in the unit appears to be good to excellent, rated Class II (moderately well controlled) by federal and state standards. However, the summits are often obscured by haze caused by air pollutants when a large number of small diameter particles exist in the air. Mountain visibility is reduced considerably on high sulphate days (O'Neil 1990). Air quality may be more affected by particulate matter blown in from outside sources rather than from activities within the unit.

The adverse effects of atmospheric deposition on the Adirondack environment has been documented by many researchers over the last two decades. While permanent monitoring sites have not been established in the Grass River Unit general observations of the effects of acidic deposition on the regional ecosystem are numerous and well documented.

Effects of Acidic Deposition on Forest Systems

At present, the mortality and decline of red spruce at high elevations in the Northeast and observed reductions in red spruce growth rates in the southern Appalachians are the only cases of significant forest damage in the United States for which there is strong scientific evidence that acid deposition is a primary cause (National Science and Technology Council Committee on Environment and Natural Resources, 1998). The following findings of the National Acid Precipitation Assessment Program (1998) provide a broad overview of the effects of acidic deposition on the forests of the Adirondacks. The interaction of acid deposition with natural stress factors has adverse effects on certain forest ecosystems. These effects include:

- Increased mortality of red spruce in the mountains of the Northeast. This mortality is due in part to exposure to acid cloud water, which has reduced the cold tolerance of these red spruce, resulting in frequent winter injury and loss of foliage;
- Reduced growth and/or vitality of red spruce across the high-elevation portion of its range;
- Decreased supplies of certain nutrients in soils to levels at or below those

required for healthy growth.

Nitrogen deposition is now recognized with sulfur as an important contributor to effects on forests in some ecosystems, which occurs through direct impacts via increased foliar susceptibility to winter damage, foliar leaching, leaching of soil nutrients, elevation of soil aluminum levels, and/or creation of nutrient imbalances. Excessive amounts of nitrogen cause negative impacts on soil chemistry similar to those caused by sulfur deposition in certain sensitive high-elevation ecosystems. It is also a potential contributor to adverse impacts in some low-elevation forests.

Sensitive receptors

High-elevation spruce-fir ecosystems in the eastern United States epitomize sensitive soil systems. Base cation stores are generally very low, and soils are near or past their capacity to retain more sulfur or nitrogen. Deposited sulfur and nitrogen, therefore, pass directly into soil water, which leaches soil aluminum and minimal amounts of calcium, magnesium, and other base cations out of the root zone. The low availability of these base cation nutrients, coupled with the high levels of aluminum that interfere with roots taking up these nutrients can result in plants not having sufficient nutrients to maintain good growth and health.

Sugar maple decline has been studied in the eastern United States since the 1950s. Recently, studies suggest that the loss of crown vigor and incidence of tree death is related to the low supply of calcium and magnesium to soil and foliage. (Driscoll 2002) Exposure to acidic clouds and acid deposition has reduced the cold tolerance of red spruce in the Northeast, resulting in frequent winter injury of current-year foliage during the period 1960-1985. Repeated loss of foliage due to winter injury has caused crown deterioration and contributed to high levels of red spruce mortality in the Adirondack Mountains of New York, the Green Mountains of Vermont, and the White Mountains of New Hampshire.

Acid deposition has contributed to a regional decline in the availability of soil calcium and other base cations in high-elevation and mid-elevation spruce-fir forests of New York and New England and the southern Appalachians. The high-elevation spruce-fir forest of the Adirondacks and Northern New England are identified as one four areas nationwide with a sensitive ecosystem and subject to high deposition rates.

Effects of Acidic Deposition on Hydrology Systems

New York's Adirondack Park is one of the most sensitive areas in the United States affected by acidic deposition. The Park consists of over 6 million acres of forest, lakes, streams and mountains interspersed with dozens of small communities, and a large seasonal population fluctuation. However, due to its geography and geology, it is one of the most sensitive regions in the United States to acidic deposition and has been

impacted to such an extent that significant native fish populations have been lost and signature high elevation forests have been damaged.

There are two types of acidification which affect lakes and streams. One is a year-round condition when a lake is acidic all year long, referred to as chronically or critically acidic. The other is seasonal or episodic acidification associated with spring melt and/or rain storm events. A lake is considered insensitive when it is not acidified during any time of the year. Lakes with acid-neutralizing capability (ANC) values below 0 µeq/L are considered to be chronically acidic. Lakes with ANC values between 0 and 50 µeq/L are considered susceptible to episodic acidification; ANC may decrease below 0 µeq/L during high-flow conditions in these lakes. Lakes with ANC values greater than 50 µeq/L are considered relatively insensitive to inputs of acidic deposition (Driscoll 2001). Watersheds which experience episodic acidification are very common in the Adirondack region. A 1995 EPA Report to Congress estimated that 70% of the target population lakes are at risk of episodic acidification at least once during the year. Additionally, EPA reported that 19% of these lakes were acidic in 1984, based on their surveys of waters larger than 10 acres. A 1990 report by the ALSC (which included lakes of less than 10 acres in an extensive survey of 1,469 lakes in the Adirondacks, found that 24% of Adirondack lakes had summer pH values below 5.0 a level of critical concern to biota. Moreover, approximately half of the waters in the Adirondacks surveyed had ANC values below 50 making them susceptible to episodes of acidification. Confirming that, EPA's Environmental Monitoring and Assessment Program (EMAP) sampling in 1991-1994 revealed that 41% of the Adirondack lakes were chronically acidic or susceptible to episodic acidification, demonstrating that a high percentage of watersheds in the Adirondacks are unable to neutralize current levels of acid rain.

In addition to sensitive lakes, the Adirondack region includes thousands of miles of streams and rivers which are also sensitive to acidic deposition. While it is difficult to quantify the impact, it is certain is that there are large numbers of Adirondack brooks that will not support native Adirondack brook trout. Over half of these Adirondack streams and rivers may be acidic during spring snowmelt, when high aluminum concentrations and toxic water conditions adversely impact aquatic life. This adverse effect will continue unless further limits are placed on emissions of acid rain precursors.

References for the Section Above on Air Resources and Atmospheric Deposition:

Driscoll, C.T. et.al. 2001. Acidic Deposition in the Northeastern United States: Sources and Inputs, Ecosystem Effects, and Management Strategies. *BioScience* 51:3, p. 180-198.

Driscoll, C.T., K.M. Driscoll, MJ Mitchell and DJ Raynal. 2002. Effects of acidic deposition on forest and aquatic ecosystems in New York State. *Environmental Pollution*. (In Press).

National Science and Technology Council Committee on Environment and Natural Resources. 1998. *National Acid Precipitation Assessment Program Biennial Report to Congress: An Integrated Assessment.* U.S. National Acid Precipitation Assessment Program, Silver Spring, MD. (www.nnic.noaa.gov/CENR/NAPAP/NAPAP_96.htm).

Permanent LTM monitoring sites in and around this unit

Summaries of those data can be found at (http://www.adirondacklakessurvey.org) see Adirondack Lake Survey Pond Information. The Adirondack Long-Term Monitoring (LTM) program managed by the ALSC has been sampling chemistry in 52 lakes across the Adirondack Park on a monthly basis. There are no long term monitoring sites within the unit. Data gathered from monitored waterbodies near the unit, such as McCuen Pond, applies to the unit since the conditions are similar physically and chemically.

Climate

Climate conditions vary across the unit. Factors such as slope, aspect, elevation, precipitation, prevailing wind and barriers to air current, and proximity to waterbodies effect variations. Day time temperatures rarely exceed 90 degrees and nights are cool. Frosts can occur any month of the year and have been recorded in July and August. Winters are long and are accompanied by high winds. Temperatures can vary 20-30 degrees during a day. Frost free days typically range from 90-120 days.

Precipitation is between 40 to 60 inches per year. Snowfall ranges from 100-150 inches per year. Prevailing winds are from the west. South facing slopes are thawed early and dried quickly by direct sunlight. North facing slopes are generally wetter and retain snow and soil moisture longer. The number of days with an inch or more of snow ranges from 120 to 140 days.

2. Biological

a. Vegetation

The vegetation is typical of the Northern Adirondack sub-region. The topography is irregular, ranging from flat or gently sloping to occasionally rougher areas of rock outcroppings. Soils are low in fertility and are composed of sandy, acidic material derived from granitic rock. These soils can be fairly deep in the valleys, and are shallow and droughty on the slopes.

The forest conditions today are a result of the heavy logging and fire that occurred from 1875-1915. Originally the lands were covered with big pine and spruce. The forest

composition today includes northern hardwood, mixed woods, and spruce-fir. Plantations are a minor component of the forest.

The recently acquired Tooley Pond Parcel was harvested lightly along the South Branch of the Grass River. The other parcels of Forests Preserve have been in state ownership for many years and the evidence of past cutting is diminishing.

All of the forested lands within this unit have been modified, in various degrees, by the harvest of forest products and now provide a diverse pattern of plant succession within the unit. During the course of the facilities inventory for this Wild Forest, the following Ecological Communities were noted (ref. DRAFT Ecological Communities of New York State, Edinger et.al 2002):

- Beech-Maple mesic forest: a hardwood forest with sugar maple (*Acer saccharum*) and beech (*Fagus grandifolia*) codominant. This is a broadly defined community type with several regional and edaphic variants. These forests occur on moist, well-drained, usually acid soils. Common associates are yellow birch (*Betula alleghaniensis*), white ash (*Fraxinus americana*), eastern hop hornbeam (*Ostrya virginiana*), and red maple (*Acer rubrum*).

  Characteristic small trees or tall shrubs are: hobblebush (*Viburnum lantanoides*), American hornbeam *(Carpinus caroliniana)*, striped maple *(Acer pennsylvanicum)*, witch hazel *(Hamamelis virginiana)*, and alternate-leaved dogwood *(Cornus alternifolia)*.

- Dominant groundlayer species are: star flower (*Trientalis borealis*), common wood-sorrel (*Oxalis montana*), Canada mayflower (*Maianthemum canadense*), painted trillium (*Trillium undulatum*), purple trillium (*T. erectum*), shining clubmoss (*Lycopodium lucidulum*) and intermediate wood fern (*Dryopteris intermedia*). Associated herbs include Christmas fern (*Polystichum acrostichoides*), jack-in-the-pulpit (*Arisaema triphyllum*) and false Solomon's seal (*Smilacina racemosa*). There are many spring ephemerals which bloom before the canopy trees leaf out. Typically there is also an abundance of tree seedlings, especially of sugar maple; beech and sugar maple saplings are often the most abundant "shrubs" and small trees. Hemlock (*Tsuga canadensis*) may be present at a low density. In the Adirondacks a few scattered stands of red spruce (*Picea rubens*) may also be present.

  Characteristic birds include: American redstart (*Setophag ruticilla*), red-eyed vireo (*Vireo olivaceus*), ovenbird (*Seiurus aurocapillus*), black-throated blue warbler (*Dendroica caerulescens*), least flycatcher (*Empidonax minmus*), and very *(Catharus fuscescens)*.

Within extensive areas of beech-maple mesic forest, there are often associated small patches of hemlock-northern hardwood forest in steep ravines and gullies where hemlock is locally dominant.

In association with the Beech-Maple mesic forest, the following common ecological communities are interspersed, mixing and blending with the main Beech-Maple mesic community.

- Hemlock-northern hardwood forest: a mixed forest that typically occurs on middle to lower slopes of ravines, on cool, mid-elevation slopes, and on moist, well-drained sites at the margins of swamps.

  In any one stand, hemlock (*Tsuga canadensis*) is codominant with any one to three of the following: beech (*Fagus grandifolia*), sugar maple (*Acer saccharum*), red maple (*A. rubrum*), black cherry (*Prunus serotina*), white pine (*Pinus strobus*), yellow birch (*Betula alleghaniensis*), black birch (*B. lenta*), northern red oak (*Quercus rubra*), and basswood (*Tilia americana*). The relative cover of hemlock is quite variable, ranging from nearly pure stands in some steep ravines to as little as 20% of the canopy cover. Striped maple (*Acer pennsylvanicum*) is often prominent as a mid-story tree.

  The shrublayer may be sparse; characteristic shrubs are hobblebush (*Viburnum lantanoides*), maple-leaf viburnum (*Viburnum acerifolium*), and raspberries (*Rubus spp*.). Canopy cover can be quite dense, resulting in low light intensities on the forest floor and hence a relatively sparse groundlayer.

  Characteristic groundlayer plants are: Indian cucumber-root (*Medeola virginiana*), Canada mayflower (*Maianthemum candense*), shining clubmoss (*Lycopodium lucidulum*), common wood fern (*Dryopteris intermedia*), mountain wood fern (*Dryopteris campyloptera*), Christmas fern (*Polystichum acrostichoides*), star flower (*Trientalis borealis*), bellwort (*Uvularia sessilifolia*), common wood-sorrel (*Oxalis acetosella*), partridge berry (*Mitchella repens*), foamflower (*Tiarella cordifolia*), round-leaf violet (*Viola rotundifolia*), twisted stalk (*Streptopus roseus*), purple trillium (*Trillium erectum*), and the moss *Leucobryum glaucum*. In forests that have beech as a codominant, beech-drops (*Epifagus virginiana*) is a common herb.

  Characteristic birds include wild turkey (*Meleagris gallopavo*), pileated woodpecker (*Dryocopus pileatus*), golden-crowned kinglet (*Regulus satrapa*), and black-throated green warbler (*Dendroica virens*).

  This is a broadly defined and very widespread community, with many regional and edaphic variants. For example, in the Adirondacks, yellow birch and sugar

maple are sometimes codominant, with a relatively small number of hemlocks as well as a few red spruce (*Picea rubens*). More data on the shrublayer and groundlayer composition are needed before these regional variants can be distinguished as separate types.

- Spruce-northern hardwood forest: a mixed forest that occurs on lower mountain slopes and upper margins of flats on glacial till, primarily in the Adirondack and Catskill mountains, and in the Tug Hill plateau. This is a broadly defined community with several regional and edaphic variants; it is one of the most common forest types in the Adirondacks.

  Codominant trees are: red spruce (*Picea rubens*), sugar maple (*Acer saccharum*), beech (*Fagus grandifolia*), yellow birch (*Betula alleghaniensis*), and red maple (*Acer rubrum*), with scattered balsam fir (*Abies balsamea*). Striped maple (*Acer pennsylvanicum*) and mountain maple (*Acer spicatum*) are common subcanopy trees.

  Characteristic shrubs are: hobblebush (*Viburnum lantanoides*), American fly honeysuckle (*Lonicera candensis*), and Canada yew (*Taxus canadensis*).

  Characteristic groundlayer plants are: common wood-sorrel (*Oxalis acetosella*), common wood fern (*Dryopteris intermedia*), shining clubmoss (*Lycopodium lucidulum*), wild sarsaparilla (*Aralia nudicaulis*), bluebeads (*Clintonia borealis*), goldthread (*Coptis trifolia*), bunchberry (*Cornus canadensis*), Canada mayflower (*Maianthemum canadense*), Indian cucumber-root (*Medeola virginiana*), and twisted stalk (*Streptopus roseus*).

  Characteristic birds include yellow-bellied flycatcher (*Empidonax flaviventris*), white-throated sparrow (*Zonotrichia albicollis*), golden-crowned kinglet (*Regulus satrapa*), pileated woodpecker (*Dryocopus pileatus*), and gray jay (*Perisoreus canadensis*).

- Hemlock-hardwood swamp: a mixed swamp that occurs on mineral soils and deep muck in depressions which receive groundwater discharge, typically in areas where the aquifer is a basic or acidic substrate. These swamps usually have a fairly closed canopy (70 to 90% cover), sparse shrublayer, and low species diversity.

  The tree canopy is typically dominated by hemlock (*Tsuga canadensis*), and co-dominated by yellow birch (*Betula alleghaniensis*), and red maple (*Acer rubrum*). Other less frequently occurring trees include white pine (*Pinus strobus*), and green ash (*Fraxinus pennsylvanica*).

Characteristic shrubs include saplings of canopy trees plus highbush blueberry (*Vaccinium corymbosum)*. Other less frequently occurring shrubs include various viburnums (*Viburnum cassinoides, V. lentago, and V. lantanoides*), and winterberry (*Ilex verticillata*).

Characteristic herbs are cinnamon fern (*Osmunda cinnamomea*) and sensitive fern (*Onoclea sensibilis*). Groundcover may also be fairly sparse. Other less frequently occurring herbs include sedges (*Carex trisperma, C. folliculata, and C. bromoides*), goldthread (*Coptis trifolia*), Canada mayflower (*Maianthemum canadense*), mountain sorrel (*Oxalis montana*), foamflower (*Tiarella cordifolia*), and sarsparilla (*Aralia nudicaulis*).

This is a common and widespread swamp community. Some occurrences are very small (1 to 2 acres). Water levels in these swamps typically fluctuate seasonally: they may be flooded in spring and relatively dry by late summer.

- Successional northern hardwood: a hardwood or mixed forest that occurs on sites that have been cleared or otherwise disturbed.

  Also noted in the Grass River Unit, but less prevalent, is the common successional northern hardwoods ecological community. The existence of these communities in the unit indicate that the area has been disturbed in more recent years, most likely with a timber harvest prior to New York State ownership.

  Successional forests include forests that develop on sites that have been cleared (for farming, logging, etc.) or otherwise disturbed (by fire, ice scour, wind throw, flooding, etc.). Successional forests generally have the following characteristics: 1) dominated by light requiring, wind-dispersed species that are well-adapted to establishment following disturbance, 2) lack of reproduction of the canopy species, 3) have tree seedlings and saplings that are more shade-tolerant than the canopy species, 4) shrub layer and ground layer dominants may include many species characteristic of successional old fields, or they may include species that occurred on or near the site prior to disturbance, 5) have canopy trees with small diameter (generally less than 10 to 15 cm dbh), 6) have canopy trees of young age (generally less than about 25 to 50 years old), 7) have evidence of recent logging (e.g., presence of stumps and brush), and 8) have relatively low canopy height with poor tree diversity and poor development of multiple strata.

  Characteristic trees and shrubs include any of the following: quaking aspen (*Populus tremuloides*), big-tooth aspen (*P. grandidentata*), balsam poplar (*P. balsamifera*), paper birch (*Betula papyrifera*), or gray birch (*B. populifolia*), pin

cherry (*Prunus pennsylvanica*), black cherry (*P. serotina*), red maple (*Acer rubrum*), white pine (*Pinus strobus*), with lesser amounts of white ash (*Fraxinus americana*), green ash (*F. pennsylvanica*), and American elm (*Ulmus americana*). Northern indicators include aspens, birches, and pin cherry. This is a broadly defined community and several seral and regional variants are known.

Characteristic birds include chestnut-sided warbler (*Dendroica pennsylvanica*), Nashville warbler (*Vermivora ruficapilla*) in young forests with aspen and birch seedlings, and yellow-bellied sapsucker (*Sphyrapicus varius*) in mature aspen forests.

Legal Protection for Rare Species in New York State

Listing on New York's Endangered and Threatened species list regulates animal protection under New York State's Environmental Conservation Law. Species listed as Special Concern usually have no legal protection unless they are among those covered under a separate piece of federal or state legislation. However, listings of Special Concern indicate elevated interest in the status of the species within the state and serve as a mechanism for monitoring and tracking species that do not quite meet the criteria for active regulation.

New York State's Protected Plant Law, passed in 1974, prohibits the collection or destruction of listed protected plants without prior consent from the landowner. Violations of this law are punishable by a $25.00 fine per stem. The most recent list of endangered, threatened, rare and exploitable vulnerable plants was adopted through rulemaking in 2000.

State Ranking System

Each rare species and significant natural community has a state rank as determined by New York Natural Heritage. These ranks carry no legal weight but are believed to accurately reflect the relative rarity given of the species.

S1- Typically 5 or fewer occurrences, very few remaining individuals, acres, or miles of stream, or some other factor of its biology making it especially vulnerable in New York State.

S2- Typically 6 to 20 occurrences, few remaining individuals, acres, or miles of stream, or factors demonstrably making it very vulnerable in New York State.

S3- Typically 21 to 100 occurrences, limited acreage, or miles of stream in New York State.

S4- Apparently secure in New York State.

S5- Demonstrably secure in New York State.

Rare Plants

Drummond's Rock-cress *(Boechera stricta)* – Located in open sandy areas on the east side of the South Branch of the Grass River. It is listed as S2, endangered on the State ranking system.

Pod Grass (*Scheuchzeria palustris*) –Located in open marshy areas. It is listed as S3, rare on the State ranking system.

The Fir Clubmoss (*Hupergia selago*) and the vascular plant Southern Twayblade (*Listeria australis*) are both listed as Endangered.

Invasive Plants

In 1998 the Adirondack Nature Conservancy's Invasive Plant Project initiated Early Detection/Rapid Response (ED/RR) surveys along Adirondack Park roadsides. Expert and trained volunteers reported 412 observations of ten plant species throughout the area surveyed, namely NYS DOT Right-of-Ways (ROW). In 1999 the Invasive Plant Project was expanded to include surveying back roads and the "backcountry" (undeveloped areas away from roads) to identify the presence or absence of fifteen invasive plant species. Both surveys were conducted under the auspices of the Invasive Plant Council of New York "Top Twenty List" of non-native plants likely to become invasive within New York State. A continuum of ED/RR surveys now exists under the guidance of the Adirondack Park Invasive Plant Program (APIPP).

Assessments from these initial ED/RR surveys determined that four terrestrial plant species would be targeted for control and management based upon specific criteria such as geophysical setting, abundance and distribution, multiple transport vectors and the likelihood of human-influenced disturbance. The four priority terrestrial invasive plant species are: Purple loosestrife (*Lythrum salicaria*), Common reed (*Phragmites australis*), Japanese knotweed (*Fallopia japonica*), and Garlic mustard (*Alliaria petiolata*).

The Adirondack Park is susceptible to further infestation by invasive plant species intentionally or accidentally introduced to this ecoregion. While many of these species are not currently designated a priority species by APIPP, they may become established within or in proximity to a Unit and require resources to manage, monitor, and restore the site.

Infestations located within and in proximity to a Unit may expand and spread to uninfected areas and threaten natural resources within a Unit; therefore it is critical to identify infestations located both within and in proximity to a Unit and then assess high

risk areas and prioritize Early Detection Rapid Response (ED/RR) and management efforts.

Terrestrial Invasive Plant Inventory

Terrestrial invasive plant species documented in, or within proximity to, the Grass River Unit include the following: Purple loosestrife *(Lythrum salicaria)*, Common reed *(Phragagmites australis)*, Japanese knotweed *(Fallopia japonica)*, and Garlic mustard *(Allaria petiolata)*. These invasive species have been identified in or near the Unit boundaries. See Appendix S for the Documented Aquatic & Terrestrial Invasive Plant Occurrences map.

Japanese knotweed (*Fallopia japonica*) is known to exist within the unit. In general, Japanese knotweed reproduces vegetatively and is common to disturbed areas throughout the state. It is not shade tolerant, and consequently, is unable to invade forests (Van Driesche, 2002); however, it poses a great threat of rapid colonization of riparian corridors. It is expected, there may be other small populations of invasive-exotic plants along roadsides and other disturbed areas within the Unit area.

Aquatic Invasive Plant Inventory

A variety of monitoring programs collect information directly or indirectly about the distribution of aquatic invasive plants in the Adirondack Park including the Department, Darrin Fresh Water Institute, Paul Smiths College Watershed Institute, lake associations, and lake managers. In 2001, the Adirondack Park Invasive Plant Program (APIPP) compiled existing information about the distribution of aquatic invasive plant species in the Adirondack Park and instituted a regional long-term volunteer monitoring program. APIPP trained volunteers in plant identification and reporting techniques to monitor Adirondack waters for the presence of aquatic invasive plant species. APIPP coordinates information exchange among all of the monitoring programs and maintains a database on the current documented distribution of aquatic invasive plants in the Adirondack Park.

Aquatic invasive plant species documented in the Adirondack Park are Eurasian watermilfoil (*Myriophyllum spicatum*), Water chestnut (*Trapa natans*), Curlyleaf pondweed (*Potamoogeton crispus*), Fanwort (*Cabomba caroliniana*), European frog-bit (*Hydrocharus morsus-ranae*), and Yellow floating-heart (*Nymphoides peltata*). Species located in the Park that are monitored for potential visibility include Variable-leaf milfoil (*Myriophyllum heterophyllum*), Southern Naiad (*Najas guadalupensis*), and Brittle Naiad (*Najas minor*). Additional species of concern in New York State but not yet detected in the Park are Starry Stonewort (*Nitellopsis obtuse*), Hydrilla (*Hydrilla verticillata*), Water hyacinth (*Eichhornia crassipes*), and Brazilian elodea (*Egeria densa*).

Infestations located within and in proximity to a Unit may expand and spread to uninfected areas and threaten natural resources within a Unit; therefore it is critical to identify infestations located both within and in proximity to a Unit to identify high risk areas and prioritize Early Detection Rapid Response (ED/RR) management efforts.

Aquatic invasive plants are primarily spread via human activities, therefore lakes with public access, and those connected to lakes with public access, are at higher risk of invasion. All aquatic invasive species pose a risk of spreading via transport mechanisms which may include: seaplanes, motorized and non-motorized watercraft (canoes, kayaks, jet skis, motor boats etc.) and associated gear and accessories.

Documentation of aquatic invasive plant distributions in the Park is limited by the number of lakes and ponds that have been surveyed and the frequency of monitoring. In some cases, only a portion of the water's shoreline has been surveyed. In other cases, a single specimen may have been identified without documentation as to its location within a waterbody. It follows that a negative survey result indicates only that an invasive plant has not been detected and does not preclude the possibility of its existence.

The aquatic invasive species European frog-bit *(Hydrocharis morsus-ranae)* is also known to exist within the unit in the Grass River near Lampson Falls. European frog-bit is a floating-leaved aquatic plant that reproduces by runners or by seeds and winter buds. It is capable of producing dense mats of vegetation that completely cover the water surface, which can shade out native vegetation and thereby reduce plant diversity, and also impede human recreation by entangling around boat propellers and making swimming difficult. The European frog-bit infestation in the Grasse River near Lampson Falls was first detected in the fall of 2005 by an Adirondack Park Invasive Plant Program (APIPP) volunteer. Identification was confirmed in 2006 and APIPP began control in 2007. Delineation surveys revealed three small sites less than one quarter acre in size, in total. Thirty-six 5 gallon buckets of plant material were harvested in 2007; seven buckets were harvested in 2008; and fewer than two buckets were harvested in 2009. In 2010, fewer than 1.5 buckets of plant material were harvested. In 2011, just over one bucket of plant material was harvested in just a few hours. Additional surveys and maintenance work will be conducted by the APIPP Aquatic Invasive Species Project Coordinator until no new plants are seen for three consecutive years.

APIPP has been implementing a volunteer lake monitoring program since 2002. Tooley Pond is the only water body within the Grass River unit besides Lampson Falls that has been monitored since the program's inception. Tooley Pond is not known to have any aquatic invasive species.

The principles of early detection and management actions aimed at eliminating these invasive plants while the stands are small in size should be adopted by managers of the Unit. In addition, infestations on nearby private lands and in other areas of Forest Preserve can pose a threat to the natural communities of this unit and should be addressed as part of a comprehensive ecosystem wide approach to invasive species management.

The Adirondack Invasive Plant Project is a cooperative effort put into operation by the Department, The Nature Conservancy (TNC), the APA, and the NYS Department of Transportation (DOT). The program includes efforts by these and other groups to identify and monitor control sites, develop and implement cost effective methods of control, and increase public awareness about invasive plants. TNC and partners performed a roadside survey of a core area of the Adirondack Park in an effort to establish baseline data and recorded the occurrence of several invasive plant species on public and private land, including: Russian and autumn olive; fly and Tartarian honeysuckle; purple loosestrife; white sweet-clover; Japanese knotweed; and black locust. The TNC survey was a rapid assessment of invasive plant distribution along state and county routes, and as such recognized that plants that typically invade forest interiors may have been under-represented in the survey's findings: specifically, garlic mustard. This baseline survey was conducted more than a decade ago and additional species may now be present. The Department will continue to work with these groups to detect and remove populations of invasive plants within the Unit.

DOT is working to develop Best Management Practices that reduce or eliminate the introduction and spread of invasive species within the highway ROW. The Department should seek to follow such BMPs when performing similar work, i.e. parking lot construction and maintenance, road maintenance, etc., within the Grass River Unit.

Through the Office of Invasive Species Coordination, DEC will investigate the use of appropriate educational signage at fishing and waterway access sites to mitigate or prevent the spread of aquatic non-native or invasive species.

b. Wildlife

Wildlife present within the area are typical of those found in the western Adirondack foothills eco-zone. Common large mammals include white-tailed deer and black bear, and although uncommon, moose are increasingly present. Typical fur-bearing species represented in Department harvest data for the area include beaver, coyote, fisher, otter, pine marten and bobcat. Avian diversity in the unit is representative of northern hardwood and spruce/fir forested habitats. Breeding Bird Atlas data for the unit from the 2000-2005 census (Appendix A) identified 115 confirmed, probable and possible breeding bird species in the blocks covering the unit. Although no systematic survey of

the unit has been conducted for reptiles and amphibians, a volunteer based “Herp Atlas” sponsored by the Department through the decade of the 1990s, identified 24 species occurring on or adjacent to the unit. There are no exotic species of concern known to exist within the unit, and nuisance wildlife issues are largely limited to beaver induced flooding.

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Deer Wintering Areas

Within the unit there are 15 winter deer yards identified by the Department. One major yard is mostly just outside the boundary but has two finger-like extensions that reach into the area. A deer yard or deer wintering area is any location where deer tend to concentrate during winter. Deer yards typically have features which provide thermal benefits and/or mobility advantages during periods of cold and deep snow. In the Adirondacks, deer yards are often associated with dense conifer cover which helps to reduce rapid snow accumulation, provides shelter from winds, and limits cooling during the evening. South-facing slopes are also used by wintering deer, where smaller snow accumulation and favorable sun exposure provide similar benefits. Better quality deer yards also have adjacent regenerating hardwood components which provide available woody browse during milder conditions.

In the Adirondacks, deer use the same yarding areas annually, although the boundaries change over time with succession. Deer use within yarding areas will also change annually in response to winter severity. Severe winter weather virtually confines deer to wintering areas for long periods during which the depletion of available browse can lead to high deer mortality. Severe decline in the deer population can be traced directly to adverse winters. The carrying capacity of deer wintering areas limits the carrying capacity of the entire annual range of the deer population. The maintenance and protection of winter deer yards remains a concern of wildlife managers, particularly in

the Adirondacks, as they fulfill a critical component of the seasonal habitat requirements of white-tailed deer.

Spruce Grouse Potential Habitat

Habitat suitable for spruce grouse (*Falcipennis canadensis*) is found in several locations within the unit. No confirmed sightings of the bird have been recorded since 2002. Within the boundary of the UMP, there are four historic sites, two of which have not been surveyed extensively enough to confirm the species absence. Moreover, the core of the spruce grouse's remaining population center is within four miles of the Grass River UMP boundary and is located within the spruce grouse conservation focus area as defined by the draft Spruce Grouse Recovery Plan, (Ross and Johnson, 2010). As an important location relative to remaining healthier populations, the Grass River unit may represent an area where significant conservation efforts may take place to aid in the species recovery in New York State.

Invasive/Exotic Wildlife

As with plant species, these organisms do not occur naturally in New York State. While some species go relatively unnoticed (e.g., spiny water flea), other introductions such as the zebra mussel have caused great concern. There are no confirmed reports of zebra mussels in unit waters. Domestic canines and felines can also have an impact on native deer, rodents, and birds.

Other Fauna

Other, less known, members of the animal kingdom occur within the unit. Insects are the most notable and abundant form of animal life. Some species can cause human health concerns (e.g., Giardia, swimmer's itch) or are generally considered a nuisance (e.g., black flies, mosquitoes) to individuals that recreate in the area.

c. Fisheries

The major flowing water resources within the unit are provided by the North, Middle and South Branches of the Grass River and the Oswegatchie River. Significant portions of each of these are on Forest Preserve or easement land. The South Branch of the Grass River on the Tooley Pond FP tract supports a naturally sustained brook trout population which was initially protected by special regulation (no-kill, artificial lures only), but due to low fishing pressure and a healthy population it is no longer under any special regulations.

Aquatic resources within the boundary of the planning area consist of many small ponds and small streams along with a few large streams, rivers and impoundments. These waters lie primarily in the St. Lawrence (Grass River) and Oswegatchie watersheds, as

defined by the NYS DEC Bureau of Fisheries. A few waters are in the Raquette watershed.

Fish communities in these watersheds were historically characterized primarily as Adirondack brook trout communities. These communities included brown bullhead, white suckers and native minnows, as well as brook trout. Environmental perturbations associated with resource extraction, hydropower development and indiscriminate stocking have resulted in many communities dominated by warm water and non-native species.

There are 67 waters on State land or conservation easements in the area, of which 13 are named in the NYS DEC or Adirondack Lakes Survey Corporation (ALSC) databases. For most unit waters fish community data is insufficient to develop management objectives. Fish community surveys will be top priority for these waters.

3. Visual/Scenic Resources/Land Protection

Travel Corridors

The main corridors for automobile travel access to the Grass River Wild Forest are State Highway 56, and State Highway 3, which offer many scenic views.

Observation Points

There are several popular sites to appreciate the natural beauty of the unit; Lampson Falls and Harper Falls have long been a destination for sight-seers and picnickers. Lampson Falls is the largest waterfall in St. Lawrence County, an impressive fall at an estimated 40 feet tall and 100 feet wide. Lampson is a shallow and broad-faced fall, which can have large amounts of water flowing over it during peak melt season in the spring. During the summer it calms and becomes a much quieter setting. At the base of the falls the Grass River takes a 90 degree turn so that a good view of the falls and the pool is provided from the shore opposite the falls.

Along the Tooley Pond Road many opportunities exist to view rapids and waterfalls. Canoe and kayak trips on the river are well known for their scenic quality.

Overall, there are a few peaks which provide rewarding views of the surrounding area. Mountain tops that provide scenic views include: Tooley Pond, Baldface and Spruce.

4. Critical Habitat

Legal Protection for Rare Species in New York State

Listing on New York's Endangered and Threatened species list regulates animal protection under New York State's Environmental Conservation Law. Species listed as

Special Concern usually have no legal protection unless they are among those covered under a separate piece of federal or state legislation. However, listings of Special Concern indicate elevated interest in the status of the species within the state and serve as a mechanism for monitoring and tracking species that do not quite meet the criteria for active regulation**.**

New York State's Protected Plant Law, passed in 1974, prohibits the collection or destruction of listed protected plants without prior consent from the landowner. Violations of this law are punishable by a $25.00 fine per stem. The most recent list of endangered, threatened, rare and exploitable vulnerable plants was adopted through rulemaking in 2000.

State Ranking System

Each rare species and significant natural community has a state rank as determined by New York Natural Heritage. These ranks carry no legal weight but are believed to accurately reflect the relative rarity given of the species.

S1 – Typically 5 or fewer occurrences, very few remaining individuals, acres, or miles of stream, or some other factor of its biology making it especially vulnerable in New York State.

S2 – Typically 6 to 20 occurrences, few remaining individuals, acres, or miles of stream, or factors demonstrably making it very vulnerable in New York State.

S3 – Typically 21 to 100 occurrences, limited acreage, or miles of stream in New York State.

S4 – Apparently secure in New York State.

S5 – Demonstrably secure in New York State.

Natural Heritage Data Base

The unit hosts a wide variety of plant and animal species. Most of these species thrive throughout the Adirondack Park. However, due to ecological factors, change in climate, and human factors, there are some species that warrant protection. According to the NYS DEC, Natural Heritage Program (NYNHP), various plant, animal and community species have been identified as rare, threatened, endangered or protected.

There are seven species identified on the Natural Heritage data base as occurring in the Grass River area.

Drummond's Rock-cress (*Boechera stricta*) is listed as endangered, and Pod Grass (*Scheuchzeria palustris*) is listed as rare. The Fir Clubmoss (*Hupergia selago*) and the vascular plant Southern Twayblade (*Listeria australis*) are both listed as endangered.

The Extra Striped Snaketail (*Ophiogomphus anomalus*), a type of dragonfly, is designated – special concern. Two birds are listed: the Common Loon (*Gavia immer*) is designated special concern and the Spruce Grouse (*Falcipennis canadensis*) is endangered.

An Overview of the New York Heritage Program

The New York Natural Heritage Program is a partnership between the New York State Department of Environmental Conservation and The Nature Conservancy. Their mission is to enable and enhance conservation of rare animals and plants, and significant natural communities, maintaining a comprehensive database on the status and location of rare species and natural communities.

The following definitions apply to the list of Endangered, Threatened and Special Concern Fish and Wildlife Species of New York State:

Endangered - Any native species in imminent danger of extirpation or extinction in New York State;

Threatened - Any native species likely to become an endangered species within the foreseeable future in New York State;

Special Concern- Any native species for which a welfare concern or risk of endangerment has been documented in New York State.

The following definitions apply to the **New York State Rare Plant Status List**:

Endangered Species: listed species are those with:

1) 5 or fewer extant sites, or
2) fewer than 1,000 individuals, or
3) restricted to fewer than 4 U.S.G.S. 7 ½ minute topographical maps, or
4) species listed as endangered by the U.S. Department of Interior as enumerated in Code of Federal Regulations 50 CFR 17.11

Threatened Species: listed species are those with:

1) 6 to fewer than 20 extant sites, or
2) 1,000 to fewer than 3,000 individuals, or
3) restricted to not less than 4 or more than 7 U.S.G.S. 7 ½ minute topographical maps, or

4) listed as threatened by the U.S. Department of Interior, as enumerated in Code of Federal Regulations 50 CFR 17.11

Rare Species: listed species have:

1) 20 to 35 extant sites, or

2) 3,000 to 5,000 individuals statewide

Exploitably vulnerable: listed species are likely to become threatened in the near future throughout all or a significant portion of their range within the state if causal factors continue unchecked.

B. Man-Made Facilities

The Grass River Wild Forest has relatively few developed recreational facilities. There are designated primitive tent sites on the Stone Dam, Lampson Falls, Leonard Pond and Tooley Pond parcels, snowmobile trails on Tooley Pond and Leonard Pond parcels, and hiking trails at Lampson Falls and Tooley Pond Mountain. Kiosks at Tooley Pond and the Lake George Road on the Tooley Pond parcel, and at Lampson Falls provide information on the area to the public.

1. Boundary Lines

Parcel	***Boundary Miles***
Tooley Pond Parcel	34.2 miles
Cranberry Pond Parcel	1.7 miles
Leonard Pond Parcel	10.7 miles
Stone Dam Parcel	7.9 miles
Lampson Falls Parcel	9.9 miles
Grass River RR Parcel	5.3 miles
Church Pond Parcel	8.0 miles
Fine (3 Parcels)	2.1 miles
Grass River Parcel	1.3 miles
Middle Branch	1.3 miles
Total	**82.40 miles**

2. Bridges

Parcel	*Number/name*	
Tooley Pond Parcel	2	Spruce Mtn. Road - motor vehicle bridge
Stone Dam Parcel	1	Middle Br. Grass River – non-conforming foot bridge(with respect to the APSLMP)

3. Designated Primitive Tent Sites

Parcel	*Number*
Tooley Pond Parcel	6
Stone Dam Parcel	13
Lampson Falls	5
Leonard Pond	3
Harper's Falls	1

4. Foot Trails

Parcel	*Number/Name/Length*	
Tooley Pond Parcel	1	Tooley Pond Mountain -1.75 miles
Lampson Falls	4	Lampson Falls accessible trail-.0.49miles
		Grass River Trail East - 0.8 miles
		Palmer Hill Trail - 0.8 miles
		Harper's Falls Trail -1.0 miles

5. Gates

Parcel	*Number/Location*	
Tooley Pond Parcel	6	various
Lampson Falls Parcel	2	Lampson and Harper's Falls

6. Parking Areas

Parcel	***Capacity/*** (cars)	***Location***
Tooley Pond Parcel	5 – 1 universal	Tooley Pond
	3	Tooley Pond Mtn.
	3	Lake George Rd.
	5	Spruce Mt Bridge
Lampson Falls Parcel	6 – 1 universal	Lampson Falls
	4	Harper Falls
Middle Branch Lot	5	
Leonard Pond Parcel	2- 1 universal	Chandler Pond

7. Snowmobile Routes

Parcel	***Name***
Tooley Pond Parcel	Spruce Mtn Road - 0.65 miles
	New Bridge Road - 0.07 miles
	Beech Hill Road - 0.30 miles
	Railroad Grade Road - 2.83 miles
Leonard Pond Parcel	Hollywood Road – 2.25 miles

8. Trail Head Registers

Parcel	***Number***
Tooley Pond Parcel	3
Lampson Falls	1

9. Kiosks

Parcel	*Number/Location*	
Tooley Pond Parcel	1	Tooley Pond
	1	Lake George Road
Lampson Falls	1	

10. Privies

Parcel	*Number*
Tooley Pond Parcel	1
Lampson Falls Parcel	1

11 Signs

Parcel	*Number*	
Tooley Pond Parcel	2	
Stone Dam Parcel	1	(Dean Rd)
Lampson Falls	2	

12. Waterway/Access Sites

Parcel	*Location*
Tooley Pond Parcel	Spruce Mountain Road – S. Br. Grass
	Tooley Pond
	First Brook – S. Br. Grass
Lampson Falls	Above falls
Middle Branch Lot	Trail to river

13. Canoe Carries

Parcel	*Name/Length*

Tooley Pond Parcel	Deerlick Rapids – 0.21
	Long Rapids – 0.27
	Brumagin Falls – 0.72
	Copper Rock Falls – 0.6

14. Public Motor Vehicle Roads

Parcel	***Name/Length***
Middle Branch Parcel	Access Road - 0.1 miles
Leonard Pond	Hollywood Road – 2.1 miles
Tooley Pond	Spruce Mtn. Road – 0.88 miles

15. Administrative Roads

Parcel	***Number/Name/Length***
Tooley Pond Parcel	Railroad Grade Road – 2.8 miles
	New Bridge Road – 0.07 miles
	Beech Hill Road – 0.22 miles
Lampson Falls Parcel	Harper Falls Road - 0.6 miles
	Lampson Mill/Logging Road - 1.6 miles
Grass River RR	2.6 miles

C. Past Influences

1. Cultural

The term “cultural resources” encompasses a number of categories of human-created resources including structures, archaeological sites and related resources. The DEC is required by the New York State Historic Preservation Act (SHPA-PRHPL Article 14) and the State Environmental Quality Review Act (SEQRA-ECL Article 9) to include such resources in the range of environmental values that are managed on public lands. The Adirondack Forest Preserve was listed as a National Historic Landmark by the National Park Service in 1963. This designation also results in automatic listing of the Park in the State and National Registers of Historic Places.

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 pre-contact Native American camps and villages to Euro-American homesteads and industrial sites. Such sites can be entirely subsurface or can contain above ground remains such as foundation walls or earthwork features.

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

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. Therefore all current inventories must be considered incomplete. Event 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, or 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. Should systematic archaeological inventory be undertaken at some point in the feature, it is very likely that additional resources will be identified.

Documented archeological sites located within the Grass River Wild Forest unit are listed below:

TABLE 1: Grass River WF Previously Recorded Archaeological Sites within the Area.

Site Name	Site Type	Cultural Affiliation	Temporal Period	Artifacts/Features
Clarksboro Mining Community and Furnace	Mine/Furnace	Historic	ca. 1860	Furnace Foundations
Newbridge Community	Industrial/Domestic	Historic	ca. 1906	Foundations
Tooley Pond Mtn. Fire Tower/Cabin	Industrial/Domestic	Historic	ca. 1913 1919	Foundations

The area was changed substantially through the activities of people in the past. Logging and mining were the primary industries, and their impact is very extensive and evident today. The logging and wildfires associated with logging changed the character of the forest dramatically, which in turn influenced the animal communities associated with it.

There were a number of timber products that came from the Adirondack forests. Hemlock bark was needed for the tanning industry. The invention of the Fourdinier paper making machine made it possible to produce large volumes of paper in rolls efficiently, which led to the development of the printing press that used rolled paper, which made it possible to print a huge amount of newspapers economically, further driving up demand for paper. Spruce was the main ingredient required to produce that paper and demand for the species was tremendous. Pine was used for buildings, boxes, slack cooperage and other items. Hardwoods were used for a great many items including barrels, vehicle parts, furniture, tools and farm implements. The forests were essentially cleared to supply the huge demands of the time. Since trees were harvested manually and skidded by animals the most efficient method was to remove everything that was marketable from an area.

Mining had a far reaching impact, not only at the location of the mine, but on other aspects of the environment as well. Charcoal, mine timbers, railroad ties, lumber, fuel wood and many other necessary items came from timber harvested locally. Roads and railroads were pushed into the forests to extract timber for supplies as well as ore and to distribute the finished products. Rivers and streams were harnessed for power. Water

was often a necessary ingredient in an industrial process, and waste materials were routinely dumped in water ways. Each product or activity influenced the surrounding forest and the combined effect was profound.

2. Historical

Tooley Pond

One interesting historical feature is the site of an early iron foundry, at Twin Falls on the South Branch of the Grass. The mining company built a hamlet, Clarksboro, around the iron works. Evidence of the smelting facility still remains today. There is a stone lined sluice where water was directed to the waterwheel. The wheel created the power to operate bellows, trip hammers and other machines. Part of the arch and kiln are still there and are in stable condition.

Old maps show the Great Windfall of 1845. The swath of blowdown was one half mile wide extending from Cook Pond to the northeast for about 25 miles.

Stone Dam

A so called “splash dam” was constructed on the Middle Branch of the Grass River. The impounded water was released in the spring to float logs downstream to a sawmill at Lampson Falls. Because of its remote location and early inclusion into the Forest Preserve, this area has some of the oldest forested area.

Church Pond

Church Pond is the head of the North Branch of the Grass River. This pond was named for Daniel W. Church, pioneer settler and premier mill builder.

Grass River RR

The Emporium Forestry Company, owned by the Sykes family, extended the Mohawk and Malone Railway 17 miles from Conifer Junction to Cranberry Lake Village in 1911. At that time many miles of logging branches, or trams as they were called, were put through the forest. Tram lines were used only for logging; they were not permanent lines. The tracks were laid down in such a way that they could be picked up and relocated as soon as an area had been logged. Spur lines of the Grass River RR stretched almost to Clare on the North Branch of the Grass River. The tracks and spurs of this tram line totaled forty miles in length. All this was done to supply logs to the sawmill at Conifer.

The main line to Cranberry Lake was more carefully and substantially built and became popular enough that the Grass River RR sought a certificate to operate as a common

carrier from Childwold to Cranberry Lake Village. The Public Service Commission purchased the 17 miles of railroad, locomotives, cars and buildings in 1916.

As a result of the Great Depression, the Emporium Forestry Company and the Grass River RR businesses suffered. Starting in 1930, timberlands were sold off and tracks were removed from the trams. In 1948, the rails were removed from Cranberry Lake Village to Conifer. Before its demise, the Grass River RR had made possible the harvest of over 1.1 billion board feet of hardwoods.

D. Public Use

1. Land Resources

Recreational use information for the Grass River unit is limited. From field observations, and the visitor use survey, it is clear that most recreational uses are day-use activities. The unit's small size, lack of facilities, and ease of access favor day-use activities of short duration. Day hiking, hunting, fishing, canoeing/kayaking and snowmobiling are popular activities. Some additional recreational use occurs in the form of bicycling, horseback riding, and wildlife observation.

a. Hunting

The Grass River Wild Forest unit is located within the DEC Wildlife Management Units (WMU) 6F and 6C. Primary wildlife related usage has historically centered around big game hunting, primarily for deer, although bear hunting, and fur-bearer trapping are also prominent.

While public hunting is permitted on Forest Preserve lands it has generally been limited by poor access. The amount of time required to reach the interior portions of the unit has led to the establishment of seasonal deer hunting camps. In 2011, two camping permits were issued during big game season for the Stone Dam parcel. The local forest ranger estimates that 3-5 camping permits are issued annually for Stone Dam, and none for the other Forest Preserve parcels.

b. Fishing

Aquatic resources within the Grass River unit consist of many small ponds and small streams along with a few large streams, river and impoundments. Opportunities for stream fishing are readily available on the unit. The major flowing water resources within the area are provided by the North, Middle and South Branch of the Grass River and the Oswegatchie River. The South Branch of the Grass River supports a naturally sustained brook trout population. It is believed that the area's streams annually receive between 100-150 angler hours of effort per acre.

c. Camping

Camping, other than that which is associated with hunting on the Stone Dam parcel, has always been very limited. Designated primitive tent sites have been established at: Harper's Falls, Leonard Pond, Lampson Falls, Stone Dam, and Tooley Pond parcels. The condition class of most of the DEC designated primitive tent sites is either class 1 or class 2, with minimal physical resource damage and ground vegetation impact. The Stone Dam and Lampson Falls primitive tent sites within the GRWF do not conform to APSLMP guidelines for separation distances.

Overnight camping on the GRWF is mainly limited to these DEC designated sites. Camping use is well below the areas capacity to withstand use, and is expected to remain so into the foreseeable future.

d. Bicycling

Bicycling occurs on old roads, trails and snowmobile trails throughout the GRWF. The Tooley Pond Road runs 17 miles from SH 3, to Degrasse, and is a favorite scenic bicycle route. Use of this area by cyclists is minimal to moderate. The use of bicycles on this unit will continue under 6NYSCRR Part 196.7 (e) which states. "The operation of bicycles is permitted on all roads and trails on Adirondack forest preserve wild forest areas except for those roads and trails posted as closed to bicycle operation".

e. Snowmobile Trails

There is an extensive network of snowmobile trails in St. Lawrence County. Snowmobile trails have been designated throughout the Grass River Management Unit, crossing and linking various Wild Forest parcels with easement tracts. This trail system provides links between all of the easements as well as the Tooley Pond and Leonard Pond Forest Preserve parcels within the GRMU, as well as adjacent easements and Forest Preserve lands. Please refer to the Facilities Map to gain an understanding of the linkages provided by the various trails. The Department has a Volunteer Stewardship Agreement (VSA) with the St. Lawrence County Snowmobiling Association to maintain and groom many of these snowmobile trails.

f. Hiking

The hiking trails in GRWF unit are moderate-length, mostly level trails that lead to scenic waterfalls, such as Lampson Falls, or to scenic vistas such as Tooley Pond Mountain. Use levels range from several hundred visitors per year on the Tooley Pond and Tooley Pond Mountain areas to over 5,000 visitors per year at Lampson Falls, based upon 2010 trail register data. Visitors are almost exclusively day-users.

g. Canoeing/Kayaking

The South Branch of the Grass River, as it runs through the Grass River Wild Forest, represents a navigable waterbody with great potential for canoe and kayak recreation. It is viewed by some kayakers as providing some of the most challenging white water in the Adirondacks. Jamieson described the South Branch of the Grass River as a “river of special beauty, providing challenging whitewater alternated with placid paddling”. The aesthetic qualities of the river corridor coupled with easy access in spots, has lead to significant public use during high water. Although limited to times of high water, a trip down the South Branch will include sections that challenge the most experienced paddler.

The signed DEC fishing access site north of Cranberry Lake where the South Branch crosses SH 3 begins an excellent, canoe-able, whitewater stretch, navigable to the DEC take-out above Rainbow Falls. This stretch also contains designated takeouts/boat launch locations at Spruce Mountain Bridge and First Creek, the latter just above Rainbow Falls. An additional informal access point just above Newbridge enhances the rivers already considerable utility for paddlers.

From the Rainbow Falls access point above the falls at First Creek, the river’s gradient increases. The section below Rainbow Falls has numerous waterfalls and rapids spaced fairly close together and is easily accessible from Tooley Pond Road. This stretch is run primarily by intermediate to advanced paddlers. With a few portages, it can be paddled all the way to the hamlet of Degrasse at County Route 27 with an option to take out at the Lake George Road Bridge.

There are scattered primitive tent sites along the river, but there is still room for more, perhaps near Copper Rock Falls and near Rainbow Falls. Portages skirt most major rapids and waterfalls, but there are a few locations where no formal carries exist.

The Middle Branch also provides opportunities for canoeing and kayaking. There is significant flatwater between where the Middle Branch crosses under Co. Rt. 27 at the Middle Branch parcel down to Lampson Falls. Below Lampson falls there are a series of rapids, making it more challenging canoeing/kayaking water.

h. Wildlife Observation

There is currently no assessment of non-consumptive use available for the unit. Current public access provides many opportunities to experience outdoor wildlife viewing. The GRWF provides opportunities for users to view wildlife while bird watching, picnicking, hunting, driving, hiking, etc.

2. Current Use

a. Registers

The Department monitors trail use by voluntary registration. Registers are installed at the following locations: Tooley Pond, Tooley Pond Road at Lake George Road, Tooley Pond Mountain, and Lampson Falls.

One of the inherent problems with registers is that not all visitors register. As a result, the information recorded is incomplete, and use is understated. Accuracy of the information obtained is questionable. Use of boxes is greatly affected by a number of factors: location, timing of visitation, length of stay (day vs. overnight use), group size, and type of activity. Research studies have found that certain types of visitors, especially day users, hunters, and lone individuals, are less likely to register than others (Leatherberry and Lime, 1981; Lucas 1975; Lucas 1983; and Petersen, 1985).

Registration accuracy can be greatly improved if registers are periodically validated by field spot-checks or by trail counters (Leatherberry and Lime, 1981; Lucas 1975; Lucas 1983; and Petersen, 1985). Estimates of non-compliance in self-registration can then be developed for each trail.

b. Trail Counters

The primary objective for using trail monitoring devices is to obtain accurate use data. Trail counters are set up to count trail traffic. Monitoring by observers is used to assess the reliability of the counter data. Careful site selection and proper installation are critical to insure accurate counts. It is important to place the trail counter far enough from the trailhead to be reasonably confident that everyone who trips the counter actually enters the area.

The trail counters used at GRWF sites were an infrared trail monitoring system. It features the following qualities: ease of installation, accuracy, and rugged construction. The trail counter unit consists of two parts: an infrared receiver and an infrared transmitter. This counter was used for trail monitoring, and field observations were used to validate accuracy. Trail counters were set up at two locations in the GRWF: Tooley Pond Mtn. and Lampson Falls.

One counter was located to estimate visitor use on the trail to Lampson Falls, a trail with unknown use, and no trailhead register. The infrared trail counter recorded the date and time that the users entered the trail. Visitor use data was collected over a 95 day period on this trail. Daily use ranged from a low of 0 to a high of 43 visitors, with an average group size of 3.9 users.

Another trail counter was located on the trail to Tooley Pond Mtn., which has a trailhead register. Visitor use data was collected over a 168 day period on this trail. Daily use ranged from a low of 0 to a high of 38 visitors, with an average group size of 4.3 users. In comparing the trail registration totals to the trail counter totals, the average percent compliance rate was 45%.

The monthly distribution of use on the Tooley Pond Mtn. Trail can be seen by graphing the trail counter over a five month period (Figure 1). The x-axis represents the months data was collected in, and the y-axis represents the total number of users recorded per month.

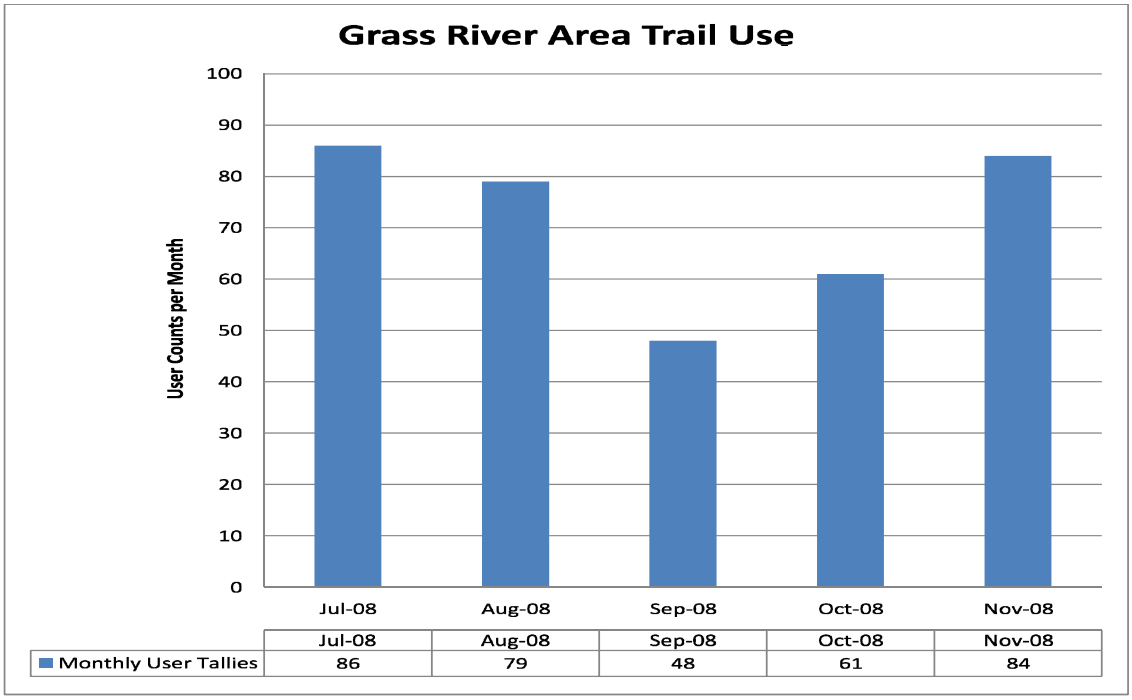

Figure 1: GRWF Tooley Pond Mtn. Trail Counter Monthly Totals during the Summer & Fall of 2008.

Trail register data for the Lampson Falls register

A trail register was installed in June 2007. No compliance checks have been made at this register, to date. Field checks have indicated more vehicles parked at the trailhead then registration totals. The actual number of visitors using this location may be substantially higher than the trail register indicates.

Trail register data for the Tooley Pond Mountain register

A trail register was installed in June 2007. Compliance checks have indicated a 45% compliance rate at this register. The Tooley Pond Mountain trail is a popular trail among

day users because of easy access and the relatively short hike to the former fire tower summit site. Based on the trail registration numbers and the registration compliance rate, estimated annual use of the Tooley Pond Mtn. trail is 415 users.

TABLE 2: Grass River Wild Forest 2009-10 Forest Preserve & Easement Trail Register Data

2009 Forest Preserve & Easement Trail Register Data

Unit/Trailhead	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Grass River WF													
Tooley Pond	1	0	0	10	9	10	39	100	30	9	7	4	219
Tooley Pond Rd.	8	0	5	15	14	16	43	66	32	24	4	0	227
Tooley Pond Mt.	6	2	0	9	33	28	69	83	26	24	5	0	285
Lampson Falls	34	74	270	403	490	410	873	919	843	658	234	87	5295
Total	49	76	275	437	546	464	1024	1168	931	715	250	91	6026

2010 Forest Preserve & Easement Trail Register Data

Unit/Trailhead	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Grass River WF													
Tooley Pond	1	0	2	28	30	22	48	50	33	6	0	1	221
Tooley Pond Rd.	1	0	0	28	12	11	63	59	23	5	0	1	203
Tooley Pond Mt.	4	6	4	7	40	17	68	85	43	31	3	0	308
Lampson Falls	83	52	174	498	657	391	1023	1107	532	889	231	93	5730
Total	89	58	180	561	739	441	1202	1301	631	931	234	95	6462

2011 Forest Preserve & Easement Trail Register Data

Unit/Trailhead	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Grass River WF													
Tooley Pond	0	0	0	0	0	11	46	72	39	23	0	0	191
Tooley Pond Rd.	0	0	2	15	14	3	25	436	19	11	18	0	543
Tooley Pond Mt.	7	0	10	4	13	15	47	59	82	27	8	3	275
Lampson Falls	158	68	93	400	400	352	1096	581	727	629	158	72	4734
Total	165	68	105	419	427	381	1214	1148	867	690	184	75	5743

Despite the deficiencies in the voluntary registration system, some information regarding patterns of use can be obtained from the limited trail register data in the Grass River Unit.

- Lampson Falls is, by a factor or nearly twenty, the most heavily used location in the GRWF;
- The destination of most signers of the Tooley Pond and Lake George Rd. registers is the series of waterfalls on the South Branch of the Grass River, and

the Tooley Pond Mountain trail;

- Visitors are almost exclusively day-users;
- Overnight use of Tooley Pond Mountain is basically non-existent due to the lack of overnight facilities;
- Total use of the sites with trail registers, if the compliance rate is on the order of about 50%, is 12,000 users.

Based on the register information referenced above, staff observations, and site impacts, the only site on the Grass River Wild Forest that is even moderately heavily used is Lampson Falls. The Leonard Pond, Church Pond, Cranberry Pond and Stone Dam parcels are probably used the most during big game hunting season, but even then use is light. The Leonard Pond, Stone Dam and Tooley Pond parcels are also important for the angling opportunities they provide. Lampson Falls is primarily used by the public to view the falls, picnic, and swim.

c. Camping Permits

The Department also collects visitor use information on camping through permits issued to users staying more than three nights in the same location, or camping in groups larger than nine. Most of the permits issued are for either small groups or for hunting camps during the big game season.

During 2011, two camping permits were issued during hunting season for the Stone Dam parcel. In 2006-07, Forest Rangers issued four NYS DEC Camping Permits for undeveloped State lands within the GRWF. These permits were all issued during the big game hunting season at the primitive tent sites on the Stone Dam parcel. Historically, there have been approximately 3-5 camping permits issued for this area per year, with a total of 10-15 campers.

d. Snowmobile Trail Counter

The NYS Department of Transportation provided the St. Lawrence County Snowmobile Association with a traffic counter to monitor snowmobile trail use. This permanent counter was located on the Long Pond CE, which is within the GRMU so will give an idea of the level of snowmobile use on the trails across Forest Preserve and conservation easements within the unit. This counter is an acoustic sensor set up to count vehicles, which included snowmobiles.

Environmental factors influencing traffic counter accuracy include weather. For example, during snow and rain events, moisture may affect count accuracy. Vandalism,

theft, and tampering with traffic counter equipment are serious concerns, especially in heavy-use areas near parking areas or trailheads.

The following table lists the snowmobile traffic counter data on one trail in the Long Pond easement during the 2009-2012 winter seasons.

Table 3: Snowmobile Traffic Counter Data (2009-2012)

NY Route 56 Long Pond Easement Snowmobile Trail: Trail 8 to Trail 8E

2009-2010 Season	**Days Counted**	**Monthly**	**Average Daily Total**
December 2009	5	24	5
January 2010	24	1,386	58
February 2010	25	2,170	87
March 2010	31	2,567	83
2010-2011 Season			
December 2010	17	247	16
January 2011	---	----	---
February 2011	5	195	39
March 2011	---	----	---
2011-2012 Season			
December 2011	22	302	14
January 2012	12	761	63
February 2012	23	1,011	44
*March 2012	30	1,870	62

Weekends	**Lowest Daily Total**	**Highest Daily Total**
2009-2010	1	537
2010-2011	4	89
2011-2012	2	335

*March 2012 monthly total included logging equipment vehicles.

e. Visitor Use Survey

Study Design:

The visitor use survey design was based on an example provided in: Adirondack Visitor Studies Conducted in Support of NYS DEC Unit Management Planning: Recommendations for Research - Appendix B. (Dawson, C. P., Connelly, N. A. and Brown, T. L. 2006).

The Grass River visitor use survey was conducted in the unit during a three month period from June to September 2007. This survey was designed to obtain a basic description of the users, their visit, and some information about the effects of public use on the physical and biological resources of the unit, as well as additional information about social impacts. Visitors were surveyed to measure the importance of, and satisfaction with, experiences related to social, resource, and managerial conditions. The objectives of this visitor use survey were to measure the conditions sought by users and the resource problems as perceived by visitors to the Grass River Wild Forest Unit.

The one-page visitor use survey was structured so that the respondents could simply fill in or circle the appropriate replies. A short cover letter and a self-addressed, postage-paid return envelope were provided for each mailed survey. No follow up reminder mailings were sent to non-respondents in this survey.

Methods

Visitor characteristics and preferences were collected with personal interviews in the field and mailed questionnaires. Sampling occurred at trailheads and along trails in the Grass River Wild Forest Unit. A one-page visitor use survey questionnaire was administered in the field so that users could be questioned during their recreational activity on that visit. Large scale sampling was difficult to obtain because of the extensive geographic area, numerous access points, and variable recreation use.

On-site field interviews were conducted with users for twenty-six days from June to September 2007 at access points in the Grass River Wild Forest Unit on a random basis. Brief on-site interviews were conducted to find out further information about each visitor or group entering or exiting the area. Information gathered included: gender, age, group size, length of stay, number of previous visits to the area, date, type of user, and location of the interview. Table 3 lists the visitor characteristics of the Grass River Wild Forest survey participants.

Several different methods of sampling visitors were used in the Grass River visitor use survey. Questionnaires were distributed by four methods: (1) mailing them to a random sample of users with names and addresses obtained from trailhead registration stations; (2) mailing them to users with names and addresses obtained from DEC Camping Permits; (3) personal interviewing in the field and; (4) distributing them on vehicles parked at access points for later completion and return.

Sampling

Survey questionnaires were sent to a sample of those visitors using the Grass River Unit during the summer of 2007. A total of 133 visitor use surveys were distributed by mail, with 13% of these surveys returned by the Post Office as undeliverable. In addition, 23 surveys were distributed on the windshields of parked vehicles at entry

points to the Grass River unit. One hundred thirteen personal interviews with visitors were carried out at access points and in the interior of the unit over twenty-six days throughout the summer season. Interviews were conducted on both weekdays and weekends. During the field interview the researcher filled out one survey for each group encountered. If possible, this interview was carried out with the leader of the party.

The following table lists the various data gathering methods, number sampled, and percent returned for the visitor use survey in the Grass River Unit.

Table 4

Grass River Wild Forest
Visitor Use Survey

Method	No. Sampled	No. Responded	Percent
*Mailed	133	85	64%
**Vehicle Distribution	23	9	39%
Field Interviews	113	113	100%
TOTALS:	**269**	**198**	**74%**

*13% of these surveys were returned by the Post Office as undeliverable.
**Included in the mail return response.

Visitors responded well to the survey; overall a 74% return rate, adjusted for undeliverable questionnaires, was achieved for the survey, with 198 surveys returned, representing 773 users in the Grass River Unit. Almost all of the visitor use surveys were completely filled out. There was every indication of thoughtful, conscientious answers, with additional voluntary comments on several surveys. All completed surveys were checked for completeness and consistency.

Analysis

Data from the interviews and the mail questionnaires were entered and analyzed using the Statistical Package for the Social Sciences (SPSS) software package.

The geographic distribution of recreational use is uneven, with many users in a few places and relatively few in many other locations in the Grass River Wild Forest Unit.

Based upon the responses between the interview locations in the Grass River Wild Forest Unit areas, the following SPSS analysis results were divided into two geographic groups: (1) Lampson Falls users and, (2) Tooley Pond Road, waterfalls, and mountain users aggregated together. This accounted for 97% of the visitors surveyed. The remaining 3% of the visitors were surveyed in the Long Pond and Stone Dam parcels.

Results

1. Visitor Characteristics

Of the 773 respondents 63% were male and 37% female, ranging in age from 14 to 82, with a mean age of 40.7 years. The number of users on a trip ranged from 1 to 18 in the Grass River Wild Forest Unit, with a mean party size of 3.8 users. The majority of the users interviewed, 97%, were day users, while the rest of the users camped at least one night in the Grass River Wild Forest area. Of the users interviewed, 57% had been to the Grass River Wild Forest area before, while 43% were first time visitors. Previous users had visited an average of 4.9 times before. The following table lists the visitor characteristics of the Grass River Wild Forest survey participants.

Table 5

Profile of Visitor Characteristics by Survey Participation

Visitor Characteristics		(n-198)	Percent
Gender	(%male)		63%
Age	(mean years)		40.7
Party Size	(mean size)		3.8
Trip Length	(mean days)		1
Previous Visits	(mean times)		4.9

2. User Attitudes

Visitors were asked if they considered six listed conditions to be problems in the Grass River Wild Forest Unit, and if so, how this detracted from their enjoyment of the area. The following table lists the percent of users surveyed that felt that the conditions listed below were detraction elements in the Grass River Unit.

***Table 6* - Natural and Social Conditions Observed, and the Percent Indicating the Condition Detracted From Their Enjoyment**

Natural and Social Conditions Observed	(% Detracted from Enjoyment)
Trash	72%
Soil Erosion	33%
Damaged Trees	31%
Trampled Vegetation	29%
Exposed Tree Roots	17%
*Military Overflight	2%

*This question was added to the visitor use survey at a later date, and not asked on over 50% of the surveys' returned.

Trash (litter) was the most frequently cited negative detraction observed in all of the areas, followed by soil erosion, trees that had been damaged or cut down, and trampled vegetation due to human use.

3. Groups

In an effort to understand what the Grass River users expected, and what they experienced in visitor encounter numbers while on their trips, they were asked to indicate whether the number of user encounters experienced was less or more than expected during their trip in a given area. The five response categories were: “far too few,” “too few,” “about right,” “too many,” and “far too many” than expected. The largest percentage of visitors reported that the number of groups seen was about right. The majority of the users, 94%, saw what they expected, 10% saw fewer other users than they expected, and 5% saw more users than they expected.

Respondents were also asked if the number of groups seen detracted from their enjoyment; 94%, felt that the number of groups did not detract from their enjoyment of the trail at all.

Three survey questions concerning finding an unoccupied primitive tent site and camping group numbers were not applicable, since overnight camping was such a small percentage, 3%, of the users surveyed.

Visitors were also asked if finding space to park at the trailhead was a problem; 84% indicated that parking was no problem at all.

Summary:

A visitor use survey was conducted in the Grass River Unit during a three month period during the summer of 2007. Baseline visitor use data was collected from several areas. Responses were obtained from a total of 198 surveys, representing 773 users.

This survey identified the Grass River Unit user as mainly a day user who had visited the area before. Users were predominantly male, in groups of three to four.

Users perceived trash as the major detraction from their enjoyment of the area. The level of use was about right to most respondents. The majority of the users surveyed felt that the number of groups seen was what they had expected, and did not detract from their enjoyment at all.

3. Wildlife

The Grass River Wild Forest parcels are located within Wildlife Management Units (WMU) 6F and 6C. Primary wildlife related usage has historically centered around big game hunting, primarily for deer, although bear hunting, small game hunting and fur-

bearer trapping are also prominent. Most of the adjacent easement lands have not been open to public hunting, but public hunting became available in June of 2012 on the Tooley Pond CE, and will become available in 2014 on the Long Pond CE. Public hunting is not allowed on the Grass River, Seveys, or Silver Lake easements, since it was not one of the rights acquired by New York State. There is currently no assessment of non-consumptive wildlife use available for the unit, although the public access provisions now in effect undoubtedly provide some direct or incidental wildlife viewing opportunities to users.

4. Fisheries

Specific quantitative information about angler use of Grass River Wild Forest or even of the Grass River Unit is unavailable. The major trout fishery in the area is the South Branch of the Grass River in the Tooley Pond Forest Preserve tract. Fishing pressure on this type of water is probably in the range of 100-150 angler-hours/acre/year based on data from other areas (NYS DEC Catch Rate Oriented Trout Stocking Policy), mostly in the spring. Fishing on the areas trout ponds can be expected to peak in April, May and June. Church Pond probably has the greatest use among the area trout ponds. Use rates in the range of 6-10 angler-trips/acre/year could reasonably be expected (Gordon 1992, Pfeiffer 1979). Fishing on warmwater ponds likely peaks in July and August. Tooley Pond is probably the most used pond of this type on the GRWF. Use of electric but not gas motors is allowed on Tooley Pond.

Church Pond (as well as Allen and Blue Ponds on adjacent easement lands) is stocked with brook trout, and use and possession of baitfish is prohibited. This water will continue to be managed as an Adirondack brook trout pond and stocked as necessary. Stocking will be conducted in accordance with Bureau of Fisheries policies and the Final Programmatic Environmental Impact Statement on Fish Species Management Activities of the Department of Environmental Conservation Division of Fish and Wildlife (1980). Establishment of additional fish species in Adirondack brook trout ponds may make reclamation necessary to enhance or restore a native fish community. If reclamation is determined to be necessary, the UMP will be amended to include it in the Schedule for Implementation and the associated descriptions will be revised to reflect the new fish community data.

None of the ponds in Grass River WF are currently candidates for liming. If these or other ponds are later determined to be liming candidates based on additional survey work, the UMP will be amended accordingly. Any candidate waters will be inspected by APA to determine wetlands jurisdiction and permits will be obtained if required. Any liming operations will be conducted in accordance with the Final Generic Environmental

Impact Statement of the New York State Department of Environmental Conservation Program of Liming Selected Acidified Waters (1990).

5. Water Resources

Use of the waters for angling is discussed earlier in the Natural Resource section of the plan. Since many of the waterbodies have been in private ownership, there has not been a history of use developed. The South Branch of the Grass River receives a considerable amount of use by kayakers and some canoers in the spring, or after heavy rain.

E. Recreational Opportunities for Persons with Disabilities

Application of the Americans with Disabilities Act (ADA)

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

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

An assessment was conducted, in the development of this UMP, to determine appropriate accessibility enhancements which may include developing new or upgrading of existing facilities or assets. The Department is not required to make each

of its existing facilities and assets accessible so long as the Department's programs, taken as a whole, are accessible. New facilities, assets and accessibility improvements to existing facilities or assets proposed in this UMP are identified in the Proposed Management Actions section.

F. Relationship between Public and Private Land

The mix of public and private landownership in the Grass River Unit is somewhat unique. There are three major types of ownership in the unit. These include the publicly owned Forest Preserve and the privately owned land, which can be categorized further into industrial forest land and small non-industrial holdings. The third type of ownership is a blend, where the state owns an easement on privately owned industrial forest land. The conditions of the easement provide the public opportunities for recreation and the landowner retains ownership and the ability to manage their property for forest products, with some limitations.

The primary purpose of the conservation easements is to maintain and support the sustainable management of forest resources. Forest management should be sustainable and avoid or minimize negative impacts to water quality, soil productivity, sensitive species, biological communities, and other natural resources and providefor the sustained production of forest products. The secondary purposes are to conserve other natural resource values and to provide opportunities for public outdoor recreation.

The proximity of easement lands to Forest Preserve lands in the unit ranges from parcel contiguity to separations of several miles. In cases where easement and Forest Preserve lands are contiguous or close, logging operations and road construction activities may be seen or heard by public recreationists using the Forest Preserve. Forest Preserve recreationists in these circumstances should continue to expect a recreation experience that is impacted by such activities.

Much of the Forest Preserve lands in the GRWF are bordered by private lands subject to conservation easements, including the Tooley Pond, Long Pond, Seveys, Silver Lake and Grass River easements. The easement lands adjoining Forest Preserve parcels give recreationists expanded opportunities and retain open space. Preventing development on the easement areas protects the Forest Preserve lands from many stresses.

For example, access to Stone Dam FP parcel is improved by the public's ability to use the Long Pond CE and the Grass River CE roads. Recreational activities in the Tooley Pond FP parcel are improved because of the Tooley Pond easement land that surrounds the Forest Preserve parcel, and which benefits from the protection provided by the conditions placed on the nearby easement land. The combined area of the two

pieces of land allows for the dispersal of recreational activity thereby lessening pressures on the resources. Future management proposals will need to consider the impacts on adjoining private lands as well as the impacts of new public access on the capacity of Forest Preserve lands to withstand the new level of projected use.

Having working forests with easements addresses two different economic issues; tourism and the forest products industry. Tourism and outdoor recreation are becoming more influential in Adirondack community economies, and visitor-related expenditures contribute to the economy of the area. Opening private land to the public for recreation contributes to the tourism portion of the economy. Another strong segment of the local economy is the forest products industry. The continued practice of forest management on the easement tracts is important in the commodities production, labor and value added aspects of the local economy.

A direct economic benefit is the amount of land and school taxes paid to local governments for Forest Preserve and Conservation Easement ("CE") lands. This is especially significant because State lands do not require the same infrastructure, government goods and services demanded by the private sector, but State government pays the same taxes on unimproved forest lands as private landowners do.

Long Pond Conservation Easement

A working forest for many years, the 18,950 acre Long Pond tract has been opened to specific recreational activities through the easement process. The land owner will continue to conduct forest management operations and has leased certain rights to six different hunting clubs, but public access to the area also allows for biking, hiking, snowshoeing, cross country skiing and horseback riding across much of the parcel. Camping by the public is permitted in accordance with regulations pertaining to state lands. Firewood may be gathered from dead and downed trees for on-site cooking and warmth.

Significant opportunities for motor vehicle access are provided including the main east-west haul road, from SH 56 to Selleck's Lower Camp, and five secondary haul roads. Snowmobiles and ATV's may also be used on all roads posted open for these activities.

Universal access consistent with the Americans with Disabilities Act is provided for. Most roads are open for ATV use and there are some open motor vehicle use for those with mobility impairments. There are five accessible drive to primitive tent sites which feature a privy, tent pad and fire ring. The surface of the primitive tent site is a firm stable surface suitable for mobility devices. Accessible parking, a privy and a kiosk with a map of the area are provided in the main parking lot.

The Long Pond tract lies within the Grass River watershed and contains a number of streams and ponds (e.g., Long, Ormsby, and Blue) and the North Branch of the Grass River. The public can use a canoe or kayak on any navigable body of water on the property.

Physical and biological resources contained within the parcel make the area a natural attraction for sportsmen and wildlife observers alike. White-tailed deer, black bear, moose, beaver, coyote, fisher, otter, and bobcat can all be found in the area. In addition, brook trout are stocked in Blue pond and can be found in the tracts other rivers, streams, and ponds. Hunting, fishing and trapping are also allowed; previous restrictions expired in 2013.

Tooley Pond Conservation Easement

This property is located in the northwestern portion of the Adirondack Park in south central St. Lawrence County, within the towns of Clare and Clifton. A component of lands purchased from Champion International, the Tooley Pond tract sits astride the Tooley Pond Forest Preserve tract which encompasses the South Branch of the Grass River and includes Tooley Pond and Tooley Pond Moubtain. The Tooley Pond easement tract contains nine named streams and four named lakes and ponds which cover approximately 100 acres, and many acres of wetlands.

Public access to the easement can be achieved by foot, bicycle or other non-motorized means, including hiking, snowshoes, cross country skis, mechanized aids for persons with disabilities and/or horseback. The easement also provides access to some of the Forest Preserve lands, such as by way of Spruce Mountain Road, which is open for public motor vehicle use from the Tooley Pond Road to the South Branch of the Grass River. The easement is home to a variety of fish and wildlife species. Anglers can expect to find both brook and brown trout in area waters as well as pumpkinseed, brown bullhead, and yellow perch. Size and limit restrictions are in place for trout in Allen Pond, and only electric motors may be used. Public hunting is now allowed as past restrictions have been eliminated.

Grass River Conservation Easement

The Grass River CE is an approximately 51,000 acre tract located within St. Lawrence County, New York in the towns of Clare, Clifton and Colton. The easement opens access to portions of these lands for various recreational activities. It includes access to both the North and Middle Branches of the Grass River.

The tract contains more than twelve ponds and lakes: Clear Lake, Pleasant Lake, Cranberry Pond, Long Pond, Mile Pond, Horseshoe Pond, Parmater Pond, Mile Pond, Tracy Pond, Slouch Pond, Wolf Pond and Brothers Ponds. There are also numerous streams and brooks: Alder Brook, Gulf Brook, Bear Creek, Pleasant Lake Stream,

Stoney Brook, and Blue Mountain stream. The Middle and North Branches of the Grass River are designated Scenic Rivers. There are outstanding opportunities for public recreational use of these watercourses.

Motorized recreation (e.g., snowmobiles, ATV's) is confined to specific linear recreation corridors. Snowmobile access to the easement connects to existing trails on adjacent lands. ATV use is managed in a manner designed to prevent damage to the natural resources and biological diversity of the tract, and to provide connection to ATV routes on adjacent lands.

Non-motorized recreation use of the easement includes hiking, biking, and camping in designated sites. The nicest hike on the property is to Little Blue Mountain that has a view to the south that is extraordinary for this part of the Adirondacks. The public also has the right to fish and trap along designated river corridors. Public hunting on these easement lands is not allowed.

Public use of the watercourses and on designated roads and trails will be from December 16th through September 30th annually. During the period from October 1st to December 15th, the landowner has reserved recreation rights to the land with two exceptions: access to Blue Mountain continue through October 10th annually, and there can be year-round use of an easement road into the Stone Dam Forest Preserve parcel adjacent to this property.

Silver Lake Conservation Easement

Silver Lake CE is a family owned parcel centered on Silver Lake in the town of Clifton, St. Lawrence County, New York. The easement agreement allows the family to manage the land for private and economic goals while providing the State an opportunity for limited recreation opportunities for the public.

Forest management is prescribed to protect riparian zones, wetlands, and natural habitats from impacts associated with timber harvests. Future subdivision of the tract is limited to preserve its open space characteristics.

Public access includes various forms of non-motorized use such as hiking, biking, horseback riding and skiing on a couple of specific existing roads/trails. The easement also provides for a couple of snowmobile routes that connect with routes on adjacent lands. At this time, none of the recreation opportunities are available to the public as the routes on the adjacent private lands are not open to the public.

Seveys Conservation Easement

The Seveys tract is located within St. Lawrence County, New York, within the town of Colton. The total land area measures 11,933 acres. Access to the tract is by SH 3 and

SH 56, which bisect the tract. The majority of the property provides only public snowmobile access, including an estimated sixteen miles of potential snowmobile trails with several opportunities for connections to trails on adjacent lands. Public use on the portion of the property called Raquette River Point may include: hiking, fishing, nature observation, camping, picnicking and canoeing/kayaking on the Raquette River. An access site to the river has now been opened and the Point may also be opened for public use in the near future.

The tract has three ponds including Seveys Pond, (32 acres) and a complex network of watercourses exist within the tract, including: Windfall Brook, Mink Brook, Tuttle Brook, Jocks Pond outlet, and Sampson Pond outlet. In addition, the Raquette River that adjoins the northeastern portion of the tract is classified Scenic.

The tract is located within the Central Adirondack Mountain ecological zone of New York State. Throughout the tract, a mixture of forest types can be found, including northern hardwoods, mixed woods, and softwoods of various classes.

The tract has several areas with visual/scenic significance including Seveys Bog, which has historically been considered as a high quality scenic area, as well as a biologically unique and diverse habitat and former, if not current, habitat for spruce grouse.

G. Capacity to Withstand Use

Carrying Capacity Concepts

The Grass River Wild Forest, like any other natural area in our Forest Preserve, cannot withstand ever-increasing, unlimited visitor use without suffering the eventual loss of its essential, natural character. The challenge for managers is to determine how much use and what type of use the area, or particular sites within it, can withstand before the impacts of use cause serious degradation of the resource or recreational experience. Such is a wildland manager's most important and challenging responsibility; however: to work to ensure a natural area's "carrying capacity" is not exceeded while concurrently providing for visitor use and benefit.

The term "carrying capacity" has its roots in range and wildlife management sciences. As defined in the range management sciences, carrying capacity means "the maximum number of animals that can be grazed on a land unit for a specific period of time without inducing damage to the vegetation or related resources"(Arthur Carhart National Wilderness Training Center, 1994). This concept, in decades past, was modified to address recreational uses as well; although in its application to recreational use it has been shown to be significantly flawed when used to determine the maximum number of people allowed to visit an area such as the Grass River Wild Forest. After many years of

study, basic research showed that there was no linear relationship between the amount of use and the resultant amount of impact (Krumpe and Stokes, 1993). For many types of activities, low levels of use can cause observable impacts. For example, in sensitive areas the elimination of ground vegetation at a primitive tent site can become significant after only a few camping parties have occupied it. Once moderate use levels have removed nearly all the vegetation, large increases in use cause relatively little additional impact. It has been discovered that such factors as visitor behavior, site resistance and resiliency and type of use may actually be more important in determining the degree of impact than the amount of use, although the total amount of use contributes to a significant extent (Hammit and Cole, 1987).

The shortcomings of a simple carrying capacity approach have become so apparent that the basic question has changed from the old one, “How many is too many?” to the new, more realistic one: “How much change is acceptable?” Because of the complex relationship between use and use impacts, the manager’s job is much more involved than simply counting, redirecting, or restricting the number of visitors in an area. Professionally-informed judgments must be made so that carrying capacity is defined in terms of acceptable resource and social conditions. These conditions must be compared to real life situations, projections must be made, and management policies and actions must be drafted and enacted to maintain or restore the desired conditions. Shaping the types of use impacting an area can call not only for education and research, but also the formulation and enforcement of a set of regulations which some users are likely to regard as objectionable.

This shift in managers’ central focus – away from trying to determine how many visitors an area can accommodate to trying to determine what changes are occurring in the area and whether or not they are acceptable – is as critical in a Wild Forest Unit, as it is in a Wilderness Unit. All such areas are State Forest Preserve units which must be protected, as per the state Constitution, as “forever wild.” Furthermore, the APSLMP dictates in the very definition of Wild Forest areas that their “essentially wild character” be retained. A central goal of this plan is to achieve resource protection while providing for public use in the Grass River Wild Forest.

The magnitude of the challenge here is made evident by other statements and acknowledgments found in the APSLMP concerning Wild Forest areas. The 1972 APSLMP claim that

“[m]any of these areas are under-utilized” remains seemingly true, and from this determination and the determination that these areas “are generally less fragile, ecologically comes a directive that “these areas should accommodate much of the future use of the Adirondack forest preserve.

Clearly, a delicate balancing act is called for, and yet just as clearly, the Department's management focus must remain on protecting the resource. "Future use" is not quantified in the above directive, but it is generally quantified and characterized in the definition of Wild Forest as only "a somewhat higher degree of human use" when compared to Wilderness. And whereas certain "types of outdoor recreation... should be encouraged," they must fall "within constitutional constraints...without destroying the wild forest character or natural resource quality" of the area.

A central objective of this plan, then, is to lay out a strategy for achieving such a balance in the Grass River Wild Forest unit. This strategy will help insure that its "essentially wild character" will be retained, as required by the APSLMP.

Planning Approach

The approach to the development of a unit management plan for the Grass River Wild Forest involves a combination of two generally accepted wilderness planning methods: (1) the goal-achievement framework; and (2) the Limits of Acceptable Change (LAC) model employed by the U.S. Forest Service and other agencies.

Goal-Achievement Framework

In wild forest areas, the Department is mandated by law to implement actions designed to realize the intent of the wild forest guidelines of the APSLMP. The goal-achievement framework will be used to organize this management plan to direct the process of determining appropriate management actions through the careful development of goals and objectives. Goals are general descriptions of management direction reflecting legal mandates and general conditions to be achieved or maintained in the Grass River Wild Forest. Wild forest goals, along with guidance for the future of the Grass River Wild Forest, can be found in Section III-C. Objectives are statements of more specific conditions whose achievement will be necessary to assure progress toward the attainment of the established goals and principles. In each category of management activity included in Section IV of this plan, the current management situation is assessed and assumptions about future trends and conditions are discussed. Proposed management objectives describing conditions to be achieved are presented and individual actions to meet the objectives are proposed.

However, this approach does not identify specific thresholds of unacceptable impact on particular resources or give managers or the public clear guidance as to when a particular restrictive management action is warranted. For these issues, the LAC process will be used.

Limits of Acceptable Change (LAC) Process

The LAC process employs carrying capacity concepts to prescribe-not the total number of people who can visit an area-but the desired resource and social conditions that should be maintained regardless of use. Establishing and maintaining acceptable conditions depends on explicit management objectives which draw on managerial experience, research, inventory data, assessments, projections and public input. Indicators, measurable variables that reflect conditions, are chosen and standards, representing the bounds of acceptable conditions, are set, so management efforts can address unacceptable changes. The LAC process relies on monitoring to provide systematic and periodic feedback to managers.

Though generally the levels of human impact within the Grass River Wild Forest unit are relatively low, a number of management issues could be addressed by the LAC process. Such issues may be categorized as conflicts between public use and resource protection, conflicts between users, and conflicts between outside influences and the objectives for natural resource or social conditions within the unit. For instance, two goals of management are protecting natural conditions and providing public recreational access. Yet the promotion of recreational use could have unacceptable impacts to natural resources, such as the soils and vegetation in a popular camping area. The LAC process could be used to determine the thresholds of acceptable soil and vegetation impacts and what management actions would be taken to protect resources from camping use. LAC does not work in every situation. For example, managers do not need a process to help them determine how much illegal ATV use is acceptable; because existing wild forest guidelines and regulations strictly limit public motor vehicle use, all illegal motor vehicle use is unacceptable.

The LAC process involves 10 steps:

1. Define Goals and Desired Conditions
2. Identify Issues, Concerns and Threats
3. Define and Describe Acceptable Conditions
4. Select Indicators for Resource and Social Conditions
5. Inventory Existing Resource and Social Conditions
6. Specify Standards for Resource and Social Indicators for Each Opportunity Class
7. Identify Alternative Opportunity Class Allocations
8. Identify Management Actions for Each Alternative

9. Evaluate and Select a Preferred Alternative
10. Implement Actions and Monitor Conditions

The application of the LAC process will require a substantial commitment of staff time and public involvement. The full implementation of LAC for each unit will occur over a period of years. Of the 10 steps of the LAC process, this plan implements step 1, 2, and 3, which apply to all the resources and conditions of the unit. The application of steps 4, 5, and 6 to selected issues is proposed for the next five years.

As part of step two of LAC, this UMP identifies significant management issues affecting the Grass River Wild Forest. For these issues, the Department will implement the four major components of the LAC process:

- The identification of acceptable resource and social conditions represented by measurable indicators;
- An analysis of the relationship between existing conditions and those desired;
- Determinations of the necessary management actions needed to achieve and preserve desired conditions; and,
- A monitoring program to see if objectives are being met over time.

Though LAC will not be fully implemented, this plan provides resource inventory information, sets goals founded on law, policy and the characteristics of the area, identifies management issues, and lays out proposed objectives and actions designed to meet management goals. Ultimately a monitoring system will be put in place, and management actions will be revised and refined over time in response to the results of periodic evaluation to assure that desired conditions will be attained or maintained.

A prioritized list of indicators which will be used by the DEC for measuring and evaluating acceptable change on the Grass River Unit are:

- Condition of vegetation in camping areas and riparian areas near lakes and streams;
- Extent of soil erosion on trails and at primitive tent sites;
- Noncompliant behavior;
- Noise on trails and in primitive tent sites;
- Conflicts between different user groups;

- Diversity and distribution of plant and animal species;
- Air and water quality.

These indicators form the basis for the proposed management actions presented in Section IV. Each applicable resource area or facility type identified in Section IV will be assessed for its present condition, its desired future condition and how it will be measured. This approach will require flexibility, determination and patience. It may not be possible to complete all inventories and assessments called for by this strategy - and by the APSLMP - in this plans five-year time frame. It will be important to show progress in achieving APSLMP goals and in gaining initial managerial experience and knowledge in applying this strategy to some carrying capacity questions and issues. Knowledge gained as a result of the implementation of the Grass River Wild Forest unit management plan will be useful to: 1) revising and refining management actions if evaluation shows that desired conditions are not being attained or sustained; and 2) creating a foundation upon which this strategy can eventually be built into a fully-developed, science-based approach to protecting and managing the unique resources of the Grass River Unit.

Impacts of Public Use

The assessment of the impacts of public use within the Grass River Wild Forest unit has been limited to staff observations and initial assessments of primitive tent sites. While additional information is needed about overall public use of the Grass River Wild Forest unit and the impacts of use on the area's physical and biological resources, as well as its social impacts, the planning team considered the best available information. For ease of organization, the capacity of the Grass River Wild Forest unit to withstand use is divided into three broad categories: physical, biological, and social. For each category, the definition of capacity will be followed by the known current situation within the Grass River Wild Forest unit. The management objectives and proposed management actions to deal with existing or potential future problems are presented in Section IV of this plan.

- **Physical capacity** – May include indicators that measure visitor impacts to physical resources (e.g. soil erosion on trails, primitive tent sites and access sites) and changes to environmental conditions (e.g. air and water quality).
- **Biological capacity** – May include indicators that measure visitor impacts to biological resources (e.g. vegetation loss at primitive tent sites or waterfront access sites) and changes in the ecosystem (e.g. diversity and distribution of plant and animal species).
- **Social capacity** – May include indicators that measure visitor impacts on other visitors (e.g. conflicts between user groups), the effectiveness of managerial

conditions (e.g. noncompliant visitor behavior), and interactions with the area's physical or biological capacity (e.g. noise on trails, primitive tent sites and access sites).

1. Land Resources

a. Physical

The physical capacity of a land area to withstand recreational use is the level of use beyond which the characteristics of the area's soils, water and wetland resources, and topography undergo substantial unnatural changes. The capacity of a particular site is related to slope, soil type, ground and surface water characteristics, the type of vegetation that occupies the site, and the types or amount of recreational activity to which the site is subjected. In some cases, physical impacts observed within the area are due to erosion brought on by inadequate or infrequent maintenance or poor layout and design, rather than actual use. In other instances, impacts may be caused by illegal uses of the area.

Current use numbers for the Grass River Wild Forest unit are relatively low, based on field staff observations, when compared to other units on the Forest Preserve. Overuse of designated or developed facilities does not appear to be a problem on the Grass River Wild Forest unit, with the exception of use impacts and sanitation at Lampson Falls.

Air quality in the region including the Grass River Wild Forest unit is largely a product of forces and activities originating outside the unit. The air quality impacts resulting from the building of campfires by visitors are limited and localized. Smoke from campfires is not known to have significant ecological effects. The effects of exhaust emissions from snowmobile use within this unit have not been comprehensively studied or documented.

The administration of Forest Preserve land is the responsibility of the Division of Lands and Forests. The responsibility for the enforcement of DEC rules and regulations lies with the Office of Public Protection. The Division of Operations conducts interior construction, maintenance and rehabilitation projects. The Bureau of Recreation within the Division of Operations operates and manages the public campgrounds adjacent to the unit. The Division of Fish, Wildlife and Marine Resources manages the state's fish and wildlife resources.

b. Biological

The biological capacity of a land area to withstand recreational use is the level of use beyond which the characteristics of the area's plant and animal communities and ecological processes sustain substantial unnatural change. A review of available

information indicates that the level of use within the unit does not appear to be exceeding the capacity of the biological resources to withstand use.

c. Plant Life

Impacts from public use to area vegetation include illegal tree cutting, removal of brush, and loss of vegetation due to expansion of primitive tent sites. Additional impacts to this resource involve tree cutting allowed by easement or road and utility line maintenance (under TRP) or tree removal associated with trail maintenance, rehabilitation, and development. Another potential impact is the introduction of invasive species into the unit.

2. Fish and Wildlife Resources

Fisheries

Public use of the fishery resources is described under section II. D. 3. Since no major changes in access to aquatic resources are anticipated, future use levels are expected to be similar to existing levels. Current stocking policies and fishing regulations apparently provide adequate protection to area fishery resources.

Wildlife

Present wildlife use is considered by Wildlife Managers to be within sustainable levels and is not anticipated to change substantially in the short to mid-term future. Most documented wildlife use is currently big game hunting related and a look at recent harvest trends suggests harvest is compatible with available resources. Annual hunting effort for these two species, (deer and bear) is assumed to be fairly consistent from year to year, making the harvest trend information a relatively good indicator of the population increases or decreases over time. Deer and bear harvests for the unit can be extrapolated from town data and estimated based on the percentage of the total town area occupied by the Grass River Wild Forest unit. The four towns in which the unit is located (Clare, Clifton, Colton, and Fine) occupy 671 square miles, while the unit covers approximately 288.6 square miles, or 43% of the total. The table below shows the estimated deer and bear takes for the unit over the past 5 years:

Estimated Bear Harvest 2005-2010

	Clare	Clifton	Colton	Fine
2005	0	2	2	6
2006	1	5	9	0
2007	4	0	1	9
2008	2	9	23	12

2009	3	10	13	11
2010	4	2	6	8

Estimated Deer Harvest 2005-2010

		Clare	Clifton	Colton	Fine
2005	buck	71	66	181	87
	Total	101	71	225	138
2006	buck	57	62	202	105
	Total	74	80	267	161
2007	buck	95	95	264	145
	Total	111	100	331	206
2008	buck	100	102	296	130
	Total	113	110	349	201
2009	buck	110	78	212	108
	Total	132	84	278	164
2010	buck	95	69	177	86
	Total	121	81	250	156

Estimated Beaver Harvest 2005-2010

	Clare	Clifton	Colton	Fine
2005	172	157	171	126
2006	173	118	99	66
2007	112	124	124	151
2008	40	78	22	82
2009	52	123	83	121
2010	51	178	201	73

Estimated Otter Harvest 2005-2010

	Clare	Clifton	Colton	Fine
2005	21	24	24	12
2006	17	19	17	6
2007	7	8	9	15
2008	3	2	1	13
2009	4	9	13	12
2010	4	12	19	10

Estimated Bobcat Harvest 2005-2010

	Clare	Clifton	Colton	Fine
2005	0	1	5	1
2006	5	3	2	1
2007	1	2	0	0
2008	0	0	5	0
2009	2	2	4	1
2010	2	5	1	1

Estimated Fisher Harvest 2005-2010

	Clare	Clifton	Colton	Fine
2005	8	6	16	7
2006	17	11	17	8
2007	16	16	23	11
2008	4	5	46	9
2009	2	7	14	3
2010	5	7	0	6

Estimated Coyote Harvest*

	Clare	Clifton	Colton	Fine
2005	17	2	3	3

* There are no specific requirements for reporting coyotes since the 2004 season. The harvest is estimated, based on information collected as part of the NYS Small Game Hunters and Trapping Survey. The 2005 totals are broken down by township and do not distinguish between hunting and trapping efforts.

Fur-bearer harvest can be estimated for the unit to illustrate the presence of several species. Trapping effort is known to vary somewhat annually in response to weather conditions and pelt prices, particularly in areas with low resident human densities (e.g.: trappers will not travel as far when prices are low). Thus, the estimates above cannot be used for population trend purposes, but rather for indication of presence.

Deer Wintering Areas

The maintenance and protection of deer wintering areas (or deer yards) are important in maintaining northern deer populations. These areas provide deer with relief from the energetic demands of deep snow and cold temperatures at a time when limited fat reserves are being used to offset reduced energy intake (i.e., nutritionally, winter browse is poor) Previous researchers have demonstrated that deer consistently choose wintering areas which provide relief from environmental extremes over areas that may

provide more abundant forage (Severinghaus, 1953; Verne, 1965). These observations are consistent with the fact that the nutritional value of winter browse is poor due to low digestibility and that deer can expend more energy obtaining browse than the energy gained by its consumption (Mautz, 1978).

Severinghaus (1953) outlined several habitat components of deer yards, including topography and forest cover type (i.e., presence of conifers). The most important characteristic of an Adirondack deer yard is the habitat configuration making up a “core” and travel corridors to and from the core. The core is typically an area, or areas, of dense conifer cover used by deer during severe winter weather conditions. Travel corridors are dense but narrow components which allow access to food resources (hardwood browse) in milder conditions. Use of wintering areas by deer can vary over time depending on winter severity and deer population density. Although Severinghaus (1953) reported that some Adirondack deer yards have been used since the early 1800’s, recent research suggests that the location of some current deer yards may overlap very little (or not at all) with their historical counterparts mapped in the late 1960’s and early 1970’s by NYSDEC (Hurst, 1004) Therefore, planning for the protection of deer wintering areas relative to recreational activities in the unit should consider the dynamic nature of these areas (not the static representation of historical boundaries) and seek to update our understanding of wintering areas currently used by deer.

Some human uses do have the potential to affect wildlife resources on the unit, particularly relative to portions critical to deer survival in the winter. Some guidelines for use regulation in proximity to the identified deer wintering yards follow:

Guidelines for Protection of Deer-Wintering Areas

The maintenance and protection of deer-wintering areas are important in maintaining deer in the northern portions of their range. Activities which substantially diminish the quality or characteristics of the site should be avoided, but this does not mean human use is always detrimental. Forest stewardship activities (including softwood harvest), pass through trails, and other uses can be compatible with a deer yard if carefully considered. The most important characteristic of an Adirondack deer yard is the habitat configuration making up a “core” and travel corridors to and from the core. The core is typically an area (or areas) of dense conifer cover used by deer in severe conditions. Travel corridors are dense but narrow components which allow access to food resources in milder conditions. Forest management practices which afford protection of core sections and avoid fragmenting travel corridors are acceptable in many situations.

Research on wildlife responses to winter recreation (e.g., cross-country skiing, foot travel, and snowmobiling) is limited. Studied conducted on mule deer (Freddy et al.,

1986) and elk (Cassirer et al., 1992) suggest that these species can be disturbed by these activities. However, when planning the location of recreational trails, general guidelines for protecting deer wintering areas can be followed which should reduce the potential for disturbance.

Activities which substantially diminish the quality or characteristics of the site should be avoided, but this does not mean human use is always detrimental. Pass through trails, and other recreational uses can be compatible with deer wintering areas if they are carefully considered. Recreational planning which affords protection of core sections and avoids fragmenting travel corridors are acceptable in many situations. Certain types of recreation such as cross-country skiing are not presently considered to significantly impact deer yards in an overall negative way, particularly if the traffic along trails is not prone to stopping or off-trail excursions. These types of trails in or adjacent to deer wintering areas can provide a firm, packed surface readily used by deer for travel during periods of deep snow. They can also create access for free-roaming dogs if the location is close to human habitation; thus, trails should avoid deer yards in these situations. High levels of cross-country ski use can increase the energy demands of deer within the yard due to increased movement. Some general guidelines follow:

- Maintain a minimum 100-ft buffer on either side of streams to protect winter habitat and travel corridors between core yard components.
- Discourage large clear cuts of mature softwood stands within conservation easements, (except in locations where habitat restoration projects for spruce grouse are needed or ongoing). Plan softwood timber harvests utilizing small strip or block clear cuts with a rotation long enough to ensure interconnected portions of mature softwood cover (12+ meters in height) remain intact (50 to 60% of the mature softwood trees). Encourage private landowners to discuss management options for spruce grouse with DEC wildlife staff, to discuss and conduct management consistent with the Spruce Grouse Recovery Plan, (Ross and Johnson, 2010).
- Avoid placement of ski trails through core segments of deer yards to reduce disturbance associated with skiers stopping to observe deer.
- Avoid placement of snowmobile trails through core segments of deer yards to reduce potential disturbance to deer.
- Snowmobile trails traversing deer yards should be designed for through traffic, functioning much as a highway.

Snowmobile trails passing through a yard should be designed to sustain moderate speeds to avoid vehicle/deer collisions and should be of sufficient width as stated

in Management Guidance: Snowmobile Trail Siting, Construction and Maintenance on Forest Preserve Lands in the Adirondack Park.

- Trails should not traverse core segments of deer yards near densely populated areas such as hamlets, villages, or along roadsides developed with human habitation because they provide access to free roaming dogs.
- In areas with nearby human habitation, avoid land uses which result in remnant trails, roadways or other access lanes which facilitate access by free-roaming dogs.

Modern snowmobiles designed for on-trail usage are not presently considered to significantly impact deer yards in a negative way. The use associated with this activity is essentially identical to other motorized thoroughfares (such as highways) allowing resident animals to readily acclimate. Snowmobile trails in or adjacent to deer wintering yards may also provide a firm packed surface readily used by deer for travel between yard components during periods of deep snow.

3. Social

The social capacity of a land area to withstand recreational use is the level of use beyond which the likelihood that a visitor will achieve his or her expectations for a recreational experience is significantly hampered. Social capacity is strongly influenced by an area's land classification, which in turn determines the management objectives for the area and the degree of recreational development possible. While solitude may be managed for in some locations, it is not as important a component of the recreational experience in Wild Forest Areas as it is in Wilderness. Social conflicts mainly occur due to recreationists seeking different experiences. A source of tension can derive from different ideas of what constitutes a camping experience; some visitors anticipate spending a quiet evening observing their natural surroundings, while others look forward to a party atmosphere.

User satisfaction from recreating is a function of both perception and expectation with the presence, number, and behavior of others encountered having a direct influence on the quality of the experience. Compatibility between users usually involves how quiet or noisy an activity is, whether it is consumptive or non-consumptive, whether it involves individuals or groups, and whether it is a traditional or newly introduced activity. A few recreationists feel that other users degrade the quality of their own experiences. Particularly controversial in this respect are motorized recreational activities to which people involved in non-motorized activities often object.

Sound related impacts can cover a large area but are generally temporary in nature with little or no physical effect on the environment. Loud noise could impact wildlife or alter the experience of a person seeking to escape the sounds of civilization. For other users, particularly those using motor vehicles such as snowmobiles, the sound is an expected normal part of the overall recreational experience.

According to available information and the low level of reports of user conflict, the current level of public use within the Grass River Wild Forest unit is not believed to be exceeding the social capacity of the area to withstand use.

H. Education, Interpretation and Research

Scientific research activities on the Grass River Wild Forest are conducted under Temporary Revocable Permits from the Department. Researchers, as part of the TRP process, will be required to report to the DEC in writing on the findings of each research project. Research projects may include TRP's for: collection of plant specimens, effects of acidic deposition on fish and water quality, geological research, and stream monitoring and water chemistry, for example. This type of research is compatible with the area's natural resources and consistent with APSLMP guidelines. Collection of specimens requires prior approval by DEC and the Director of the State Science Service of the NYS Museum.

The Boy Scouts are a group that often uses the area for general outdoor education activities and often hike the trailed mountains. Other groups use the land and water for teaching classes about kayaking, canoeing, skiing, snowshoeing, orienteering and other outdoor activities.

Biologists at the New York State DEC are currently evaluating historically occupied and potential sites for spruce grouse to document population trends and shifts in site occupancy as an expressed need identified in the recovery plan. Habitat favorable for spruce grouse exists in the unit, but populations of the bird have not been confirmed since 2002, which may be due to population dynamics rather than a lack of quality habitat present. The DEC is also conducting a translocation of spruce grouse at historically occupied sites to bolster population numbers and improve genetic diversity of existing populations. Intensive study of the species at set intervals is expected to occur through 2022, at which time a refinement of the population viability analysis will take place.

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III. Management and Policy

A. Past Management

1. Land Management

Tooley Pond

Prior to state acquisition this parcel was managed primarily for timber production. Because of the South Branch of the Grass River's Scenic river classification under the Wild, Scenic and Recreational Rivers (WSSRA), past forest management within the river corridor was conservative and the view from the river shows little evidence of forest management activities.

In 1908, 11,000 acres of the parcel burned.

A fire tower was operated on Tooley Pond Mountain under an agreement between NYS and the landowner. The observer's cabin has been removed and the fire tower has been moved and re-erected at the Ranger School in Wanakena, at Cathedral Rock.

A few of the parcel's waters were studied during the original 1931 NYS Biological Survey, some during the 1940's and 1950's, and most recently, by the Adirondack Lakes Survey Unit during 1985 and 1986. At present all the area's waters are managed for self-sustained populations of resident fish species.

Lampson Falls

Lampson Falls is a popular destination for day hikers and overnight campers. Management has been focused on maintaining the trail, primitive tent sites and privy.

A bridge that had been the access to the trail and primitive tent sites on the west side of the river was washed away during the 1998 ice storm.

Lampson Falls is one of the most spectacular waterfalls in the Adirondacks with a vertical drop of approximately 40 feet. In 2006, the Lampson Falls trail was retrofitted to provide accessible parking and trail access for persons with disabilities. Reserved roadside parking is located at the entrance to the facility (St. Lawrence County DPW constructed the accessible roadside parking area) and the trail was reconstructed to meet ADA trail guidelines, making it suitable for use by persons with mobility devices. This 2900 foot long trail provides an enjoyable trip through forest land ending at an overlook at the falls. The majority of the trail is at a grade of 5% or less, however users should be prepared for steeper grades of up to 10% to get them to a point at mid-falls

for a view of the falls and the surrounding area. Level resting areas are provided at close intervals. The trail ends at the viewing area.

Stone Dam

The Department acquired the Stone Dam parcel in the early 1900's. The forest on this parcel exhibits characteristics of an old growth or late successional forest, due to the fact it has been over 100 years since any harvesting took place. It is not known if the original owner cut any timber on the parcel, and there is certainly no evidence today. Old maps indicate a small mine was located here. It probably yielded a small amount of gravel for railroad and road construction.

A splash dam on the Middle Branch of the Grass River was built to help float logs to sawmills operating downstream. Remnants of the dam remain visible today.

A group of designated primitive tent sites near the dam are used mostly during big game hunting season. Some of these sites will have to be closed as they are not compliant with the spacing requirements in the APSLMP for primitive tent sites.

Church Pond & Leonard Pond

These two parcels have histories of use that are typical of Adirondack forest land. Before state acquisition the land was managed primarily for timber production.

More recently, since acquisition, the parcels have not been heavily used by the public. The foot trail on Church Pond parcel has not been used enough to maintain, because of the wetlands it crosses. An alternative route will be sought so that the public can use the area in an environmentally sound manner. Church Pond is stocked with brook trout annually. The road through Leonard Pond parcel historically has been the route used for the Hollywood Club, a private landowner west of Leonard Pond.

The resurfacing of part of an old roadbed an on an esker off of SH 56 near Chandler Pond, and the addition of a small section of wooden edge protection to allow for accessible parking was recently completed. This allows an opportunity for persons in mobility devices to view a small pond from the road surface.

Cranberry Pond

This parcel was acquired by New York State in 1888. In 1913 an "Examination of State Lands" was done which noted monuments at the two south corners of the parcel as well as marked trees on the south and east lines. In 1929, Ernest Blue surveyed and mapped this parcel. Blue found no evidence of the original monuments or line marking and set four new corners. He also stated that he did not search for evidence of the previous location. In 1967, George Cook surveyed and mapped this lot. Cook checked the work that Blue had done and did extensive reconnaissance work on six parcels in

the immediate area, and of the pertinent lot lines. It appears that the original survey of this lot, by Ernest Blue in 1929 was in error. Evidence was found and verified, and the parcel was monumented in the proper location. The 1913 “Examination of State Lands” noted that the parcel was 95% covered by virgin forest. In 1967, Cook noted that local information and stump evidence indicated that the correct (southerly) parcel had been logged in the late 1920’s or early 1930’s.

Town of Fine Parcels

Two small parcels are quite isolated and their history is not known. It can be assumed that the forests supplied firewood and perhaps small amounts of lumber in the past.

Grass River Railroad

This 66' wide strip of land extends from near the hamlet of Conifer to just north of the hamlet of Cranberry Lake. A significant portion of the parcel south of SH 3 is open for public motor vehicle and snowmobile use, but north of SH 3, in the GRWF, it is not currently in use due to the absence of a bridge over the South Branch of the Grass River, and lack of a legal connection into the hamlet of Cranberry Lake.

Conservation Easements

The Long Pond, Tooley Pond, Seveys, and Grass River CE lands share a similar past. These areas have been managed for timber production for many years. DEC management has been minimal. Activities conducted include some fish stocking, unofficial deer yard monitoring, routine record keeping regarding furbearer, deer and bear harvesting, and forest management monitoring to ensure conservation easement compliance.

Since the Silver Lake easement is close to a hamlet it was used more for agriculture and residence than timber production. The DEC holds the easement for the public’s use of the snowmobile trail that exists there.

2. Wildlife Management

Past and present wildlife management activities on the Grass River Wild Forest unit have been shaped largely by Article XIV of the New York State Constitution that provides that the lands of the Forest Preserve “shall be forever kept as wild forest lands” and that the timber thereon shall not be “sold, removed, or destroyed.” Therefore, habitat management through the use of timber harvesting, prescribed burning, or other means of modifying the vegetation to alter wildlife habitat is not permissible in the unit. Additionally, NYCRR §194.2 (b) prohibits prescribed fires to be set on Forest Preserve lands. Options for wildlife management in the Forest Preserve include the setting of hunting and trapping seasons, setting harvest limits, defining manner of taking, restoring

or augmenting populations of native species, preventing the introduction of non-native species, and removing non-native species.

Hunting and Trapping Regulations

Regulations controlling season dates, method of taking, and bag limits for wildlife have been the principal wildlife management techniques applied to unit lands. Early regulations were written consistent for all of northern New York (equivalent to the Northern Zone). In the past, DEC subdivided the State into numerous Deer Management Units (DMU) for big game and Wildlife Management Units (WMU) for small game and furbearers. Each unit was defined according to its distinctive ecological and social characteristics. In an effort to make hunting and trapping regulations more user friendly and easier to understand a single set of management units is now used for all species. Boundaries were adjusted when necessary and a new alpha-numeric identification system was created. Decisions concerning wildlife management are ordinarily based upon these management units which are typically larger than individual forest preserve units. The Grass River Unit occupies a portion of the larger forest stands and landforms within WMU 6F and WMU 6C, the number indicating the wildlife region generally responsible for that unit.

Deer hunting in the Adirondack Mountains is steeped in tradition and has had a significant influence on the evolution of the Adirondack Park. Whitetail deer have influenced important cultural and economic decisions in northern New York. In surveys conducted by the Department during the 1970's and 1980's, there were 15 winter deer yards identified within the Grass River Unit. Deer wintering yards are an important component of whitetail deer habitat. Therefore, it is important that they be carefully managed.

Waterfowl season parameters are largely established by Federal authority, but states have some flexibility for season modifications within the Federal framework.

Nuisance Wildlife Policy

The Bureau of Wildlife investigates nuisance wildlife complaints on a case-by-case basis. The DEC does not actively control nuisance wildlife except when the behavior of wildlife is deemed to threaten the lives of visitors. No major conflicts between visitors to the unit and resident wildlife have been reported. Beaver activity occasionally floods trails or roads in the unit.

Surveys and Inventories

Over the years, both game and non-game species of wildlife and significant wildlife habitats have been the subjects of various surveys and inventories. Maps showing the locations of significant wildlife habitats have been created and are continually updated

by DEC's Wildlife Resources Unit. Significant habitats within the unit are described in the Section II.A.4, Critical Habitat.

Annual flights through the Adirondacks to inventory active osprey nests and to determine nesting success are conducted by the Bureau of Wildlife. Eagle and peregrine falcon nests, and deer wintering areas are monitored annually. Periodically, DEC and private agencies have surveyed common loon populations in the State. Since 2001, the DEC conducts an annual loon census. DEC is also part of a joint project to study the common loon migration routes, staging areas, and wintering grounds. The most recent Breeding Bird Atlas Project was conducted from 2000 to 2005 and conducted a census of breeding birds statewide. Appendix A lists the Breeding Bird Atlas data for the Grass River unit. As mentioned elsewhere, harvest figures are collected annually for a variety of game species. In addition, spruce grouse surveys were conducted statewide from 2002 to 2006, and four historically occupied sites within the Grass River unit were surveyed. The Draft Spruce Grouse Recovery Plan (Ross and Johnson, 2012) calls for periodic (every 3-year) surveys of all historically occupied sites and any potential habitat to maintain knowledge of the status and distribution of the species in the state.

Species Restoration

A number of wildlife species once native to the Adirondacks were extirpated either directly or indirectly as a result of human activities. In recent years, recognizing the desirability of at least partially restoring the composition of wildlife species originally present in the Adirondacks, DEC and others have launched projects to reintroduce the peregrine falcon, bald eagle, and Canada lynx.

DEC began an effort to reintroduce the peregrine falcon to the Adirondacks in 1981 by implementing a method of artificially rearing and releasing young birds to the wild called "hacking." Between 1983 and 1985, 55 bald eagles were also hacked within the Adirondack region. The peregrine and bald eagles restorations have been very successful statewide, but no nesting activity by either species has been discovered within the unit since the end of the hacking program.

The State University of New York College of Environmental Science and Forestry, through the Adirondack Wildlife program, conducted an experimental project to reintroduce the Canada lynx to the Adirondack High Peaks region. Lynx were first released in 1989; a total of 83 animals were released by the spring of 1991. The restoration was considered to be a failure, as a viable lynx population has not been re-established in the Adirondacks.

An important action of the Draft Spruce Grouse Recovery Plan, (Ross and Johnson, 2012) is to reintroduce spruce grouse individuals into two historically occupied sites

near the core of the species current distribution. Because of its location in close proximity to the core of the spruce grouse's remaining distribution, the Grass River unit may serve as a good area to reintroduce the species and monitor results.

Invasive/Exotic Wildlife

A Non-indigenous Aquatic Species Comprehensive Management Plan prepared by the Department in 1993 identifies strategies to eliminate or reduce environmental, public health, and safety risks associated with non-indigenous aquatic species, particularly zebra mussels.

Other Fauna/Public Health Concerns

Wildlife occasionally can impact the health or enjoyment of outdoor recreationists. In some cases, area waters are treated with Bti to help reduce the numbers of black flies. This activity falls within the scope of Article 15 of the Environmental Conservation Law and an aquatic pesticide application permit and TRP are required under NYCRR Part 329. The more common potential health concerns include:

Chronic Wasting Disease (CWD) in White-Tailed Deer

Chronic Wasting Disease (CWD) is a rare, fatal, neurological disease found in members of the deer family (cervids). It is a transmissible disease that slowly attacks the brain of infected deer and elk, causing the animals to progressively become emaciated, display abnormal behavior and invariably results in the death of the infected animal. Chronic Wasting Disease has been known to occur in wild deer and elk in the western U.S. for decades since its discovery in wild deer in Wisconsin in 2002 generated unprecedented attention from wildlife managers and hunters. Chronic Wasting Disease poses a significant threat to the deer and elk of North America and, if unchecked, could dramatically alter the future management of wild deer and elk. However, there is no evidence that CWD is linked to disease in humans or domestic livestock other than deer and elk.

New York State began testing for Chronic wasting Disease in 2002. In 2005, the New York State Department of Environmental Conservation (NYS DEC) received the first confirmation of CWD. It was found in two captive white-tailed deer herds in Oneida County and subsequently detected in two wild deer from Hamilton County. Since that time, several other states in the eastern US have documented CWD. Currently, it is found in eighteen states across the US: Minnesota, Maryland, North Dakota, Missouri, Virginia, Colorado, Wyoming, Michigan, Wisconsin, Utah, New Mexico, Kansas, West Virginia, New York, Nebraska, South Dakota, Illinois and Oklahoma.

The NYS DEC established a containment area around the CWD-positive samples and monitored the wild deer herd intensively for a number of years. Since 2002,

approximately 34,000 deer have been tested throughout New York State, 7,300 directly from the containment area in Oneida and Madison counties. No additional cases have been identified since 2005, resulting in a decrease in the monitoring effort.

In 2010, the containment area designation was lifted and mandatory deer checks for deer harvested in this area are no longer a requirement. New York continues to randomly sample harvested deer throughout the entire state, but with less intensity. More information on CWD, New York's response to this disease, the latest results from ongoing sampling efforts and current CWD regulations, are available on the DEC website: *http://www.dec.ny.gov/animals/7191.html.*

Asian Longhorned Beetle

The Asian longhorned beetle (*Anoplophora glabripennis*) is a destructive wood-boring pest of maples and other hardwoods. Tunneling by beetle larvae girdles tree stems and branches. Repeated attacks lead to dieback of the tree crown and, eventually, death of the tree.

The Asian longhorned beetle is believed to have been introduced into the United States from wood pallets and other wood packing materials accompanying cargo shipments from Asia. The beetle has been intercepted at ports and found in warehouses throughout the United States. It was first discovered on several hardwood trees in Brooklyn, New York in August 1996.

Currently, the only effective means to eliminate ALB is to remove infested trees and destroy them by chipping or burning. To prevent further spread of the insect, quarantines are established to avoid transporting infested trees and branches from the area. Early detection of infestations and rapid treatment response are crucial to successful eradication of the beetle.

Emerald Ash Borer

The emerald ash borer (*Agrilus planipennis*) is a small but very destructive beetle. In North America, the emerald ash borer is known to infest all species of ash (*Fraxinus spp.*). Larval feeding in the tissue between the bark and sapwood disrupts the transport of nutrients and water in a tree, eventually causing branches and the entire tree to die.

Native to China and eastern Asia, the emerald ash borer probably came to North America hidden in wood packing materials commonly used to ship consumer goods. It was first detected in Michigan in July 2002. The beetle is responsible for the loss of more than seven million ash trees in Michigan alone.

In terms of the range and extent of the emerald ash borer infestation in North America, the human element is of particular significance. The movement of any ash tree products

(e.g., branches, logs, woodchips, nursery stock, and firewood) advances the spread of the emerald ash borer.

It is extremely difficult to determine whether an ash tree is infested with emerald ash borer because tree decline is usually gradual, and damage to the tree may not be apparent for up to three years. If a tree is infested with the emerald ash borer, tree removal is recommended as the most effective way to eliminate and prevent the species' further spread. The recommended procedure includes felling the infested trees and chipping them.

Giardiasis

This intestinal illness sometimes called "beaver fever" is caused by a microscopic parasite called *Giardia lamblia*. Even though many animals other than man can act as hosts, including the beaver, improper disposal of human excrement is one of the primary reasons for the increased numbers of this parasite in the interior.

Lyme Disease

This infection is caused by the bite of a deer tick carrying a bacterium that often infects deer, field mice, humans and household pets.

West Nile Virus

Is a relatively new viral disease that is carried by birds and can be transmitted to humans, in particular, through mosquito bites. It is often fatal to some species of birds, such as crows, but in most species it is not fatal. It can be fatal in humans, especially in those with compromised immune systems. The use of insect repellant will help reduce exposure.

Rabies

Rabies is a viral infection that affects the nervous system of all mammals, including humans. It is usually transmitted by the bite of an infected animal to another. Like other viral infections, it does not respond to antibiotics and is almost always fatal once the symptoms appear. Major carriers of rabies include: raccoons, skunks, bats and fox species, but all mammals can be potential carriers.

3. Fisheries Management

Public use of fishery resources is described under section II.D.3. Since no major changes in access to aquatic resources are anticipated, future use levels are expected to be similar to existing levels. Current stocking policies and fishing regulations apparently provide adequate protection to area fishery resources.

Church Pond, in the St. Lawrence watershed, is stocked with brook trout. This water will continue to be managed as an Adirondack brook trout ponds and stocked as necessary. Stocking will be conducted in accordance with Bureau of Fisheries policies and the Final Programmatic Environmental Impact Statement on Fish Species Management Activities of the Department of Environmental Conservation Division of Fish and Wildlife (1980). Establishment of additional fish species in Adirondack brook trout ponds may make reclamation necessary to enhance or restore a native fish community. If reclamation is determined to be necessary, the UMP will be amended to include it in the Schedule for Implementation and the associated descriptions will be revised to reflect the new fish community data. Church Pond (P327 SL) will be managed under General (Statewide) Angling Regulations.

Church Pond is not a candidate for liming, nor are any other ponds in the unit. If any of these ponds are later determined to be liming candidates based on additional survey work, the UMP will be amended accordingly. Any candidate waters will be inspected by APA to determine wetlands jurisdiction and permits will be obtained if required. Any liming operations will be conducted in accordance with the Final Generic Environmental Impact Statement of the New York State Department of Environmental Conservation Program of Liming Selected Acidified Waters (1990).

Privately stocked brown trout, as well as largemouth bass, were present in Tooley Pond during a 1986 survey. In 2001, the fishery was dominated by largemouth bass; brown trout were not detected. The pond will be managed as a warmwater fishery.

The South Branch of the Grass River on the Tooley Pond Tract supports a naturally sustained brook trout population. When the property was acquired in 1999, special regulations (no-kill, artificial lures only) were adopted to assure that the fishery would not be overfished. This has not happened, so the river is now managed under the General (Statewide) Angling Regulations. Below Lake George Road the South Branch is stocked with brown trout. The South Branch of the Grass River will continue to be managed as salmonid water and stocked according to the Programmatic Impact Statement.

For most unit waters, fish community data is insufficient to develop management objectives. Fish community surveys will be top priority for these waters.

Biological and chemical surveys of selected waters will be conducted to assess management needs and determine progress toward fishery management objectives. Allen Pond will have first priority and should be surveyed.

Fish will be stocked in Unit waters as described in III.A.3. Stocking will be consistent with Bureau of Fisheries policies and the Final Programmatic Environmental Impact

Statement on Fish Species Management Activities of the Department of Environmental Conservation Division of Fish and Wildlife (1980).

B. Management Guidelines

1. Guiding Documents

This unit management plan has been developed within the guidelines set forth by Article XIV of the State Constitution, Article 9 of the Environmental Conservation Law, Parts 190-199 of Title 6 NYCRR of the State of New York, the Adirondack Park State Land Master Plan ("APSLMP"), and established Department policy.

Article XIV of the State Constitution provides in part that, "The lands of the State, now owned or hereafter acquired, constituting the Forest Preserve as now fixed by law, shall be forever kept as wild forest lands. They shall not be leased, sold or exchanged, or be taken by any corporation, public or private, nor shall the timber thereon be sold, removed or destroyed."

In order to implement the guidelines and criteria set forth in the APSLMP, the DEC and APA have jointly signed a Memorandum of Understanding concerning the implementation of the APSLMP for the Adirondack Park. The document defines the roles and responsibilities of the two agencies, outlines procedures for coordination and communication, defines a process for the revision of the APSLMP, as well as outlines procedures for State land classification, the review of UMPs, state land project management, and state land activity compliance. The MOU also outlines a process for the interpretation of the APSLMP.

Wild, Scenic, and Recreational Rivers

Three rivers in the unit—the North Branch of the Grass, the Middle Branch of the Grass and the South Branch of the Grass River—are classified as Scenic Rivers under the Wild, Scenic and Recreational Rivers System (WSRRS) Act (Article 15, Title 27 of the Environmental Conservation Law). The portion of the South Branch from the confluence with Allen Pond Outlet to the Adirondack Park boundary is classified Recreational. In addition, a small portion of the Leonard Pond parcel of the Grass River WF is within the ½ mile boundary of the Raquette River, which is classified as Recreational. The WSSRS Act and its implementing regulations found in Part 666 of Title 6 of the Official Compilation of Codes, Rules, and Regulations of the State of New York (6 NYCRR) and 9 NYCRR Part 577 regulates the activites within a classified River Areas.

ECL §15-2705 grants the Adirondack Park Agency jurisdiction over River Areas located on privately owned land within the Adirondack Park and grants the Department

jurisdiction over all other River Areas, including River Areas owned by the State within the Adirondack Park.

Unless otherwise designated by the the Agency or the Commissioner, River Areas include the designated river and all land located within ¼ mile of each bank on private land, and within ½ mile of each bank of the river on State land (9 NYCRR Part 577 Appendix Q-7 and 6 NYCRR Part 666.3(yy)).

C. Administration and Management Principles

1. Administration

Several programs within the Environmental Conservation Department share responsibility for the administration of the Grass River Unit.

The Division of Lands and Forests manages the Forest Preserve and recreational use of Easement lands. This unit also acquires, maintains and promotes responsible use of public lands.

The Division of Operations is responsible for designing, building and maintaining Department facilities. This unit operates Department campgrounds and maintains facilities such as roads, trails, lean-to's and parking lots.

The Division of Fish, Wildlife and Marine Resources protects and manages fish and wildlife species. It also protects and manages habitat and provides for public fishing, hunting and trapping opportunities.

The Division of Water protects water quality in lakes and rivers by monitoring waterbodies and controlling surface runoff.

The Division of Law Enforcement enforces Environmental Conservation Laws relating to hunting, fishing and trapping; endangered species; possession, transportation and sale of fish and wildlife; and laws relative to environmental quality, such as pollution. Environmental Conservation Officers are responsible for the enforcement of environmental conservation law in order to protect the state's natural resources and environment.

The Division of Public Affairs and Education is the communication link to the public. It promotes citizen participation in the UMP process.

The Division of Forest Protection and Fire Management is responsible for the preservation, protection, and enhancement of the State's forest resources and the safety of the public using the States resources. Forest Rangers are also responsible for fire control and search/rescue functions.

The Adirondack Park Agency's responsibility is to ensure that management of Forest Preserve lands is done in compliance with the APSLMP. The coordination of management activities is outlined in the Memorandum of Understanding between the DEC and APA, as well as policies of both agencies. The APSLMP provides guidance for the use and management of lands which it classifies as "Wild Forest" by establishing basic guidelines. Some of these guidelines are quoted below.

"Wild Forest

Definition: "A Wild Forest area is an area where the resources permit a somewhat higher degree of human use than in wilderness, primitive or canoe areas, while retaining an essentially wild character. A wild forest area is further defined as an area that frequently lacks the sense of remoteness of wilderness, primitive or canoe areas and that permits a wide variety of outdoor recreation."

Guidelines for Management and Use: "The area classified as Wild Forest is generally less fragile, ecologically, than the wilderness and primitive areas. Because the resources of these areas can withstand more human impact, these areas should accommodate much of the future use of the Adirondack forest preserve. The scenic attributes and the variety of uses to which these areas lend themselves provide a challenge to the recreation planner. Within constitutional constraints, those types of outdoor recreation that afford enjoyment without destroying the Wild Forest character or natural resource quality should be encouraged. Many of these areas are under-utilized."

Recreational use and overuse

1. All types of recreational uses considered appropriate for Wilderness areas are compatible with Wild Forest and, in addition, snowmobiling, motor-boating and travel by jeep or other motor vehicles on a limited and regulated basis that will not materially increase motorized uses that conformed to the APSLMP at the time of its adoption in 1972 and will not adversely affect the essentially wild character of the land are permitted.

2. Certain Wild Forest areas offer better opportunities for a more extensive horse trail system than in Wilderness, Primitive or Canoe areas and horse trails and associated facilities in these areas would be provided where appropriate.

3. Although the nature of most Wild Forest areas indicates that potential recreational overuse will not be as serious as in Wilderness, Primitive and Canoe areas, care must nonetheless be taken to avoid overuse, and the basic Wilderness guidelines in this respect apply also to Wild Forest lands.

The relatively greater intensity of use allowed by the Wild Forest guidelines should not be interpreted as permitting or encouraging unlimited or unrestrained use of Wild Forest areas.

The following principles provide specific guidance for managing the Grass River Wild Forest:

- Sustain the existing environmental conditions and restore areas of resources being degraded;
- Public use of motor vehicles will not be encouraged;
- Manage the unit as a composite resource and employ an interdisciplinary set of skills in recognition of the complexity of the relationships between the unit's resources and the recreating public."

An interdisciplinary team has developed the management proposals listed in the next section to meet APSLMP criteria and guidelines. All management objectives are designed to help meet the goals of preserving the area's Wild Forest character while providing a range of acceptable primitive recreation opportunities. All planned actions require monitoring to determine their effectiveness in ensuring that the natural characteristics that define this Wild Forest are protected.

All necessary work in the Grass River Unit will be accomplished with the minimum tool concept. This concept requires that every management action be scrutinized to see first if the action is necessary, and then plan to do it with the "minimum tool" to accomplish the task. The chosen tool, equipment, or structure should be the one that least degrades Wild Forest character temporarily or permanently (High Peaks Plan, 1999).

Future issues, actions, or opportunities will be considered on a case-by-case basis to determine if they are consistent and compatible with the APSLMP and the goals and objectives of this plan. The APSLMP has procedures to amend unit management plans if resource and/or social conditions change during the five-year tenure of each plan.

DEC policy has been developed for the public use and administration of Forest Preserve lands. Select policies relevant to the management of this unit include:

- Administrative Use of Motor Vehicles and Aircraft in the Forest Preserve (CP-17).
- Motor Vehicle Access to State Lands under the Jurisdiction of DEC for People with Disabilities (CP-3).
- Standards and Procedures for Boundary Line Maintenance (NR-91-2; NR-95-1).

- Tree Cutting on Forest Preserve Land (O&D #84-06).
- Cutting and Removal of Trees in the Forest Preserve (LF-91-2).
- Division Regulatory Policy (LF-90-2).
- Adopt-A-Natural Resource (ONR-1).
- Policies and Procedures Manual Title 8400 - Public Land Management.
- Forest Preserve Roads (CP-38).

DEC is currently developing policies for ATV access on public lands, including Forest Preserve. A draft policy was released for public review several years ago. (see http://www.dec.state.ny.us/website/dlf/publands/atv.html), but has not yet been finalized. Currently, requests for ATV use on state lands is reviewed on a case by case basis.

Guidance and Clarification Documents:

- Memorandum of Understanding between the Adirondack Park Agency and the Department of Environmental Conservation Concerning the Implementation of the State Land APSLMP for the Adirondack Park.
- Snowmobile Plan for the Adirondack Park/Final Generic Environmental Impact Statement, Sept. 2006
- Management Guidance: Snowmobile Trail Siting, Construction and Maintenance on Forest Preserve Lands in the Adirondack Park, November 2009.
- Guidelines for Motor Vehicle Use Proposals in Wild Forest UMP's Memorandum - 7/25/2001

The Division of Lands and Forests also maintains policies to provide guidelines for the design, location, siting, size, classification, construction, maintenance, reconstruction and/or rehabilitation of dams, fireplaces, fire rings, foot bridges, foot trails, primitive tent sites, road barriers, sanitary facilities and trailheads. Other guidelines used in the administration of Forest Preserve lands are provided through Attorney General Opinions, Department policy memos, and Regional operating procedures.

The recommendations presented in this unit management plan are subject to the requirements of the State Environmental Quality and Review Act of 1975. The State Environmental Quality and Review Act (SEQRA) requires the consideration of environmental factors early in the planning stages of any proposed action(s) that are undertaken, funded or approved by a local, regional or state agency. An Environmental

Assessment Form (EAF) is used to identify and analyze relevant areas of environmental concern based upon the management actions in the draft unit management plan. For this plan, SEQRA review has been initiated with the preparation of the EAF. Upon review of the information contained in the EAF, there will not be any large important impacts associated with any of the management actions, therefore there will not be a significant impact on the environment and a Negative Declaration will be prepared. Any changes that are made in this plan, based upon public comments, will be considered in the EAF and determination of significance when the final plan is written.

Historic and Archaeological Site Protection

The historic and archaeological sites located within the unit, as well as additional unrecorded sites that may exist on the property, are protected by the provisions of the New York State Historic Preservation Act (SHPA - Article 14 PRHPL), Article 9 of Environmental Conservation Law, 6 NYCRR § 190.8 (g) and Section 233 of the Education Law. Unauthorized excavation and removal of materials from any of these sites is prohibited by Article 9 of the ECL and Section 233 of the Education Law. In some cases additional protection may be afforded these resources by the federal Archaeological Resources Protection Act.

Archaeological Research

The archaeological sites located on this 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 Office of Parks and 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.

Management Principles

The call for a management approach which balances the need for recreational use with the need to preserve the Wild Forest character of the area and the capacity of the resources to withstand use presents a challenging and complex task – one which requires both a long-term and a day-to-day approach to problem solving. There may be no one right answer to a problem – that in making Department decisions, the key is to apply a systematic rationale based on monitoring and evaluation.

This Unit Management Plan is intended to serve as the basic management tool for the Grass River Wild Forest unit for a five-year period following APA determination of

conformity with the APSLMP and approval by the Department's Commissioner. Implementation will commence following approval by the Commissioner.

All necessary work in the Grass River Wild Forest unit will be accomplished with the minimum tool concept. This concept requires that every management action be scrutinized to see first if the action is necessary, then plan to do it with "minimum tools" to accomplish the talk. The chosen tool, equipment, or structure should be the one that least degrades Wild Forest character temporarily or permanently.

2. Application of Guidelines and Standards

a. Project Development

Where required, permits will be obtained. All projects will be developed in accordance with applicable laws, rules, regulations and policies and will incorporate the use of Best Management Practices, including but not limited to such considerations as:

General

- Locating improvements to minimize necessary cut and fill;
- Locating improvements away from streams, wetlands, and unstable slopes;
- Use of proper drainage devices such as water bars and broad-based dips;
- Using stream crossing with low, stable banks, firm stream bottom and gentle approach slopes;
- Limiting stream crossing construction to periods of low or normal flow;
- Avoiding areas where habitats of threatened and endangered species are known to exist;
- Using natural materials to blend the structure into the natural surroundings.

Lean-tos

- Locating lean-tos to minimize necessary cut and fill;
- Locating lean-tos to minimize tree cutting;
- Locating lean-tos away from streams, wetlands, and unstable slopes;
- Use of drainage structures on trails leading to lean-to sites, to prevent water flowing into site;
- Locating lean-tos on flat, stable, well-drained sites;

- Limiting construction to periods of low or normal rainfall.

Parking Lots

- Locating parking lots to minimize necessary cut and fill;
- Locating parking lots away from streams, wetlands, and unstable slopes wherever possible;
- Locating parking lots on flat, stable, well-drained sites
- Locating parking lots in areas that require a minimum amount of tree cutting;
- Limiting construction to periods of low or normal rainfall;
- Limiting the size of the parking lot to the minimum necessary to address the intended use and to comply with the definition of water access parking areas within designated River Areas.
- Wherever possible, using wooded buffers to screen parking areas from roads.

Trails

- Locating trails to minimize necessary cut and fill;
- Wherever possible, lay out trails on existing old roads or clear or partially cleared areas;
- Locating trails away from streams, wetlands, and unstable slopes wherever possible;
- Use of proper drainage devices such as water bars and broad-based dips;
- Locating trails to minimize grade;
- Using stream crossings with low, stable banks, firm stream bottom and gentle approach slopes;
- Constructing stream crossings at right angles to the stream;
- Limiting stream crossing construction to periods of low or normal flow;
- Using stream bank stabilizing structures made of natural materials such as rock or wooden timbers;
- Using natural materials to blend the structure into the natural surroundings.

Bridges

- Minimizing channel changes and the amount of cut or fill needed;
- Limiting construction activities in the water to periods of low or normal flow;
- Minimizing the use of equipment in the stream;
- Installing bridges at right angles to the stream channel;
- Constructing bridges to blend into the natural surroundings;
- Using stream bank stabilizing structures made of natural materials such as rock or wooden timbers;
- Stabilizing bridge approaches with aggregate or other suitable material;
- Using soil stabilization practices on exposed soil around bridges immediately after construction;
- Designing, constructing and maintaining bridges to avoid disrupting the migration or movement of fish and other aquatic life.

b. Fisheries Projects

All reclamation projects will be in compliance with the Programmatic Environmental Impact Statement on Fish Species Management Activities of the Department of Environmental Conservation, Division of Fish and Wildlife, dated June 1980 and the Programmatic Environmental Impact Statement on Undesirable Fish Removal by the Use of Pesticides Under Permit Issued by the Department of Environmental Conservation, Division of Lands and Forests, Bureau of Pesticides Management, dated March 1981.

All liming projects will be in compliance with the Final Generic Environmental Impact Statement on the New York State Department of Environmental Conservation Program of Liming Selected Acidified Waters, dated October 1990, as well as the Division of Fish, Wildlife and Marine Resources liming policy.

All fish stocking projects will be in compliance with the Programmatic Environmental Impact Statement on Fish Species Management Activities of the Department of Environmental Conservation, dated December 1979.

c. Conservation Easements

Plans for the easements discussed below are not part of this UMP, but the public recreation rights provided on these easements may affect public recreation facility

proposals on the Forest Preserve lands where trails or roads may connect to the same on the easement lands. This section will thus highlight the public recreation rights on these easements as they may relate to FP lands of the GRWF.

Management and administration of easement lands is guided by DEC policies, some specific to easements and some which apply generally to state lands.

- The Administration of Conservation Easements (NR-90-1).
- Acquisition of Conservation Easements (NR-86-3).
- Motor Vehicle Access to State Lands under the Jurisdiction of DEC for People with Disabilities (CP-3).
- Standards and Procedures for Boundary Line Maintenance (NR-91-2; NR-95-1).
- Division Regulatory Policy (LF-90-2).
- Volunteer Stewardship Agreements (CP-58).

Management and administration of easement lands is also guided by the terms of the individual conservation easements. Presented below are the terms of the easements in the Grass River Unit that relate to public recreation use.

Long Pond Conservation Easement

This easement is adjacent to the Stone Dam Forest Preserve parcel, is northwest of the Church Pond parcel and adjacent to the Grass River CE. It was acquired in 1999. A Recreation Plan is required to be developed and it must be approved by the landowner. The Recreation Plan has been completed and there is now a well-developed trail and road system open for public use, as well as some accessible primitive tent sites.

The conservation easement specifies public access and recreational opportunities as follows;

- Access by non-motorized means is allowed including by bicycle, horses or similar animals, foot, snowshoe, cross country skis, and canoes/boats.
- Access by motorized vehicle is limited to the following roads;
    1. The main east-west haul road from State Highway 56 to Selleck's Lower Camp.
    2. The secondary haul road from USGS benchmark 1304 south across Deerskin Creek than east and north back to the main east-west haul road;

3. The secondary haul road going north from Selleck's Lower Camp across Gulf Brook, then north east, then east, than back south to the main haul road;
4. The secondary haul road that branches off to the north from the road described in #3 above going about 1 mile;
5. The secondary haul road near the easterly property boundary going back about 2 miles north and west;
6. The secondary haul road that branches off to the main haul road just west of USGS benchmark 1289 going south and southeast to the north end of Long Pond.

DEC can build new motor vehicle roads and parking areas necessary for the exercise of recreational rights. Snowmobiles and ATV's may use all existing roads. Some roads may be closed by the landowner to be plowed for logging, but alternative routes must be provided. DEC is responsible for placing signs to indicate which roads and trails are open for public motor vehicle, snowmobile and ATV use. DEC can build new roads and trails for ATV's, snowmobiles and non-motorized means of travel by the public. Camping by the public is permitted under the same regulations as other state lands. Firewood may be gathered from dead and downed trees for on-site cooking and warmth only. Hunting, fishing and trapping by the public is permitted. DEC has the right to maintain fish and wildlife.

Tooley Pond Conservation Easement

This easement is adjacent to the Tooley Pond Forest Preserve lands, and was acquired at the same time as those lands in 1999. It also abuts the Grass River CE lands. A Recreation Plan is required for public use of the property, and the landowner must approve it. A Plan was completed by DEC and approved by the landowner shortly after the property was acquired. This plan is in the process of being revised, with a draft expected to be available for public review in early 2016. Currently, a limited number of roads are open to automobiles and there are also some major snowmobile trail segments open that are part of the statewide system.

The conservation easement specifies public access and recreational opportunities as follows;

- Access by non-motorized means is allowed including by bicycle, horses or similar animals, foot, snowshoe, cross country skis, and canoes/boats;
- Access by motorized means by automobile, ATV and snowmobiles is allowed on designated routes;

- The DEC has the right to construct and maintain trails for non-motorized means of travel by the public, and new Motorized Access Corridors as long as these facilities don't interfere with the landowner's right of forest management.

- Camping, hunting, fishing and trapping, etc. are allowed following the same regulations that apply to other State Lands.

Silver Lake Conservation Easement

This easement was acquired in 2001. A "Land Management Plan"(equivalent to a recreation management plan) is required for public use of the property. Only a portion of the property has public access rights. A plan has not yet been completed for public use as there is currently no legal public access to the property through the adjacent private landowners. The portion of the property that includes the public access/use rights described below does not abut any other FP or CE lands.

The conservation easement specifies public access and recreational opportunities as follows;

- Access to the portion of the Grass River RR at the north end of the property, the North Tramway and the Cut-over Trail is provided for hiking, skiing, bicycling, horseback riding and other non-motorized travel and when conditions allow, snowmobiling. .Access to the Grass River RR from the edge of the hamlet of Cranberry Lake north to the point where the Cutoff Trail intersects the Grass River is provided for snowmobile use only; there is only administrative access from the Grass River RR t the edge of the hamlet of Cranberry Lake to the north end of Mill Street.

Grass River Conservation Easement

This easement was acquired in 2007. It is adjacent to the Cranberry Pond and Stone Dam Forest Preserve parcels, as well as the Tooley Pond and Long Pond easements. Currently an Interim Recreation Management plan is in place. This CE requires a Recreation Management Plan to be developed and it must be approved by the landowner. This plan is currently in the draft stage, and it is expected that it will provide for expanded public recreation opportunities compared to those authorized in the Interim plan, subject to funding. There is currently limited public motor vehicle access, primarily to provide access over the property to the Stone Dam FP parcel, but there are also snowmobile trail routes on the existing road system that connect to the regional snowmobile trail network that are open to the public.

The conservation easement specifies public access and recreational opportunities, which are available annually except for the period between Oct. 1st and December 15th each year, as follows;

- Access for public motor vehicle and snowmobile use as well as non-mechanized use of the extensive network of existing roads;
- Access for fishing, camping, boating, hiking, trapping and other non-mechanized recreational uses along designated river corridors and one lake;
- Access for fishing along several designated stream corridors;
- Access for limited ATV use on a corridor that provides connections between adjacent CE lands;
- Access for non-mechanized use of a trail up Little Blue Mountain and a trail between the Long Pond CE and the Church Pond FP parcel.
- Access for public motor vehicle use on a road to the Stone Dam FP parcel, including during the period of Oct. 1st to Dec. 15th.

Seveys Conservation Easement

This easement was acquired in 2007. It is adjacent to the Leonard Pond Forest Preserve parcel and just east of a portion of the Grass River CE. The part of this CE west of SH 56 is within the Grass River unit while the part east of SH 56 is in the Raquette-Boreal unit. Currently an Interim Recreation Management plan is in place. This CE requires a Recreation Management Plan to be developed and it must be approved by the landowner. Current public access on this property is on snowmobile trails that are connected to the regional network, and a car top boat launch on the Raquette River on the east side of SH 56 in the Raquette-Boreal unit.

The conservation easement specifies public access and recreational opportunities as follows;

- Access for snowmobile use on identified corridors;
- Access to the Raquette River for a car-top boat launch.

D. Management Issues, Needs and Desires

Issue identification is an important element of the planning process. An issue is defined as a point or question of discussion or interest that needs to be addressed or decided upon in the planning process. Issues help identify where DEC needs to focus its management efforts in the future.

The following list of issues, needs and desires were received from the public and Department staff by way of an Open House, held on February 26, 2003 at Colton Pierrepont High School, by mail, email, and personal conversations.

1. Boundary Lines

a. Description of Issue

On the Forest Preserve lands in this unit, there are a few miles of unpainted boundary lines, a few lines that do not have the Forest Preserve sign (the yellow 8x12 metal signs that display the DEC symbol and the FP classification), and some that are missing all of the above and may need to be surveyed, but overall the boundaries are in good shape. The complex ownership pattern of the unit makes the need for accurately marked boundaries even more critical to the planning of future facilities.

Un-surveyed and unmarked boundary lines on the unit can pose problems:

- Trespass and the cutting of trees on the Forest Preserve.
- Trespass by motor vehicles on the Forest Preserve.
- Illegal establishment of trails, tree stands, camps, and the storage of personal property.
- Dumping of rubbish, garbage, refuse or waste.
- Inability to access public land.
- Trespass on adjacent private land.

b. Discussion

A few state land boundaries need to be surveyed to clarify their location. In the meantime, the Department could at least post the roadsides that are boundaries for parcels needing a survey but are unmarked as to New York State ownership. In addition, the Department could post signs on those few boundaries that currently have postings from adjacent private landowners, pending a survey to determine the exact location of those boundary lines. This will give the public and Department enforcement staff a better indication of the approximate location of boundaries until survey work is accomplished.

2. Illegal Motor Vehicle / ATV Use

a. Description of Issue

According to a national survey on recreation and the environment, about 36.3 million people participate in off-highway driving or ATV use (Cordell et. al., 1999). Inappropriate recreational ATV use can cause unacceptable physical and biological impacts on the natural environment. The effects of ATV's on soil, wetlands, water, vegetation, heritage sites, and wildlife have long been recognized in the scientific literature. The magnitude of the effects varies depending on local characteristics of the landscape including slope, aspect, soil susceptibility to erosion, and vegetation type. Riparian areas are particularly vulnerable to ATV damage. More recently, ATV use has been implicated in the spread of invasive species. An extensive study of the biophysical and social impacts of Off Road Vehicle and ATV use is reflected in an annotated review of the scientific literature by Stokowski and LaPointe (2000).

Biophysical impacts

- Damage and loss of vegetative cover.
- Compaction and erosion of organic litter and soil.
- Rutted, widening, eroded trails.
- Multiple, braided side trails.
- Impacts on environmentally sensitive areas, such as wetlands and stream crossings.
- Air and noise pollution.

Effects on soil erosion and vegetation

The primary effects of ATV's on soils are compaction and erosion, which may result in sedimentation into waterways. Damaged grasses and forbs may open the door to invasive plant species. The adverse effects of motorized use are most evident where cross-country travel occurs or motorized use occurs on trails that are not designed for that purpose.

Effects on wildlife

The scientific literature indicates some wildlife species may be affected by excessive noise and disturbance. Displacement during winter depletes energy reserves needed for survival and reproduction by mammals and birds.

This is the most serious issue relating to natural resource impacts identified by Department staff on the Forest Preserve and easement lands of this unit. There is

unlimited potential for illegal ATV use on both the Forest Preserve and easement lands, given the versatility and ease with which these machines can be operated off road in a wooded setting. Numerous old logging roads and trails provide tempting places for people to illegally drive ATV's. Some of these old logging roads lead into the interior of the Grass River Unit, and have been used as traditional access to lakes and ponds. Hunting season brings additional illegal use, as hunter's use ATV's to reach areas inaccessible by car or truck.

b. Discussion

Illegal use on Grass River Wild Forest parcels is relatively limited, as barricades, signage and patrols seem to have controlled such use to a large extent. Complete control is not possible, but using a combination of the above techniques will limit significantly the damage and disturbance from illegal use.

Limited illegal use of ATV's occurs on the Lampson Falls parcel, and the Stone Dam parcel west of the Middle Branch of the Grass River. The Leonard Pond parcel has somewhat more illegal use, though it is mostly on the existing road Hollywood Road and some old roads not open to motor vehicles that are spurs off the Hollywood Road. Additional signage and some barricades on these spurs should help further reduce illegal use there.

3. Public Access on Roads to Forest Preserve Lands

a. Description of Issue

Forest Preserve roads, which are generally low maintenance seasonal roads, are a means of providing the public with access to recreational programs on Forest Preserve lands. Roads on or adjacent to Forest Preserve generally provide adequate public access to the unit; most of the access is from town roads, or Forest Preserve roads maintained by the Department. There are some roads with questions about their legal use by the public as well as roads being used that are not designated for public motor vehicle use.

b. Discussion

The Stone Dam parcel has traditionally been accessed by the public and DEC staff via an old road in poor condition off the end of the town of Clare maintained Dean Road. The old road extends about 2 miles to the Stone Dam parcel thru lands owned by Rayonier. Its legal status as the access route to the parcel is uncertain and it has not been regularly maintained. The town of Clare does not identify it it as a town highway, and the underlying landowner prior to Rayonier's ownership stopped its maintenance after building a separate road to access their own land. Since the acquisition by DEC of an easement on the surrounding land (the Grass River CE), there is an alternative route

on a good road that provides access another way to the Stone Dam parcel, so there is no need to maintain the old road to provide access. Some members of the public continue to use it. The main question about this road is whether it constitutes a public way, and thus cannot be closed if it continues to be used. In its current condition, it should not be open for public motor vehicle use, though it may be able to remain open for non-motor vehicle use if the landowner does not contest that use.

4. St. Lawrence County Multi-Use Trail

a. Description of Issue

St. Lawrence County has been in the process of opening a multi-use recreational trail system. Prior to this formal effort, the County had been periodically requesting of DEC that it open various areas of state forest and forest preserve areas to ATV use. In response, DEC requested that the County develop a comprehensive plan which resulted in the proposed 120 mile multi-use trail, extending from Lewis to Franklin County, which would provide public recreational use for: ATV's, snowmobiling, biking, skiing, hiking and other permitted uses. The multi-use trail would include ATV use from approximately May 15 to Sept. 15 and be managed consistent with State, department, agency and municipal rules and regulations. The County undertook a SEQR process with DEC input that resulted in a Generic Environmental Impact statement to address impacts from a potential trail. At DEC's request, the County made efforts to avoid the use of state land to the greatest extent possible. As a result, only three areas of state owned land were requested for use by the trail system, of which this UMP addresses one. In addition there were three CE properties that were requested to be part of the trail system. St. Lawrence County has proposed segments of the trail for portions of the Tooley Pond FP and CE parcels, the Grass River CE and the Long Pond CE within the GRMU, as well as for White Hill WF and Greenwood Creek State Forest outside of the GRMU.

The location of the proposed segment on the Tooley Pond parcel involves use of an existing logging road that is located on an old railroad bed that extends north from Newton Falls and runs thru the Tooley Pond CE for a few miles before reaching Forest Preserve land just before New Bridge on the Tooley Pond Road. It would cross approximately 900 feet of Forest Preserve.

Segments of roads laying within the River Area are pre-existing and already used for motorized vehicles. ECL §15-2709(2) provides for continuations of pre-existing uses.

b. Discussion

The proposed use of Forest Preserve roads within the Grass River Wild Forest as a public ATV connection must be analyzed carefully to ensure compliance with New York

State Vehicle and Traffic Law, the Environmental Conservation Law, DEC rules and regulations, the APSLMP, and the "Memorandum of Understanding between The Adirondack Park Agency and The Department of Environmental Conservation concerning Implementation of the APSLMP for the Adirondack Park" (March 30, 2010). Additionally, where opening forest preserve roads is permissible, a number of factors should be evaluated, including whether:

- the proposed road connection to be opened is necessary to bridge a gap of less than one mile in an otherwise continuous ATV trail that is open for public use by the landowner or landowners of adjoining lands;
- the proposed road connection duplicates or parallels other routes in the area that serve the same purpose. The Department cannot open routes that duplicate or parallel other connections or trails that exist in the area per the Vehicle and Traffic Law Section 2405.1, which only allows connections by road if it is "otherwise impossible for ATVs to gain access to areas or trails adjacent to the highway"(VTL Section 2405.1)
- the natural resources along the proposed road connection can withstand use of the connector road by ATVs considering factors such as soil erosion into streams, wetlands or water bodies, potential impacts of ATV traffic outside the road corridor, and other adverse impacts. If natural resources cannot withstand such use, the road will not be opened to public ATV access or, if previously opened to public ATV access, will be closed to public ATV access
- the proposed connector road is the connection alternative with the least environmental impact. The proposed public ATV use must not have a significant adverse impact to natural resources, including but not limited: to soil erosion, siltation of streams, wetlands or water bodies, or impacts to wildlife resources outside the road corridor. Therefore, although length is a consideration, ATV connector routes should not be chosen merely because they provide the shortest and most direct connector route available;
- the proposed connector is part of a comprehensive county or regional ATV trail plan;
- public ATV use of the proposed road connection is compatible with other public use of the area as authorized by the UMP;
- the proposed connector road can be expected to withstand ATV use and sufficient maintenance funds are available to ensure that the road can be maintained to prevent muddy, eroded or dangerous conditions. Substitution or enhancement of maintenance funds may be considered, such as trail maintenance by volunteers.

- whether reasonably feasible measures to prevent illegal ATV use off the proposed connector roads exist and can be effectively implemented.
- whether the proposals to open the ATV routes includes plans for monitoring environmental impacts and compliance with applicable laws and regulations, as well as possible remediation and enforcement actions that will be taken in the event of significant impacts or non-compliance.

Roads to be open to public ATV use are subject to actions necessary to ensure safe operation of ATVs, including: posting of appropriate signage for speed limits, stopping, caution and curves. Such roads will be opened and closed to ATV use seasonally and as necessary to address any undue adverse effects or compliance issues.

The Department will manage connector roads that are opened to ATV use to ensure compliance with all regulations and avoid damage to the road and surrounding natural resources. If enforcement actions are ineffective, the Department may close connector roads where problems persist.

When ATV use causes significant adverse environmental impacts along connector roads, such roads may be closed summarily by the DEC to protect the resource. A road that was opened to public ATV access but was closed due to such impacts may be reopened to public ATV access only after such impacts have been mitigated and measures are identified to avoid such impacts in the future.

Any routes opened for ATV use across lands under DEC jurisdiction will be patrolled by the DEC Rangers, and inspected by other Staff, and the DEC retains the right to close any route to ATV use if abuse does occur.

c. Alternatives Discussion

- **Alternative 1** – This route uses approximately 900 feet of road within the Tooley Pond Forest Preserve parcel, referred to here as “Forest Preserve road segment”; approximately 600 feet are on Railroad Grade Road, which is an old railroad bed, and 300 feet on New Bridge Road, a logging access road which connects the Railroad Grade Road to the Tooley Pond Road, a paved town road. Because Railroad Grade Road is located along the top of a former railroad bed, there are slopes dropping off each side of the road that will minimize the ability of ATVs to leave the improved road and impact the lands along the connection.

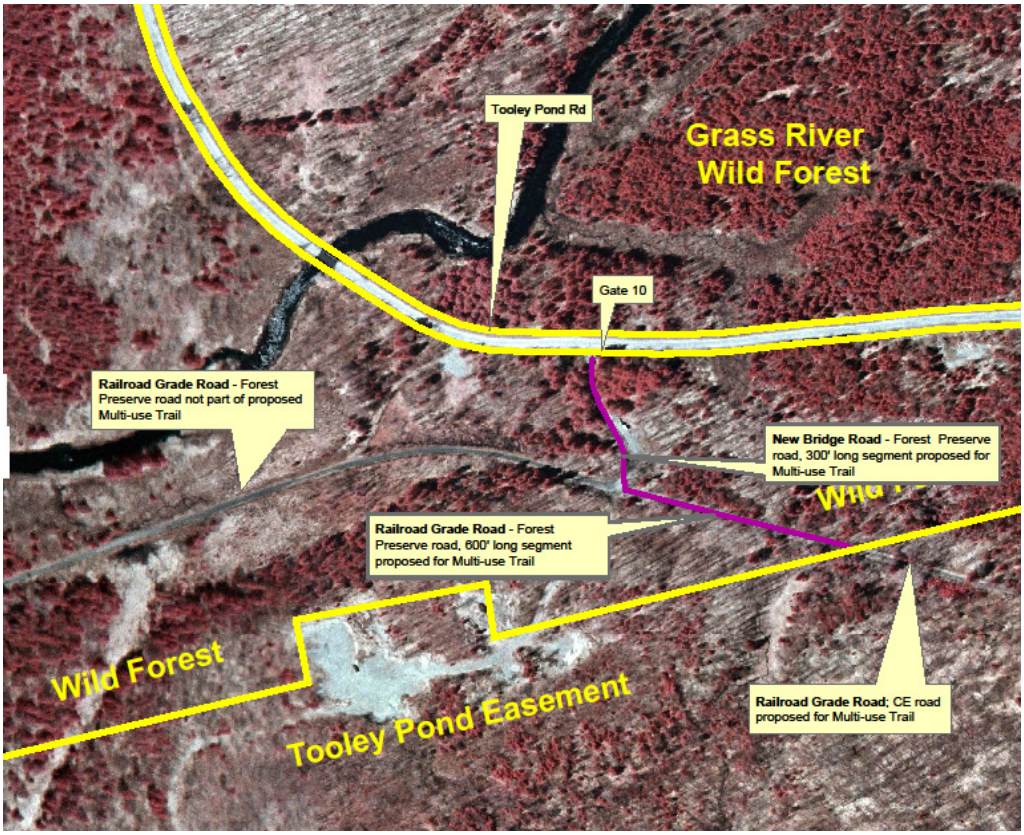
  These roads provide the legal access from the Tooley Pond Road across the Forest Preserve lands for the underlying fee owner of the adjacent easement lands, for access for lessees to their camps and for the public to the easement lands. Consequently, these roads will always be maintained as main haul roads for both private and public access, and will be able to withstand use by ATVs.

The roads surfaces are generally firm and no signicant erosion or other impacts are expected from ATV use.

Both of these road segments were in use for logging and general access to these lands at the time of purchase of these lands, and this use will continue. The Department has the right to designate these roads as open for motor vehicle use, including for use by ATVs, so such designation and use complies with the Adirondack Park State Land Master Plan and use of these roads as ATV connectors is compatible with other uses of the area. The Department has the right to maintain, post signs, and enforce regulations for such use of New Bridge and Railroad Grade Road pursuant to ECL Article 9, 6 NYCRR Part 196 and Vehicle and Traffic Law §1630.

Three conditions must be met before Alternative 1 can be implemented. First, St. Lawrence County must verify to the Department's satisfaction that it has permission from any involved private landowners to continue the trail south from the Tooley Pond CE toward Newton Falls. Second, the Town of Clifton must close River Road and their section of Tooley Pond Road to ATV use. Vehicle and Traffic Law states that public roads (such as the Forest Preserve road segments in question) can only be open to ATV use if it is "otherwise impossible for ATVs to gain access to areas or trails adjacent to the highway"(VTL Section 2405.1). The Town of Clifton currently has the River Road (which extends northeast from Newton Falls along the Oswegatchie River to the Tooley Pond Road) and the southern portion of the Tooley Pond Road open to ATVs. These roads provide an alternate route for connecting the trails to the north and south of this area. As such it is not "otherwise impossible" for ATVers to connect to the rest of the trail system, and the connection in Alternative 1 would create a parallel route that could be used as a loop rather than a connection. Consequently, the Forest Preserve roads can only be opened to ATV use if these Town of Clifton roads were closed to ATV use.

Third, the Town of Clare must open the Tooley Pond Road west from the intersection with New Bridge Road to the intersection with the Allen Pond Outlet Road, which heads north onto the Tooley Pond CE and eventually to the Grass River CE lands. These actions would ensure that opening the Forest Preserve roads is necessary and complies with requirements of the Vehicle and Traffic law for the proposed route of Alternative 1 and the connections to it.



- **Alternative 2** – This alternative would start in Newton Falls and instead of heading north on the old RR bed road on private lands towards the Tooley Pond CE lands would follow twelve miles of Town and County highways. This route would redirect users to the Tooley Pond Road past New Bridge to the Allen Pond Outlet Road, and so parallel the South Branch of the Grass for several miles. It would run closer to the South Branch of the Grass River (a Scenic river under the WSRRA) for a longer distance than Alternative 1. This ATV connector route is not located on lands under the jurisdiction of the Department. As such, the Department does not have control of whether it is utilized or how it is maintained, patrolled or signed; additionally, whether this route is open effects whether the Department may legally implement either of the other alternatives per the requirements of V&TL Section 2401.5.

- **Alternative 3** – An alternative route on only easement lands to get to the Tooley Pond Road was investigated by the DEC. This alternative would follow the old RR bed north from Newton Falls, like Alternative 1, but before it gets to the Forest Preserve lands it would head east and remain on Tooley Pond CE lands until reaching the Tooley Pond Road. It would require crossing wetlands and the Moosehead Pond Outlet east of the Railroad Grade Road, and would require

some new trail construction on conservation easement land. Therefore, it would have greater potential adverse environmental impacts than Alternative 1.

Alternative 1 is the preferred alternative, being the shortest, most environmentally benign route (see map above) and provided the three conditions described above in the Alternative 1 description are met and sustained. It will require no additional work other than signs and perhaps a few gates to open to ATV use. It is the primary access to the easement lands south of the South Branch and west of Moose Pond Outlet so will be a logging road for as long as logging occurs on the CE lands. This CE provides for public motor vehicle and ATV use on this route, so this is also the only way for the public to get on this section of the CE lands.

5. National Grid Ownership – 100' From Low Water Mark

a. Description of Issue

The State of New York, on June 30, 1999, acquired approximately 29,000 acres of former Champion International lands in fee, which became part of the Adirondack Forest Preserve, and 144,000 acres of conservation easement. The Tooley Pond tract included approximately 5,800 acres in fee along both sides of the South Branch of the Grass River and 25,000 in easement. Much of these lands were then opened to the public, except for seasonal closure during the hunting season on the easement lands.

In the process of doing research in preparation for a survey of the entire acquisition (fee and CE lands) it was determined that what had been thought to be a use reservation for flooding purposes along the South Branch was actually fee ownership. A strip of land "100 feet (horizontally) from the low water mark" actually belonged to National Grid.

This 100-foot strip is not universal along both sides of the Grass River – there are areas where there is no 100-foot strip, sometimes on one side of the river, and sometimes on both sides. This type of boundary is very difficult to mark on the ground because it is not straight or based upon a datum.

These lands need to be under the control of the Department in order to manage the entire river corridor since, needless to say, most of the recreation on the Forest Preserve lands on the Tooley Pond tract occurs near or on the river. There has not been an issue with the public using these lands as National Grid (and its predecessor Niagara Mohawk) have long had a policy that their lands are open to public use. But in order to develop and maintain facilities that provide access to the river (trails, carries, launches, primitive tent site, etc.) the Department must have control over the lands. An offer to acquire these lands a few years ago from National Grid by the State of New York was presented but was unsuccessful.

b. Discussion

The Department must have control over these lands to manage them for public use and promote their use. Before the Department knew of this situation a limited number of primitive tent sites and carries were built along the river, but since discovering the situation no new facilities have been provided. Any proposals for new facilities must acknowledge that they cannot move forward without this situation being resolved in some way.

There are a few alternatives that could be pursued to resolve this situation:

- Pursue acquisition of these lands from National Grid Power Company;
- Enter into a cooperative use agreement with National Grid Power Company
    - A Fish and Wildlife Management Act Cooperator agreement, which has the advantage of a standard format and set of conditions already in place which provide for public use of private lands and liability protection for the landowner;
    - A memorandum of understanding or similar agreement which has the advantage of being able to be tailored to a specific set of circumstances.

The best approach is likely a combination of two alternatives; pursue purchasing the property, while putting in place a cooperative agreement in the meantime.

6. Bridge over the Middle Branch of the Grass on Stone Dam Parcel

a. Description of Issue

The Stone Dam parcel has traditionally been accessed from the west by way of the Dean Road, which is a town maintained road up to a certain point, and a disputed non-maintained public way beyond. When the Grass River CE was acquired one of the rights acquired was a ROW on an easement road nearly all the way to the Stone Dam parcel, so guaranteeing access on a well maintained road. Once to the Stone Dam parcel, there is a relatively small portion of the parcel west of the Middle Branch, so most of the State land is on the east side. There are a number of primitive tent sites that have been used during hunting season on the west side of the river, and at some point in the past, a bridge was put up by unknown individuals to provide access across the river. This bridge was recently replaced, also by unknown individuals and cannot remain because it does not comply with the APSLMP standards. Further, 6 NYCRR Part 666.13(E)(5) required a permit for construction of bridges for non-motorized open-space recreational ues over designated scenic rivers.

b. Discussion

The need for a bridge over the river is the primary question that needs to be answered. Hunters continue to use this location to access state land during the hunting season. There does not appear to be a reliable place to ford the river in the vicinity of the existing bridge, and during the fall with steady rain the river can apparently rise fairly quickly, so a reliable, safe crossing is needed for these users. In addition, with a well maintained road to the Stone Dam parcel, use by non-hunters could increase since it is more accessible. Aside from fishing the river, the Stone Dam parcel has relatively mature timber since it has not been harvested in the more than 100 years since the State acquired it, so that could draw more users also. Therefore, DEC proposes removing and replacing the existing non-conforming bridge.

7. Tooley Pond Mountain Vista

a. Description of Issue

The vista on the top of Tooley Pond Mountain is gradually being obscured by vegetation.

b. Discussion

The Tooley Pond Mountain trail was originally established to provide access to the site of an old fire tower where hikers have enjoyed a scenic vista for over 15 years. This vista is closing in and will be lost without vegetative management. The loss of the vista has been raised as a concern by the public. DEC and APA will continue discussions to determine what options may be available to maintain the vista in compliance with the APSLMP.

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IV. Proposed Management Actions

Goals for the management of the Grass River Wild Forest:

a. Protect the natural wild forest and River Area setting.

b. Provide a variety of compatible outdoor recreational opportunities without degrading the resource or impairing the wild forest or River Area character. These opportunities must be consistent with the guidelines set forth in the APSLMP, 6 NYCRR Part 666,and with Department policies.

This section of the plan breaks down proposed management of the various resources of the unit into the following categories; bio-physical resources, land protection, man-made facilities, and public use and access. Each category is further broken down into component units where the present conditions are assessed, management objectives developed and management actions proposed. All recommended actions are consistent with the APSLMP and the management guidelines and principles outlined above, and are based on information gathered during the inventory process, through public input and in consultation with the Planning Team. When writing management proposals, DEC managers are restricted by Article XIV, Section 1 of the New York State Constitution, the APSLMP, the Environmental Conservation Law (ECL), and DEC rules, regulations and policies.

A. Bio-Physical Resources

1. Water

Present Situation and Assumptions

Water quality studies have been conducted throughout the Adirondacks by the Adirondack Lakes Survey Corporation, researching the effects of acid deposition, and the Bureau of Fisheries routinely conducts biological surveys of area waters. However, no studies have been conducted to determine the effects of recreation use on water quality.

Objectives

- Seek to achieve and maintain high water quality within the Grass River Unit.
- Reduce the potential for pathogenic contamination (especially giardiasis) from all water sources.
- Reduce or eliminate aquatic invasive plant species found within the unit.

- Reduce the direct impact of human activities on water quality by improving user awareness of the effect of polluting activities.
- Reduce the impact of water quality caused by the use and construction of facilities by locating facilities adequate distances from water bodies and adhering to BMPs during construction.

Management Actions

- Monitor Grass River Wild Forest waters for physical and chemical factors and maintain a water quality database.
- Develop LAC indicators and standards for vegetation in riparian areas near lakes and streams.
- Aquatic and riparian habitats will be maintained and/or improved. Any new use which could prove damaging to the character of riparian vegetation will be monitored.
- Train DEC staff working within the unit to identify and document the location of key invasive plant species.
- Monitor for the location and extent of aquatic invasive plant species found within the unit. Management of identified populations of invasive plant species should be undertaken. These actions may be carried out by NYS DEC personnel or by members of APIPP or other volunteers under supervision of NYS DEC through Volunteer Stewardship Agreements. Specifically, continue to take actions to control frogbit and monitor the unit's waters for its presence, particularly on the Middle Branch of the Grass River where it was originally found.
- Biological survey work will be incorporated in all future water related planning activities.
- Advise adjoining landowners on the use of Best Management Practices to protect water quality.
- Advise the public through DEC information and education programs to treat all water prior to consumptive use.

2. Soil

Present Situation and Assumptions

Broad soil types (accurate to an area about 40 acres in size) were delineated on aerial photographs by the Natural Resource Conservation Service. Little information has been

documented on wide-spread soil loss and deposition. Information needs to be collected to document soil loss through human disturbance on trails, shorelines, and at tent sites.

Objectives

- Keep soil erosion and compaction caused by recreational use within acceptable limits that closely approximates the natural erosion process.
- Remediate and stabilize areas that have significant erosion.

Management Actions

- Inventory, map, and monitor soil conditions affected by recreational use.
- Develop LAC indicators and standards for soil erosion.
- Relocate any trail, designated primitive tent site, or lean-to which is causing significant soil erosion.
- Establish routine maintenance on all designated trails; establish a priority list based on resource needs rather than on the convenience of users.
- Continue to restrict motor vehicle use during the spring breakup and during periods of excessively wet weather.
- Target trail and road maintenance to heavily eroded trails and roads; develop a priority list based on resource need rather than on user convenience.
- Request voluntary compliance with minimizing use of trails during periods of wet weather and susceptible soils; roughly from November 1 - December 15 and April 1 - May 15.

3. Wetlands

Present Situation and Assumptions

The wetlands found on the unit provide great ecological, aesthetic, recreational, and educational value. In their capacity to receive, store, and slowly release rainwater and snow melt, wetlands protect water resources by stabilizing water flow and minimizing erosion and sedimentation. They are one of the most productive habitats for fish and wildlife, and afford opportunities for fishing, hunting, wildlife observation, and photography. Wetlands also enhance open space character by providing breaks in the heavily forested terrain.

The typography of the Grass River Wild Forest unit generally restricts the occurrence of wetlands to the narrow valleys, lowlands, and associated creeks and rivers that drain

the surrounding terrain. While there are some small isolated wetlands, the vast majority of the wetlands in this management area are found in small groups or successive chains along stream courses. Wetlands are also important bird habitats and deer wintering areas.

Vernal pools are scattered throughout the upland forests of the unit. These are small wetlands that occupy shallow depressions flooded in the spring or after a heavy rainfall, but are usually dry by midsummer. Many vernal pools refill in the fall. These tiny wetlands support a diverse group of invertebrates and species of frogs, salamanders, newts, and toads.

Management activities in or adjacent to classified wetlands require consultation with the Adirondack Park Agency.

Objectives

- Minimize the impacts of construction and maintenance activities on wetlands.
- Allow natural processes to freely operate to ensure that the succession of native plants communities is not altered by human use.
- Protect known locations of sensitive, rare, threatened, and endangered plant species.

Management Action

- Consider relocating trails, primitive tent sites and lean-tos which are less than 100 feet from wetlands to reduce sedimentation and/or contamination of wetlands.

4. Vegetation

Present Situation and Assumptions

Much of the Grass River Wild Forest vegetated landscape has been altered by agriculture, wind, fire, insects and disease, and by logging activities before the land became Forest Preserve. Despite these influences, the unit has several unique ecosystems which are currently stable and intact. These areas include small portions of old growth forest, wetland communities, and potentially some areas not yet identified through the UMP process. Plant inventories and ecological mapping are on-going; however, not all areas have been inventoried. Because of the intermingled nature of private and public lands and embedded transport vectors, State Lands are, and are likely to be, affected by infestations of invasive species and subsequent degradation of natural system function. A number of invasive exotic plant species, both terrestrial and aquatic, have become established in the Adirondack Park. Under the supervision of the

Adirondack Park Invasive Plant Program (APIPP), paid staff and numerous volunteers are involved in a program of monitoring and removing invasive plants from the Adirondack environment. Many locations of invasive species have been mapped as a result of the efforts of APIPP, but the full extent of exotic, non-native species introductions that compete with indigenous vegetation is not known at this time.

Invasive Plants

The negative impacts of invasive species on natural forests, terrestrial and aquatic communities are well documented. Colonization and unrestrained growth of invasive species cause the loss of biodiversity, interruption of normal hydrology, suppression of native vegetation, and significant aesthetic, human safety and economic impacts. Terrestrial and aquatic invasive species have been identified at increasing rates of colonization along roadsides in campgrounds, and in water bodies of the Forest Preserve. Some of these species have the potential to colonize backcountry lands, lakes and ponds and degrade natural resources in the Forest Preserve.

Although in the context of a global society, the transfer of species from one location to another may be viewed as part of a “natural process,” there may be occasions when this relocation of non-native species becomes unacceptable and an active response is warranted.

The Department of Environmental Conservation has created an Office of Invasive Species to work with various universities, state agencies and non-profit groups in coordinating a response to invasive species. The Department is a member and will continue to collaborate with other partners of the APIPP to support education, inventory, research, control protocol, and control of invasive species. An inventory and analysis of the current distribution of invasive species on Forest Preserve lands will provide the necessary information on the present extent of invasive exotics and provide the basis for long term decision making.

In 2010 the Department and the Adirondack Park Agency developed Inter-Agency Guidelines for Implementing Best Management Practices for the Control of Terrestrial and Aquatic Invasive Species on Forest Preserve Lands in the Adirondack Park. These Guidelines provide a template for the process through which comprehensive active terrestrial and aquatic invasive species management will take place on Forest Preserve lands in the Adirondack Park. The Department shall be responsible for management of terrestrial and aquatic invasive species on Forest Preserve lands while the Agency will be responsible for providing review of, and advice on, APSLMP compliance and permit jurisdiction.

The control methods and Best Management Practices (BMPs) contained in these Guidelines restrict the use of herbicides so that adverse impacts to non-target species

are avoided and native plant communities are restored. Aquatic invasive species will be managed using non-mechanical harvesting techniques (hand-pulling) and temporary benthic matting as described in the Guidelines. Use of pesticides for aquatic species is not a part of this guidance. The Guidelines are meant to be a dynamic document that is periodically revised to reflect new invasive species threats, continuing inventory of the Forest Preserve, and evolving invasive species management techniques.

Efforts should be made to restore and protect the native ecological communities in the Grass River Wild Forest unit through early detection and rapid response efforts to eradicate or control existing or newly identified invasive species populations. Adoption of the Guidelines and implementation through the UMP and site specific work planning process, gives the Department the basic tools needed to preserve, protect and restore the natural native ecosystems of the Forest Preserve.

Prior to implementing containment and/or eradication controls, terrestrial and aquatic invasive plant infestations occurring within the Unit need to be assessed on a site-by-site basis. The geophysical setting and the presence, or absence, of sensitive native flora within or adjacent to the targeted infestation often predicts the Best Management Practices (BMPs) and limitations of the control methodology. Infestations occurring within specific jurisdictional settings may trigger a permitting process, as do most terrestrial infestations occurring within an aquatic setting. The species itself often dictates whether manual management controls, e.g. hand-pulling or cutting, or the judicious, surgical application of herbicides is warranted in order to best control that specific species in that specific setting. No single BMP guarantees invasive plant containment or eradication. Many infestations require multiple, seasonal control efforts to reduce the density and biomass at that setting. Adaptive management protocols suggest that implementation of integrated control methodologies may provide the best over-all efficacy at specific infestations.

All management recommendations are based on knowledge of non-native invasive species present within the Unit and their location, species, abundance and density. A complete inventory of the Unit is necessary to identify aquatic and terrestrial invasive plant threats facing the unit. Inventory should be based on existing inventories, formal or informal inventories during routine operations, and by soliciting help from volunteers to actively study the Unit and report on invasive species presence, locations, and condition.

Invasive Plant Control

Facilities and activities within the Unit may influence invasive plant species introduction, establishment, and distribution throughout and beyond the unit boundaries. These facilities and activities are likely to serve as “hosts” for invasive plant establishment.

Perpetual Early Detection/Rapid Response(ED/RR) protocols should be implemented in probable locations of invasive plant introductions:

- Parking Areas
- Campgrounds
- Boat Launches
- Dedicated Snowmobile Trails
- Horse Trails

Protocols to minimize the introduction and transfer of invasive plant species will be incorporated during routine operations and emergency maintenance activities, which may include the following:

- Construction Projects

  Supplemental to the principals of the Minimum Tools Approach, all soils/straw/seed or sources of materials to be used as stabilization/cover for construction projects within the unit will be certified as weed-free.

- Trail Maintenance

  Supplemental to the principals of the Minimum Tools Approach, all soils/straw/seed or sources of materials to be used as stabilization/cover for construction projects within the Unit will be certified as weed-fee. Persons working on trails will clean boots, tools and clothing prior to entering or leaving a work area to reduce the risk of invasive species transport and introduction to new sites.

- Field Sampling

  Personnel performing field sampling should avoid transferring aquatic invasive species between waters by thoroughly inspecting and cleaning equipment between routine operations. Potential pathways include: vehicles, boats, motors, and trailers; sampling equipment; measuring and weighting devices; monitoring equipment; and miscellaneous accessories.

- Angling Tournaments / Derbies

  Licensing, registration, and/or permitting information distributed by the Department to Tournament or Derby applicants should include guidelines to prevent the introduction and transport of invasive species.

Restoration of sites where invasive plant management occurs is critical to maintain or enhance historical ecological function and structure. Restoration should incorporate best available science to determine effective techniques and the use of appropriate native or non-invasive plant species for site restoration.

Educating natural resource managers, elected officials, and the public is essential to increase awareness about the threat of invasive species and ways to prevent their introduction and transport into or out of the Unit. Invasive species education should be incorporated in staff training and citizen licensing programs for hunting, fishing, and boating; through signage, brochures, and identification materials; and included in information centers, campgrounds, community workshops, and press releases.

Aquatic Invasive Plant Recommendations – All aquatic invasive species pose a risk of spreading via transport mechanisms which may include seaplanes, motorized and non-motorized watercraft (canoes, kayaks, jet skis, motor boats, etc.) and associated gear and accessories. Some measures are currently under development to help educate the public about controlling the spread of exotic and invasive species. Signs have been placed at some access points and DEC boat launches which warn about the threat of exotic species, including specific information on some aggressive species such as Eurasian water milfoil. Additional research and collaboration among partners and stakeholders should occur to develop an appropriate, effective, and approved prevention and integrated plant management plan.

Objectives

- Allow natural processes to play out their roles to insure that the succession of plant communities is not altered by human impacts.
- Preserve and protect known locations of Threatened, and Endangered species.
- Continue and enhance programs to identify and map Threatened, and Endangered species.
- Assist natural forces in restoring natural plant associations and communities where they have been severely altered by human activity.
- Reduce or eliminate invasive plant species found within the unit.
- Support scientific research projects on the Grass River Wild Forest that contribute to management improvements or to dealing with Adirondack Forest Preserve management issues.

Management Actions

- Develop LAC indicators and standards for condition of vegetation in camping areas.
- All vegetation protection and restoration programs will emphasize information and education as the primary means to reduce impacts and slow unnatural change.
- Continue botanical surveys to produce a more complete inventory of Threatened and Endangered species.
- Ecological inventorying and mapping will be correlated with recreation, and fish and wildlife project plans to prevent unintended and undesirable impacts to Threatened and Endangered species.
- Re-vegetate sites where concentrated use has destroyed natural vegetation. Native seedlings, trees, shrubs, and grasses will be planted to accelerate return to natural conditions when necessary.
- Vegetation at primitive tent sites will be monitored in conjunction with the primitive tent site monitoring program described in the section on primitive tent sites.
- Train DEC staff working within the unit to identify and document the location of key invasive plant species.
- Control known infestations of invasive species using BMPs found in Appendix O.
- A comprehensive inventory of the presence and extent of invasive plants in the unit should be undertaken.
- Management of identified populations of invasive plant species should be undertaken. These actions may be carried out by NYS DEC personnel, by APIPP professional or volunteer staff and/or other volunteers under supervision of NYS DEC through a Stewardship Agreement, or under contracts with other institutions or commercial entities.
- Support research through the issuance of TRP's and coordinating with research institutions on research topics/projects.
- Department staff will work with APPIP staff to implement ED/RR inventories at all trails, trailhead parking areas, camp sites and facilities within the interior of the Grass River Wild Forest.

5. Wildlife

Present Situation and Assumptions

The Grass River Wild Forest unit hosts a variety of Adirondack wildlife. Many species depend on area habitats for nesting, rearing, and survival. Recreational hunting is a major use of the unit because of the easy access to public land. Many visitors also come to the Grass River Wild Forest to view wildlife, especially along riparian areas and wetlands.

A number of changes have occurred over the past several decades that have impacted a variety of wildlife species within the GRWF. Habitat changes have resulted from logging prior to the land becoming Forest Preserve, wildfires, acid precipitation, recreational use, natural plant succession, protection of the forest and wildlife species through legislation, attempted reintroduction of extirpated species of wildlife and immigration of extirpated species back into the area.

One of the original factors attracting visitors to the Adirondacks, in general, was the vast array of hunting, fishing and trapping opportunities. The APSLMP indicates that these uses are legitimate and compatible with Forest Preserve concepts. DEC policy encourages these activities as part of a larger Forest Preserve experience, not just a quest for game (Doig, 1976).

Habitat areas heavily used by wildlife are often also choice locations for human trails and primitive tent sites (Hendee et al, 1990). Trails which follow easily along contours are often times used by wildlife and also make desirable routes for locating hiking trails. Bears often scrounge for food and garbage where people habitually camp. While negative human/bear encounters in this unit are minimal, the concentration of camping in distinct locations poses the potential for this to be a problem in the future. Domestic pets, mainly dogs, may also harass and stress wildlife.

Objectives

- To perpetuate, support, and expand a variety of wildlife recreational opportunities, including sustainable hunting and trapping wildlife observation and photography as desirable uses of wildlife resources.
- To assure that wildlife populations are of appropriate size to meet the demands placed on them, including consumptive and non-consumptive uses.
- To increase our understanding of the occurrence, distribution, and ecology of game and nongame wildlife species and their habitats.
- To minimize wildlife damage and nuisance problems.

- To meet the public's desire for information about wildlife and its conservation, use, and enjoyment.
- Provide additional hunter access to public lands.
- When feasible, re-establish self-sustaining wildlife populations of species that are Endangered, Threatened or of Special Concern in habitats where their existence was considered to be an historical element of the ecosystem.
- Monitor and afford extra protection, where warranted, to species which are Endangered, Threatened or of Special Concern that are currently using the Grass River Wild Forest.
- Maintain and perpetuate annual hunting and trapping seasons as legitimate uses of the wildlife resources compatible with other recreational uses in the unit.
- Provide information, advice and assistance to individuals, groups, organizations and agencies interested in wildlife, whose activities and actions may affect, or are affected by, the wildlife resources or the users of wildlife.

Management Actions

- Manage and protect wildlife through enforcement of the Environmental Conservation Law and applicable Rules and Regulations.
- Support traditional use of the unit's wildlife resources, particularly activities designed to perpetuate hunting and trapping programs and education efforts.
- Continue to monitor and inventory wildlife populations and their habitats, particularly game species, species classified as rare, threatened, endangered or special concern, and those species associated with boreal habitats.
- Active management of wildlife populations will be accomplished primarily through hunting and trapping regulations developed by the NYSDEC Bureau of Wildlife for individual or aggregate Wildlife Management Units. Continued input from Citizen Advisory Committees will be considered in determining desirable levels of wildlife.
- Re-establish, to the extent possible, self-sustaining wildlife populations of species that are extirpated, endangered, threatened or of special concern in habitats where their existence will be compatible with other elements of the ecosystem and human use of the area.

  - Conduct surveys for Spruce Grouse and evaluate the distribution and quality of potential Spruce Grouse habitat. Based on results of the surveys and habitat assessment, consider reintroducing this species.

- Provide information, advice and assistance to individuals, groups, organizations and agencies interested in wildlife whose activities and actions may affect, or are affected by, the wildlife resources or the users of wildlife.
- Provide information, advice and/or assistance to requests for relief from, or solutions to reduce or alleviate, problems with nuisance wildlife.
- Promote educational efforts to protect spruce grouse from accidental shooting by small game hunters.
- Monitor moose that enter the area through visual observation and reports from the public.
- Continue pelt sealing of species to determine level of harvest, guarding against over harvest for species especially vulnerable to trapping (marten and fisher).
- Promote education efforts stressing multiple uses and hunting seasons that are concurrent with other anticipated uses of the area. Advise visitors of the fact that there is hunting in the area so that they may dress and act accordingly during the hunting season.
- Advise visitors to the area that the potential for conflict with wildlife exists and suggest means of avoiding conflicts through a combination of on-site signage, printed Department media, and direct contact with Department staff.

6. Fisheries

Present Situation and Assumptions

For most of the unit's waters, fish community data is insufficient to develop complete management objectives. Fish community surveys will be a top priority for these waters. Biological and chemical surveys of selected waters will be conducted to assess management needs and determine progress toward fishery management objectives.

Stocking fish in unit waters, including fish stocking via aviation support, will be consistent with Bureau of Fisheries policies and the Programmatic Environmental Impact Statement on Fish Species Management Activities of the Department of Environmental Conservation, dated December 1979.

Objectives

- Perpetuate and enhance a diverse, high quality fishing experience in accordance with sound biological management practices.
- Maintain the diversity of coldwater and warmwater fish populations in the unit.
- Protect native fish communities from the addition of undesirable non-native fish.
- Provide recreational angling as an experience for the public including persons with disabilities.
- Encourage and promote angler use of the waters in the unit through routine fish management practices including hotlines, correspondence and contact with the public by Department staff.

Management Actions

- Conduct biological and chemical surveys of all waters within the unit as required.

B. Land Protection

1. Acquisition

Present Situation and Assumptions

The overall framework for land protection in New York State is identified in the "State Open Space Conservation Plan." The plan is built from the bottom up from the work of nine regional committees, representing the spectrum of open space advocates, natural resource and recreation professionals, local government, and concerned citizens. This plan ensures that the State of New York conserves its cherished open space resources as a critical part of efforts to improve the natural resources, economy and the quality of life in New York communities. This plan is available from DEC or at the DEC website at www.dec.state.ny.us

Objectives

- Provide public access to all state lands.

Management Actions

- Pursue acquisition of parcels identified in the Open Space Plan from willing sellers.
- Pursue acquisition of the National Grid lands along the South Branch of the Grass River.

2. Boundary Lines

Present Situation and Assumptions

Aside from public roads and riparian boundaries, the Grass River Wild Forest has approximately 84 miles of boundary lines (plus 147 miles on Conservation Easement lands in the Grass River Unit).

Objectives

- Locate and post all boundary lines on a scheduled basis.
- Physically identify APSLMP unit designations on the ground for administrative and public use.

Management Actions

- Physically inspect the boundary lines of all Grass River Wild Forest lands to determine survey and maintenance needs; assign a priority to each.
- Undertake maintenance activities to ensure all boundaries are identified and marked within the five-year implementation of the UMP.
- Brush, paint, and sign all boundary lines at least once every seven years. In particular, post signs where the boundaries cross any trail, road, or stream.
- Monitor boundaries for unauthorized activities, such as illegal motor vehicle entry, encroachment from private lands, and timber trespass.
- Sign unit boundaries with boundary signs identifying the land classification of the unit.
- Sign trailheads, trails and other entrances to the Grass River Wild Forest with specific signage identifying the unit's designation, so that both Department personnel and the public know individual unit designations.
- Explore opportunities to gain legal access to landlocked parcels in Fine.

3. Fire Management

Present Situation and Assumptions

DEC is required by law (Article 9 ECL) to suppress all human-caused and natural fires. Fire activity within the Grass River Wild Forest has been historically low. The predominantly hardwood forests combined with abundant annual precipitation lessens the likelihood of major fires. Short term droughts can increase the potential for fires.

Objective

- Adequately protect the unit from wildland fires.

Management Actions

- Fire prevention activities will consist of public education on fire safety awareness, with information disseminated through brochures and signing at informational kiosks.
- Use restrictions may be imposed on Forest Preserve lands during periods of high fire danger.

4. Use Reservations and Occupancies

Present Situation and Assumptions

Adjoining owners use several roads across Forest Preserve to reach their lands. For example, on the Tooley Pond tract, Spruce Mountain and New Bridge roads both are ROWs for the owner of the easement lands to access their lands. Although their use of these roads may be legitimate, their use and maintenance must conform to existing laws, policies, Article XIV and the APSLMP. Completion of boundary line survey work is needed to determine if there are any additional occupancies on Forest Preserve lands.

Objectives

- Comply with guidelines set forth in the APSLMP.
- Comply with provisions of Article XIV, Section 1 of the NYS Constitution.

Management Actions

- Monitor use of roads utilized under reserved rights of others.
- Develop a plan and schedule for the removal of any occupancies on Forest Preserve lands as they are discovered.

C. Man-Made Facilities

Objectives

- Construct, maintain and manage all structures and improvements in conformance with Article 14 of the state constitution, the APSLMP, and within River Areas, ECL Article 15 title 27, 6 NYCRR Part 666.
- Remove any nonconforming uses.
- Remove any illegal man-made facilities on Forest Preserve lands.

- Establish a program of continual monitoring of the unit's conforming structures and improvements through the implementation of the Department's Maintenance Management System.
- Design all structures and improvements in accordance with a unified system developed for all Forest Preserve lands and in conformance with regulations implementing title 27 of Article 15 of the ECL and any required permits.
- Support the retention and long-term development of facility construction and maintenance expertise among Department staff.
- Supplement Department staff resources by encouraging volunteer assistance in the construction and maintenance of facilities. Enter into long-term volunteer maintenance agreements under the terms of the Adopt-A-Natural Resource policy.

Management Actions

- Prepare a project work plan for each construction or maintenance project.
- Consult with the Adirondack Park Agency in accordance with the current DEC-APA Memorandum of Understanding.
- Obtain permits for any new facilities or uses within the river corridor as required by title 27 of Article 15 of the Environmental Conservation Law and 6 NYCRR Part 666 as applicable.
- Develop a complete inventory of all structures and improvements and identify maintenance needs in accordance with the Department's Maintenance Management System.
- Comply with the requirements of all applicable laws, regulations and policies.
- Use the Limits of Acceptable Change (LAC) system to monitor and address environmental impacts related to the existence of structures and improvements in the unit.

1. Roads

Present Situation and Assumptions

A wide variety of roads can be found within the unit from heavily traveled highways like State Highway 56 to lightly used forest access roads. While these major roadways pose management issues such as litter and storm water discharge, it is the local county and

town highways that pose the more significant concern to the management of the Grass River Wild Forest unit.

Concerns related to the smaller local highways involve routine maintenance and safety issues. The Grass River Wild Forest UMP stresses coordination and cooperation with local townships concerning the repair and maintenance of local highways providing access to trail heads and waterway access sites.

Area roads not open to public vehicular traffic (State truck trail/administrative roads) will only be maintained to the degree necessary to allow DEC administrative vehicles. In addition, where noticeable impacts are observed to roads being used illegally by motor vehicles, barriers will be placed. Where natural resource damage has occurred, remediation measures will take place.

Use of the roads identified herein within the River Areas predates and continued regularly after the enactment of the WSRRS Act. The operation of motorized vehicles on such roads is an existing land use and may be allowed subject to other applicable laws and regulations. With regard to designated rivers on state land, 6 NYCRR Part 666.13(E)(4) provides that no permit is necessary for the use and operation of motor vehicles and motorized equipment required for any allowable use within Scenic or Recreational River Areas. The operation of motorized vehicles on such roatds is an existing land use and may be allowed subject to other applicable laws and regulations.

Objectives

- Provide visitors with roadways that provide safe access to recreational opportunities in a manner that keeps physical and visual trail and resource impacts to a minimum.
- Maintain access roadways to appropriate APSLMP guidelines.
- Coordinate with local government to identify and address roadway maintenance projects that affect trail head access.
- Minimize the impact of road use and maintenance on the natural resources of the unit through continued monitoring and TRP issuance.
- Identify areas that provide potential scenic or recreational pull-offs.
- Prevent illegal motor vehicle use.

Management Actions

- Maintain existing roads open to public motor vehicle use.

- Open the Spruce Mtn. Road across the South Branch of the Grass River to seasonal public motor vehicle use to provide access to the Tooley Pond CE, particularly for the hunting seasons.
- Open the New Bridge Road:
    - to seasonal public motor vehicle use to provide access to the Tooley Pond CE, particularly for the hunting seasons;
    - to ATV use provided the St. Lawr. Co. Multi-use Trail is established.
- Open the Rail Road Grade Road:
    - to seasonal public motor vehicle use to provide access to the Tooley Pond CE, particularly for the hunting seasons;
    - to public ATV use from the New Bridge Road south to the CE lands provided the St. Lawrance County Multi-use Trail is established, and the conditions described under Alternative 1 in section III.D.4(c) above are met.
- Work with towns to establish a maintenance schedule for the road network supporting facilities, (i.e. barriers, signage, etc.) within the Grass River Wild Forest unit.
- Require TRP's for all road maintenance by local governments and holders of ROWs across unit lands that impacts the natural resources of the unit.
- Monitor roads in the unit for illegal use and take corrective measures when appropriate.
- Provide adequate signage and rock barriers, as needed, on roads closed to motor vehicle use.
- Enforce against illegal motor vehicle use.
- Install permanent rock barricades on side roads leading to Leonard Pond.
- Improve roadside pull-off parking at waterfall trails on Tooley Pond Road.
- Improve the road to and into the Stone Dam parcel, from beyond where it exits the Grass River CE main haul road.
- Install a pipe gate on the Hollywood Road on the Leonard Pond parcel.

2. Trails

a. Hiking, Skiing, Snowshoe Trails

Present Situation and Assumptions

A primary goal for all trail systems is to develop sustainable trails that have minimal impacts on the environment, require little maintenance, and meet the needs of the users. Trails should be developed using appropriate design standards based on the desired uses. Considerations should be made for either a single or multiple treadway, tread width and surface, corridor and vertical clearance, sight distance, grades, and turning radius to provide an appropriate trail experience for expected users and levels of use.

Hiking trails are designed specifically for foot travel. These trails may contain design features such as: stone steps, bog bridges, and waterbars. Cross country ski trails are designed specifically for skiing and often feature a system of looped trails of varying difficulty over rolling terrain. Ski trails are, however, often compatible with a variety of other uses.

Trail maintenance standards will utilize the DEC's trail classification and marking standards listed in Appendix P. Trail maintenance activities include:

- Maintaining drainage structures
- Clearing to maintain height and width clearances
- Maintaining bog bridges and other structures
- Maintaining signage
- Stabilizing trail tread surfaces

A monitoring program should be developed to monitor trail conditions. Regular monitoring of trail conditions allow for early detection of safety or maintenance issues before user safety is compromised or trail conditions worsen. This monitoring program will include an annual inspection of all trails in the unit. This monitoring program will include:

- Monitoring trail use to avoid user conflicts and to ensure sustainability;
- Monitoring trail conditions, including the locations of invasive species;

When overuse is occurring, remediation should be provided through the use of water control and trail hardening techniques, or by relocating sections of the trail. Sometimes it may be necessary to close or reroute a trail due to poor initial design, overuse, illegal

use, or other factors. Some trails are located on routes not initially developed for foot trail use. These trails may have started out as logging roads, and may have wet areas, steep slopes, ruts or other conditions that have caused degradation.

Trail reclamation strategies may include: closure, stabilization, recontouring, and revegetation. Restoration can be as simple as blocking a closed section of trail and allowing the vegetation to recover. More complex projects may include removing any trace of the trail tread, and actively planting native vegetation. Careful monitoring of the restored trail section is then needed to ensure that little evidence remains of the old trail.

Vegetation should be allowed to grow on the abandoned trail where it intersects with the designated trail. Brush, rocks and other natural material should be placed on the abandoned trail for a distance so that the linear characteristic of the trail cannot be readily identifiable. Old DEC trail markers should also be removed.

The Grass River unit's trail system on Forest Preserve encompasses approximately 8.65 total miles of trails, which consists of 3.65 miles of snowmobile trails and 5.0 miles of foot trails. Skiing and snowshoeing also occur on the units trails. However, no monitoring of these uses has occurred in the unit, and so the extent to which they contribute to overall trail use and impact is unknown, though the impact is assumed to be minimal since use is while there is a snowpack in place.

Trails are not self-sustaining and must receive a degree of trail maintenance or they will deteriorate quickly and cause other resource problems. Blowdown, heavy brush and vegetation growing in from the sides of the trail, and wet areas are most commonly encountered. Currently, the need for trail maintenance in the unit is greater than the maintenance resources the Department has to offer.

Despite the need for maintenance and rehabilitation on the trails in the unit, most trails are in fair to good condition. The rolling topography of the Grass River unit creates sections of trail in good condition on the high ground, and wet conditions around stream crossings and along stream corridors. Most of these trail problems can be addressed by drainage work, and others can be fixed with minor trail rerouting. In order to prioritize trail maintenance activities, all Grass River unit trails will be incorporated into the DEC's trail classification system in Appendix P.

Objectives

- Provide visitors with a trail system that offers a range of Wild Forest recreational opportunities in a manner that keeps physical and visual trail and resource impacts to a minimum.

- Maintain trails to appropriate Wild Forest standards.

- Identify need for trail relocations and/or need for new trails.
- Provide access to areas as appropriate and needed in a manner that protects the resource.
- Provide a unified system of trail signage and markers on Forest Preserve lands.
- Allow volunteer groups under Volunteer Stewardship Agreements ("VSAs") to assist with trail maintenance activities. Acknowledge and recognize the work of all groups and volunteers for their efforts on trails. Sponsor and publicize volunteer trail work days to involve community members in trail maintenance.
- Construct and maintain trails in conformance with APSLMP and DEC policy to the specifications as outlined in the Departments Trail Construction and Maintenance Manual. Within river areas, permits will be obtained and trails will be constructed to conform to the definition of trails or appropriate variances will be sought.
- Assure that trail surfaces remain durable by addressing problem sections with suitable trail hardening techniques.
- Encourage the use of regularly scheduled trail monitoring and maintenance that includes inspection and assessment of trail conditions, use, signage, and structures – followed by prompt repair.

Management Actions

- Annually inspect all marked trails. Conduct minor maintenance, (blowdown removal, brushing, etc.), as the need occurs.
- Follow DEC trail marking standards, (See Appendix R). Foot trail markers will be used on trails where only foot traffic is permitted.
- Construction of new trails will include any structures needed to protect the resource and to allow use of the trail, such as bridges.
- Construct a foot trail to Church Pond from State Highway 56, if feasible. It would require a parking area on the easement across the road and permission from the adjactent landowner to cross a skinny strip of land to get on to Preserve.
- Designate and mark trails to waterfalls along Tooley Pond Road including; Basford, Sinclair, Bulkhead, Rainbow, Copper Rock, and Twin Falls.

- Improve the canoe carry trail on the Middle Branch parcel by constructing a boardwalk, and install a trail register. This boardwalk may require a wetland permit; therefore this project will be done in consultation with the APA.
- Build a trail to Cranberry Pond, if an acceptable location can be found.
- Build a canoe carry trail through the Cranberry Pond parcel to the North Branch of the Grass River on the Grass River CE, to provide access to the stillwater section of the river.

b. Bicycle Trails

Present Situation and Assumptions

Bicycling is one of the fastest growing recreational activities in the United States (New York Statewide Trails Plan, NYSOPRHP, 2010). The increasing demand for bicycle trails has increased the pressure for use on trails established for other uses, and for the development of additional trails constructed to sustainable trail standards. Bicycle trails are typically designed for low-impact use, and can range from general to challenging.

In recent years, the St. Lawrence County bicycle community has become well-established. This bicycle community has sought to reduce conflict by maintaining trails, educating trail users, and minimizing environmental impacts.

Currently all roads and designated trails are suitable for bicycle use. At current levels of bicycle use, no significant environmental impacts are likely to occur on these trails. Assessments of current trails, and potential trails not currently designated, should be accomplished. Assessments should focus on identifying both areas which may be designated in the future for bicycle use, and on areas where bicycle use should be prohibited due to environmental impacts or user conflicts.

Objectives

- Allow volunteer groups under VSA's to assist with bicycle trail maintenance activities.
- Assure that bicycle trail surfaces remain durable by addressing problem sections with suitable trail hardening techniques.
- Design bicycle trails to avoid sensitive areas and wetlands.
- Use existing roads where possible that do not exceed grades of 10%.

Management Actions

- Monitor bicycle use within the unit.

- Annually inspect all trails. Conduct minor trail maintenance, (blowdown removal, brushing, etc.) as the need occurs.
- Assess all trails for suitability for bicycle use.
- Follow DEC trail standards for maintenance and construction (see Appendix R).
- If sections of trails being used by bicycles become too eroded, and no mitigation measures are found to alleviate the damage, those sections of trails will be closed, and relocated, if possible.
- Develop a bicycle trail connecting the old Grass River logging road at Lampson Falls to bicycle trails within Downerville State Forest.

c. Snowmobile Trails

Introduction

The main purpose of snowmobile trail use in the Grass River Wild Forest unit is to provide a Forest Preserve snowmobiling experience and to connect to existing snowmobile trails on adjacent lands. Snowmobile trails have been designated throughout the unit, crossing and linking various Wild Forest parcels with easement tracts. For example, snowmobile trails provide connecting links between the Tooley Pond Forest Preserve and CE parcels, the Grass River CE and the Long Pond CE.

Present Situation and Assumptions

The DEC system of snowmobile trails has been used by the NYS Office of Parks, Recreation, and Historic Preservation (OPRHP) to identify a snowmobile trail corridor system within the unit as part of OPRHP's statewide snowmobile trail network. OPRHP's snowmobile trail classification plays a major role in the amount of funding available for grooming and trail maintenance. Trails designated by OPRHP as snowmobile "corridor" or "secondary" trails are eligible for OPRHP funding to support maintenance and grooming. DEC, as per the *Management Guidance*, however, utilizes a different trail classification system and different trail construction and maintenance standards on Forest Preserve lands than those recommended by OPRHP.

The DEC classification of snowmobile trails on Forest Preserve lands is as follows:

Class II (Community Connector Trails) - Snowmobile trails or trail segments that serve to connect communities and provide the main travel routes for snowmobiles within a unit are Community Connector Trails. These trails are located in the periphery of Wild Forest or other Forest Preserve areas. They are always located as close as possible to motorized travel corridors, given safety, terrain and environmental constraints, and only rarely are any segments of them located further than one mile away from the nearest of

these corridors. They are not duplicated or paralleled by other snowmobile trails. Some can be short, linking communities to longer Class II trails that connect two or more other communities.

Class I (Secondary Snowmobile Trails) - All other snowmobile trails that are not Community Connector Trails are Secondary Snowmobile Trails. These trails are located in the periphery of Wild Forest and other Forest Preserve areas where snowmobile trails are designated.** They may be spur trails (perhaps leading to population areas and services such as repair shops, service stations, restaurants and lodging), short loop trails or longer recreational trails. If directly connected to Class II trails, new and rerouted Class I trails are always located as close as possible to - and no farther than one mile from - motorized travel corridors, although some - with high recreational value - may be located beyond one mile and may approach a remote interior area.

Snowmobile Use on Roads - DEC management of all such roads for motor vehicle use, including snowmobiles, is guided by the Department's CP-38 Forest Preserve Roads policy.

A Park-wide Perspective on Snowmobile Planning

Until recently, snowmobile trail planning and development was accomplished through individual unit management plans on a unit by unit basis. Throughout the development of recent UMPs, the need to consider a broader approach to snowmobile trail planning became evident. When the Adirondack Park snowmobile trail network is viewed in its entirety, it becomes obvious that there are numerous gaps in the trail network, as well as redundant trails. These gaps isolate individual towns and villages and without connections to other regions may limit opportunities for riding to local trails. In other cases ice crossings, necessitated by the lack of ground routes, adversely affects when adjoining trails may be used. These situations not only limit for some communities the opportunity to take advantage of the economic benefits of snowmobiling but also tend to focus more intensive use of areas with a more developed snowmobile trail network.

Developing a better Park-wide network will not only improve snowmobiling opportunities throughout the Park, but will offer opportunities to enhance areas within the interior by reducing impacts associated with snowmobile use. Interior trail closures should focus on dead-end trails, those requiring ice crossings, trails that are redundant and those that are in proximity to either wilderness boundaries or areas of the unit that are relatively primitive in character. Although the balance of new long distance connections versus interior back country opportunities may not achieve the desires of all snowmobilers, it is consistent with the direction of snowmobiling on the Forest Preserve, where the emphasis is on providing trail connections that cross the Forest Preserve in lieu of trails that utilize the forest preserve as a destination for riding. These concepts are outlined in

the 2006 Snowmobile Plan and the *Management Guidance*. New connecting routes should follow public highway corridors or be as peripheral to the unit as possible. The overall goal of this approach is to focus motor vehicle use in or near travel corridors while making interior portions of the unit more primitive in character.

Existing Trails and Trail Designations

Hollywood Road – This road (2.25 miles) provides a connection between the Leonard Pond parcel and the Seveys Easement, and connects to various secondary snowmobile trails. It will be managed consistent with CP-38, the Forest Preserve Roads policy.

Spruce Mountain Road – The snowmobile route uses just a short portion of the Spruce Mountain Road (0.65 miles), between the intersection with the Beech Hill Road (see below) north to the boundary of the Forest Preserve corridor along the South Branch of the Grass River. It will be managed consistent with CP-38, the Forest Preserve Roads policy.

Beech Hill Road – One segment of road (0.22 miles) through Forest Preserve provides a connection between the Spruce Mountain Road and the rest of the Beech Hill Road, which runs along the shared boundary of the Forest Preserve parcel and the CE. The latter section of the road is not counted as a Forest Preserve route since a portion of the road is on Forest Preserve and a portion on CE, and each landowner has the right to maintain and use the entire road if so desired, per the original deed for these land transactions. There is also a 0.8 mile segment at the south end of the road that is entirely on Forest Preserve, as the boundary follows the stream for a short distance.

Railroad Grade Road – This road (2.83 miles) is an old railroad bed which enters the Forest Preserve parcel near New Bridge and runs parallel to the river until exiting to the CE near the Clifton Mines. It provides a route connecting the communities of Degrasse and Cranberry Lake. It will be managed consistent with CP-38, the Forest Preserve Roads policy.

New Bridge Road – This short segment of road (0.07 miles) connects the Tooley Pond Road (a town road which the town has open to snowmobiles) to the Railroad Grade Road. It will be managed consistent with CP-38, the Forest Preserve Roads policy.

Trail Closures

No snowmobile trails are proposed to be closed.

During winter logging operations on the easement lands, when the snowmobile trails may be closed for safety reasons, alternative routes will be explored with the St. Lawrence County Snowmobile Association.

Trail Construction

No snowmobile trails are proposed to be built on GRWF.

Before any portion of trail is constructed or rehabilitated, a detailed Snowmobile Trail Work Plan will be developed as per the *Management Guidance*. The final layout will utilize existing roads, trails and natural openings to the greatest extent possible. Wetland permits will be obtained from APA if required. It is possible that soil and grade conditions would make the trail suitable for the use of bicycles during the summer and fall months.

Projected Use and Potential Impacts

Potential environmental impacts of snowmobile trail use will be minimized through the application of best management practices during trail maintenance. Monitoring will be important to ensure that environmental degradation of the trail is minimized. If degradation were to occur, the Department would take appropriate mitigation actions, including increased maintenance activities, education and other management actions. The Department will work with local snowmobile clubs to monitor use and to coordinate maintenance activities through the use of temporary revocable permits or Volunteer Stewardship Agreements.

Discussion of "No Material Increase"

The APSLMP requires that there be no "material increase in the mileage of roads and snowmobile trails open to motorized use by the public in wild forest areas that conformed to the APSLMP at the time of its original adoption in 1972." Further, the APSLMP states that "the mileage of snowmobile trails lost in the designation of wilderness, primitive and canoe areas may be replaced in wild forest areas with existing roads or abandoned wood roads as a basis of such new snowmobile trail construction, except in rare circumstances requiring the cutting of new trails" and that "wherever feasible such replacement mileage should be located in the general area as where mileage is lost due to wilderness, primitive or canoe classification."

While the material increase provision applies to all wild forest areas on a Park-wide basis, efforts are made during the planning process for each unit to close unsuitable snowmobile trails to help compensate for new snowmobile trail mileage necessary for trail relocations or new community connector links where they may be determined to be possible and desirable. In order to determine what contribution proposals of this UMP would make to a "material increase" or decrease in trail mileage, it was necessary to document historic mileage in the unit and compare that mileage to the total mileage proposed in this plan.

Snowmobile Trail Grooming

Current snowmobile trail grooming is done under an existing Volunteer Stewardship Agreement (VSA) with the St. Lawrence County Snowmobile Association. DEC will continue to allow grooming by tracked groomers on trails designated as Class II trails community connector trails within the Grass River Wild Forest, and on routes that are Forest Preserve roads.

Snowmobile Trail Counter

The NYS Department of Transportation provided the St. Lawrence County Snowmobile Association with an acoustic sensor traffic counter which was located on one snowmobile trail on the Long Pond easement during the winter seasons 2009-2012 (see discussion of results on page 46, Section II.D.2.d). DOT has expressed their willingness to cooperate with us on additional snowmobile trail use monitoring, especially near intersections with public roads.

Objectives

- Provide for snowmobiling opportunities in the Grass River Wild Forest unit consistent with APSLMP criteria and guidelines.
- Connect the Grass River Wild Forest snowmobile trail system with the snowmobile trails in the conservation easement tracts and other adjacent private lands.
- Ensure that all snowmobile trails in the unit are being maintained.
- Connect the Grass River Wild Forest snowmobile trail system with trails in the communities of Degrasse, Star Lake, South Colton and Cranberry Lake, in the towns of Clare, Clifton, Colton, Fine, and Piercefield.

Management Actions

- Maintain the existing snowmobile trail system as a designated snowmobile trail system.
- Monitor grooming practices on all trails.
- Annually monitor use levels through the use of trail counters.
- Develop trail logs detailing work needed on snowmobile trails.
- Submit work plans for each snowmobile trail requiring work, prior to any trail work taking place.

- Review all snowmobile routes being maintained by clubs under a VSA to be sure they are being maintaining in compliance with the agreements.

In March of 2008 the APA adopted a resolution which found that existing DEC policy, which places a limit on the total snowmobile trail mileage on all wild forest units in the Adirondack Park at 848.88 miles, is consistent with the APSLMP Wild Forest Basic Guideline #4. The resolution also outlined the format in which snowmobile trail mileage should be presented in UMP's to ensure continued compliance with Basic Guideline #4.

This Unit Management Plan

Base Snowmobile Trail Mileage (pre-UMP): 6.10
Proposed Closure Mileage: 0
Proposed New Trail Mileage: 0
Snowmobile Trail Mileage Post-UMP: 6.10

Table 7: Park-wide Trail Mileage:

1972 Mileage	**Estimated Existing Mileage in All Wild Forest Units**	**Proposed Net Gain/(Loss) of Mileage in GRWF**	**New Total Estimated Mileage in All Wild Forest Units**	**Total Allowable Wild Forest Mileage*** *Mileage beyond which would be considered a "material increase"
740	Fill in later	0	Fill in later	848.88

3. Trailheads (Informational Facilities)

Present Situation and Assumptions

A trailhead is defined as the starting or termination point of one or more designated trails at a point of entrance to State land which may contain some or all of the following: vehicle parking, trail signs, and peripheral registration structures (Van Valkenburg, 1987).

Trailheads make excellent locations for providing visitor information. It is important that trail users have access to information regarding trails to enhance their experience. If trail users are uncertain about trail location or direction, they may become disoriented, or they may create new trails that damage the environment. Trailhead registers also provide important information about visitor use to the DEC. Information is used to plan

facility maintenance, measure use and effects, and locate users in case of an emergency.

Visitors receive their first impression of the Forest Preserve area that they are about to enter from the nature and condition of the trailhead and/or parking facility. To allow visitors to readily identify the many separate parcels of the Grass River Wild Forest unit as part of a single entity, and to provide complete information in a consistent format, trailhead designs should be standardized.

A trailhead classification system was adopted in 1986 to provide for consistency in their location and development. Class I trailheads are the most developed and are found at the main entrances to the backcountry. Class II and III trailheads are associated with lesser used trails with correspondingly less development.

An expanded trail register structure - type 2, or “Storey kiosk,” originally designed by Mike Storey of the APA, has been developed by the Department. It contains a space on the side where the drop-down door contains a mounted trail register. There are also exposed panels for the posting of information, and rules and regulations, along with a map of the area. Installation of new trail registers shall follow this design, where space and the use or nature of the trail justifies this action.

The following information should be displayed at all DEC trailheads:

- Trail name
- Total trail mileage
- Total elevation
- DEC trail marker(s)
- DEC rules and regulations (restrictions)
- Leave No Trace (LNT) principles
- Trail Map
- DEC Emergency contact (Forest Ranger Dispatch) number

Objectives

- Provide trailhead facilities to protect resource values and to accommodate visitor needs.
- Indirectly manage interior use by balancing parking area capacities to interior visitor capacities.

- Provide trail registers, complete with maps, that clearly show trail routes and destinations available in the Grass River Wild Forest unit. Applicable rules and regulations and emergency numbers should be posted at these locations.

- Obtain better visitor use data by installing additional trail registers at known points of access.

Management Actions

- Inspect all trailheads on a regular basis. Maintain all trailhead informational facilities in a neat, litter free condition. Trail registers should be kept up and monitored regularly. Schedule routine maintenance of all trailheads and litter removal.

- Obtain more reliable visitor use data. Use infrared trail counters or other visitor use estimation methods to more accurately determine use within the unit.

- Develop a standardized method of collecting, compiling and reporting user data collected from trail register sheets.

- Install a trail register at the new foot trail to Church Pond.

- Install a trail register on the canoe carry trail on the Middle Branch parcel.

4. Trail Registers

Present Situation and Assumptions

DEC trail registers, whose original purpose was to help locate people who were lost, can also be used to provide important visitor use information. Trail registers enable the DEC to monitor visitor use for a particular location. These registers provide data on: date of entry, type (day or overnight), party size, location, destination, amount and purpose of visit. However, many trail users do not sign registers, and register sheets are occasionally destroyed or lost through vandalism. Nevertheless, trailhead registrations can give an indication of relative use levels, particularly if they are calibrated with more accurate forms of use monitoring systems. Trail registers will be installed at all new facilities as they are constructed or acquired on the Grass River Wild Forest unit.

All registers in this unit are of the standard box type. The following locations all have these style registers which are in good condition: Tooley Pond, Tooley Pond Mountain, Sinclair Falls/Lake George Rd. and Lampson Falls. The trail register data can be found in Table 2.

Objectives

- Record public use numbers.

- Provide a list of users for search and rescue activities.

Management Actions

- Maintain all register boxes in the unit.
- Install trail registers on new facilities as they are constructed.

5. Gates/Barriers

Present Situation and Assumptions

Gates are employed at selected locations to curtail illegal motor vehicle use and/or to protect road and/or trail surfaces from use during inclement weather. Gates are painted bright yellow, marked with red **STOP** signs and have "barrier ahead" cautionary signs posted 150 feet on either side of the gate.

Metal pipe gates and rock barriers are typically used to stop or limit motor vehicle use in locations where such use is not permitted. Although gates and barriers provide a deterrent, they are often circumvented, especially by ATV's. Evidence of illegal use around gates and barriers is an indication that current management strategies need to be re-evaluated and new management actions proposed. Where closure is permanent, and does not involve use of a trail by snowmobiles, gates should be removed and replaced with large rock barriers.

Objectives

- Control access to roads closed to motor vehicle use.
- Protect road surfaces during mud seasons.
- Maintain all gates in working order with proper cautionary signage.

Management Actions

- Update all gates to current health and safety regulations.
- Install a pipe gate on the Hollywood Road.
- Install a pipe gate on the access road near Gate 10 on the Tooley Pond Road.
- Install rock barriers on side roads leading to Leonard Pond.

6. Kiosks

Present Situation and Assumptions

Trail information can be disseminated in a wide variety of formats, including: maps and brochures. Providing information to users through the use of informational kiosks not only enhances their enjoyment of the area but also educates them to guidelines, areas of interest, and other opportunities available within the unit. A new kiosk was constructed at Lampson Falls in 2007.

DEC kiosks are used to provide a wide variety of educational information at one location. Standard kiosks include a plexi-glass covered display board. Educational information includes: water supply, human waste, fire, litter, tree and vegetation cutting, and camping restrictions. The kiosks in the unit presently contain: DEC general rules and regulations, maps, and educational and emergency contact information, (877-457-5680).

Objectives

- Provide educational information, DEC rules and regulations and emergency contact information to users.

Management Actions

- Maintain all information kiosks in the unit.
- Install information kiosks at new facilities as they are constructed.

7. Primitive Tents Sites

Present Situation and Assumptions

Existing camping regulations require camping to be either at designated sites or undesignated locations that are at least 150 feet or more from road, trail or water (6 NYCRR S 190.3 (b)). The latter is referred to as the “150 foot rule”. A primitive tent site, commonly referred to as a designated primitive tent site, is one identified by a DEC sign or yellow 4 ½ " diameter marker. Per the APSLMP, this primitive tent site provides space for not more than three tents, designed to accommodate a maximum of eight people on a temporary or transient basis, and is located in a manner least intrusive to the environment.

Tent sites will be designated to direct campers to previously used disturbed areas, to define proper camp locations, to disperse use, and limit adverse impacts to resources and other campers. Steep shoreline, steep mountains, rocky outcrops, wetlands, poorly drained soils, etc., severely restrict camping and intensify the demand for available tent sites. The tent sites in the unit that were developed by the Department have been

carefully developed to minimize soil erosion and disturbance to wildlife. Many of the sites were located close together due to these terrain constraints. This primitive tent site development method has caused tent sites in some instances to be developed in a manner that does not conform to the APSLMP with regard to sight and sound separation distances.

Large camping groups require greater primitive tent site space and often clear areas to accommodate additional tents, store equipment, or make room to eat and congregate. Large groups cooking with wood fires generally consume greater amounts of fuel wood and extend firewood gathering areas. Impacts tend to be more spread out and extend well beyond primitive tent site boundaries. There are no restrictions limiting day use. Groups of any size may enter the Grass River Wild Forest unit. When staying overnight, stricter restrictions apply. This plan reflects APSLMP compliant group camping separation distances as well as sight and sound separation distance spacing on primitive tent sites as the norm. Sites which have been established through long-term repeated use were evaluated in terms of size, distance from trails and water sources, distance between sites, level of impact on vegetation and soils, amount of garbage present and human sanitation problems.

The APSLMP guidelines for primitive tent sites in wilderness areas, which are also relevant in wild forest areas (APSLMP, page 21) defines conforming primitive tent sites as meeting the following criteria:

> *Primitive tent sites below 3,500 feet in elevation that are out of sight and sound and generally one-quarter mile from any other primitive tent site or lean-to; where severe terrain constraints prevent the attainment of the guideline for a separation distance of generally one-quarter mile between primitive tent sites, individual unit management plans may provide, on a site-specific basis, for lesser separation distances, provided such sites remain out of sight and sound from each other, be consistent with the carrying capacity of the affected area and are generally not less than 500 feet from any other primitive tent site.*

During the summer of 2008, primitive tent site impact assessments were conducted at the following locations within the Grass River unit: Harper Falls, Lampson Falls, Leonard Pond, Stone Dam, and Tooley Pond. Primitive tent site monitoring was conducted to measure the conditions of the resources affected by recreational use, and to provide a consistent process for collecting baseline data. The designated primitive tent sites at Lampson Falls and Stone Dam were the most heavily impacted (condition class 4 or 5).

An analysis of existing camping locations and the separation distance between sites in the Grass River Wild Forest unit revealed that many individual sites were not in compliance with the guidelines set forth in the APSLMP.

Groups of 10 or more individuals up to a maximum of 20 people must obtain a camping permit prior to overnight use of NYS lands as required by DEC rules and regulations (6 NYCRR §190.4(e)). Under guidelines for management and use of wild forest areas (APSLMP, page 35), the APSLMP additionally allows:

> *"Small groupings of primitive tent sites designed to accommodate a maximum of 20 people per grouping under group camping conditions may be provided at carefully selected locations in wild forest areas, even though each individual site may be within sight or sound and less than approximately one-quarter mile from any other site within such grouping, subject to the following criteria:*
>
> *-- such groupings will only be established or maintained on a site specific basis in conformity with a duly adopted unit management plan for the wild forest area in question;*
>
> *-- such groupings will be widely dispersed (generally a mile apart) and located in a manner that will blend with the surrounding environment and have a minimum impact on the wild forest character and natural resource quality of the area;*
>
> *-- all new, reconstructed or relocated tent sites in such groupings will be set back a minimum of 100 feet from the mean high water mark of lakes, ponds, rivers and major streams and will be located so as to be reasonably screened from the water body to avoid intruding on the natural character of the shoreline and the public enjoyment and use thereof."*

While the APSLMP accepts large camping groups of 9 to 20 people in wild forest areas, it is very specific about how carefully they should be accommodated "*per grouping under group camping conditions.*" Group sites will be a cluster of three primitive tent sites that will be available to groups with a group camping permit. Group camping permits will be issued by the Department for a specific "area" and for a specific time period and restricted so as to limit the number of group camping permits to the number of group sites available in that area. The maximum group size for group sites which are designated along waterways will be 12 people; at any other group sites in wild forest areas, the group size may be up to 20 people, with no more than 8 people allowed in an individual tent site. At group camping locations along waterways after 5 PM, any unoccupied group site will become open to the public at large for that night or until a group with a group camping permit arrives, for no more than 3 consecutive nights. The

use of this area will be closely monitored and, if user conflicts result, the Department may choose to designate the sites for use via permit only to alleviate user conflicts. Careful and limited development of designated group primitive tent sites is called for in the APSLMP since camping in large groups can cause significant degradation of an area's resources. This is reflected by the APSLMP guideline that states such group primitive tent sites "*will be widely dispersed… and have a minimum impact on the wild forest character and natural resource quality of the area*."

Group primitive tent sites are to be provided only *"at carefully selected locations in wild forest areas*" and established or maintained only "*on a site specific basis in conformity with a duly adopted unit management plan*."

Camping is a non-motorized recreational use that is allowable and does do not require a permit in the designated River Areas. (6 NYCRR Part 666.13(J)) Compliance with the ASLMP in locating campsites will also protect the river areas while allowing public use and enjoyment of these areas.

The designating of primitive tent sites will conform to the following criteria:

- The primitive tent sites will be designed to accommodate a maximum of 8 people.
- Individual tent sites will be compliant with the APSLMP.

The designating of group camp sites will conform to the following criteria:

- The grouping will be designed to accommodate a maximum group size of 12 people along waterways and no more than 20 people in other areas.
- Individual tent sites within a group site do not have to be out of sight and sound and may be less than one-quarter mile apart from other sites in the grouping.
- The group sites will be more than one mile from any other designated group site.
- Impacts on natural resources will be minimized by locating new individual sites at least 100 feet from water and wetlands.

Objectives

- Manage visitor use to keep impacts on the resource and experiences of all visitors at an acceptable level consistent with the concept of Wild Forest as described by the APSLMP.
- Provide primitive and group camping locations where appropriate.

- Keep the effects of visitor use on resources to a minimum.
- Provide appropriate screening of tent sites from water bodies.
- Encourage both overnight and day users to keep parties small.
- Reduce, eliminate, or mitigate the adverse effects of camping on natural resources that result from improperly located primitive tent sites.
- Comply with the APSLMP primitive tent site standards to disperse use.
- Direct the public to designated camping locations by providing information in DEC publications and at area trailheads.

Management Actions

- All primitive tent sites within the unit will be monitored for damage due to overuse. Where overuse of these primitive tent sites is occurring, the least intrusive measures, such as user education and/or site remediation, will be implemented. If these are not successful in reducing user impacts, more stringent measures will be considered and appropriate management actions taken.
- Monitor primitive tent sites in popular areas annually. Survey locations where camping is believed to occur. Re-inventory primitive tent sites every five years.
- Remove nine of the thirteen primitive tent sites at Stone Dam. Designate three of the remaining sites as a group site, and leave open a fourth site, which is approximately 700 feet north of the proposed group site, as an individual tent site. Preliminary field work indicates that the group site and individual site are generally out of sight and sound from one another. A map of this area is found in the Appendix.
- Remove three of the current five primitive tent sites at Lampson Falls. The two remaining sites will be over ¼ mile from each other.
- Evaluate the need/demand for up to two additional primitive tent sites in the Lampson Falls area and consult with APA for placement.
- Designate any new primitive tent sites in the Grass River Wild Forest unit so that campers are directed to locations that can accommodate such use. The goal is to define proper primitive tent site locations, disperse use, and limit adverse impacts to resources and other users.

- Restore all closed primitive tent sites to a natural condition. Fire rings, tree stumps and other evidence of past use will be removed. Native seedlings may also be planted at disturbed primitive tent sites.

- Annual work plans shall incorporate primitive tent site maintenance and rehabilitation.

8. Signs

Present Situation and Assumptions

DEC signs indicate the locations of Forest Preserve lands, trails, and trailheads. In addition, DEC produces a variety of signs that give information about rules and regulations, educational information, directions and distances to destinations, and resource conditions to Forest Preserve visitors. These signs are posted at trailheads as well as interior locations. Currently, trailheads and much of the Grass River Wild Forest boundary are not well identified.

Most signage by the Department is authorized 9 NYCRRR Part 577.6 and 6 NYCRR Part 666.13(G)(1) and (3). Permits will be obtained where required.

Regular maintenance of DEC signs should be part of the sign plan for the unit. Signs are highly visible and their maintenance or lack of maintenance leaves the visitor with a positive or negative impression about the trail and the unit. Well-maintained signs convey a sense of pride and reduce vandalism while poorly maintained signs may contribute to a diminished visitor experience, including disorientation of trail users.

Poor signage of DEC facilities and public lands may be responsible for underutilization of Grass River Wild Forest unit recreational opportunities. Some trailheads are hard to find, even if one is looking for them. There is an opportunity to improve the recognition of the Grass River unit through better use of signage. To be sure that the public will be able to easily locate Forest Preserve lands and recreational facilities, the following guidelines will apply to the maintenance, design, erection, and management of DEC signs:

- All roadside directional signs, Forest Preserve unit signs, trailhead identification signs, and interior signs will be made of wood, and will be brown in color with yellow lettering.

- Standard DEC Forest Preserve boundary signs indicating the classification of the land being identified will be posted approximately every one-tenth mile along all highways that pass through or adjacent to Forest Preserve lands, and at other strategic locations.

- Maintain a record of all DEC signs, including location, type of sign, and photo.
- Inspect signs regularly, especially after each winter season, for weathering and visibility.
- Secure loose or tilting signs in an upright position.
- Clear vegetation from around signs to maintain visibility.
- Review signage content to ensure continued relevance and accuracy.
- All DEC signs removed through vandalism or other causes will be promptly replaced.

Designated trails will have the following:

1. Signs at each road crossing or major access point indicating:
    - Name of the Forest Preserve management unit, along with its classification.
    - Name of the trail.
    - Name of the trailhead or access point.
    - Name of, and distance in miles to, the named feature.
    - Activities permitted on the trail.
    - Sign with map of the complete trail, indicating adjacent attractions.
2. Barriers, e.g., posts, gates, or boulders at every trailhead to prevent and deter activities not permitted on that section of the trail.
3. At major trail access points:
    - Sign on highway indicating trail.
    - Off-road parking.
    - Sign with map of the complete trail, indicating adjacent attractions.
4. Adequate maintenance to enable safe and enjoyable use for the activities permitted. Trail will be posted as closed if conditions make the trail unsafe.

Objectives

- Display simple, effective and informative messages to the visiting public.

- Provide for the smallest number of signs to accomplish an educational, informational or regulatory objective.
- Sign for visitor safety, resource protection, and to inform the public about recreational opportunities.
- Maintain a consistent look to the Forest Preserve - DEC signs should be standardized. Trail marking will be adequate to the trail classification system, and adhere to the trail marking standards in Appendix P.
- Provide for recognition of VSA and stewardship activities by placing signage on or near the adopted natural resource.
- Include universal symbols on signage and information kiosks to ensure that users are informed.
- Minimize regulatory signs at interior locations in favor of signs posted at trailheads or access points and published, where feasible, in brochures, maps or webpages, or otherwise made available to users prior to entry into the unit.

Management Actions

- Complete a comprehensive current sign inventory. Develop a sign plan for the Grass River unit. Evaluate the number of trail signs needed for: place names, mileage and direction.
- Update and maintain the sign inventory annually. Complete trail condition and use forms to document that all signs are in place and to report any vandalism.
- Remove illegal signs.
- Replace old, rotten and delaminating signs.
- Identify access points. New signs will be placed at area trailheads identifying recreational opportunities and rules and regulations. Forest Preserve boundary signs will be posted along roads, waterfronts, and boundary lines showing either the name of the unit, or wild forest classification. Large DEC unit signs will be placed along the main roads that travel through the larger portions of the Grass River unit.
- Install signs and mark trail to Church Pond from State Highway 56.
- Install signs and mark trails to waterfalls on Tooley Pond Road.

9. Bridges

Present Situation and Assumptions

Bridges may be built for resource protection, such as crossing swift rivers, and other places constituting a public safety hazard. Construct bridges to the minimum size needed to serve trail users, and design bridges to be as unobtrusive as possible to comport with APSLMP and, within river areas 6 NYCRR Part 666.13(E) note 3(iii). Bridges shall be built for resource protection, not user convenience. Within river areas, any new bridge over a designated river will be permitted as required by the applicable regulations for that Area.

Objectives

- Provide for safe crossings of streams, wetlands and rivers that do not impact the natural resources.
- The need for new bridges or other trail-hardening facilities will depend upon the allowed uses on the trail.
- Newly constructed snowmobile bridges will be of standard design using dimensional lumber or poles for stringers depending on total bridge length, pursuant to the June 8, 2006 Forest Preserve Snowmobile Bridge Project No.: 04-2151 design.
- Less obtrusive alternatives to bridges, such as culverts, fords and trail relocation, will be considered as an alternative.

Management Actions

- Conduct annual bridge inspections on a regular basis. These reports will document current problems, and the necessary maintenance will be scheduled as indicated by such inspections. A prioritized maintenance schedule will be based upon these inspections. All bridges that are deemed unsafe will be addressed as soon as possible.
- Remove from the site and dispose of properly, any unused material from new bridge construction and maintenance.
- Remove illegal user-constructed bridges that do not comply with DEC standards and specifications - specifically, the Stone Dam cable suspension bridge. It will be replaced with an APSLMP and Part 666 compliant bridge at the same location, as there are no good alternative locations.

- Construct bridges at other stream crossings associated with new trail proposals, where necessary. Consultation with APA will occur regarding the need for a wetland permit before any bridge project proceeds.

10. Lean-tos

Present Situation and Assumptions

Lean-tos are a traditional, quintessential feature of the Adirondacks. Prior to the advent of lightweight backpacking tents, lean-tos were constructed in many areas to provide shelter from inclement weather. These lean-tos were often built immediately adjacent to trails, and close to water sources. They were sometimes clustered in scenic areas to accommodate increased visitor demand, and to facilitate maintenance. Many lean-tos also featured fieldstone and concrete fireplaces, pit privies, and picnic tables.

At present, there are no lean-to facilities in the Grass River Wild Forest unit. The APSLMP recognizes lean-tos as conforming structures in Wild Forest units.

The APSLMP provides that any “new, reconstructed or relocated lean-tos” in Wild Forest areas will be set back a minimum of 100 feet from water, and have proper sight and sound separation distances from adjoining primitive tent sites or other lean-tos (APSLMP 2011, page 33). 6 NYCRR Part 666.13 provides further restrictions on the siting and construction of lean-tos; however, no leatos are proposed within a Scenic River Area.

Objectives

- Provide new lean-tos that conform to the APSLMP guidelines.
- To construct new lean-tos, where appropriate, to assure a quality Adirondack camping experience for all users of the Grass River Wild Forest unit.
- All proposed lean-tos will be of uniform DEC design, based upon the standard plan for an Adirondack Lean-to or Open Camp, (Plan No. 184).
- To utilize volunteers and VSAs for maintenance assistance in lean-to construction.
- New, reconstructed or relocated lean-tos will be set back a minimum distance of 100 feet or more from water as required by the APSLMP. This same minimum setback will also apply to trails where feasible.

Management Actions

- Identify an appropriate site and construct a lean-to following APSLMP guidelines in the vicinity of Church Pond.

- Monitor camping activity near the proposed lean-to at Church Pond. To help insure a wild forest experience, control camping and enforce regulations to ensure that the maximum capacity of any lean-to shall not exceed eight persons. No additional primitive tent sites will be allowed adjacent to this lean-to.

11. Sanitation (Pit Privies)

Present Situation and Assumptions

Public cooperation with the "If you carry it in, carry it out" policy for litter removal has helped considerably with sanitation around Forest Preserve facilities, particularly primitive tent sites and lean-tos. However, litter still remains a problem in some areas, e.g., trailhead parking facilities, popular primitive tent site and lean-to locations, and in fire rings. Broken glass and unburned refuse take much expense and time to clean-up and are a safety risk to Department staff and volunteers.

Improper waste disposal can affect the environment and the health and safety of wild forest visitors. Most overnight use is concentrated around lakes and streams. As use increases in these areas, proper sanitation becomes increasingly important. Users have the potential for contraction of giardiasis from consuming drinking water sources contaminated with the protozoan, *Giardia lamblia*. Improper disposal of human waste near water sources, coupled with high concentrations of users, compounds this problem. Soaps, shampoos, and other wastes also affect area waters.

To some extent, this problem has been alleviated in the unit's interior through the provision of pit privies at sites where users congregate. Proper human waste disposal is of critical importance in regularly visited sites. However, it is not uncommon to observe improperly disposed human waste within a few feet of any trail in the unit.

Proper human waste disposal is of critical importance in regularly visited places. The Department uses pit privies (outhouses) and box privies in areas where use levels are usually high and adequate dispersal of "catholes" - buried waste - is difficult. The APSLMP requires that all pit privies be located a minimum distance of 150 feet from water (APSLMP, 2001, page 21). Pit privies can be effective in minimizing health risks and water contamination if they are properly located and maintained.

There are two existing pit privies within the Grass River Wild Forest unit. At some popular locations, such as Lampson Falls, there is evidence of poor sanitary practices by the public.

The APSLMP requires that all pit privies be located a minimum distance of 150 feet from water. Pit privies are structures ancillary to recreational uses. Therefore, in river areas, they will be located outside the 100 year flood plain or 250 feet from the river

(and its tributaries), whichever is greater. Properly sited and maintained within the Grass River Wild Forest unit, pit privies have been effective in minimizing health risks and water contamination. Chemical, vault and composting toilets have not been used in the unit, to date.

Objectives

- Prevent or mitigate the adverse effects of the improper disposal of refuse and human waste on the environment.
- Provide pit privies, chemical, vault or composting toilets at popular or sensitive locations.
- Provide a quality camping experience that balances user convenience/comfort with a back country experience.
- Minimize litter in the Grass River Wild Forest unit.

Management Actions

- Inspect privies on a regular basis to insure that they are kept in a safe and sanitary condition. Relocate as needed.
- Information and education efforts and "Leave-No-Trace" programs will stress proper treatment of drinking water and the need for proper human waste disposal.
- Provide signage at high-use areas directing visitors to pit privy locations.
- Provide a chemical, vault or composting toilet at the Lampson Falls site due to the high numbers of visitors to this site, meeting UA guidelines.
- Construct a pit privy at the proposed new lean-to location at Church Pond.

12. Parking Facilities

Present Situation and Assumptions

The Department provides two types of parking facilities: parking areas and pull-offs. Parking areas are designed and designated for parking with signs and established perimeters. The perimeter can be guard rails, boulders or natural features. Pull-offs are areas where the public can safely pull off the road to park. These areas are wide spots on the road or just off the road shoulder. Pull-offs are not formally designated or signed and are generally only suitable for a few vehicles.

While the Grass River Wild Forest unit has a fair amount of public highway road frontage, there are few places to safely park motor vehicles off the road shoulder to access State lands. Parking is even more restrictive along town and county roads in the winter due to deep snowfall and banked snow. In some popular locations, parking can be a problem particularly on weekends and holidays. When these areas reach their capacity, visitors often park on the roadsides, creating unsafe road conditions for passing motorists. In one location, at Twin Falls, the general public currently uses private land to park vehicles to access the trail to the waterfalls.

Objectives

- Improve and maintain existing parking areas.
- The construction of new parking facilities is intended to provide parking while protecting the natural resources and is not intended to increase use of the facilities.
- Provide for safe, adequate parking where appropriate.
- Prohibit parking where necessary.
- Indirectly manage interior use by balancing parking lot size to interior visitor use capacities.
- Minimize resource degradation at parking areas. Design trailheads and parking areas to reflect allowed uses and the capacity of the resource to withstand use.
- Insure that all new or expanded parking facilities have accessible spaces, pursuant to ADA guidelines.
- Prevent illegal motor vehicle use.
- Mitigate parking problems in cooperation with affected parties.
- Provide for parking during winter months at locations accessible from plowed roads. Develop partnerships with local governments to maintain and snowplow roadside trailhead parking facilities.

Management Actions

- Obtain permits under 6 NYCRR Part 666.8 for water access parking areas as required by 6 NYCRR Part 666.13(j).
- Construct a four-car capacity Church Pond parking area along State Highway 56, and provide a trail register and information kiosk at this location, if a suitable location for the parking area is found.

- Investigate the feasibility of acquiring land for a five to six car parking facility for Twin Falls from the private landowners adjacent to the pool at the base of the falls. Alternatively, provide parking across the road.

- Provide pull-off parking facilities at the other waterfall sites on Tooley Pond Road, - Basford Falls (three-car capacity); Sinclair Falls (three car capacity); Bulkhead Falls (three car capacity); Rainbow Falls (four car capacity); and Copper Rock Falls (four car capacity).

- Improve roadside pull-off parking facilities at the Cranberry Pond parcel along the White Road. Construct a three-car capacity parking area adjacent to the White Road.

- Construct a four-car capacity parking lot on the Leonard Pond parcel, approximately 100 yards from State Highway 56. Provide a trail register, information kiosk, and pit privy at this location. Use, especially in winter by snowmobilers, is heavy at this location.

13. Fishing and Waterway Access Sites

Present Situation and Assumptions

Currently access to the areas waters is gained through the use of three formal and a number of informal sites. Constructing formal fishing and waterway access sites will provide for safer managed access to those waters. Constructing many of these facilities to accessibility guidelines will help meet the Department's goal of providing recreational opportunities for people with disabilities.

A canoe-launch/hand-carry access site exists on Tooley Pond Road at Tooley Pond. The launch consists of a short graded trail down to the pond, and an adjacent parking area large enough for five to six cars. The site also includes a picnic table, kiosk and trail register. This location provides public access to the pond for fishing, boating and canoeing.

There are currently two designated waterway access sites on the South Branch of the Grass River. One is off the Spruce Mountain Road where it crosses the South Branch, the other is just above Rainbow Falls, providing a trail exit from the river before it reaches Rainbow Falls.

The APSLMP defines a fishing and waterway access site as "a site for fishing or other water access with attendant parking facilities which does not contain a ramp for or otherwise permit the launching of trailered boats." The APSLMP differentiates a fishing

and waterway access site from a boat launching site, which is defined as “a site providing for the launching of trailered boats, with ramp and attendant parking facilities”.

The definition of Water Access Parking area under 6 NYCRR Part 666.3(nnn) includes both the parking area for ten or fewer cars and a trail which does not contain a ramp for hand launching of boats. The proposed fishing and waterway access sites will comport to this definition. Appropirate permits will be obtained under 6 NYCRR Part 666.13(j) prior to construction of such sites in River Areas.

Objectives

- To conform to 6 NYCRR Part 666 and APSLMP guidelines regarding fishing and waterway access sites.
- Protect potentially sensitive areas.
- Develop partnerships with local governments to maintain and snowplow appropriate fishing and waterway access sites parking facilities.

Management Actions

- Provide a portage canoe trail at Newbridge on the Tooley Pond parcel.
- Provide portages around falls and rapids where currently lacking and shoreline passage is difficult, such as at Rainbow Falls.

14. Historic Locations & Interpretation

Present Situation and Assumptions

Within the GRWF unit there are a few locations where historic features are readily accessible by road or trail.

A historic site as significant as the smelter furnace, associated with the Clarksboro community at Twin Falls, affords a variety of historical interpretive and educational opportunities. This site was built around 1860 by the Clifton Mining Company. Ore was refined at the furnace at Twin Falls. This site is close to the Tooley Pond Road, and is easily accessible. The site consists of the stone and brick remains of the furnace, related hardware and other features which are visually interesting and informative. The iron industry played a significant role in regional and state history in the 19th century.

Objectives

- Identify and promote, where deemed appropriate: historic and archaeological sites.

- Enhance the public's knowledge about the GRWF unit's cultural and historic resources, specifically early 19th century Adirondack iron ore history.

Management Actions

- Construct a small bridge and interpretive loop trail to access the Twin Falls historic furnace site, as well as provide scenic opportunities near the falls.
- Construct a kiosk at the beginning of the trail and/or maintain a series (four to six) of small interpretative signs (made of natural materials) at this site. These signs will be as low key as possible in order to maintain the site setting, and the wild forest character of the land. They will be sited in the least visually intrusive manner possible.
- Construct a four-vehicle, roadside parking pull-off site at this interpretative trail.
- Remove, as found, illegal user-placed memorials or plaques.

15. Non-conforming Structures

Present Situation and Assumptions

There are several structures in the Grass River Wild Forest that are not considered conforming structures in Wild Forest, according to the APSLMP. Except for special circumstances, such as historical structures, plans need to be developed to remove them.

Objectives

- Identify all non-conforming structures on the unit.
- Where possible, and unless there is significant historic value, remove all non-conforming structures.

Management Actions

- Remove old, abandoned pumphouse on the South Branch of the Grass River.
- Remove concrete foundation (approximately 40' x 28') on the Middle Branch parcel.
- Remove cable suspension bridge on the Stone Dam parcel.
- Remove any other nonconforming structures located on the unit when such structures are found.

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V. SCHEDULE FOR IMPLEMENTATION AND ESTIMATED BUDGET

(The Schedule for Implementation and on Estimated Budget for Easement Lands is located in Appendix K section of the plan.)

The following tables outline a schedule for implementation derived from management recommendations made in Section IV. Projected Use and Management Proposed, as well as their estimated costs. Accomplishments are contingent upon sufficient staffing levels and available funding. The estimated cost of implementing these projects is based on historical costs incurred by the Department for similar projects. Values for some projects are based on projected costs for service contracting. These cost estimates do not include capital expenditures for items such as equipment, nor do they include the value of program staff salaries.

Year 1 Action	**Supplies Materials & Equipment**	**Personnel Service Person Days**
Install 4 Area ID Signs	N/A	6
Improve signing on roads, trails	N/A	5
Construct foot trail to Church Pond	$18,000	20
Remove 9 non-compliant tent sites at Stone Dam	$400	10
Remove 3 non-compliant tent sites at Lampson Falls	$400	10
Paint, blaze, sign, boundary lines	$5,600	26
Install road barriers at FP parcels	$15,000	6
Remove cable suspension bridge at Stone Dam and replace with a APSLMP compliant bridge	$25,000	8
Provide water-less, chemical, vault or composting toilet at Lampson Falls	$18,000	24
Develop LAC indicators/standards	N/A	3
	N/A	5

Conduct assessments of use and use impacts at Lampson Falls		
Total Year 1 costs for Maintenance and other Activities	**$82,400**	**123**

Year 2 Action	**Supplies Materials & Equipment**	**Personnel Service Person Days**
Build new five-car parking area at Church Pond	$15,000	20
Construct lean-to and pit privy at Church Pond	$5,200	25
Install trail register and information kiosk trailhead at Church Pond	$500	1
Designate, sign, and mark trails to waterfalls on Tooley Pond Road	$1,000	16
Improve roadside pull-off parking on Tooley Pond Road.	$20,000	36
Develop a bicycle trail connecting the old Grass River logging road at Lampson Falls to bicycle trails within the Downerville State Forest.	$6,000	5
Paint, blaze, sign boundary lines	$8,600	40
Conduct baseline site inventory of designated tent sites. Document location condition w/ GPS and photo's	N/A	2
Assist with inventory of the unit to determine the presence of invasive plant species. Solicit help from volunteers, when appropriate.	N/A	2
Once LAC indicators and standards have been developed, monitor to determine compliance. Take actions necessary to assure APSLMP compliance and to prevent standards from being exceeded.	N/A	Undetermined
Total Year 2 costs for Maintenance and other Activities	**$56,300**	**147**

Year 3 Action	**Supplies Materials & Equipment**	**Personnel Service Person Days**
Evaluate plan effectiveness to date - comprehensive review	N/A	5
Contract inventory of ecological communities, rare species & critical habitats	$30,000	2
Remove old abandoned pumphouse - South Branch of the Grass River	$10,000	20
Remove concrete foundation on the Middle Branch parcel	$2,500	5
Construct an interpretive loop trail with 4-6 historic interpretive signs at Twin Falls	$2,000	10
Construct bridge to access Twin Falls interpretative trail	$1,000	5
Barricade with boulders side roads leading to Leonard Pond	$1,000	2
Paint, blaze, sign, boundary lines	$8,600	40
Improve roadside pull-off parking on the White Road – Cranberry Pond parcel	$2,000	4
Install a pipe gate on the Hollywood Roadl	$2,500	5
Install a pipe gate on the access road near Gate 10 on the Tooley Pond Road	$2,500	5
Total Year 3 costs for Maintenance and other Activities	**$62,100**	**103**

Year 4 Action	**Supplies Materials & Equipment**	**Personnel Service Person Days**
Construct a parking lot on the Leonard Pond parcel, near State Highway 56. Provide a trail register, information kiosk, and pit privy at this location.	$15,500	10

Improve canoe carry trail on the Middle Branch parcel by constructing a boardwalk, and install a trail register. Construct canoe carry trail & roadside pull-off parking at New Bridge on the Tooley Pond Road Develop a method for collecting use data across the unit Develop an education and information program for the unit. Paint, blaze, sign boundary lines	$1,500 $1,000 N/A N/A $8,600	5 5 3 3 40
Total Year 4 costs for Maintenance and other Activities	**$26,600**	**66**

Year 5 Action	**Supplies Materials & Equipment**	**Personnel Service Person Days**
Paint, blaze, sign boundary lines Re-inventory baseline site inventory of all designated tent sites. Investigate the feasibility of future trail proposals Evaluate plan effectiveness to date, comprehensive review. Begin preparation for five year revision of UMP	$8,600 N/A N/A N/A	40 2 5 5
Total Year 5 costs for Maintenance and other Activities	**$8,600**	**52**

Annual Maintenance Actions and Management Activities Action	**Supplies Materials & Equipment**	**Personnel Service Person Days**
Forest Ranger enforcement, fire detection, suppression Maintain existing Area ID Signs (4 – all new after plan implementation)	$1,000 $500 $300	50 2 2

Trash pickup and disposal	$700	N/A
Disposal fee for accessible privy	$8,000	32
Maintain Parking Areas	$150 annual	31
Maintain 84.30 miles of boundary line on a 5 yr. schedule-after needed surveys	N/A	10
Monitor for Limits of Acceptable Change	N/A	3
Update and maintain sign inventory	N/A	4
Conduct inventory of invasive species and perform needed control work	N/A	5
Coordinate and supervise volunteer projects (VSA, TRP's, YCC)	N/A	5
Administrative supervision, reporting, acquisition proposals etc.	$1,200	8
Maintain designated primitive tent sites	N/A	5
Stock fish in unit waters	$200	20
Maintain trails		
Total Year 5 costs for Maintenance and other Activities	**$12,050**	**177**

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ACRONYMS

AANR	Adopt-a-Natural Resources Agreement
ADA	Americans with Disabilities Act
ADAAG	Americans with Disabilities Act Accessibility Guidelines
ADK	Adirondack Mountain Club
AFR	Assistant Forest Ranger
ALSC	Adirondack Lakes Survey Corporation
ANC	Acid neutralizing capacity
APA	Adirondack Park Agency
APIPP	Adirondack Park Invasive Plants Program
APLUDP	Adirondack Park Land Use Development Plan
APSLMP	Adirondack Park State Land Master Plan
ARTC	Adirondack Regional Tourism Council
ASRC	Atmospheric Science Research Center
ATV	All-Terrain Vehicle
BMP's	Best Management Practices
BBA	Breeding Bird Atlas
CH	County Highway
DEC	Department of Environmental Conservation
DEIS	Draft Environmental Impact Statement
DMU	Deer Management Unit
DOT	Department of Transportation
ECL	Environmental Conservation Law
ED/RR	Early Detection/Rapid Response
EIS	Environmental Impact Statement
ENB	Environmental Notice Bulletin
EPA	Environmental Protection Act of 1993
EQBA	Environmental Quality Bond Act
FEIS	Final Environmental Impact
FERC	Federal Energy Regulatory Commission
FPAC	Forest Preserve Advisory Committee
FR	Forest Ranger
GRWF	Grass River Wild Forest
IMBA	International Bicycle Association
LAC	Limits of Acceptable Change
NBWI	Native-But-Widely-Introduced

NiMo	Niagara Mohawk Power Corp
NPS	National Park Service
NYCRR	New York Code of Rules and Regulations
NYNHP	New York Natural Heritage Program
NYS	New York State
NYSM	New York State Museum
OPRHP	Office of Parks, Recreation & Historic Preservation
OSP	Open Space Plan
RM	Reference Marker
ROW	Right-of-Way
RRAC	Raquette River Advisory Committee
SCORP	Statewide Comprehensive Outdoor Recreation Plan
SEQR	State Environmental Quality Review Act
SH	State Highway
SUNY	State University of New York
UMP	Unit Management Plan
USDA	United States Department of Agriculture
USFS	United States Forest Service
USGS	United States Geological Survey
VERP	Visitor Experience and Resource Protection
V&T	Vehicle and Traffic Law
WMU	Wildlife Management Unit

Appendix A: Breeding Bird Atlas

Common Name	Scientific Name	Breeding Status
American Bittern	*Botaurus lentiginosus*	Possible
American Black Duck	*Anas rubripes*	Confirmed
American Crow	*Corvus brachrhynchos*	Confirmed
American Goldfinch	*Carduelis tristis*	Confirmed
American Redstart	*Setophaga ruticilla*	Confirmed
American Robin	*Turdus migratorius*	Confirmed
American Woodcock	*Scolopax minor*	Confirmed
Baltimore Oriole	*Icterus galbula*	Confirmed
Bank Swallow	*Hirundo rustica*	Confirmed
Barred Owl	*Strix varia*	Possible
Belted Kingfisher	*Ceryle alcyon*	Possible
Black-and-white Warbler	*Mniotilta varia*	Confirmed
Black-backed Woodpecker	*Picoides arcticus*	Possible
Black-billed Cuckoo	*Coccyzus erythropthalmus*	Probable
Black-capped Chickadee	*Poecile artricapillus*	Confirmed
Black-throated Blue Warbler	*Dendroica caerulescens*	Confirmed
Black-throated Green Warbler	*Dendroica virens*	Confirmed
Blackburnian Warbler	*Dendroica fusca*	Confirmed
Blue Jay	*Cyanocitta cristata*	Probable
Blue-headed Vireo	*Vireo solitaries*	Confirmed
Boreal Chickadee	*Poecile hudsonicus*	Possible
Broad-winged Hawk	*Buteo platypterus*	Possible
Brown Creeper	*Certhia americana*	Possible
Brown Thrasher	*Toxostoma rufum*	Possible
Brown-headed Cowbird	*Molthrus ater*	Probable
Canada Goose	*Branta Canadensis*	Possible
Canada Warbler	*Wilsonia Canadensis*	Confirmed
Cedar Waxwing	*Bombycilla cedrorum*	Confirmed
Chestnut-sided Warbler	*Dendroica pensylvanica*	Confirmed
Chimney Swift	*Chaetura pelagic*	Possible
Chipping Sparrow	*Spizella passerine*	Confirmed
Common Grackle	*Quiscalus quiscula*	Confirmed
Common Loon	*Gavia immer*	Confirmed
Common Merganser	*Mergus merganser*	Confirmed
Common Raven	*Corvus corax*	Possible
Common Yellowthroat	*Geothlypis trichas*	Confirmed
Dark-eyed Junco	*Junco hyemalis*	Confirmed
Downy Woodpecker	*Picoides pubescens*	Confirmed

Eastern Bluebird	*Sialia sialis*	Confirmed
Eastern Kingbird	*Tyrannus tryannus*	Probable
Eastern Meadowlark	*Sturnella magna*	Possible
Eastern Phoebe	*Sayornis phoebe*	Confirmed
Eastern Screech-Owl	*Otus asio*	Possible
Eastern Towhee	*Pipilo erythrophthalmus*	Possible
Eastern Wood-Pewee	*Contopus virens*	Confirmed
Common Name	**Scientific Name**	**Breeding Status**
European Starling	*Sturnus vulgaris*	Confirmed
Evening Grosbeek	*Coccothrautes vespertinus*	Possible
Field Sparrow	*Spizella pusilla*	Possible
Golden-crowned Kinglet	*Regulus satrapa*	Confirmed
Gray Catbird	*Dumetella carolinensis*	Confirmed
Gray Jay	*Perisoreus canadensis*	Possible
Great Blue Heron	*Ardea herodias*	Possible
Great Crested Flycatcher	*Myiarchus crinitus*	Confirmed
Hairy Woodpecker	*Picoides villosus*	Confirmed
Hermit Thrush	*Catharus guttatus*	Confirmed
Hooded Merganser	*Lophodytes cucullatus*	Possible
Indigo Bunting	*Passerina cyanea*	Confirmed
Killdeer	*Charadrius vociferous*	Possible
Least Flycatcher	*Empidonax minimus*	Confirmed
Lincoln's Sparrow	*Melospiza lincolnii*	Confirmed
Magnolia Warbler	*Dendroica magnolia*	Confirmed
Mallard	*Anas platyrhynchos*	Confirmed
Mourning Dove	*Zenaida macroura*	Possible
Mourning Warbler	*Oporornis Philadelphia*	Confirmed
Nashville Warbler	*Vermivora ruficapilla*	Confirmed
Northern Flicker	*Colaptes auratus*	Probable
Northern Goshawk	*Accipiter gentilis*	Possible
Northern Paula	*Parula americana*	Confirmed
Northern Rough-winged Swallow	*Stelgidopteryx serripennis*	Possible
Northern Waterthrush	*Seirus noveboracensis*	Confirmed
Olive-sided Flycatcher	*Contopus cooperi*	Possible
Osprey	*Pandion halieaetus*	Possible
Ovenbird	*Seiurus aurocapillus*	Confirmed
Palm Warbler	*Dendroica palmarum*	Confirmed
Philadelphia Vireo	*Vireo philadelphicus*	Confirmed
Pileated Woodpecker	*Dryocopus pileatus*	Possible
Pine Warbler	*Dendroica pinus*	Probable
Purple Finch	*Carpodacus purpureeus*	Confirmed
Red-breasted Nuthatch	*Sitta Canadensis*	Probable
Red-eyed Vireo	*Vireo olivaceus*	Confirmed
Red-shouldered Hawk	*Buteo lineatus*	Possible

Red-tailed Hawk	*Buteo jamaicensis*	Possible
Red-winged Blackbird	*Agelaius phoeniceus*	Confirmed
Rock Pigeon	*Columba livia*	Confirmed
Rose-breasted Grosbeak	*Pheucticus ludovicianus*	Confirmed
Ruby-throated Hummingbird	*Archilochus colubris*	Confirmed
Ruffed Grouse	*Bonasa umbellus*	Confirmed
Savannah Sparrow	*Passerculus sandwichensis*	Possible
Scarlet Tanager	*Piranga olivacea*	Probable
Sharp-shinned Hawk	*Accipiter striatus*	Possible
Song Sparrow	*Meloxpiza Melodia*	Confirmed
Spotted Sandpiper	*Actitis macularia*	Confirmed
Swainson's Thrush	*Catharus ustulatus*	Confirmed
Swamp Sparrow	*Melospiza Georgiana*	Confirmed
Tennessee Warbler	*Vermivora peregrine*	Confirmed
Common Name	**Scientific Name**	**Breeding Status**
Tree Swallow	*Tachycineta bicolor*	Confirmed
Turkey Vulture	*Cathartes aura*	Possible
Verry	*Catharus fuscescens*	Confirmed
Vesper Sparrow	*Pooecetes gramineus*	Possible
Virginia Rail	*Rallus limicola*	Possible
Warbling Vireo	*Vireo gilvus*	Possible
Whip-poor-will	*Caprimulgus vociferous*	Possible
White-breasted Nuthatch	*Sitta carolinensis*	Confirmed
White-throated Sparrow	*Zonotrichia albicollis*	Confirmed
White-winged Crossbill	*Loxia leucoptera*	Confirmed
Wild Turkey	*Meleagris gallopavo*	Confirmed
Wilson's Snipe	*Gallinago delicate*	Confirmed
Winter Wren	*Troglodytes troglodytes*	Probable
Wood Duck	*Aix sponsa*	Confirmed
Wood Thrush	*Hylocichla mustelina*	Probable
Yellow Warbler	*Dendroica petechia*	Confirmed
Yellow-bellied Flycatcher	*Empidonax flaviventris*	Confirmed
Yellow-bellied Sapsucker	*Sphyrapicus varius*	Confirmed
Yellow-rumped Warbler	*Dendroica coronate*	Confirmed
Yellow-throated Vireo	*Vireo flavifrons*	Possible

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Appendix B: New York State Herp List

Allegheny Dusky Salamander	*Desmognathus ochrophaeus*
Eastern Newt	*Notophthalmus v. viridescens*
Jefferson Salamander Complex	*Ambystoma jeffersonianum x laterale**
Northern Dusky Salamander	*Desmognathus fuscus*
Northern Redback Salamander	*Plethodon cinereus*
Northern Spring Salamander	*Gyrinophilus p. porphyriticus*
Northern Two-lined Salamander	*Eurycea bislineata*
Spotted Salamander	*Ambystoma maculatum*
Bullfrog	*Lithobates catesbeiana*
Eastern American Toad	*Anaxyrus a. americanus*
Gray Treefrog	*Hyla versicolor*
Green Frog	*Lithobates clamitans melanota*
Mink Frog	*Lithobates septentrionalis*
Northern Leopard Frog	*Lithobates pipiens*
Northern Spring Peeper	*Pseudacris c. crucifer*
Pickerel Frog	*Lithobates palustris*
Wood Frog	*Lithobates sylvatica*
Common Snapping Turtle	*Chelydra s. serpentine*
Painted Turtle	*Chrysemys picta*
Wood Turtle	*Glyptemys insculpta*
Common Garter Snake	*Thamnophis sirtalis*
Eastern Milk Snake	*Lampropeltis triangulum*
Northern Red Belly Snake	*Storeria occipitomaculata*
Northern Ringneck Snake	*Diadophis punctatus edwardsii*
Smooth Green Snake	*Opheodrys vernalis*

*Special Concern Species - any native species for which a welfare concern or risk of endangerment has been documented in New York State.

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Appendix C: Mammals

The Grass River Wild Forest Unit contains potential habitat for 40 species of mammals:

Mammals	Scientific Name	Status
Big Game:		
Black Bear	*Ursus amercanus*	PGR
Moose	*Alces alces*	PGTr
White Tailed Deer	*Odocoileus virginanus*	PGR
Furbearers:		
Beaver	*Castor canadeni*	PGR
Bobcat	*Lynx rufus*	PGR
Eastern Coyote	*Canis latrans*	PGR
Ermine	*Mustela ermine*	PGOc
Fisher	*Martes pennant*	PGR
Gray Fox	*Uro Cinereoagentus*	PGOc
Long-tailed Weasel	*Mustela frenata*	PGOc
Marten	*Martes americana*	PGOc
Mink	*Mustela vision*	PGR
Muskrat	*Ondatra zibethica*	PGR
Racoon	*Procyon lotor*	PGR
River Otter	*Lutra candensis*	PGR
Striped Skunk	*Mephitis mephitis*	PGOc
Viginia Opossum	*Didelphis virginiana*	PGOc
Small Game:		
Varying Hare	*Lepus americanum*	PGR
Woodchuck	*Mamota monax*	UnUnOc
Other:		
Chipmunk	*Tamias striatus*	UnUnR
Deer Mouse	*Peromyscus maniculatus*	UnUnR
Hairy-tailed Mole	*Parascalops breweri*	UnUnR
Little Brown Bat	*Myotis lucifigus*	UnUnR
Masked Shrew	*Sorex cinereus*	UnUnR
Mead, Jumping Mouse	*Zapus hudsontus*	UnUnR
Meadow Vole	*Micotus pennsylvanicus*	UnUnR
Nn. Bog Lemming	*Synaptomys borealis*	UnUnR
Nn. Flying Squirrel	*Glaucomys sabrinus*	UnUnR
Pigmy Shrew	*Sorex hoyl*	UnUnR
Porcupine	*Erethizon dorsatum*	UnUnR
Red Squirrel	*Tamiasciurus*	UnUnR
Rock Vole	*Micotus Chrotorrhinus*	UnUnR
Short-tailed Shrew	*Sorex brevicauda*	UnUnR
Smokey Shrew	*Sorex fumeux*	UnUnR
Sn. Bog Lemming	*Synaptomys coopert*	UnUnR

Sn. Red-backed Vole	*Clethrionomys gapperi*	UnUnR
Water Shrew	*Sorex palustris*	UnUnR
White-footed Mouse	*Peromyscus leucopus*	UnUnR
Woodland Jumping Mouse	*Napaeozapus insignis*	UnUnR

Un -Unprotected G -Game R -Resident Tr -Transient Oc -Occasional P – Protected

Appendix D: Comprehensive Fish Species List

Name	Genus	Species
American Eel	*Anguilla*	*rostrata*
Banded killifish	*Fundulus*	*diaphanus*
Blacknose Dace	*Rhinichthys*	*atratulus*
Bluegill**	*Lepomis*	*macrochirus*
Brassy Minnow**	*Hybognathus*	*hankinsoni*
Brook Trout	*Salvelinus*	*fontinalis*
Brown Bullhead	*Ameiurus*	*nebulosus*
Brown Trout	*Salmo*	*trutta*
Cisco or Lake Herring	*Coregonus*	*artedi*
Common Shiner	*Luxilus*	*cornutus*
Central Mudminnow	*Umbra*	*limi*
Creek Chub	*Semotilus*	*atromaculatus*
Cutlips Minnow	*Exoglossum*	*maxillingua*
Fallfish	*Semotilus*	*corporalis*
Fantail Darter	*Etheostoma*	*flabellare*
Fathead Minnow**	*Pimephales*	*promelas*
Finescale Dace**	*Phoxinus*	*neogaeus*
Golden Shiner	*Notemigonus*	*crysoleucas*
Johnny Darter**	*Etheostoma*	*nigrum*
Lake Chub**	*Couesius*	*plubeus*
Largemouth Bass	*Micropterus*	*salmoides*
Longnose Dace	*Rhinichthys*	*cataractae*
Northern Pike	*Esox*	*lucius*
Northern Redbelly Dace	*Phoxinus*	*eos*
Pearl Dace	*Margariscus*	*margarita*
Pumpkinseed	*Lepomis*	*gibbosus*
Rainbow Trout	*Oncorhynchus*	*mykiss*
Rock Bass	*Ambloplites*	*rupestris*
Slimy Sculpin**	*Cottus*	*cognatus*
Smallmouth Bass	*Micropterus*	*dolomieu*
Sockeye Salmon	*Oncorhynchus*	*nerka*
Splake	*Salvelinus*	*fontinalis x namaycush*
Tessellated Darter	*Etheostoma*	*olmstedt*
Walleye	*Sander*	*vitreum*
White Sucker	*Catostomus*	*commersoni*
Yellow Perch	*Perca*	*flavescens*

Sources: New York State Bureau of Fisheries Database, ALSC. Note: ** denotes species which appear only in historical New York State DEC data sets prior to 1984.

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Appendix E: Butterfly Species List

Butterfly Counts for the Tooley Pond Area,

Charles R. Smith

Department of Natural Resources

Cornell University, Ithaca, NY

The area surveyed is a circle of 7.5 miles radius, centered at the point where Tooley Pond Road crosses the South Branch Grass River, Newbridge, St. Lawrence County, NY (latitude 44° 17' North, longitude 74° 58' West). These counts follow procedures established by the North American Butterfly Association (http://www.naba.org/counts.html). English and scientific names and the sequence of names follow the *Checklist of North American Butterflies*, 2nd edition (2001), published by the North American Butterfly Association. All counts conducted by Charles R. Smith, Department of Natural Resources, Cornell University, Ithaca, NY. A total of 40 species is listed here.

English Name	Scientific Name	July 2, 2000	July 24, 2001	July 3, 2005	July 3, 2006
Black Swallowtail	*Papilio polyxenes*		1		
Eastern Tiger Swallowtail	*Papilio glaucus*	2	42	4	8
Cabbage White	*Pieris rapae*		1	9	3
Clouded Sulphur	*Colias philodice*		31	2	
Orange Sulphur	*Colias eurytheme*			1	
Pink-edged Sulphur	*Colias interior*		1		
American Copper	*Lycaena phlaeas*	1			
Coral Hairstreak	*Satyrium liparops*			20	6
Summer Spring Azure	*Celastrina ladon neglecta*		1	2	2
Great Spangled Fritillary	*Speyveria Cybele*		14	92	11
Aphrodite Fritillary	*Speyeria aphrodite*		4	5	14
Atlantis Fritillary	*Speyeria atlantis*	15		6	13
Harris-Checkerspot	*Chlesyne harrisii*	14			
Pearl Crescent	*Plyciodes tharos*		1	9	10
Baltimore Checkerspot	*Euplydras phaeton*		1	5	1
Eastern Comma	*Polgonia comma*				2
Gray Comma	*Polygonia progne*			2	3

Mourning Cloak	*Nymphlis antiopa*	5	1		
American Lady	*Vanessa virginiensis*		5	2	
Painted Lady	*Vanessa cardui*		1		
Red Admiral	*Vanessa atalanta*		16	3	1
White Admiral	*Limenitis arthemis arthemis*	49	1	48	102
Northern Pearly-Eye	*Enodia anthedon*	75	2	6	15
Eyed Brown	*Satyrodes eurydice*	10	3	5	3
Common Ringlet	*Coenonympha tullia*	2		2	
Common Wood-Nymph	*Cercyonis pegala*		4		
Monarch	*Danaus plexippus*	4	44	6	9
Silver-spotted Skipper	*Epargyeus clarus*		1		
Artic Skipper	*Carterocephalus palaemon*	1			
Least Skipper	*Ancyloxypha numitor*			8	
European Skipper	*Thymelicus lineola*	30	1	66	2
Peck's Skipper	*Polites pecki*		5	4	5
Tawny-edged Skipper	*Polites themistocles*			6	
Long Dash	*Polites mystic*	3		8	2
Delware Skipper	*Anatrytone logan*				9
Hobomok Skipper	*Poanes hobomok*	11			
Dun Skipper	*Euphyes vestries*	4	13	10	3
Total Individuals		**229**	**203**	**345**	**226**
Total Species		**17**	**25**	**26**	**22**

Appendix F: Grass River Forest Conservation Easement

Rayonier, Inc
Summary of Public Use Rights Acquired
and
Interim Public Recreation Management Plan

Public Uses

The Recreation Management Plan will determine specifically where and what type of public uses will be allowed. However, those allowed public uses may be restricted at times when road conditions (mud season) or adverse weather limits motor vehicle use, or when logging operation closure zones are established which close an area to public recreation use. The location and condition of trails, parking areas, primitive tent sites, linear recreational corridors and other public recreational facilities will be reviewed at least annually, to determine if their use can continue, or what repairs/improvements are needed to allow their continued use.

General plan guidelines for public uses include planning for and implementing public recreation on the portions of the tract so designated for such uses, and shall be consistent with the purposes of this Conservation Easement and the following general objectives:

- Protection and safety of the public.
- Consideration to the capacity of the tract to accommodate public recreation.
- Protection of natural resource values and biological diversity.
- Consideration of the removal of trash or debris left by the public.
- Consideration of forest management activities.

In addition to the general guidelines listed above, development of this Interim Public Recreation Management Plan and implementation of public recreation for the tract shall be consistent with the following specific guidelines:

Standards for Public Recreational Roads and Trails

This Interim Public Recreation Management Plan shall establish minimum standards and specifications for roads and trails designated for public use. Based on the standards and specifications, the Grantee and Grantor shall decide whether portions of

trails and roads shall be repaired, improved, relocated, or if public use shall be temporarily suspended. Trails and roads must meet specifications in Appendix N before public use will be allowed.

Snowmobile Use

The main purpose of snowmobile use on the easement is to connect existing snowmobile trails. Trail design and maintenance standards shall conform to such manuals and guidelines produced by the New York State Office of Parks, Recreation, and Historic Preservation, or an equivalent State agency, and in general use by the agency at the time in question.

All-Terrain Vehicle Use

Public All-Terrain Vehicle (ATV) use shall be restricted solely to Linear Recreational Corridors delineated in the Conservation Easement. ATV use shall be managed in a manner that prevents damage to the natural resource values and biological diversity of the tract.

Recreation Leases

Public recreation on the tract shall accommodate the private recreation leases and shall not interfere with the enjoyment of the lessees. Public recreational use shall be prohibited within 300' of the principle structure(s) of any leased recreation camp. The only exceptions will be where there is a linear recreation corridor, river corridor or public fishing rights corridor within 300' of the principle structure(s), in which case the top of the nearest stream or river bank or the closest edge of a linear recreational corridor or town road will define the boundary of public use.

The following is a synopsis of the recreation rights acquired by New York State:

Public Uses Allowed From December 16th thru September 30th:

- Non-motorized use by the public on linear recreational corridors and designated river corridors.
- Camping on designated primitive tent sites.
- Fishing on designated river corridors and designated public fishing rights corridors.
- Trapping on designated ATV corridors.
- ATV use only on designated ATV Corridors.
- Snowmobile use on designated linear recreational corridors, and

- Motor vehicle access on seasonal access roads.

Public Use Allowed December 16th thru October 10th:

- Road and trail to Little Blue Mtn.

Public Use Allowed Year-Round:

- Non-motorized use of the trail located along the northern boundary of the tract north of Little Blue Mountain to connect the Church Pond Forest Preserve Parcel with the Long Pond Easement, and

- Motor vehicle access to the Stone Dam Parcel via the Stone Dam Road from the end of town maintenance on the Dean road.

Public motorized use is contingent on weather conditions, (in particular mud season) and Logging Operation Closure Zones.

Public hunting is not allowed, since it was not one of the rights acquired by New York State.

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Appendix G: Seveys Tract Conservation Easement

Lyme Adirondack Timberlands, LLC

Summary of Public Use Rights Acquired

and

Interim Public Recreation Management Plan

General and Specific Guidelines:

This Interim Recreation Management Plan shall implement public recreation on the portions of the Tract so designated for such uses.

A. General Guidelines:

Public recreational access shall be consistent with the Conservation Easement and the following general guidelines:

1. Safety.
2. Protecting natural resources; including the removal of trash or debris such as papers, bottles, cans, or other garbage left on the Tract by the public utilizing the Tract.
3. Protecting natural resources; including the removal of trash or debris such as papers, bottles, cans, or other garbage left on the Tract by the public utilizing the Tract. Not interfering with Grantor's Forest Management activities.
4. The capacity of the Tract to accommodate public recreation.
5. To the greatest extent possible, motorized and non-motorized uses shall occur on existing roads and trails so the need for new trails is minimized.
6. The location and condition of recreational improvements shall be reviewed at least annually, and more frequently, if necessary.
7. Public access and recreation on the Tract will occur and be managed in accordance with the provisions of New York State Law, the Conservation Easement, and other relevant laws and regulations, as well as this plan.

8. Relationship to adjacent public lands; when directly related to adjacent lands, public or private, the Final Recreation Management Plan may propose connecting uses such as trails for hiking and pedestrian activities, horseback riding, ATV and snowmobile corridors, and roadways for other motorized vehicle use.

B. Specific Guidelines:

In addition to the general guidelines listed above, implementing public recreation on the Tract shall be consistent with the following specific guidelines:

1. Snowmobile Use

The main purpose of snowmobile use on the Tract is to connect existing snowmobile trail systems on and off the Tract. Trail design and maintenance standards shall conform to such manuals and guidelines which are in general use by the New York State Office of Parks, Recreation, and Historic Preservation at the time in question, or equivalent manuals and guidelines used by another State agency.

2. Grantor's Recreation Leases

Unless the parties agree to do so, public recreation on the protected property shall not conflict with or diminish Grantor's private recreation and camp leases ("camp lessees"), including lessees' ability to access their camps using motorized vehicles.

Appendix H: Long Pond Conservation Easement

Danzer, Inc.

Summary of Public Use Rights Acquired

and

Public Recreation Management Plan

Introduction:

There are three main objectives of the easement:

1. To perpetuate and sustain the working forest under long-term professional management.
2. To provide for a diversity of forest types and natural conditions necessary to conserve and perpetuate fish and wildlife habitat.
3. To provide for a wide range of recreational opportunities that are consistent with forest management and resource conservation purposes to complement activities on adjacent or near-by Forest Preserve land.

The primary intent of this recreation plan is to delineate the recreational opportunities that are available to the public along with making proposals to manage and enhance those opportunities.

Management Constraints and Guidelines:

The management of the Tract must conform to a number of constitutional, legislative, and policy constraints including those related to the conditions of acquiring the lands from Long Pond LLC.

Easement Management Constraints and Guidelines

The conservation easement specifies public access and recreational opportunities in the following conditions:

1. Access by non-motorized means is allowed, including by bicycle, horses or similar animals, foot, snowshoe, cross country skis, and canoes/boats.

2. Access by motor vehicles is limited to the following roads:
    - The main east-west haul road from SH 56 to Selleck's Lower Camp.
    - The secondary haul road from USGS benchmark 1304 south across Deerskin Creek then east and then north back to the main east-west haul road.
    - The secondary haul road going north from Selleck's Lower Camp across Gulf Brook, then north east, then east, then back south to the main haul road.
    - The secondary haul road that branches off to the north from the road described above going about 1 mile.
    - The secondary haul road near the easterly property boundary going back about 2 miles north and west.
    - The secondary haul road that branches off to the main haul road just west of USGS benchmark 1289 going south and southeast to the north end of Long Pond.
3. DEC, with fee title owner approval, can build new motor vehicle roads and parking areas necessary for the exercise of recreational rights.
4. Snowmobiles and ATV's may use all existing roads. Some roads may be closed by the landowner to be plowed for logging, but alternative routes must be provided.
5. DEC is responsible for placing signs to indicate which trails are open for public snowmobile and ATV use.
6. DEC, with fee title owner approval, can build new roads and trails for ATV's, snowmobiles and foot travel by the public.
7. Camping by the public is permitted under the same regulations as other state lands.
8. Firewood may be gathered from dead and downed trees for on-site cooking and warmth only.
9. Hunting, fishing, and trapping by the public are permitted, except for the period of September 1st - December 15th each year, through 2013.
10. From October 1st - December 15th, each year through 2013, there is no public use at all.
11. DEC has the right to manage the fish and wildlife resources.

Appendix I: Tooley Pond Conservation Easement

Heartwood Forestland Fund III

Summary of Public Use Rights Acquired

and

Public Recreation Management Plan

Introduction:

The following management goals and objectives will be established for the easement lands:

1. Goals:

- Protect and enhance the primitive area settings of this management area, while providing a variety of outdoor recreation opportunities.
- Manage easement lands cooperatively with landowner to optimize timber management and recreational opportunities.

2. Objectives:

- Maintain boundary lines to clearly identify ownership, and discourage illegal uses.
- Adequately protect the management complex from wild land fire.
- Maintain and construct facilities in response to need and in conformance with DEC regulations, policies and the APSLMP.
- Maintain all native fish and wildlife species at levels compatible with their natural environment.
- Maintain fishing, hunting, trapping, and other wildlife related recreational activities.
- Provide optimum opportunity for enjoyment and beneficial utilization of the fish and wildlife resource by the user.
- Maintain the natural condition of water courses, including streams, ponds, and lakes.

- Provide for a variety of recreational pursuits on easement lands compatible to existing easement agreements.
- Initiate an educational effort to keep the public informed of the values, limitations, and opportunities available on this Tract.
- Make public use of this forest safe, enjoyable, and non-destructive to the forest ecosystem.

Appendix J: Silver Lake Conservation Easement

Dreby Family

Summary of Public Use Rights Acquired

Objectives:

1. Forest Management Objectives:

- Allow the protected property to be managed as an economically viable investment.
- Maintain acceptable periodic investment returns from forest products in perpetuity.
- Practice sustainable forestry.
- Participate in a partnership to preserve working forests and natural resources.
- Maintain a broad range of silvicultural options and opportunities to achieve management goals.

2. Conservation Objectives:

- Protect riparian zones and wetlands from negative impacts of timber harvests and associated road construction.
- Maintain a primarily forested landscape or other natural habitat conditions to advance principles of sustainable forestry.
- Protect property from excess parcelization and preserve its open space character.
- Manage property to allow and encourage public recreational access while avoiding risks to the public from conflicts with forest management operations.

3. Public Recreation Objectives:

- Provide various non-motorized public recreational opportunities on specifically identified trails including, but not limited to, biking, hiking, and skiing.
- Provide snowmobile use of specifically identified trails.

Easement Management Constraints and Guidelines:

The conservation easement specifies public access and recreational opportunities in the following way.

- The public has the ability to use the main railroad bed and North Tramway and “Cut-over Trail” for hiking, skiing, bicycling, horseback riding, and other non-motorized travel.
- When conditions allow, snowmobiling is permitted on this corridor.
- The route from the end of Mill Street to the railroad bed is only open to the public for snowmobile use.
- A permanent easement for the benefit of the public for an access trail over Lots 38 and 47 to connect Lots 3 and 35. Easement shall be fifty feet in width, the east line of which shall be the east line of Lots 38 and 47. Easement is for travel by non-mechanized means and snowmobiles are permitted on the trail to be developed.

Appendix K: Conservation Easement Lands Schedule for Implementation and Estimated Budget

Year 1 Action	**Supplies Materials & Equipment**	**Personnel Service Person Days**
Install 4 area ID signs	N/A	6
Improve signing on roads, trails	N/A	5
Paint and post boundary	$15,000	45
Begin monitoring of ATV use	N/A	6
Brush 5 miles of access road	$3,000	4
Total Year 1 costs for Maintenance and other Activities	**$18,000**	**66**

Year 2 Action	**Supplies Materials & Equipment**	**Personnel Service Person Days**
Rake 10 miles of main haul road	$4,000	6
Survey boundary lines	$150,000 (Contracted) or DEC-N/A	N/A 1326
Install 15 gates to control public ATV and motor vehicle use	$45,000	18
Improve portions of Stone Dam road	$15,000	6
Construct Long Pond Easement ATV trail connection	$20,000	6
Designate/mark roads	$3,500	4
	$50,000	25

Construct 10 parking areas Construct Church Pond access trail Designate/mark hiking trails Designate/mark snowmobile trails Designate/mark primitive tent sites, install pit privies Construct information kiosk	$2,000 $250 $500 $15,000 $5,000	4 4 8 8 3
Total Year 2 costs for Maintenance and other Activities	**310,250**	**1418**

Year 3 Action	**Supplies Materials & Equipment**	**Personnel Service Person Days**
Brush 5 miles of access road Rake 10 miles of secondary haul roads	$3,000 $4,000	4 6
Total Year 3 costs for Maintenance and other Activities	**$7,000**	**10**

Year 4 Action	**Supplies Materials & Equipment**	**Personnel Service Person Days**
Brush 5 miles of access road	$3,000	4
Total Year 4 costs for Maintenance and other Activities	**$3,000**	**4**

Year 5 Action	**Supplies Materials & Equipment**	**Personnel Service Person Days**
Rake 10 miles of main road	$4,000	6
Total Year 5 costs for Maintenance and other Activities	**$4,000**	**6**

Annual Maintenance by Component Facilities after Plan Implementation	**Inventory**	**Person Days/Year**
Trails (all uses)	0	0
Parking Areas	4 (3-Long Pond)	2
Boundary	68.40 miles	30
Trail Registers/Koisks	1	1
Signs	3 (2-Long Pond) (1-Tooley Pond)	2
Litter Control		12
Roads: Grade, Rake, Mow, Misc. (culverts, gravel, other repairs)		30
Total Annual Maintenance Cost		**77**

Annual Maintenance Actions and Management Activities	**Supplies Materials & Equipment**	**Personnel Service Person Days**
Forest enforcement, fire detections, suppression	$600	30
Maintain existing Easement ID signs(3)	$500	2
Trash Pickup and disposal	$200	2
Maintain Parking Areas (4)	$1,200	4
68.50 miles of boundary line maintenance on a 5 yr. schedule-after needed surveys	$200 annual	42
Administrative supervision (lessee inspections, complaints, re-con)	N/A	10
Road maintenance (due to public presence, new gravel, drainage, grading etc.	$7,000	10
Total Year 5 costs for Maintenance and other Activities	**$9,700**	**100**

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Appendix L: Conservation Easement Lands Facilities Inventory

Boundary Lines	Surveyed (Boundary clearly marked and signed)
Grass River	51.5 miles
Seveys	26.8 miles
Long Pond	29.1 miles
Tooley Pond	34.7 miles
Silver Lake	4.70 miles
Total	**146.80 miles**

a. Bridges	**Number**
Tooley Pond	1

b. Designated Primitive tent sites	**Number**
Long Pond	5

c. Foot Trails	**Number**
	0

d. Gates	**Number**
Tooley Pond	13
Dreby NY	4

e. Parking Areas	**Number**
Tooley Pond	1
Long Pond	3

f. Snowmobile Trails	**Number**
Long Pond	4
Tooley Pond	8
Dreby NY	2

g. Signs	**Number**
Long Pond	2
Tooley Pond	1

h. Roads	**Number**
Long Pond	4
Tooley Pond	2

i. ATV Roads	**Number**
Long Pond	18

j. CP3 Roads	**Number**
Long Pond	5

k. Kiosk	**Number**
Long Pond	1
Dean Road	1

l. Privies	**Number**
Long Pond	6

Appendix M: Primitive Tent Site Monitoring Manual

Description of Procedures

For the purpose of this manual, designated primitive tent sites are defined as those areas either designated by the Department with a yellow DEC designated primitive tent site marker, or shown on an area brochure. In areas with multiple sites there may not always be undisturbed areas separating sites, and an arbitrary decision may be necessary to define separate sites. For each site, monitoring begins with an assessment of Condition Class:

Condition Class Definitions

Class 1: Recreation site barely distinguishable; slight loss of vegetation cover and/ or minimal disturbance of organic litter.

Class 2: Recreation site obvious; vegetation cover lost and/ or organic litter pulverized in primary use area.

Class 3: Vegetation cover lost and/ or organic litter pulverized on much of the site, some bare soil exposed in primary use areas.

Class 4: Nearly complete or total loss of vegetation cover and organic litter, bare soil widespread.

Class 5: Soil erosion obvious, as indicated by exposed tree roots and rocks and/or gullying.

For sites rated Condition Class 1 or 2, complete Form B; for sites rated Class 3, 4 or 5, complete Form A. Form B is an abbreviated version of Form A and greatly reduces the amount of field time. The rationale for this approach is that detailed information on lightly impacted sites is not as critical to management.

During subsequent surveys an attempt should be made to relocate and reassess all sites from the proceeding survey. Former designated sites that have been closed, and are still being used, should be noted as illegal sites. Always note information regarding the history of site use under the comment parameter.

Materials: Compass, peephole or mirror type (not corrected for declination)

GPS data recorder (GPS point will be taken at each sites center point)

Tape measure, 100-foot (marked in tenths)

Flagged wire pins (25 min), one large steel center point stake.

Digital camera

Clipboard, pencil, field forms, field procedures

Steel nails (5 inch)

Form A Procedures

Inventory Parameters

1. Site Number: All sites will be assigned an old site number as well as a new site number. Old site numbers will use the existing site numbering system, while new site numbers will be assigned following completion of the mapping of all sites.
2. Inventoried By: List the names of field personnel involved in data collection.
3. Date: Month, day and year the site was evaluated (e.g., June 12, 1999 -06/12/99)
4. Substrate of site area: Record the predominant substrate for the area of human disturbance for each site using the coded categories below.

   B-bedrock - shelf bedrock

   C-cobble - includes gravel size stone and up

   S-sand - includes sandy soils that do not form a surface crust in trampled areas

   O-soil - includes clays to loamy sands

5. Number of other sites visible: Record the number of other primitive tent sites, which if occupied, would be visible from this site.
6. Fire ring: if present or not (y or n)

   a. Construction: stone/masonry or metal

   b. Condition: good-intact, functional for cooking

      Poor-missing stones, broken, not functional for cooking but will contain open fire.

7. Privy: if present or not (y or n)

   a. Condition: good-functional, has door, wood not deteriorated (would you use it?)

      Poor-nonfunctional, door missing, wood rotten.

8. Picnic table: if present or not (y or n)

   a. Condition: good-usable, no broken boards, table is solid

      Poor-not usable, broken/rotten boards, not sturdy

9. Tree canopy cover: Estimate the percentage of tree canopy cover directly over the primitive tent site.

   1-0-25%, 2-26-50%, 3-51-75%, 4-76-100%

Impact Parameters

The first step is to establish the sites boundaries and measure its size. The following procedures describe use of the variable radial transect method for determining the sizes of recreational sites. This is accomplished by measuring the lengths of linear transect from a permanently defined center point to the recreation site boundary.

Step 1. Identify Recreation Site Boundaries and Flag Transect Endpoints. Walk the recreation site boundary and place flagged wire pins at locations which, when connected with straight lines, will define a polygon whose area approximates the recreation site area. Use as few pins as necessary, typical sites can be adequately flagged with 10-15 pins. Look both directions along site boundaries as you place the flags and try to balance areas of the site that fall outside the lines with offsite (undisturbed) areas that fall inside the lines. Pins do not have to be placed on the site boundaries, as demonstrated in the diagram following these procedures. Project site boundaries straight across areas where trails enter the site. Identify site boundaries by pronounced changes in vegetation cover, vegetation height/disturbance, vegetation composition, surface organic litter, and topography. Many sites with dense forest over stories will have very little vegetation and it will be necessary to identify boundaries by examining changes in organic litter, i.e. leaves that are untrampled and intact versus leaves that are pulverized or absent. In defining the site boundaries, be careful to include only those areas that appear to have been disturbed from human trampling. Natural factors such as dense shade and flooding can create areas lacking vegetative cover. Do not include these areas if they appear “natural” to you. When in doubt, it may also be helpful to speculate on which areas typical visitors might use based on factors such as slope or rockiness.

Step 2. Select and Reference Site Center point. Select a site center point that is preferably a) visible from all site boundary pins, b) easily referenced by distinctive permanent features such as larger trees or boulders, and c) approximately 5 feet from a steel fire ring if present. Embed a 5 inch nail in the soil at the center point location so that the head is 3-4 inches below the surface. During future sight assessments a

magnetic pin locator can be used to locate the center point. Next, insert a large steel stake at the center point and reference it to at least three features. Try to select reference features in three opposing directions, as this will enable future workers to triangulate the center point location. For each feature, take a compass azimuth reading and measure the distance (nearest 1/10 foot) from the center point to the center of trees or the highest point of boulders. Also measure the approximate diameter of reference trees at 4.5 feet above ground (dbh). Be extremely careful in taking these azimuths and measurements, as they are critical to relocating the center point in the future. Record this information on the back of the form.

Take a digital photograph that clearly shows the center point location in relation to nearby trees or other reference features, such as the fire ring, trees or boulders. Record a photo description, such as" center point location site 23 ", in the photo log.

Options: Some sites may lack the necessary permanent reference features enabling the center point to be accurately relocated. If only one or two permanent reference features are available, use these and take additional photographs from several angles. If permanent features are unavailable, simply proceed with the remaining steps without permanently referencing the center point. This option will introduce more error in comparisons with future measurements, particularly if the site boundaries are not pronounced. Note your actions regarding use of these options in the comment section.

Step 3. Record Transect Azimuths and Lengths. Standing directly over the center point, identify and record the compass bearing (azimuth) of each site boundary pin working in a clockwise direction, starting with the first pin clockwise of north. Be careful not to miss any pins hidden behind vegetation or trees. Be extremely careful in identifying the correct compass bearings to these pins as error in these bearings will bias current and future measurements of site size. Next, anchor the end of your tape to the center point stake, measure and record the length of each transect (nearest 1/10 foot), starting with the same boundary pin and in the same clockwise direction as before. Be absolutely certain that the appropriate pin distances are recorded adjacent to their respective compass bearing.

Step 4. Measure island and satellite areas. Identify any undisturbed islands of vegetation inside the site boundaries (often due to the clumping of trees and shrubs) and disturbed satellite use areas outside the site boundaries (often due to tent sites or cooking sites). Use site boundary definitions for determining the boundaries of these areas. Use the geographic figure method to determine the areas of these islands and satellites (refer to the diagrams following these procedures). This method involves superimposing one or more imaginary geometric figures (rectangles, circles or right triangles) on island or satellite boundaries and measuring appropriate dimensions to

calculate their areas. Record the types of figures used and their dimensions on the back of the form; the size of these areas should be computed in the office using a calculator.

Site Remeasurement: During site remeasurement use the data from the last monitoring period to reestablish the center point and all site boundary pins. If steel nails were embedded in the ground, a magnetic pin locator can assist in this process. Place flagged wire pins at each transect boundary point. Boundary locations based on the following procedures:

- Keep the same transect length if that length still seems appropriate, i.e., there is no compelling reason to alter the initial boundary determination.
- Record a new transect length if the prior length is inappropriate, i.e., there is compelling evidence that the present boundary does not coincide with the pin and the pin should be relocated either closer to or further away from the center point along the prescribed compass bearing. Use different colored flags to distinguish these current boundary points from the former boundaries.
- Repeat steps 1 and 3 from above to establish additional transects where necessary to accommodate any changes in the shape of recreation site boundaries (diagram below). Also repeat step 4.
- Leave all pins in place until all procedures are completed. Pins identifying the former site boundaries are necessary for tree damage and root exposure assessments.

These additional procedures are designed to eliminate much of the measurement error associated with different individuals making subjective judgments on those sites or portions of sites where boundaries are not pronounced. These procedures may only be used for sites whose center points can be relocated.

10. Condition class: Record the condition class you assessed for the site using the categories described earlier.

11. Vegetative ground cover on site: An estimate of the percentage of live non-woody vegetative ground cover (including herbs, grasses, and mosses and excluding tree seedlings, saplings, and shrubs) within the flagged primitive tent site boundary using the coded categories listed next. Include any disturbed satellite use areas and exclude any undisturbed island areas of vegetation. For this and the following two parameters, it is often helpful to narrow your decision to two categories and concentrate on the boundary that separates them. For example, if the vegetation cover is either category 2 (6-25%) or category 3 (26-50%), you can simplify your decision by focusing on whether vegetative cover is greater than 25%.

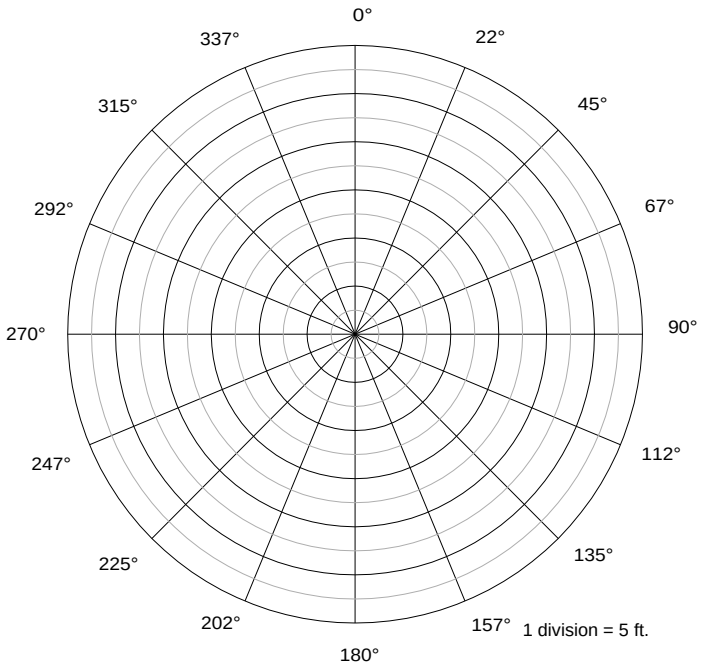
1-0-5%, 2-6-25%, 3-26-50%, 4-51-75%, 5-76-95%, 6-96-100%

Site Number / Site Name	**_____/_____**

Compass Bearing:

	0	22	45	67	90	112	135	157	180	202	225	247	270	292	315	337
X																
O																

Primitive Tent Site Map:



12. Vegetative ground cover offsite: An estimate of the percentage of vegetative ground cover in an adjacent but largely undisturbed “control” area. Use the codes and categories listed earlier. The control site should be similar to the primitive tent site in

slope, tree canopy cover (amount of sunlight penetrating to the forest floor), and other environmental conditions. The intent is to locate an area that would closely resemble the primitive tent site area had the site never been used. In instances where you cannot decide between two categories, select the category with less vegetative cover. The rationale for this is simply that, all other factors being equal, the first campers would have selected a site with the least amount of vegetation cover.

13. Soil exposure: An estimate of the percentage of soil exposure, defined as ground with very little or no organic litter (partially decomposed leaf, needle, or twig litter) or vegetation cover, within the primitive tent site boundaries and satellite areas. Dark organic soil, which typically covers lighter colored mineral soil, should be assessed as bare soil. Assessments of soil exposure may be difficult when organic litter becomes highly decomposed and forms a patchwork with areas of bare soil. If patches of organic material are relatively thin and few in number, the entire area should be assessed as bare soil. Otherwise, the patches of organic litter should be mentally combined and excluded from assessments. Code as for vegetative cover.

14. Tree damage: Tally the number of live trees (> 1 in. diameter at 4.5 ft.) within the primitive tent site boundaries, including trees in undisturbed islands and excluding trees in satellite areas, into one of the rating classes described below. Assessments are restricted to trees within the flagged primitive tent site boundaries in order to ensure consistency with future measurements. Multiple tree stems from the same species that are joined at or above ground level should be counted as one tree when assessing damage to any of its stems. Assess a cut stem on a multiple-stemmed tree as tree damage, not as a stump. Do not count tree stumps as tree damage. Take into account tree size. For example, damage for a small tree would be considerably less in size than damage for a large tree. Omit scars that are clearly not human-caused (e.g., lightning strikes).

    During site remeasurement, begin by assessing tree damage on all trees within the site boundaries identified in the last measurement period. Tally the number of trees in areas where the boundary has moved closer to the center point, i.e., former site areas that are not currently judged to be part of the site separately. Place a box around this number. Next, assess tree damage in areas where boundaries have moved further from the center point, i.e. expanded site areas that are newly impacted since the last measurement period. Circle these tallies. These additional procedures are necessary in order to accurately analyze changes.

    None/Slight- No, or slight, damage such as broken or cut smaller branches, one nail, or a few superficial trunk scars. Moderate- Numerous small trunk scars and/or nails or one moderate-sized scar. Severe- Trunk scars numerous with many that are large

and have penetrated to the inner wood; any complete girdling of trees (cut through tree bark all the way around tree).

15. Root exposure: Tally the number of live trees (> 1 in. diameter at 4.5 ft.) within the primitive tent site boundaries, including trees in undisturbed islands and excluding trees in satellite areas, into one of the rating classes described below. Assessments are restricted to trees within the flagged primitive tent site boundaries in order to ensure consistency with future measurements. Where obvious, omit exposed roots that are clearly not human-caused (e.g., stream/river flooding). During site remeasurement, begin by assessing root exposure on all trees within the site boundaries identified in the last measurement period. Tally the number of trees in areas where the boundary has moved closer to the center point, i.e., former site areas that are not currently judged to be part of the site separately. Place a box around this number. Next, assess root exposure in areas where boundaries have moved further from the center point, i.e. expanded site areas that are newly impacted since the last measurement period. Circle these tallies. These additional procedures are necessary in order to accurately analyze changes in root exposure over time.

    None/Slight- No, or slight, root exposure such as is typical in adjacent offsite areas. Moderate- Top half of many major roots exposed more than one foot from base of tree. Severe- Three-quarters or more of major roots exposed more than one foot from base of tree; soil erosion obvious.

16. Number of tree stumps: A count of the number of tree stumps (> 1 in. diameter) within the primitive tent site boundaries. Include trees within undisturbed islands and exclude trees in disturbed satellite areas. Do not include cut stems from a multiple-stemmed tree. During site remeasurement, begin by assessing stumps on all trees within the site boundaries identified in the last measurement period. Tally the number of trees in areas where the boundary has moved closer to the center point, i.e., former site areas that are not currently judged to be part of the site separately. Place a box around this number. Next, assess stumps in areas where boundaries have moved further from the center point, i.e. expanded site areas that are newly impacted since the last measurement period. Circle these tallies. These additional procedures are necessary in order to accurately analyze changes in stumps over time.

17. Number of trails: A count of all trails leading away from the outer primitive tent site boundaries. Do not count extremely faint trails that have untrampled tall herbs present in their tread or trails leading out to any satellite sites.

18. Number of fire sites: A count of each fire site within primitive tent site boundaries, including satellite areas. Include old inactive fire sites as exhibited by blackened rocks, charcoal, or ashes. Do not include areas where ashes or charcoal have been dumped. However, if it is not clear whether or not a fire was built on the site, always count questionable sites that are within site boundaries and exclude those that are outside site boundaries.

19. Litter/trash: Evaluate the amount of litter/trash on the site: n-None or less than a handful, S-Some-a handful up to enough to fill a 2-1/2-gallon bucket, M-Much- more than a 2-1/2-gallon bucket.

20. Human waste: Follow all trails connected to the site to conduct a quick search of likely “toilet” areas, typically areas just out of sight of the primitive tent site. Count the number of individual human waste sites, defined as separate locations exhibiting toilet paper and/or human feces. The intent is to identify the extent to which improperly disposed human feces is a problem. Use the following code categories: N-None, S-Some-1-3 sites, M-Much-4 or more sites evident.

21. Comments/Recommendations: An informal list of comments concerning the site: note any assessments you felt were particularly difficult or subjective, problems with monitoring procedures or their application to this particular primitive tent site, or any other comment.

22. Primitive tent site photograph: Select a good vantage point for viewing the entire primitive tent site, preferably one of the site boundary pins, and take a digital picture of the primitive tent site. Note the azimuth and distance from the center point to the photo point and record on the form. The intent is to obtain a photograph that includes as much of the site as possible to provide a photographic record of site condition. The photo will also allow future workers to make a positive identification of the site. Label disks with date, and site number.

23. Total primitive tent site area: Calculate the primitive tent site area based on the recorded transect measurements. Add the area of any satellite sites and subtract the area of any undisturbed islands to obtain the Total Primitive Tent site Area. Record primitive tent site area to nearest square foot (ft^2)

Form B Procedures

Refer to the procedures described earlier; all procedures are the same with the exception of primitive tent site size. Measure primitive tent site size using the geometric figure method. Typically, class 1 and 2 primitive tent sites are quite small in size and this method should be both efficient and accurate. Be sure to record on form B the types of

figures used (rectangle, square, triangles...etc.) and all necessary dimensions. Record primitive tent site area to nearest square foot (ft^2).

Appendix N: Snowmobile Trail Siting, Construction and Maintenance on Forest Preserve Lands in the Adirondack Park

I. **Adirondack Park Snowmobile Trail System**

The October 2006, *Snowmobile Plan for the Adirondack Park/Final Generic Environmental Impact Statement* (2006 Snowmobile Plan) presents a conceptual snowmobile plan with the goal of creating a system of snowmobile trails between communities in the Adirondack Park. The 2006 Snowmobile Plan outlines the concept of reconfiguring the existing snowmobile trail network across the Forest Preserve through the UMP process. Implementation is supported by this "Management Guidance…" establishing a new DEC snowmobile trail classification system with new standards and guidelines for snowmobile trail siting, construction and maintenance.

The designation of a new class of snowmobile trail to establish and improve community connections (Class II trails) will be complemented by the designation of another new class of trail (Class I trails) intended to preserve a more traditional type of Adirondack snowmobiling experience. Some existing snowmobile trails (most likely within the interior of Wild Forest areas or adjacent to private inholdings) will be redesignated for non-motorized use or abandoned as trails altogether. These actions will serve to ensure available, wintertime recreational opportunities in Wild Forest areas are not dominated by snowmobile use to the exclusion or near exclusion of passive recreational uses. All snowmobile trails, regardless of class, will be carefully sited, constructed and maintained to preserve the most essential characteristics of foot trails and to serve, where appropriate, hiking, bicycling and other non-motorized recreational pursuits in spring, summer and fall. Additionally, this guidance helps ensure protection of sensitive natural resources on public lands and the minimization of snowmobiling safety hazards.

Implementing the broad recommendations of the 2006 Snowmobile Plan will also result in the establishment of important new routes on private lands through the acquisition of easements or other access rights from willing sellers. This guidance does not address the management of those trails, but instead provides standards and guidelines solely for the management of DEC snowmobile trails on Forest Preserve lands throughout the Adirondack Park.

In many locations, designated snowmobile routes of varying lengths exist on Forest Preserve roads, rather than on trails. DEC's management of all such roads for motor

vehicle use, including snowmobiles, is guided by DEC's "CP-38 Forest Preserve Roads" policy and not by this guidance.

Snowmobile Trail Classification

The classification system for designated snowmobile trails (not on roads) in the Forest Preserve is presented below. It establishes two classes of trails,[1] for which the following definitions apply:

"Motorized travel corridor" – non-snowmobile public motor vehicle routes[2] and motorized waterbodies.

"Motorized waterbodies" – waterbodies upon which year-round, public motorized uses (including snowmobiling) occur to a moderate or great extent, typically facilitated by direct motorized route access to shorelines and boat launching facilities.

"Periphery" – the geographic area within two miles of a motorized travel corridor.

"Remote interior" – the geographic area more distant than two miles from the nearest motorized travel corridors in all directions.

Class II Trails: ***Community Connector Trails***

Snowmobile trails or trail segments that serve to connect communities and provide the main travel routes for snowmobiles within a unit are Community Connector Trails. These trails are located in the periphery of Wild Forest or other Forest Preserve areas. They are always located as close as possible to motorized travel corridors, given safety, terrain and environmental constraints, and only rarely are any segments of them located further than one mile away from the nearest of these corridors. They are not duplicated or paralleled by other snowmobile trails. Some can be short, linking communities to longer Class II trails that connect two or more other communities.

[1] The classification scheme outlined in the 2006 Snowmobile Plan differed from the scheme presented here. Class I trails were presented as snowmobile trails on Forest Preserve roads, Class II trails (of two subtypes) as secondary trails and Class III trails as community connector trails.

[2] Including routes where rights for motorized access to private in-holdings exist, but generally not including DEC administrative roads.

Class I Trails: ***Secondary Snowmobile Trails***

All other snowmobile trails that are not Community Connector Trails are Secondary Snowmobile Trails. These trails are located in the periphery of Wild Forest and other Forest Preserve areas where snowmobile trails are designated.[3] They may be spur trails (perhaps leading to population areas and services such as repair shops, service stations, restaurants and lodging), short loop trails or longer recreational trails. If directly connected to Class II trails, new and rerouted Class I trails are always located as close as possible to – and no farther than one mile from – motorized travel corridors. If not directly connected to Class II trails, they are generally located within one mile of motorized travel corridors, although some – with high recreational value – may be located beyond one mile and may approach a remote interior area.

II. **Reconfiguration of the Snowmobile Trail System**

Establishment of Community Connections

The establishment of a Park-wide community-connection snowmobile trail system will provide north-to-south and east-to-west routes that will link many Adirondack communities together. Designation of Class II, Community Connector snowmobile trails on Forest Preserve lands will create essential portions of the system, the use of which will result in a significant shifting of snowmobile use away from some remote interior areas of these lands to the periphery. Within the periphery, these Class II trails will intentionally be located as close to motorized travel corridors as practicable without locating them within – nor within sight of – road rights-of-way wherever such locations can be avoided. The actual, on-the-ground routes that establish the connections through Forest Preserve will be determined through the UMP process. Many of the connections already exist and the focus will be on improving them through proper siting, construction and trail maintenance work.

A small number of existing[4] DEC snowmobile trails in the Park shown to be located partly within remote interior areas may receive Class II designation due to their importance and may be retained and kept open, as long as either of the following conditions are met: 1) the remote interior area of concern is small – no more than 750 acres in area; or, 2) the trail segments of concern are located very near the boundary of the remote interior area, with no trail segment located further than one-half mile into the interior from any

[3] Snowmobile trails may also be located in some Primitive areas and in Wilderness areas within 500 feet of the Wilderness boundary.

[4] "Existing," as used here and in the paragraph immediately below, means existing at the time of DEC's adoption of this guidance.

boundary. DEC will give high priority to relocating out of the remote interior area any Class II trails or trail segments so retained.

No existing DEC snowmobile trails in the Park that receive Class I designation may be retained and kept open with any portion of the trail located within a remote interior area.

Redesignation and Abandonment of Existing Trails

Actions taken under this guidance will also include the re-designation of some existing Forest Preserve snowmobile trails as either Class I, Secondary Snowmobile Trails or as non-snowmobile trails (such as foot trails or horse trails) for non-motorized recreational uses. The re-designation of some snowmobile trails for non-motorized uses will occur consequent to management actions called for in adopted UMPs or UMP amendments and will be guided by the primary goal: *To provide a net benefit to the Forest Preserve through reconfiguring the trail system and revising trail management practices*[5]*.* In some instances, the re-designation of particular snowmobile trail segments – such as the far portions of some dead-end trails – may be the preferred alternative over re-designation or abandonment of the entire trail. Such actions can provide for a new type of recreational opportunity – a combined or hybrid type (motorized/non-motorized), in which the last stretches of some routes are undertaken by means of skis or snowshoes.

Snowmobile trails that receive the new Class I designation or are re-designated for non-snowmobile use will be revegetated to narrower widths that conform to their specific trail classification standards where they are wider. In many locations, this will serve to restore a more consistently closed canopy, thereby improving the aesthetic experience of trail users and enhancing ecological integrity.

Criteria for Redesignation or Abandonment of Trails

Removing some snowmobile trails or trail segments from the existing network is central to the balance sought in providing a net benefit to the Forest Preserve while also providing for key improvements in snowmobile riding in the Park. In proposing trails or trail segments for redesignation or abandonment, management will seek to eliminate those that:

- do not provide safe snowmobiling conditions;

[5] For a discussion of the "net benefit" concept, see page 187 of the Snowmobile Plan for the Adirondack Park/Final Generic Environmental Impact Statement, October 2006.

- penetrate the more remote areas of large Wild Forest parcels6 or traverse an existing undeveloped forest corridor connecting two or more remote interior areas in the Forest Preserve;
- are located near Wilderness area boundaries;
- are redundant trails, or are part of an unnecessarily dense, local snowmobile trail network where opportunities for quiet, non-motorized use of trails are rare or nonexistent;
- are no longer used or receive only minimal public use;
- might encourage illegal motorized access to public and private lands or create significant potential conflicts with adjacent property owners;
- incur unusually high snowmobile trail maintenance costs.

Additional Environmental Benefits

By restricting use of tracked groomers to the more developed Class II trails (see "Motor Vehicle Use Guidelines"), and by allowing Class I snowmobile trails to acquire a less developed and less maintained character, this guidance is intended to clearly distinguish between two important types of snowmobiling opportunities in the Adirondacks while shifting the highest snowmobile use to the outer periphery of Forest Preserve lands. Consequently, the wilder, more remote areas of the Forest Preserve will be less impacted by motorized traffic. There will be lower noise levels, lower exhaust emission levels, decreased impacts on wildlife and reduced user conflicts between users participating in motorized and non-motorized forms of recreation. DEC's responsibility to manage and monitor snowmobile use and impacts will also be made easier.

III. Standards and Guidelines for Snowmobile Trail Siting, Construction and Maintenance on the Forest Preserve

The following standards will apply to siting and designating snowmobile trails on Forest Preserve lands in the Adirondack Park and carrying out construction and maintenance activities on them.

Specific Trail Siting Criteria for New and Rerouted Snowmobile Trails

Class I Trails: ***Secondary Snowmobile Trails***

[6] Trails providing access to frozen surfaces of waterbodies located wholly or partly within remote interior areas should be rerouted or abandoned to prevent possible incursion into the remote areas via the frozen surfaces.

New and rerouted Class I trails will be sited within the periphery of State lands and may only be sited beyond one mile from motorized travel corridors when the recreational value of the newly sited or rerouted trail segment is high and potential impacts to sensitive interior areas are minimal as carefully assessed and described in a UMP.

All new and rerouted Class I trails directly connected to Class II Trails will be sited as close as possible to motorized travel corridors and, without exception, will be sited no farther than one mile from these corridors.

Class II Trails: ***Community Connector Trails***

New and rerouted Class II Trails on State lands will be sited as close as possible to motorized travel corridors. No new or rerouted trail segments will be sited farther than one mile from these corridors unless terrain or environmental constraints dictate otherwise, or such siting of a new or rerouted trail segment within the periphery is necessary to connect important, existing trail segments that together will form the same Community Connector Trail.

Snowmobile Trail Siting Standards

1. In cases where closure or abandonment of a motorized travel corridor results in an existing snowmobile trail location being inconsistent with these guidelines, such trail will, if practicable and as soon as possible, be relocated or reclassified to comply with these guidelines.

2. New and rerouted snowmobile trails will be sited, when possible, along existing routes or previously existing old routes such as foot trails, woods roads, utility rights of way and abandoned railroad beds in lieu of constructing entirely new trails.

3. New and rerouted snowmobile trails will be sited with an objective to avoid locations that present safety hazards such as the edges of ravines or ledges, major highway crossings and crossings of frozen surfaces of water bodies such as rivers, lakes and ponds. If suitable alternative routes are designated or developed, trails that lead riders to unsafe locations will be closed to snowmobile use in favor of the alternative routes in order to lower risks and eliminate unnecessary snowmobile trail mileage.

4. New and rerouted snowmobile trails will be sited with an objective to avoid areas considered environmentally sensitive, such as: wetlands; endangered plant or animal populations that might be harmed by the trails and/or their use; remote interior areas as defined by these guidelines and forested corridors connecting such remote interior

areas; and deer wintering areas and other significant habitats, so that the values of these areas are not diminished.

5. New and rerouted snowmobile trails will not be established without an evaluation of potential significant impacts on adjacent private holdings.

6. New and rerouted snowmobile trails, including spur trails, will not provide access to private lands where public snowmobile access is not permitted.

7. New and rerouted snowmobile trails, through the acquisition of easements or other access rights from willing sellers, will be sited on private lands rather than State lands wherever possible to minimize impacts on the Forest Preserve.

Snowmobile Route Design, Construction and Maintenance Standards

Snowmobile route design, construction and non-ordinary maintenance activities[7] will be carried out pursuant to Snowmobile Trail Work Plans developed by DEC staff in consultation with APA staff. The following standards will be followed and reflected in the development of these Work Plans in order to preserve the trail-like character of snowmobile trails while ensuring they are appropriately safe to ride. When undertaking any of the types of work described below with motorized landscaping equipment (almost exclusively on Class II Trails), only careful use of appropriate low-impact landscaping equipment will be approved, as determined by a "minimum requirement" decision making approach set forth in the Snowmobile Trail Work Plan. For example, use of bulldozers and creation of "dugways" will not be approved. Operators of low-impact landscaping equipment will conduct their work in optimal environmental conditions and in a manner that will not contribute to any potential degradation of the wild forest setting. All work will be done with appropriate DEC oversight.

For new snowmobile trails of both classes to retain essential characteristics of foot trails, management practices must integrate thorough knowledge of the standards and guidance below, with efforts to appropriately balance them and the underlying concerns as the trails are sited, constructed and maintained thereafter. The end result should be trails that are both enjoyable and safe to ride for essentially the same reason – for the way the trails snake through the wild landscape of the Adirondacks in a natural fashion… construction and maintenance practices having altered the terrain enough to allow for an acceptable

[7] Ordinary maintenance activities are defined in the "Memorandum of Understanding Between the Adirondack Park Agency and the Department of Environmental Conservation Concerning Implementation of the State Land Master Plan for the Adirondack Park" (APA/DEC MOU).

degree of riding comfort, but not so much as to create potential for high-speed, disruptive and unsafe snowmobiling experiences.

Many existing snowmobile trails are sited on old woods roads and other routes originally constructed and maintained for use of motor vehicles other than snowmobiles. In such cases, the standards set forth below may also be used to reroute or otherwise minimally alter such trails with the objective to achieve the same end result.

Alignment and Grade:

Trail alignment will not result in blind curves and abrupt changes in either horizontal or vertical direction; trails will be designed to ensure:

a) Sight distance will be 50 feet or more wherever possible;

b) Curves will have a radius of at least 25 feet;

c) The maximum grade of trails will not exceed 20% unless deemed necessary to minimize environmental impacts associated with trail construction;

d) Trails will not normally be laid out on existing cross slopes greater than 12%;

1. To the greatest extent possible, trails will not be aligned with long straight sections. Trails will follow the natural contours of the terrain as much as possible and will be laid out to balance and minimize necessary tree cutting, rock removal and terrain alteration.

2. Trails will be laid out to avoid rocky areas and drainage features such as wetlands and streams to the greatest possible extent.

3. In locations where serious environmental or safety conditions exist along a trail, the trail will be rerouted rather than rehabilitated at that location.

Trail Width:

1. Class I Trails may be maintained to an 8-foot maximum cleared trail width.

2. Class II Trails may be maintained to a 9-foot maximum cleared trail width except on sharp curves (inside turning radius of 25-35 feet) and steep running slopes (over 15%) where they may be maintained to a 12-foot maximum cleared trail width.

Class I and II trails wider than their classification allows will be actively restored to these limits.

Tree Cutting:

DEC policy requires that cutting trees should be minimized, but where cutting is required, trees must be identified, tallied and included in a Work Plan in accordance with *DEC Program Policy LF91-2 Cutting and Removal of Trees in the Forest Preserve.*

1. Cutting of overstory trees will be avoided in order to maintain a closed canopy wherever possible. Large and old growth trees should be protected.

2. Cutting trees to expand a trail from its current width or otherwise improve a trail will be carried out only pursuant to a Work Plan.

3. All snowmobile trails may be kept clear to a height of 12 feet, as measured from ground level.

4. No trees, except trees that due to structural problems or fallen/tipped conditions present an immediate hazard to the safe use of the trail by snowmobilers, will be cut outside the cleared trail width.

5. Trees should be felled away from the trail to minimize the amount of material that needs to be moved. If the tree trunks are not used to help delineate the trail, felled trees should be delimbed and cut into short enough lengths to lie flat on the ground. Once delimbed and cut up, the short lengths should be dispersed and not left in piles next to the trail. If the tree trunks are used to help delineate the trail, the cut ends of the trunks should be located outside the intended edge of the trail by at least one foot for safety reasons.

6. When trees are cut within the cleared trail width, they will be cut flush with the ground, and the preference will be to leave the root masses in place.

    a) On Class II trails, if it is important to remove a root mass because it presents an obstacle in the trail surface, the preference will be to grind the stump and roots. If grinding is not feasible, the root mass may be dug up, rolled or placed off the trail into the woods without removing intervening vegetation and organic matter; the root mass will be set down so as to have the lowest profile possible.

    b) Grinding will not occur on Class I trails.

7. No brushing will occur outside the cleared trail width of any snowmobile trails.

Trail Surface:

1. Grading:

    a) Class I Trails. Trail surfaces should generally follow the existing contours of the natural forest floor and not be graded flat. While limited leveling and grading may

be undertaken, this work will be done using hand tools almost exclusively. In rare circumstances, appropriate low-impact landscaping equipment may be used as specified in a Work Plan.

b) Class II Trails. Trail surfaces should generally follow the existing contours of the natural forest floor and not be graded flat. Limited leveling and grading may be undertaken using appropriate low-impact landscaping equipment as specified in a Work Plan.

2. Rock Removal:

a) Removal of boulders and rocks from snowmobile trail surfaces will be minimized to the greatest extent possible and will be described in a Work Plan. Methods of removal will be specified in the Work Plan. No boulders or rocks will be removed outside the cleared trail width.

i. On Class I Trails, rock removal will occur using hand tools only, except in rare circumstances in new trail construction and trail reconstruction when use of low-impact landscaping equipment may be approved. Rock removal on Class I trails will be primarily limited to uncommon, major obstacles that present demonstrable safety hazards to snowmobile riders and which cannot be avoided by appropriate trail layout or rerouting.

ii. On Class II Trails, rock removal may occur using low-impact landscaping equipment and may include removal of rocks determined to present demonstrable safety hazards to snowmobile riders or to be very likely to damage grooming equipment. Many rocks in snowmobile trails, due to their specific shapes and/or locations, do not present themselves so as to cause these problems, and these may not be removed regardless of how high above the trail surface they project. Conversely, some rocks in snowmobile trails – while small – do present themselves so as to cause these problems, and if they are identified in an approved Work Plan, they may be removed.

b) Boulders and rocks removed from trails will preferably be buried in the trails to minimize disturbance. Earth moved to dig the holes into which the boulders or rocks are to be placed will be used to fill the holes that result from the rock removal. When removed boulders and rocks are not buried, but are instead set to the side of the trail, they will be dispersed with care and not left in windrows or piles next to the trail. If a boulder or rock is used to help delineate the trail, it should be placed outside the intended edge of the trail by at least one foot for safety reasons.

c) Alternatives to rock removal should be considered to minimize the need for disturbance of the ground, to reduce the likelihood of creating drainage problems and to reduce the potential need for fill. Such alternatives may include covering or minor relocation of the trail where a boulder or rock may be too large or the number too great to deal with by any other method.

d) Removal of boulders and rocks from the surrounding natural, wild forest setting for use in snowmobile trail construction and maintenance work will be minimized and may occur only on a limited, carefully selective basis for small-scale projects. On Class II trails, where large-scale trail construction projects using stone material may be approved, importation of native stone from appropriate, specified sources may occur.

3. Side Slope Management:

a) On Class I trails, elimination or reduction of side slopes by means of bench cuts will be accomplished using hand tools exclusively. The need for bench cuts will be minimized through proper trail layout. The maximum amount of cut, measured vertically, will be 20% of the tread width. Side slopes of newly constructed trails and reroutes will be dressed and tapered within the cleared trail width; side slopes of some existing, degraded trails may be dressed and tapered outside the cleared trail width if this is determined the best way to address the degradation and restore environmentally sound, safe conditions.

b) On Class II trails, elimination or reduction of side slopes will be accomplished primarily by means of full bench cuts for which appropriate landscaping equipment may be used. The need for bench cuts will be minimized through proper trail layout. The tapering of side slopes will be allowed outside the cleared trail width. The areas dressed and tapered will be revegetated to restore stability and natural site conditions after the full bench cut is created.

Drainage:

1. Adequate drainage will be provided within the cleared trail width to prevent trail erosion and washout and to maintain a safe trail. All snowmobile trails will be constructed so as not to intercept groundwater to the greatest extent possible; natural drainage patterns will be maintained. In areas where the natural drainage patterns may be affected, bridges will be the preferred method for crossing wet areas as authorized in a Work Plan. Bridges will be constructed pursuant to approved snowmobile trail bridge designs.

2. Water bars and broad-based dips may extend beyond the cleared trail width to the extent necessary to effectively remove water from the trail surface, provided that no

trees are cut outside the cleared trail width. Culverts will not be installed as drainage devices. Any existing culverts will be removed unless the culverts are very large and their removal is essentially not possible.

Wetlands:

1. Wetlands will be avoided to the greatest extent possible.
2. When wetlands crossings or trail locations adjacent to wetlands are proposed, the trail will be designed to minimize potential adverse impacts.
3. Any activity in a wetland or that may impact a wetland will be undertaken with prior consultation with the APA and with recognition of Army Corps of Engineers' permit requirements.

Motor Vehicle Use Guidelines

1. Snowmobile route design, construction and non-ordinary maintenance will be carried out pursuant to Snowmobile Trail Work Plans (Work Plans) developed by DEC staff in consultation with APA staff.
2. Administrative personnel, equipment and materials will be brought to work sites by the least intrusive means possible, as determined by a "minimum requirement" decision making approach set forth in the Snowmobile Trail Work Plan and as identified in priority order below:
   a) By non-motorized means or, during periods of sufficient snow and ice cover, by snowmobile.
   b) By aircraft.
   c) By appropriate motor vehicles other than snowmobiles. Such motor vehicle use will only be approved when alternative means of transportation (non-motorized means, snowmobiles, aircraft) are not feasible or are inadequate. The motor vehicles used will be those which are suitable for the particular activities but have the least potential adverse impact on the environment. Even when such motor vehicle use has been approved, administrative personnel will utilize motor vehicles only to the minimum extent necessary.
3. Proposed motor vehicle or aircraft use will also be described in a Conceptual Use Plan, per CP 17, "Record Keeping and Reporting of Administrative Use of Motor Vehicles and Aircraft in the Forest Preserve" or any successor policy.
4. Any motor vehicle used will display an official "DEC Administrative Use" sign, unless otherwise prominently identified as a DEC vehicle.

5. All motorized uses will be supervised by an individual who has attended and completed DEC training concerning guidelines and policies for snowmobile trail construction and maintenance.

6. All activities involving landscaping equipment will be directly supervised by DEC staff.

7. A detailed Work Plan, approved by DEC Lands & Forests staff must be prepared for all work to be done on snowmobile trails except for the Initial Annual Maintenance Trips described below and immediate removal of fallen or tipped trees that present safety hazards as described above, under "Tree Cutting."

8. A Snowmobile Trail Maintenance Log (Trail Log) will be used to record all work done on snowmobile trails.

9. Work requiring use of aircraft or motor vehicles other than snowmobiles should be done, whenever possible, when environmental conditions allow during the months of August, September, and October.

Maintenance Trips involving Snowmobiles and other Motor Vehicles:

1. **Initial Annual Maintenance Trips.** These trips will be authorized under an AANR or TRP and are undertaken solely for the purpose of removing fallen branches and trees that obstruct the trail and maintaining drainage features.

    a) AANRs and TRPs will identify trail names, trail class and authorized motor vehicles to be used for Initial Annual Maintenance Trips.

    b) Motor vehicle use will be limited to one trip per trail per year.

    c) Trips will only be conducted when environmental conditions allow in the months of August, September, and October.

    d) All activities undertaken during Initial Annual Maintenance Trips will be recorded in Snowmobile Trail Maintenance Logs.

    e) During Initial Annual Maintenance Trips an assessment of necessary trail construction and maintenance work will be conducted. Necessary work will be recorded in Snowmobile Trail Maintenance Logs by specific location and will be used to develop Work Plans.

2. **Maintenance, Rehabilitation and Construction Trips.** These trips include all work trips on snowmobile trails except for "Initial Annual Maintenance Trips," described above, and "Grooming and Associated Winter Maintenance Trips," described below. They are undertaken primarily for the purposes of snowmobile route design, construction and non-ordinary maintenance activities (i.e., most "trail work," bridge

construction, etc.) and so are a primary focus of the standards and guidelines set forth earlier in this section of the guidance.

a) All motor vehicle use associated with work of this type will be undertaken by the least intrusive means possible, as identified in priority order set out under "Motor Vehicle Guidelines," Section 1.

b) All work of this type will require an approved, detailed Work Plan as describe under "Snowmobile Route Design, Construction and Maintenance Standards," above.

3. **Grooming and Associated Winter Maintenance Trips**. Grooming will be tailored to the Class of the snowmobile trail; it must not alter a trail's width or physical character and will not be used to gather snow from outside the allowable cleared width of the trail. Grooming equipment will be operated only by administrative personnel including DEC staff or volunteers under an agreement with the DEC (AANR or TRP) and covered by appropriate insurance. The type of equipment allowed will be as follows:

Class I Trails: Snowmobile with a drag, as the 8-foot cleared width and layout of the trail will allow[8] and as approved in an AANR, TRP or pursuant to a Work Plan.

Class II Trails: Snowmobile with a drag, or, grooming equipment with tractor and drag width sufficiently less than the 9-foot to 12-foot trail width[9] to allow for grooming that will not cause tree damage. Type and dimensions of grooming equipment to be identified and approved in an AANR, TRP and pursuant to a Work Plan.

Associated Winter Maintenance Trips will occur only when snow and ice cover is sufficient to protect the trail. They will normally be performed by use of snowmobiles but may also involve use of tracked groomers or other motor vehicles, where appropriate, as approved in an AANR, TRP and pursuant to a Work Plan. These trips may include any of the following activities:

a) Removing fallen or tipped trees that present immediate safety hazards as described above, under "Tree Cutting."

b) Placing trail signs or markers.

c) Pruning vegetation.

[8] The drag should not be wider than 7 ½ feet on Class I trails.
[9] The drag should not be wider than 8 ½ feet on Class II trails.

d) Taking building materials, supplies and tools to a construction site for immediate work or for staging them for an upcoming construction season;

e) In rare instances, installing temporary trail safety or natural resource protection features or structures.

f) Removing materials from the Forest Preserve that were staged during previous work projects.

Department Oversight of Motor Vehicle Use:

1. The Regional Natural Resource Supervisor, or a Departmental designee, will be notified no less than 48 hours prior to commencement of motor vehicle use and will determine whether or not trail conditions are suitable for such work and vehicle use prior to such use.

2. The Regional Natural Resource Supervisor, or a Departmental designee, will be responsible for ensuring Department staff periodically monitor and inspect all construction and maintenance work to ensure compliance with approved Work Plans.

   a) Department staff shall inspect the snowmobile trail work at times which are intended to coincide with the use of equipment that has the greatest potential to cause environmental damage.

   b) All construction activities involving landscaping equipment will be directly supervised by DEC staff.

   c) Within seven days of completion of authorized construction and maintenance activities, the Regional Natural Resource Supervisor will verify the work was satisfactorily completed according to Standards and Guidelines for Snowmobile Trail Construction and Maintenance and, if applicable, that any AANR or TRP terms and conditions were met.

   d) If the terms and conditions of an AANR, TRP and associated Work Plan are violated at any time, the AANR/TRP may be amended or revoked, with the determination to be made by the Director of the Division of Lands and Forests.

IV. **Implementation and Review**

Implementation of this guidance – and the appending of it to the APA/DEC MOU – is intended to establish snowmobile trail management practices that conform to the guidelines and criteria of the APSLMP.

Some activities may require a freshwater wetlands permit from the Agency. Some activities will qualify by MOU definition as ordinary maintenance, rehabilitation, and minor relocation of snowmobile trails. In addition to these considerations, implementation of this

guidance may occur through: authorization granted directly via an approved UMP or UMP amendment; interagency consultation on Work Plans authorized by UMP's or UMP amendments; and APA/DEC staff observations and monitoring of off-season snowmobile trail management practices and trail character.

This guidance does not prevent DEC, via individual UMP's or other means, from providing more restrictive management where necessary to protect the character of Forest Preserve lands.

Staff of both the APA and DEC will document examples of the implementation of this guidance in order to: 1) verify that implementation is producing the desired results; and, 2) identify specific aspects of the guidance that may need to be clarified or otherwise revised by APA and DEC in order to achieve, or more fully achieve, the desired results. APA staff will report regularly to the Agency State Land Committee concerning such review and any recommendations that may stem from it.

Appendix O: Invasive Species Guidelines

(Interagency Guidelines for Implementing Best Management Practices for the Control of Terrestrial and Aquatic Invasive Species on Forest Preserve Lands in the Adirondack Park – Updated 2015)

Prepared By
NYS Department of Environmental Conservation,
Adirondack Park Agency,
and the Adirondack Park Invasive Plant Program

I. Introduction

The negative impacts of invasive species on natural forest and aquatic communities are well documented. Colonization and unrestrained growth of invasive species cause the loss of biodiversity, interruption of normal hydrology, suppression of native vegetation, and significant aesthetic, human safety and economic impacts. Terrestrial and aquatic invasive species have been identified at increasing rates of colonization along roadsides, in campgrounds, and in water bodies of New York State Department of Environmental Conservation (DEC or Department) administered lands within the Adirondack Park over the past 20 years. Some of these species have the potential to colonize backcountry lands, lakes and ponds and degrade natural resources of these lands.

These guidelines apply to DEC administered lands within the Adirondack Park, which are comprised primarily of Forest Preserve lands. The Forest Preserve is protected by Article XIV, Section 1 of the New York State Constitution. This Constitutional provision, which became effective on January 1, 1895 provides in relevant part:

"The lands of the state, now owned or hereafter acquired, constituting the Forest Preserve as now fixed by law, shall be forever kept as wild forest lands. They shall not be leased, sold or exchanged, or be taken by any corporation, public or private, or shall the timber thereon be sold, removed or destroyed."

The Department has jurisdiction over the Forest Preserve, and its management of these lands must be in keeping with this Constitutional provision.

Furthermore, DEC's management of the Adirondack Forest Preserve is governed by the Adirondack Park State Land Master Plan (Master Plan), which was initially adopted in 1972 by the Adirondack Park Agency (Agency or APA), with advice from and in consultation with the Department, pursuant to Executive Law §807 (recodified as Executive Law §816). The Master Plan provides the overall general framework for the development and management of State Land in the Adirondack Park. The Master Plan sets forth the following classifications for State Land within the Adirondack Park: Wilderness, Primitive, Canoe, Wild Forest, Intensive Use, Historic, State Administrative,

Wild, Scenic and Recreational Rivers, and Travel Corridors, and sets forth management guidelines for each of these major land classifications.

Executive Law §816 requires the Department to develop, in consultation with the Agency, individual unit management plans (UMPs) for each unit of land under the Department's jurisdiction which is classified in one of the nine classifications set forth in the Master Plan. The UMPs must conform to the guidelines and criteria set forth in the Master Plan. Thus, UMPs implement and apply the Master Plan's general guidelines for particular classifications of State Land within the Adirondack Park.

Executive Law §816(1) provides in part that "(u)ntil amended, the master plan for management of state lands and the individual management plans shall guide the development and management of state lands in the Adirondack Park.

Article XIV, Section 1 of the New York State Constitution does not specifically address the issue of invasive species. However, since Article XIV directs that Forest Preserve lands be "forever kept as wild forest lands" and prohibits the removal or destruction of timber, care must be taken to ensure that decisions to eradicate invasive species do not result in a material cutting of Forest Preserve timber or adversely impact the wild forest character of Forest Preserve lands.

Although there are no explicit references to active invasive species management on Forest Preserve lands in the Master Plan, the Master Plan provisions are consistent with the concept of actively managing invasive species to protect the "wild forest" character of the Forest Preserve. For instance, page 1 of the Master Plan (2001 Update) states that, "If there is a unifying theme to the Master Plan, it is that the *protection and preservation* of the natural resources of the state lands within the Park must be paramount" (emphasis added). Surveys of DEC administered lands document the continued importation and expansion of invasive plants into and throughout the Adirondack Park (see Section II below). Given that models indicate that eradication of an invasive species becomes progressively more difficult, more expensive, and less effective the longer the species is allowed to grow without intervention (Chippendale 1991; Hobbs and Humphries 1995), it is critical for the Department and APA to address this problem in an expeditious manner.

The goal of these guidelines is to establish parameters known as best management practices (BMPs) for the control of terrestrial and aquatic invasive species while ensuring that such management activities do not alter the "forever wild" character of the Forest Preserve. These guidelines are intended to harmonize the Constitution's "forever wild" provisions with the Master Plan's overriding directive to manage Forest Preserve lands for their protection and preservation. They have been developed pursuant to, and are consistent with, relevant provisions of the New York State Constitution, the Environmental Conservation Law (ECL), the Executive Law, the State Environmental Quality and Review Act (SEQRA), the Master Plan, and all other applicable rules and regulations, policies and procedures.

It is also important to determine if any regulatory jurisdictions or permits are triggered by a proposed management activity. For example, any management activities that involve work within 100 feet of jurisdictional wetlands on private or public lands may require a permit from the APA.

II. Goal of the Guidelines

The goal of the Guidelines is to restore and protect the native ecological communities on DEC administered lands in the Adirondack Park through **e**arly detection and rapid response efforts in order to locally eradicate, suppress, or contain existing or newly identified invasive species populations.

III. Objectives of the Guidelines

These Guidelines provide a template for the process through which comprehensive active terrestrial and aquatic invasive species management will take place on DEC administered lands in the Adirondack Park. The Guidelines provide protocols for implementing BMPs on DEC administered land. The protocols describe what management practices are allowed and when they can be implemented, who can be authorized to implement the management practices, and which terrestrial and aquatic invasive species are targeted. The Guidelines are a living document and should be revisited and revised periodically to reflect the dynamic nature of invasive species and the state of knowledge of best management practices.

Reference to these Guidelines will be included in UMPs as they are drafted or revised. UMPs will also include available inventory information on the distribution of invasive terrestrial and aquatic species on or in close proximity to the Unit. The Guidelines will guide invasive terrestrial and aquatic species management activities on DEC administered land units.

The Guidelines also describe a process by which the Department may enter into Partnership Agreements with and facilitate individuals or groups to manage terrestrial and aquatic invasive species on DEC administered lands using the listed best management practices, in the appropriate circumstances. The Partnership Agreement will be accompanied with a site-specific or rapid response work plan for treatment of invasive species based on the BMPs in the Guidelines and include provision for monitoring control efficacy and native plant recovery. As noted above, the site-specific or rapid response work plan for treatment of invasive species will provide the detail regarding the selected management options on a site-specific basis.

IV. Definitions

a. Adirondack Park Invasive Plant Program (APIPP) – A partnership including the Department, the Agency, Department of Transportation, and the Adirondack Nature Conservancy whose goals are:

1. to coordinate a regional early detection and monitoring program in cooperation with staff, volunteers and the public;

2. to facilitate invasive species management and control with public and private landowners; and,

3. to increase public awareness and involvement to prevent the spread of invasive species through education and outreach.

b. Adopt-a-Natural Resource Agreement (AANR) – An agreement between the Department and an individual or group for the purpose of providing volunteer assistance to the Department in managing resources or facilities on public lands, as further described in Department Program Policy ONR-1.

c. Agency – The New York State Adirondack Park Agency (APA), its officers and employees.

d. Aquatic Invasive Plant Species – A completely submerged or floating plant that is typically found in lacustrine or riparian settings (including lakes, ponds, rivers or streams) that is capable of rapid reproduction and displacement of native species.

e. Best Management Practice (BMP) – Best management practices are state-of-the-art mitigation measures applied on a site-specific basis to reduce, prevent, or avoid adverse environmental or social impacts.

f. Biological Control – A method of controlling pests (including insects, mites, weeds and plant diseases) that relies on predation, parasitism, herbivory, or other natural mechanisms. It can be an important component of integrated pest management (IPM) programs.

g. Certified Applicator – An individual who has successfully completed the course of training and licensing and who holds a valid, appropriate pesticide applicators certificate in New York State.

h. Control Method – A field tested recommendation for the most effective control of invasive species. Species-specific control methods for terrestrial invasive species are attached in Appendix B. As of this writing, only hand harvesting and/or benthic matting are approved control methods for aquatic invasive species. Additional guidance for the use of aquatic herbicides will be developed at a later date after consultation with the Department and the Agency.

i. Department – The New York State Department of Environmental Conservation (DEC), its officers and employees.

j. DEC Administered Lands – Lands under the jurisdiction of the Department.

k. Herbicide – A pesticide that is registered in New York State that kills plants. Due to the sensitive nature of DEC administered lands, only selected herbicide active ingredients are included for use under these Guidelines. They include glyphosate, triclopyr, and Imazapyr. Imazapyr may only be used for upland treatments of Japanese knotweed. In wetlands, only glyphosate formulations which include language approving the product's use in or around wetlands or aquatic sites may be used. In all cases herbicides will be used in strict compliance with label precautions and the species-specific control methods found in Appendix B.

l. Herbicide Application Method – The means by which herbicide is delivered to a target organism during an herbicide treatment. The methods of herbicide application will be by the means specified in Appendix B. No application will be allowed by high pressure broadcast or boom sprayers.

m. Inter-Agency Guidelines (Guidelines) – The document agreed to by the Adirondack Park Agency and the Department of Environmental Conservation that outlines regulated management of terrestrial and aquatic invasive species on Department of Environmental Conservation administered lands within the Adirondack Park.

n. Invasive Species – "invasive species" means a species

that is:

(a) nonnative to the ecosystem under consideration; and

(b) whose introduction causes or is likely to cause economic or environmental harm or harm to human health. This harm must significantly outweigh any benefits.

o. Partnership Agreement – An agreement between the Department and an individual, organized group or municipal entity in the form of either a Volunteer Stewardship Agreement, Temporary Revocable Permit of Adopt-a-Natural Resource Agreement.

p. Pesticide – Any substance or mixture of substances that is registered in New York State
to kill pests. A pesticide may be a chemical substance, biological agent (such as a virus or bacterium), antimicrobial, disinfectant, plant regulator, defoliant, or other device used against a pest.

q. Rapid Response Work Plan – An abbreviated description of work to be performed on new, isolated terrestrial invasive plant infestations under 0.1 acres in size.

r. Site-specific Work Plan – A detailed description of work to be performed at a specific site, the Best Management Practices that will be used to perform the work and the desired final condition of the site once the work is complete.

s. Temporary Revocable Permit (TRP) – Department issued permit for the temporary use of State Lands and Conservation Easement lands for certain activities, as described in Department Program Policy ONR-3.

t. Terrestrial Invasive Plant Species – A plant that is typically found in upland or wetland settings that is capable of rapid reproduction and displacement of native species.

u. Volunteer Stewardship Agreement (VSA) – An agreement between the Department and an individual or group for the purpose of providing volunteer assistance to the Department in managing resources or facilities on public lands, as further described in Department Commissioner Policy CP-58.

V. Present Extent of Terrestrial and Aquatic Invasive Species on Forest Preserve Lands

An inventory of invasive species that are present and a measure of the extent of the invasive species populations is essential to determining the correct course of action. The Department conducts ongoing regular, systematic surveys to identify and quantify the extent of terrestrial and aquatic invasive species on Forest Preserve units in the Adirondack Park. The results of this continued survey have been documented in Unit Management Plans (UMPs). UMPs should be periodically updated with the best available invasive species location information. DEC and partners will present a report, as needed, on the survey data from previous growing seasons. Detailed location and population information shall be provided to the Regional Land Manager for each Region and will be included in the iMap Invasive Species Database.

The Department shall seek to develop and foster a relationship with private landowners adjacent to or connecting DEC administered land units to share information regarding existing and potential invasive species populations or threats.

VI. BMPs for the Control of Terrestrial and Aquatic Invasive Species and Procedure for Implementation

The general parameters or BMPs for the control of invasive species that apply regardless of the targeted species are set forth below. Specific control methods for select terrestrial and aquatic invasive species are attached as Appendix B. These BMPs will be implemented through site-specific work plans with corresponding SEQRA compliance, which must be approved by the Department's Central Office Bureau of Forest Preserve Management. Volunteer Stewardship Agreements (VSAs), Adopt-a-Natural Resource Agreements (AANRs), and Temporary Revocable Permits for Use of State Lands (TRPs), collectively referred to as Partnership Agreements in these guidelines, with outside parties to conduct invasive species management require site-specific work plans with corresponding SEQRA compliance.

In order to accommodate early detection and rapid response (EDRR) efforts for terrestrial invasive species, initial control of new infestations discovered on DEC-administered lands within the Adirondack Park under 0.1 acres in extent may be conducted through an Expedited-Review Authorization process upon notification and approval from the appropriate DEC regional office. However, these Expedited-Review Authorizations must still comply with SEQRA through one of the five means indicated on the project authorization submission form (Appendix C). Approved Expedited-Review Authorizations allow for immediate management actions to be taken for sites that meet the EDRR criteria previously mentioned. After the growing season in which the EDRR infestation was found and managed through the Expedited-Review Authorization process, the site must be incorporated into a formal site-specific work plan within 12 months. It is anticipated that if the proposed activities conform to these guidelines, they will be consistent with constitutional directives, authorized pursuant to the APA/DEC MOU, and will not require approval through the UMP process.

If the Department determines during its review of a proposed site-specific work plan that proposed management activities may potentially have a material effect on the character or use of the land or the vegetation thereon, DEC and APA staff will then consult to determine if the activity should be addressed as part of an individual UMP or UMP Amendment. Furthermore, application of these guidelines to all such management activities on DEC administered lands throughout the Adirondack Park will ensure that cumulative impacts will be minimized due to the fact that the BMPs being implemented through these guidelines avoid and mitigate impacts to native ecological communities.

The following BMPs apply to the control and management of invasive species.

1. **Prevent the introduction of invasive plants and animals to uninvaded sites.**

Invasive species can be introduced to a site by moving infested equipment, sand, gravel, borrow, fill and other off-site material. Monitoring disturbed areas and proper sanitation of equipment will help prevent new infestations. BMPs to prevent the introduction of invasive species include:

- Clean all clothing, boots, and equipment prior to visiting site.
- Begin activities in uninfested areas before operating in infested areas.
- Use native plants and weed-free seed and mulch (straw, wood fiber).
- Use fill that does not have invasive plant seeds or material.
- Keep equipment on site during the entire project.

• Incorporate invasive plant prevention into road work layout, design, and decisions. Use uninfested areas for staging, parking and cleaning equipment. Avoid or minimize all types of travel through infested areas, or restrict to those periods when spread of seed or propagules are least likely.

• When possible, to suppress growth of invasive plants and prevent their establishment, retain relatively closed canopies.

2. **Contain and treat new invasive plants and animals or those not yet well established.**

Controlling small infestations is more effective and economical than trying to control well-established, rapidly spreading infestations. Selected control measures need to be based on species biology and the individual characteristics of an infestation. This document provides guidance on an Expedited Review Authorization for instances when new isolated invasive plant infestations under 0.1 acres in size are documented on DEC administered lands.

3. **Minimize transport of invasive plants and animals from infested to uninfested areas.**

Invasive species can be spread by moving infested materials and equipment off-site. Cleaning vehicles and equipment (usually with steam or hot water) is the most effective method of preventing an introduction. BMPs involving the transport of material and equipment off-site include:

• Determine the need and identify sites where equipment can be cleaned. Seeds and plant parts need to be collected when practical and effectively disposed of (e.g., burned, dried, bagged and taken to landfill, etc.). Remove mud, dirt, and plant parts from project equipment before moving it into a project area and clean all equipment before leaving the project site, if operating in infested areas.

• Check, clean, and, when appropriate, dry all clothing, boots, and equipment (e.g., boats, trailers, nets, etc.) prior to visiting a site.

• Don't move firewood. All cut tree material should be either chipped or dispersed onsite.

• Inspect material sources at site of origin to ensure that they are free of invasive plant material before use and transport. Treat infested sources for eradication, and strip and stockpile contaminated material before any use.

• Inspect and document the area where material from treated infested sources is used annually for at least three years after project completion to ensure that any invasive plants transported to the site are promptly detected and controlled.

• Minimize roadside sources of seed that could be transported to other areas.

• Periodically inspect roads and rights-of-way for invasion. Inventory and mark infestations and schedule them for treatment.

• Avoid working in infested areas if possible. Postpone such work until invasive plants have been eliminated from the site.

• When necessary to conduct work in infested areas, schedule activity when seeds or propagules are least likely to be viable and to be spread

• Perform road maintenance such as road grading, brushing, and ditch cleaning from uninfested to infested areas to help prevent moving seeds and plant material from infested areas into adjacent uninfested areas.

• Clean road graders and other equipment immediately after operating in infested areas.

• Clean all dirt and plant parts from the top and underside of mower decks.

4. **Minimize soil disturbance.**

Invasive plants prefer and often thrive under disturbed conditions. Do not disturb the soil unless absolutely necessary. BMPs for activities involving soil disturbance include:

• Before starting ground-disturbing activities, inventory invasive plant infestations both on-site and in the adjacent area.
• Minimize soil disturbance and retain desirable vegetation in and around area to the maximum extent possible.
• Monitor infested areas for at least three growing seasons following completion of activities. Provide for follow-up treatments based on inspection results.
• Do not blade roads or pull ditches where new invaders are found, if possible.
• When it is necessary to conduct soil work in infested roadsides or ditches, schedule activity when seeds or propagules are least likely to be viable and to be spread.
• Do not move soil from infested area to prevent off-site spread.

5. **Maintain desirable species.**
Establishing and maintaining competitive, desirable plants along roadsides and disturbed areas prevents or slows establishment of invasive plants. BMPs for re-vegetating disturbed areas include:
• Re-vegetate all disturbed soil, except on surfaced roads, in a manner that optimizes plant establishment for that specific site, unless ongoing disturbance at the site will prevent establishment of invasive plants.
• Use native material where appropriate and available. Re-vegetation may include planting, seeding, fertilizing, and mulching.
• Monitor and evaluate success of re-vegetation in relation to project plan.
• When re-vegetating areas that were previously dominated by invasive plants, try to achieve at least 90% control of the invasive before attempting restoration.

VII. General Practices
1. **Minimum Tool Approach** – State Land stewardship involving invasive species management practices should always incorporate the principles of the Minimum Tool Approach. Any group or individual implementing such practices on State Land should only use the minimum tools, equipment, devices, force, actions or practices that will effectively reach the desired management goals. Implicit in this document is the structure to implement a hierarchy of management practices based upon the target species and site conditions starting with the least intrusive and disruptive methods. For the management of submerged or floating aquatic invasive species, Agency General Permit 2008G-1B can be used for hand harvesting and benthic matting. Other management techniques for submerged or floating aquatic invasive species may require review and approval by the Department and the Agency.

2. **Erosion Control** - Some of the species-specific best management practices described in Appendix B require digging or pulling of plants from the soil. Where vegetation is to be removed, it must be determined if the proposed control method and extent of the action will destabilize soils to the point where erosion is threatened. Generally if more than 25 square feet of soil surface is cleared or plant removal occurs on steep slopes, staked silt fencing should be installed and maintained as a temporary erosion control practice. In some cases seeding and organic, non-hay mulching may be required.

3. **Re-vegetation** - Although not required, replanting or reseeding with native species may sometimes be necessary. All of the species-specific control methods described in Appendix B are aimed at reducing or eliminating invasive species so that natives are encouraged to grow and re-establish stable conditions that are not conducive to invasive colonization. In most cases, removal or reduction of invasive populations in the Adirondacks will be enough to release native species and re-establish their dominance on a site (Smith 2009). However, the site-specific work plan for treatment of invasive species shall include yearly monitoring provisions that document native plant recovery.

4. **Solarization** - Because of the extremely robust nature of invasive species, composting terrestrial invasive plants in a typical backyard compost pile or composting bin is not appropriate. In many instances, composting invasive plants has led to new infestations through the distribution of compost material off site. However, solarization methods can be used whereby sun-generated heat is used to destroy the harvested plant materials. This process usually involves the storage of invasive plant materials in sealed 3 mil thickness (minimum) black plastic garbage bags that are placed on blacktop and exposed to the sun until the plant materials liquefy or dry out. If allowed ample sunlight, plant materials should be rendered nonviable within 2 weeks of being laid out. If a larger section of blacktop is available, make a black plastic (4 mil thickness minimum) envelope sealed on the edges with sand bags. The plant material left exposed to the sun will liquefy in the sealed envelope without danger of dispersal by wind. The bags or envelopes must be monitored to make sure the plants do not escape through rips, tears or seams in the plastic. Once invasive plant materials have gone through the solarization process and are rendered completely nonviable, they can be disposed of in an approved landfill or incinerated after attaining the appropriate permits.

5. **Material Collection and Transportation** – While on the control site, place all cut plant material in heavy duty, 3 mil or thicker, black contractor quality plastic clean-up bags. Securely tie the bags and transport from the site in a covered vehicle in order to prevent spread or loss of the plant material during transport from the control work site to the appropriate staging or disposal location. The main root structure, root fragments and/or horizontal rhizomes from harvested Japanese, giant or bohemian knotweed infestation should be bagged only to facilitate transport to an appropriate staging area. All knotweed root structure, root fragments and rhizome propagules should be separately bagged from any cut, aerial canes and crowns. Over an open bag, remove as much adherent soil as possible from the root/rhizome structure prior to spreading the root/rhizome parts out onto a secure, impervious surface. Once completely dried out, the root/rhizome structure may be burned or disposed of in an approved landfill.

The mature, upright stems and canes of common reed and the knotweeds can be cut, formed into bundles and securely bound with rope or twine. The bundles may then be transported to an appropriate staging or disposal location that has an impervious or near- impervious surfaced area. After the bundles have completely dried out they may be burned at an approved incinerator or burn pit with an appropriate permit.

VIII. Management Protocols

a. All Department personnel whose duties involve outdoor field work on State Land (e.g., Division of Lands & Forests Staff, Biologists, field technicians, Forest Rangers, Environmental Conservation Officers, Operations staff, etc.) will report the locations of suspected terrestrial and aquatic invasive species infestations encountered during the course of their ordinary work to the Adirondack Park Invasive Plant Program (APIPP) at http://adkinvasives.com/get-involved/report-invasive-species/ and implement the species specific BMPs in Appendix B when conducting or supervising work to remove invasive species from State Land. Terrestrial and aquatic invasive species identification and management trainings will be provided as needed by APIPP.

b. All site-specific work plans must include a site map, an inventory of target and non-target species, an estimate of the size and age of the infestation, target species impacts and concerns, a Natural Heritage review, adjoining land uses and nearby State Land units, a proposed treatment method and probability of success, treatment impacts and concerns,
an assessment of treatment alternatives, a history of past treatment methods used on the site, a timeframe by which the work will be undertaken and completed, a schedule of anticipated future work, monitoring provisions to determine the effectiveness of the management action and to document native plant recovery, and if needed, revegetation and contingency plans.

c. For infestations under 0.1 acres in size, an Expedited Review Authorization can be issued. The rapid response work plan for this authorization must include a site map, an inventory of the target species, an estimate of the size of the infestation, a Natural Heritage review, a proposed treatment method, and a timeframe by which the work will be undertaken and completed. A commitment will be made to complete a formal site-specific work plan before the next field season. See Appendix C

d. All invasive plant management on State Land will be conducted using the BMPs and species-specific control methods listed in Appendix B, pursuant to the DEC – APA Memorandum of Understanding.

e. Any individual or group demonstrating an interest and appropriate expertise in implementing the species-specific control methods found in Appendix B may apply for a Partnership Agreement to manage terrestrial and aquatic invasive species.

f. The treatment of invasive species on State Lands by Department personnel or any other party will only be undertaken pursuant to a site-specific or rapid response work plan for the treatment of invasive species and pursuant to all applicable State, federal and local regulations regarding pesticide use, residue removal and disposal.

g. Written approval from the Department, in the form of a Partnership Agreement and a site-specific or rapid response work plan for treatment of invasive species are

required for all non-Department personnel to implement species-specific control methods and BMPs on State Land

h. Prior to implementation of work plans for the treatment of invasive species the activity must be posted in the Environmental Notice Bulletin.
1. For treatment areas exceeding 0.1 acres in size:
a. No work will be implemented under a site-specific work plan until being noticed in the ENB for 15 days.
2. For areas less than 0.1 acre in size:
a. Approved EDRR plans can be implemented immediately upon being noticed in the ENB.

i. Appropriate certification (NYS pesticide applicator/technician certification) is required for commercial pesticide applications. The only pesticide application methods allowed under these guidelines are spot treatments to individual plants by the following means:
   - Foliar spray application using a back pack sprayer or hand sprayer
   - Wiper application using a wick applicator or cloth glove applicator
   - Stem injection application using a stem injection gun, unitary wash bottle, or hand sprayer
   - Cut stump application using a unitary wash bottle, paintbrush, backpack sprayer, or hand sprayer
   - Basal bark application using a backpack sprayer, hand sprayer, or paintbrush
   - Frill or tree injection method using an injection lance, hatchet and unitary wash bottle or spray bottle, or hypo hatchet

j. No broadcast herbicide applications using, for example, boom sprayer, are allowed. In all cases, all herbicide directions for use and restrictions found on the label shall be followed by a New York State Certified Applicator, Technician, or a properly trained and supervised apprentice in an appropriate category. In all instances, the label is the law and should be followed accordingly. All invasive species to be treated and the method of treatment to be used must be present on the herbicide product label or included in additional supplemental labeling or an approved 2ee recommendation for that product. In addition, all product labels, supplemental labels, and approved 2ee's covering an invasive species for herbicide treatment must be in the applicator's custody and made available to the Department upon request at any time before, upon, during, or after application. The application methods described and allowed are designed to reduce or eliminate the possibility that non-target species will be impacted by the pesticide use. All pesticide treatments require follow-up inspection later in the growing season and/or over following years to assess and document effects and possibly re-treat any plants that were missed. The following guidelines apply with respect to the application of herbicides, which must be applied according to respective labels under federal and state law:

- In wetlands, only glyphosate formulations which include language approving the product's use in or around wetlands or aquatic sites may be used. Common examples of glyphosate based products approved for use in or around wetlands include Aquamaster®, Rodeo®, Accord Concentrate®, Roundup Custom®, and Glypro®. Applications of pesticides to, over, or near surface waters may require the incorporation of the project into a SPDES general permit for aquatic pesticide use via submission of a notice of intent to the NYSDEC Division of Water. Any invasive plant management activities that take place within 100 feet of a jurisdictional wetland within the Adirondack Park require a general permit from the Agency.

- In uplands, either glyphosate, triclopyr, or Imazapyr based products may be used. Imazapyr based products may only be used for upland treatments of Japanese knotweed (*Fallopia japonica*). Common examples of glyphosate based products used in uplands include Roundup Pro®, Roundup Pro Max®, Ranger Pro®, and Accord XRT II®. Common examples of triclopyr based products used in uplands include Garlon 4®, Garlon 4 Ultra®, Element 4®, and Pathfinder II®. Common examples of Imazapyr based products used for upland treatments of Japanese knotweed include Arsenal®, Arsenal Powerline®, and Polaris®.

- The proposed use of herbicides must be detailed in a site-specific or rapid response work plan.

Note: The mention of any pesticide product in this document does not constitute endorsement of that product

k. All appropriate and applicable signage and public notification required for pesticide application by or on behalf of the Department shall be used, including adjacent landowner notification, newspaper notice, and temporary on and off-site signs.

l. These Guidelines do not authorize the use of motor vehicles, motorized equipment, or aircraft. All use of motorized equipment on State Lands under the jurisdiction of the Department requires written approval from the Department.

m. A UMP or UMP Amendment may be required if the proposed implementation of an activity identified in these Guidelines is considered to cause a potential material change to the use of the land or the vegetation thereon due to its extent, intensity or duration.

n. Invasive species management materials and methods evolve; any deviation from the BMPs and species-specific control methods must be approved by the Department after consultation with the Agency.

o. Any invasive species management action proposal that involves tree cutting for control or access must comply with constitutional requirements and will be carried out pursuant to LF-91 and a site-specific or rapid response work plan.

p. Appendix A of these Guidelines contains a list of species that are considered terrestrial or aquatic invasive species. Other species may be added over time recognizing the constant threat of new invasive species. Note that to be eligible for management actions under these Guidelines, species-specific control methods must be accepted by the Department
after consultation with the Agency. New or revised control methods may be developed by other entities, but also must be reviewed and accepted by the Department after consultation with the Agency.

q. Those individuals or groups applying for a Partnership Agreement to manage any invasive species without an approved species-specific control method must develop and submit a control method for the species of concern. The submitted control methods will be reviewed and must be approved by the Department and the Agency before the approval of a site-specific or rapid response work plan or issuance of the Partnership Agreement. For submerged or floating aquatic invasive plant species management options are currently restricted to hand harvesting or benthic matting detailed in a site-specific work plan.

IX. Potential Environmental Impacts

The control methods and BMPs contained in these Guidelines restrict the use of herbicides so
that adverse impacts to non-target species are avoided and native plant communities are restored.

Aquatic invasive species will be managed using non-mechanical harvesting techniques (hand- pulling) and temporary benthic matting as described in the Guidelines. Use of pesticides for aquatics is not part of this guidance and will be developed at a later date.

The removal of these species reduces the potential for disruption and harm to the native ecosystem. It is expected that by using the Guidelines invasive species populations will be managed, and hopefully eradicated, in a timely manner before significant impact to DEC administered lands occurs. Successful implementation of these control methods and BMPs or other recommended control methods will allow natural processes to take place undisturbed by the impacts of invasive species colonization and proliferation.

Any of the control actions described in the Guidelines has the potential for environmental impact. For example, the use of pesticides may cause mortality to non-target species and cutting trees may have both visual and ecological impacts on the landscape. It is recognized that although the BMPs and species-specific control methods seek to mitigate these impacts, the potential for impact is real and must carefully be weighed against all other possible actions,
including the no-action alternative. It is believed that the protection, preservation, and restoration of native flora and fauna in the Adirondacks is an outcome that is worth reasonable associated risk. These Guidelines represent a tool for land managers to reduce the potential for disruption and harm to Forest Preserve lands from terrestrial and aquatic invasive species. It is expected that these actions will lead to the preservation

and restoration of native ecological communities on State Lands within the Adirondack Park.

X. Effect of This Action

The Guidelines seek to lay the ground rules for managing terrestrial and aquatic invasive species on DEC administered lands. It identifies certain species that, if left untreated, have the potential to colonize backcountry land and water bodies causing severe disruption and degradation of natural systems. The Guidelines set out a protocol for action and recommend a set of comprehensive BMPs and specific control methods for dealing with invasive species of concern, and outline a process for developing and incorporating new control methods for additional species. The control methods provide detailed guidance on the use of several techniques for managing terrestrial and aquatic invasive species including hand pulling, cutting, digging, matting and pesticides. Finally, the Guidelines identify a host of additional terrestrial and aquatic invasive species that require surveillance, early detection and, after appropriate consultation with the Regional Supervisor of Natural Resources a rapid response to protect DEC administered lands.

Adoption of the Guidelines and implementation through the UMP and site-specific or rapid response work plans gives the Department the tools needed to preserve, protect and restore the natural native ecosystems of DEC administered lands within the Adirondack Park.

XI. Responsibilities

The responsibility for interpretation and update of these Guidelines and overall management shall reside with the cooperating agencies. The Department shall be responsible for management of terrestrial and aquatic invasive species on DEC administered lands while the Agency will be responsible for providing review of, and advice on, the management activities contained in the Guidelines and the assessment of materiality of proposed actions and the management recommendations in UMPs.

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Appendix P: Trail Classification System

CLASS	MARKING	TREAD	BARRIERS	USE LEVEL	ACCEPTABLE MAINTENACE
I Unmarked Route	None	Intermittently apparent, relatively undisturbed organic soil horizon.	Natural obstructions present, logs and water courses.	Occasional	None
II Path	Intermittent	Intermittently apparent, compaction of duff, mineral soils occasionally exposed.	Same as unmarked route.	Low, varies by location	Intermittent marking with consideration given to appropriate layout based on drainage, occasional barrier removal only to define appropriate route.
III Primitive	Trial markers, sign at junction with secondary or other upper level trail.	Apparent, soil compaction evident.	Limited natural obstructions (logs and river fords).	Low	Drainage (native materials) where necessary to minimize erosion, blowdown removed 2-3 years, brushing as necessary to define trail (every 5-10 years). Bridges only to protect resource (max-2 log width). Ladders only to protect exceptionally steep sections. Tread 14"-18" wide. Clear: 3' high.

IV Secondary	Markers, signs with basic information.	Likely worn and possibly quite eroded. Rocks exposed, little or no duff remaining.	Up to one year's accumulated blowdown, small streams.	Moderate	Drainage where needed to halt erosion and limit potential erosion (using native materials), tread hardening with native materials where drainage proves to be insufficient to control erosion. Remove blowdown annually. Brush to maintain trail corridor. Higher use may warrant greater use of bridges (2-3 logs wide) for resource protection. Ladders on exceptionally steep rock faces. Tread 18"-24" wide, Clear 4' wide, 3' high.
CLASS	**MARKING**	**TREAD**	**BARRIERS**	**USE LEVEL**	**ACCEPTABLE MAINTENACE**

V Trunk or Primary Trail	Markers, signed with more information and warnings.	Wider tread, worn and very evident. Rock exposed, possibly very eroded.	Obstructions only, rarely, small streams.	High	Same as above; Plus: regular blowdown removal on designated ski trails, non-native materials as last resort. Extensive tread hardening when needed, bridge streams (2-4 logs wide) difficult to cross during high water, priority given to stream crossings below concentrations of designated camping. Tread 18"-26" wide, Clear 6' wide, 8'high, actual turn piking limited to 2% of trail length.
VI Front Country	Heavily marked, detailed interpretive signing.	Groomed	None	Very High	Extensive grooming, some paving, bark chips, universally accessible. This is to be implemented within 500' of wilderness boundary.
VII Horse Trail	Marked as Trunk or Secondary.	Wide tread, must be rather smooth.	Same as Trunk Trail.	Moderate to High	Same as trunk trail, except use techniques appropriate for horses. Bridges: 6' minimum width with kick rails, nonnative dimensional materials preferred. Tread: 2'-4' wide, Clear 8' wide, 10' high.

VIII Ski Trail	Marked High. Special markers, sign at all junctions with hiking trails.	Duff remains. Discourage summer use.	Practically none due to hazards.	High	Focus on removal of obstructions, maintenance should be low profile, tread determined by clearing 6' (Should be slightly wider at turns and steep sections. Provide drainage using native materials to protect resource.
IX Bicycle Trail	Marked frequently and No Biking signs posted on adjoining trails not specified for bike use.	New trails to maximum of 4 feet. Tread width less than 18 inches on a rolling grade.	None	Moderate	Remove vegetation at root level. Texture the tread. Keep trails below 2000 feet. Use existing roads or trails that do not exceed 10% grade. Blowdown removal (annual). Trail brushing.

TRAIL CLASSIFICATION SYSTEM – SNOWMOBILE ROUTES

GRASS RIVER WILD FOREST

CLASS	**MARKING**	**TREAD**	**EQUIPMENT**	**USE LEVEL**	**ACCEPTABLE MAINTENACE**
Class I	Marked High	Up to 8 feet wide	Groomed with snowmobile and a drag, up to 7.5 feet wide	Low to Moderate	As permitted under "Management Guidance: Snowmobile Trail Siting, Construction and Maintenance on Forest Preserve Lands in the Adirondack Park.
Class II	Marked High	9 feet wide, 12 feet on sharp corners and steep slopes	Groomed with a tracked groomer and drag, up to 8.5 feet wide	Moderate to High	As permited under "Management Guidance: Snowmobile Trail Siting, Construction and Maintenance on Forest Preserve Lands in the Adirondack Park.

Trail Marking Standards

On Forest Preserve and State Forest lands, all trails are marked with small, colored plastic disks nailed to trees or posts at regular intervals. In the past on hiking trails blue markers were used for north-south trails, red markers for east-west trails and trails to fire towers, and yellow markers for connector trails.

The following markers are used today. All are available in blue, yellow and red.

Foot Trail - Used on all trails where only foot traffic is permitted.

Trail - Used along multiple-use trails. Other markers appropriate on a given trail, such as foot, snowmobile, horse, and bicycle trail markers, are posted together at trailhead and intersections on guideboards. “Trail” markers are used along the trail to mark the trail route.

Canoe Carry - Used on designated canoe carry trails.

Cross-country Ski Trail - Used on trails considered suitable for cross-country skiing. Cross-country skiing is permitted anywhere on the Forest Preserve.

Snowmobile Trail - Used on trails where snowmobiles are permitted. Snowmobiles are only permitted on trails marked as snowmobile trails.

Horse Trail - Used on trails where horses are permitted. Horses may not be ridden on foot trails that are not also marked as horse trails, nor on snowmobile or cross-country ski trails when they are covered with ice and snow.

Bicycle Trail - Used on trails where bicycles are permitted. Bicycles are permitted in wild forest areas except where posted. In wild forest, it is not necessary for a trail to be marked as a bicycle trail for bicycles to be permitted. They may be used in primitive, and canoe areas only on designated roads. They are not permitted in wilderness.

Markers should be applied so that they appear on the right side of the trail to the traveler. They should be close enough that a person standing at one marker can see the next marker ahead clearly, but cannot see more than two markers ahead. Long straight trails or naturally well-defined trails should be marked less frequently (one every 100-200 feet). This guideline is especially applicable in wilderness areas where markers should be kept to a minimum.

Markers should be applied in one direction at a time to assure that they are located where appropriate for those traveling in that direction.

Appearance is extremely important. Old and damaged markers should be removed wherever it is possible to do so without further damage to the tree before posting the new marker. If the old marker can't be removed, cover it with a new marker, rather than setting the new marker in a different spot. Use two 1 1/2-inch roofing nails, preferably aluminum (untreated steel nails rust and can stain markers), one near the top and one near the bottom of the marker. Unless vandalism is a problem, do not drive the nails home. Sinking the nails no more than one-half to two-thirds of the way into the wood allows the tree to grow for a few years without damaging the marker. Markers should be posted at or slightly above eye level except in areas of heavy snowfall where snow might obscure them. The markers then should be placed even higher on the tree.

Appendix Q: Proposed Easement Road and Trail Specifications

ROAD/TRAIL SPECIFICATION FACTOR	MOTOR VEHICLE ROAD VOLUME CLASS[1]			ATV TRAIL VOLUME CLASS			SNOWMOBILE TRAIL VOLUME CLASS		
	LOW	MED	HIGH	LOW	MED	HIGH	LOW	MED	HIGH
# of TRAFFIC LANES	1	1	1+	1	1	2	1	1	2
MINIMUM CURVE RADIUS w/o signage(feet)	50	50	50	n/a	35	50	n/a	40	50
MAXIMUM GRADE % (sustained/ short stretch)	10/15	10/15	10/15	10/15	10/15	10/15	10/15	10/15	10/15
SHOULDER WIDTH, EACH SIDE(feet)	3 to 4	4 to 5	5 to 6	n/a	3 to 4	4 to 5	n/a	n/a	n/a
TRAVELED SURFACE WIDTH(feet)	10	12	14	6/8	10	12	6/8	12	14
MINIMUM TURNOUT SPACING	n/a	1/2mi	1/4 mi	n/a	n/a	1/2mi	n/a	n/a	1/2mi
SURFACE SPECIFICATIONS	BMP's[2]	BMP's	BMP's	BMP's	BMP's	BMP's	BMP's	BMP's	BMP's

DITCHING	BMP's	BMP's	BMP's	BMP's	BMP's	BMP's	BMP's	BMP's	BMP's
CULVERT INSTALLATION SPECIFICATIONS [3]	BMP's	BMP's	BMP's	BMP's	BMP's	BMP's	BMP's	BMP's	BMP's
MIN. SIGHTING DISTANCE w/o SIGNAGE(feet)	100	150	250	n/a	150	250	n/a	150	250
VEGETATION CONTROL	Cut / remove	Cut / remove	Cut / remove	n/a	n/a	Cut / remove	n/a	n/a	Cut / remove
PITCH(maximum)	<10%	4" crown	4" crown	N/A	20%	15%	n/a	20%	15%
STREAM AND WETLAND X-ING SPECS	BMP'S	BMP'S	BMP'S	BMP'S	BMP'S	BMP'S	BMP'S	BMP'S	BMP'S
SENSITIVE AREA SET BACKS	BMP'S	BMP'S	BMP'S	BMP'S	BMP'S	BMP'S	BMP'S	BMP'S	BMP'S
SIGNAGE STANDARDS[4]	Minimal	Basic	Moderate	Minimal	Basic	Moderate	Minimal	Basic	Moderate
GATE LOCATIONS	as agreed	as agreed	as agreed	as agreed	as agreed	as agreed	as agreed	as agreed	as agreed
SEASONAL USE SPECIFICATIONS[5]	surface	surface	surface	surface	surface	surface	winter	winter	winter

MAINTENANCE STANDARDS	minimal	as needed	regular	minimal	as needed	graded	none	none	groomed
ENVIRONMENTAL STANDARDS[6]	APA/DEC	APA/DEC	APA/DEC	APA/DEC	APA/DEC	APA/DEC	APA/DEC	APA/DEC	APA/DEC
INSURANCE STANDARDS[7]	NYS REG	NYS REG	NYS REG	NYS REG	NYS REG	NYS REG	NYS REG	NYS REG	NSY REG
ENFORCEMENT	DEC	DEC	DEC	DEC	DEC	DEC	DEC	DEC	DEC

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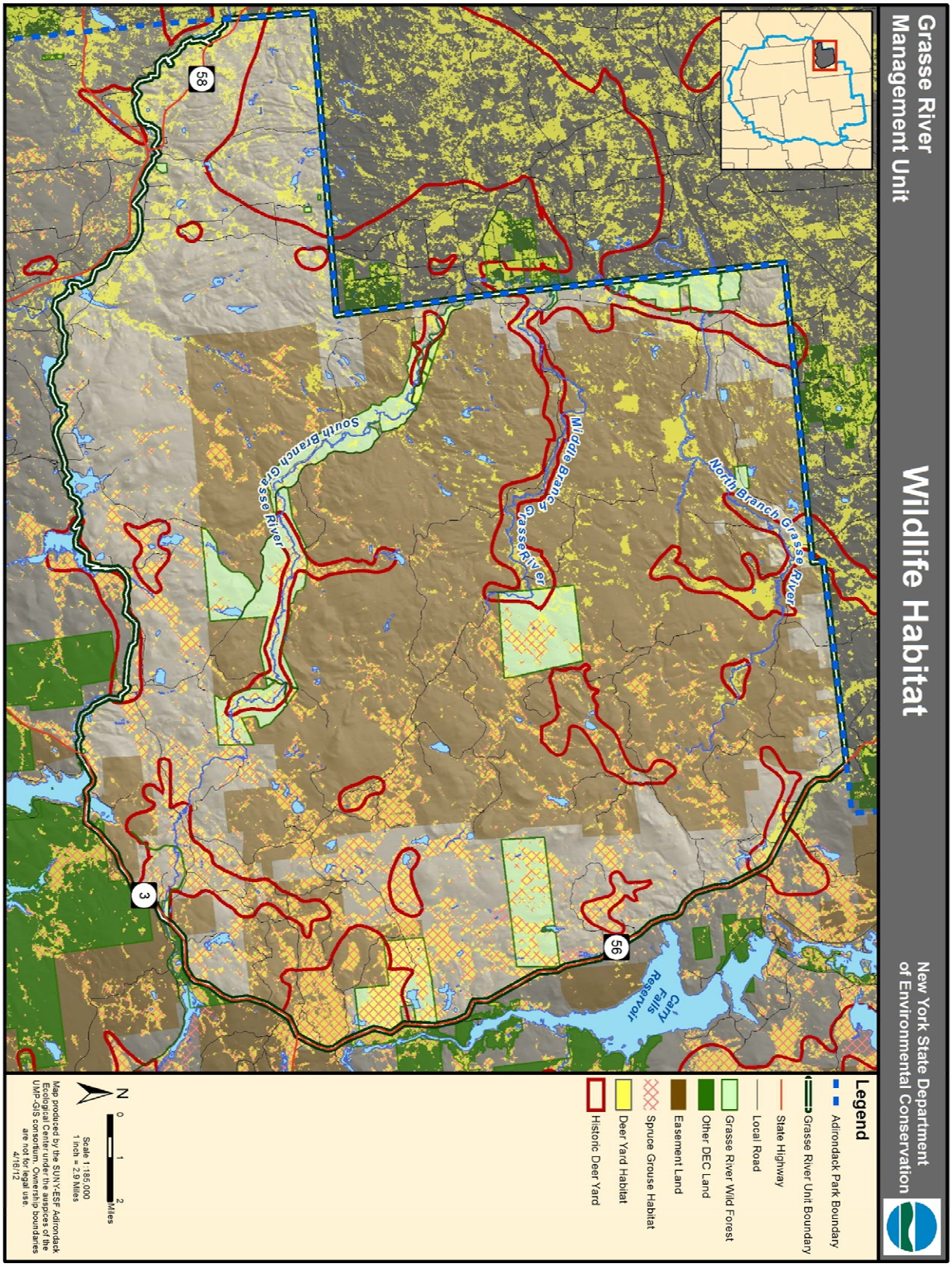
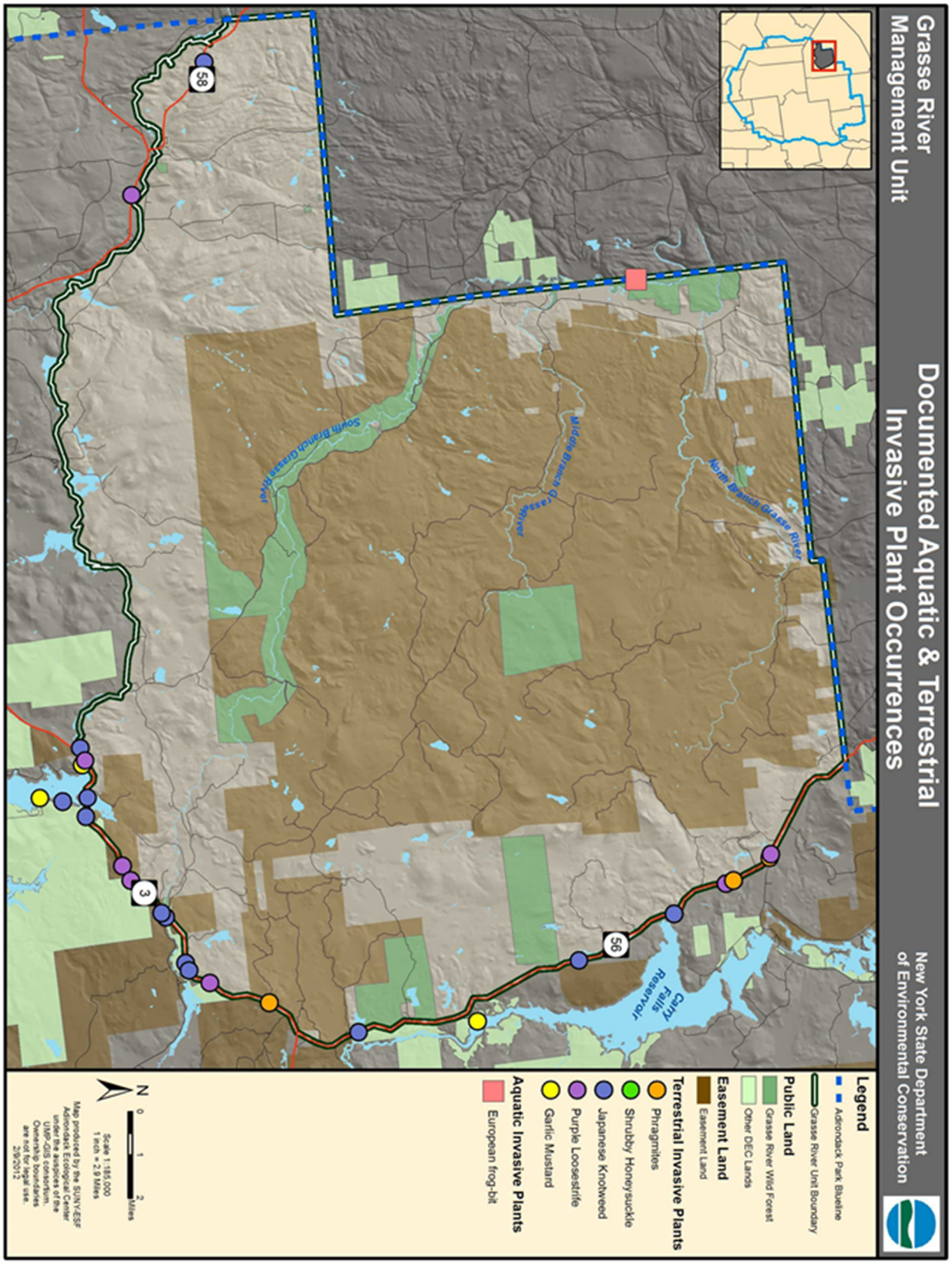
Appendix R – Maps

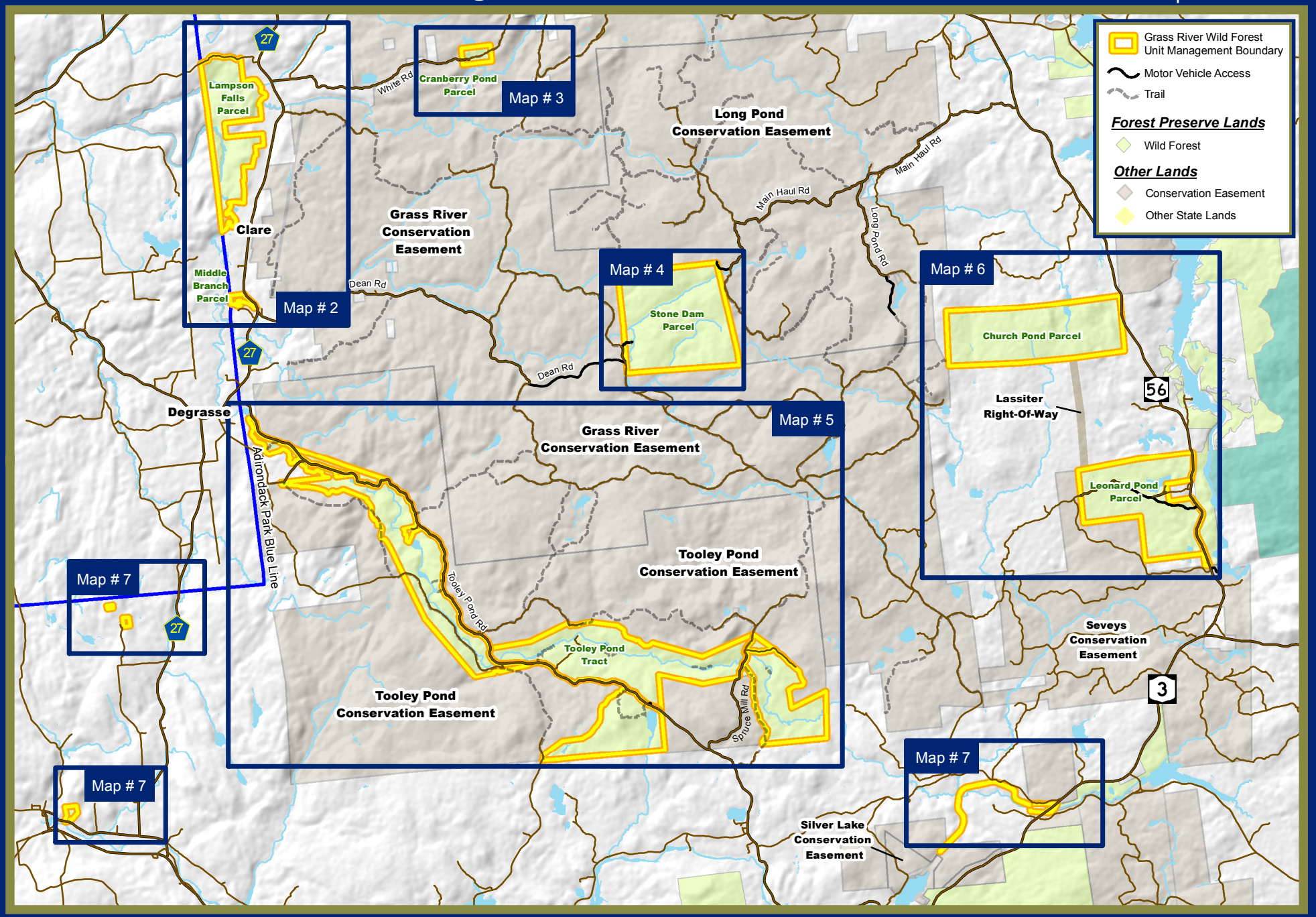

Grasse River
Management Unit
Wildlife Habitat
New York State Department
of Environmental Conservation
Legend
Adirondack Park Boundary
Grasse River Unit Boundary
State Highway
Local Road
Grasse River Wild Forest
Other DEC Land
Easement Land
Spruce Grouse Habitat
Deer Yard Habitat
Historic Deer Yard
South Branch Grasse River
Middle Branch Grasse River
North Branch Grasse River
Carry Falls Reservoir
58
3
56
N
0
1
2
Miles
Scale 1:185,000
1 inch = 2.9 Miles
Map produced by the SUNY-ESF Adirondack Ecological Center under the auspices of the UMP-GIS consortium. Ownership boundaries are not for legal use.
4/16/12


Grasse River
Management Unit
Documented Aquatic & Terrestrial
Invasive Plant Occurrences
New York State Department
of Environmental Conservation
Legend
Adirondack Park Blueline
Grasse River Unit Boundary
Public Land
Grasse River Wild Forest
Other DEC Lands
Easement Land
Easement Land
Terrestrial Invasive Plants
Phragmites
Shrubby Honeysuckle
Japanese Knotweed
Purple Loosestrife
Garlic Mustard
Aquatic Invasive Plants
European frog-bit
N
0
1
2 Miles
Scale 1:185,000
1 inch = 2.9 Miles
Map produced by the SUNY-ESF
Adirondack Ecological Center
using best available data.
Ownership boundaries
are not for legal use.
2/9/2012
Middle Branch Grasse River
North Branch Grasse River
South Branch Grasse River
Carry Falls Reservoir
56
58
3

New York's Forest Preserve

Grass River Wild Forest Unit Management Plan

Map 1 - Overview



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Potsdam Office: (315) 265-3090

0 1¼ 2½ 5 Miles

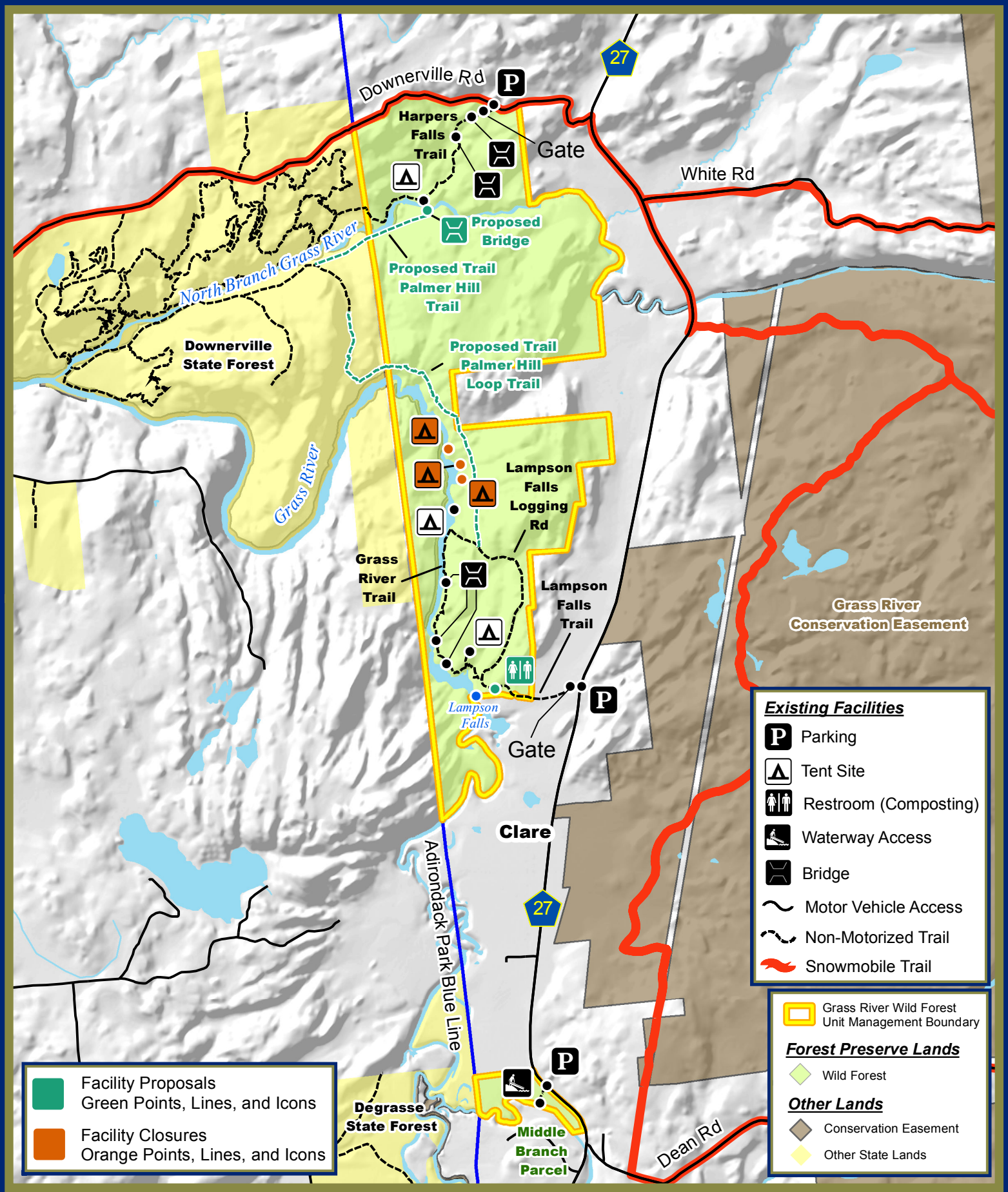
0 1¼ 2½ 5 Kilometers

N

New York's Forest Preserve

Grass River Wild Forest Unit Management Plan

Map 2
Existing & Proposed Facilities
Lampson Falls & Middle Branch Parcels



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0 0.225 0.45 0.9 Kilometers

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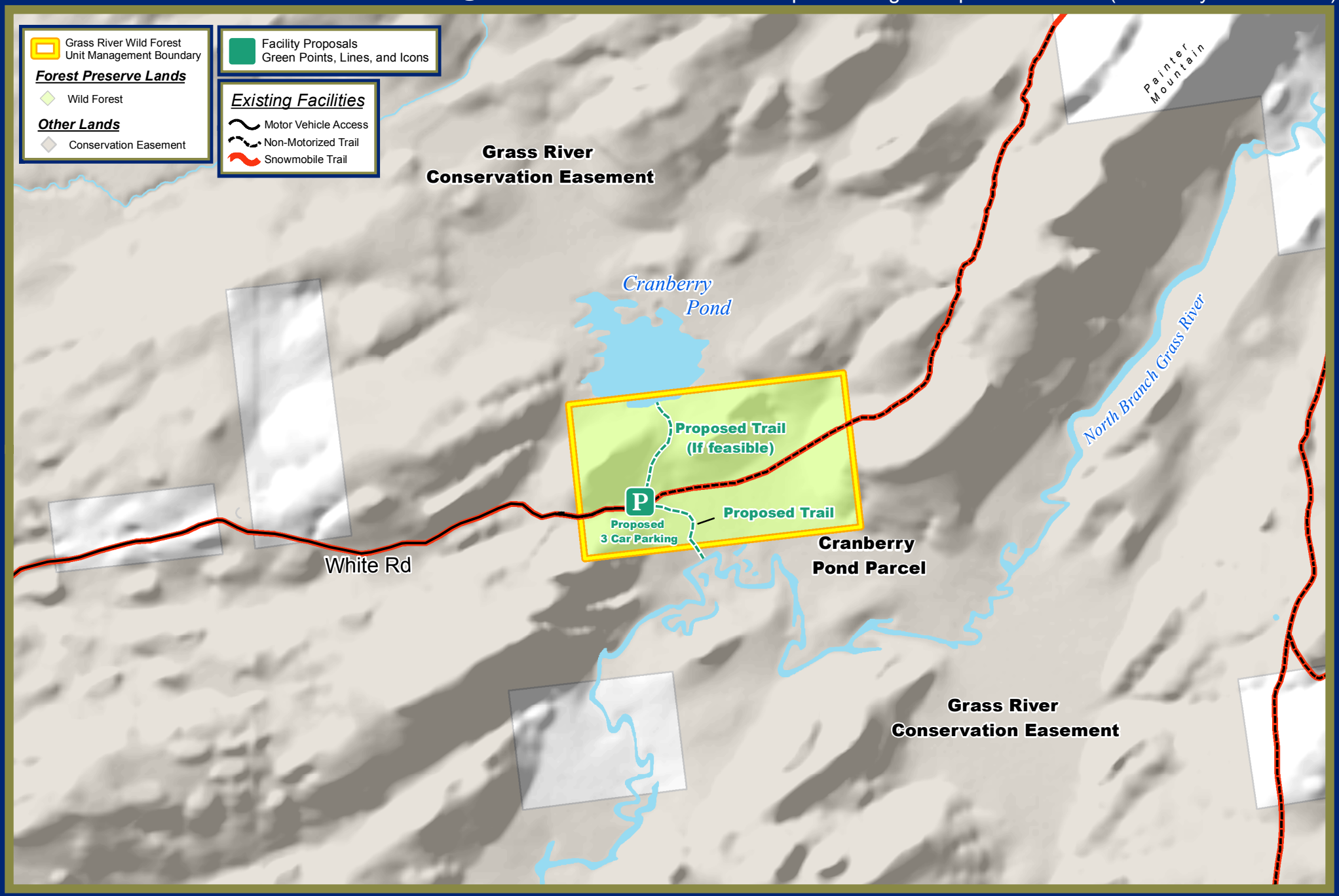
New York's Forest Preserve

Grass River Wild Forest Unit Management Plan

Map 3 Existing & Proposed Facilities (Cranberry Pond Parcel)



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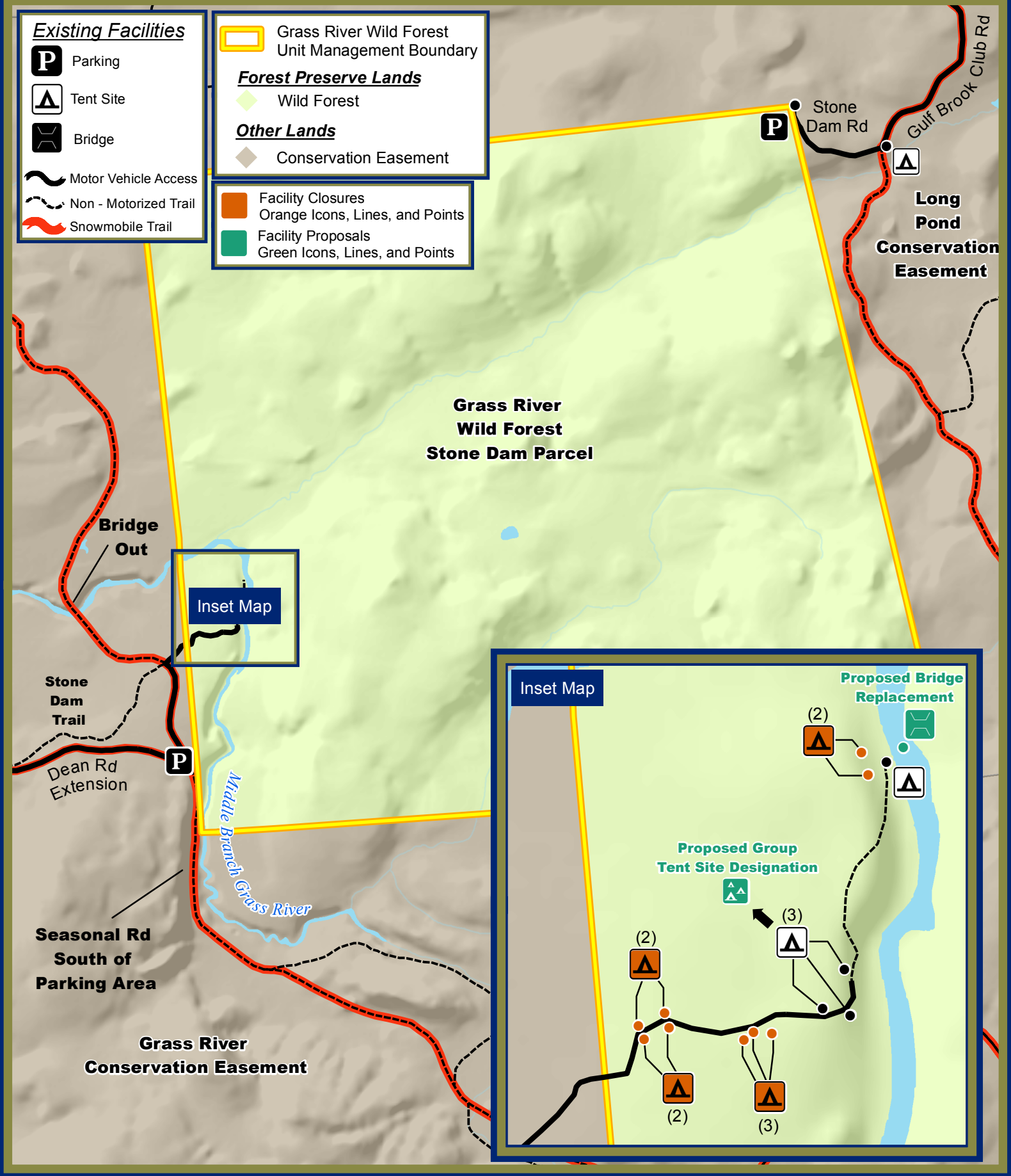
New York's Forest Preserve

Grass River Wild Forest Unit Management Plan

Map 4
Existing & Proposed Facilities
Stone Dam Parcel



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0 ¼ ½ 1 Miles

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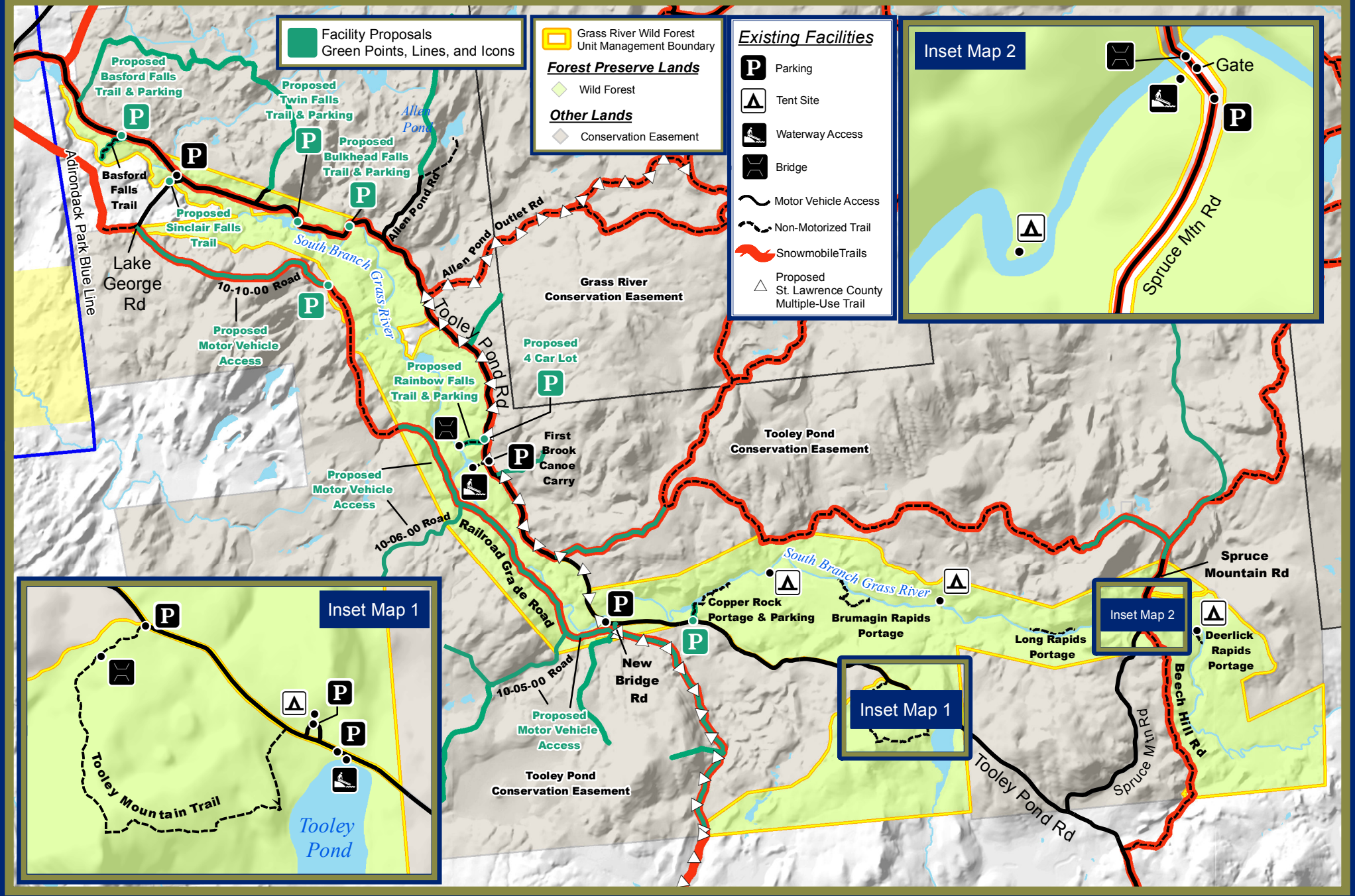
New York's Forest Preserve

Grass River Wild Forest Unit Management Plan

Map 5
Proposed and Existing Facilities
Tooley Pond Parcel



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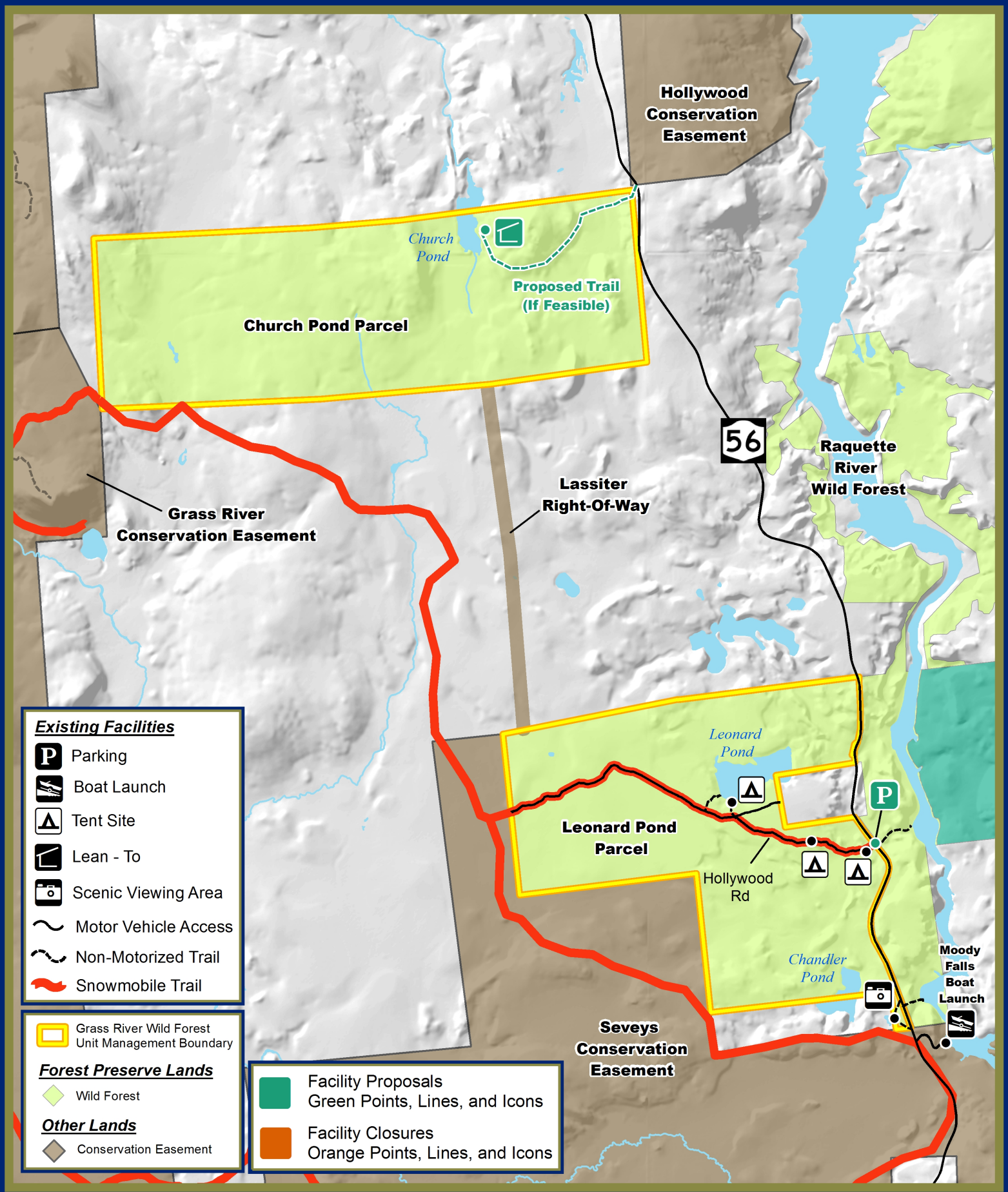
New York's Forest Preserve

Grass River Wild Forest Unit Management Plan

Map 6
Existing & Proposed Facilities
Church Pond & Leonard Pond Parcels



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0 ¼ ½ 1 Miles
0 ¼ ½ 1 Kilometers

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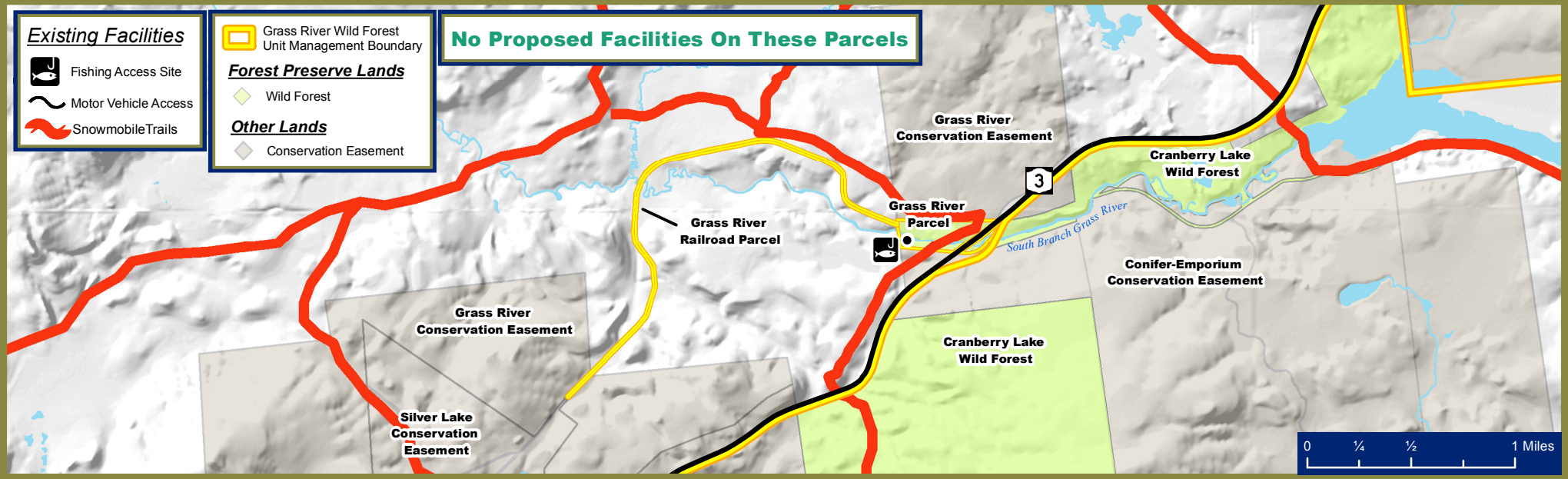
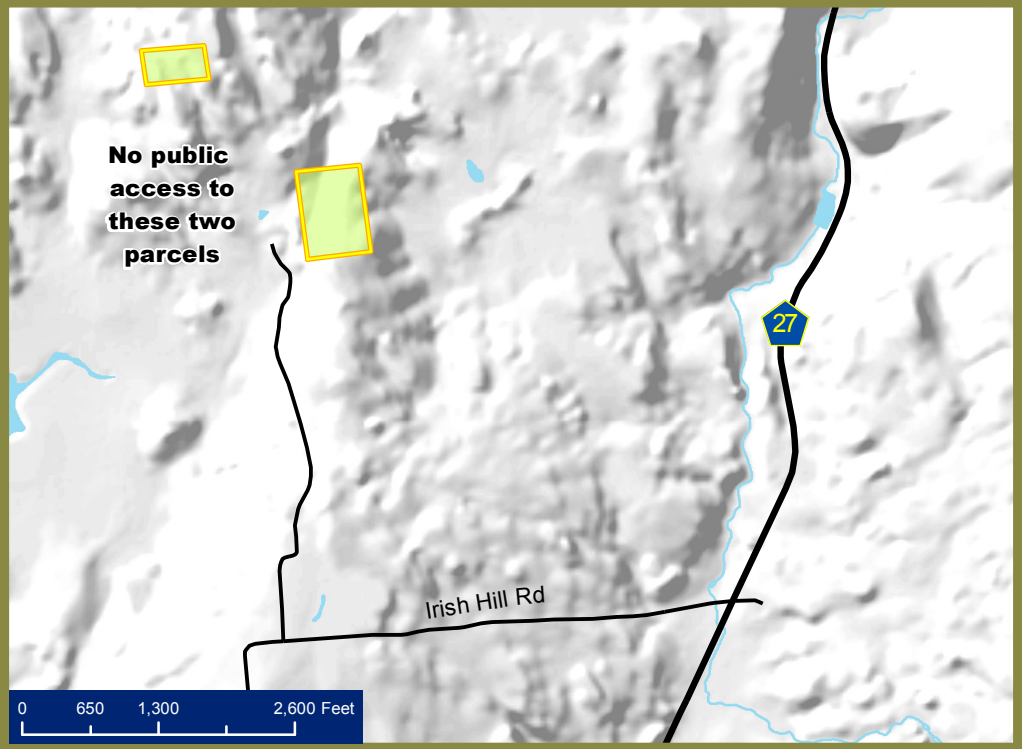
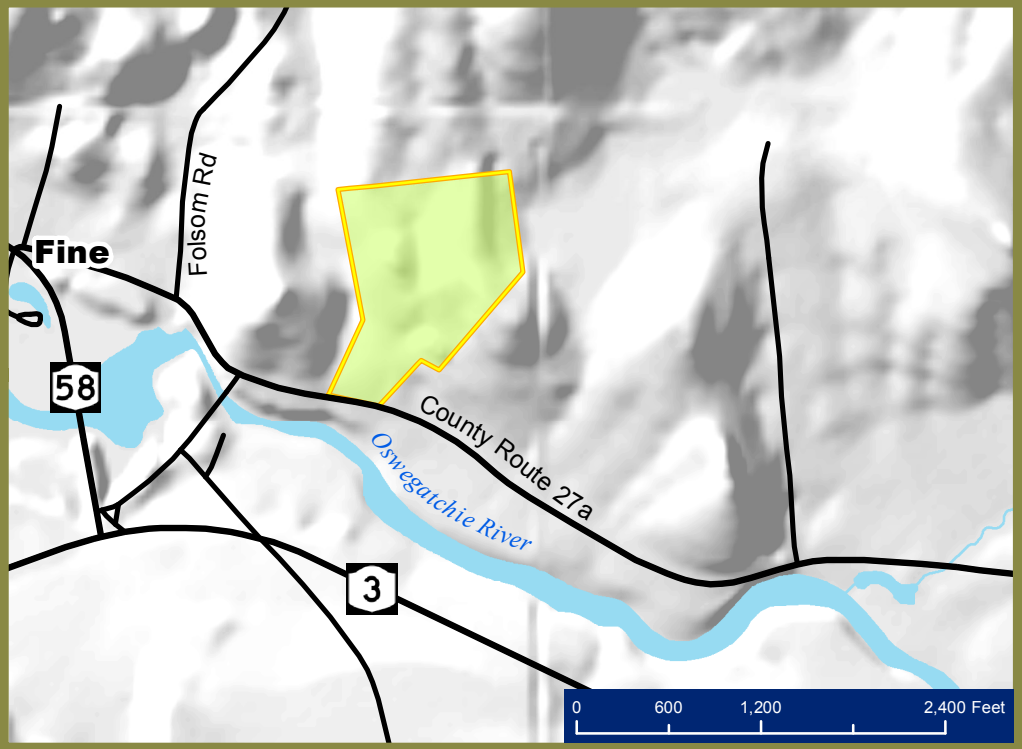
New York's Forest Preserve

Grass River Wild Forest Unit Management Plan

Map 7
Proposed and Existing Facilities
Town of Fine Parcels & Grass River Railroad Parcel







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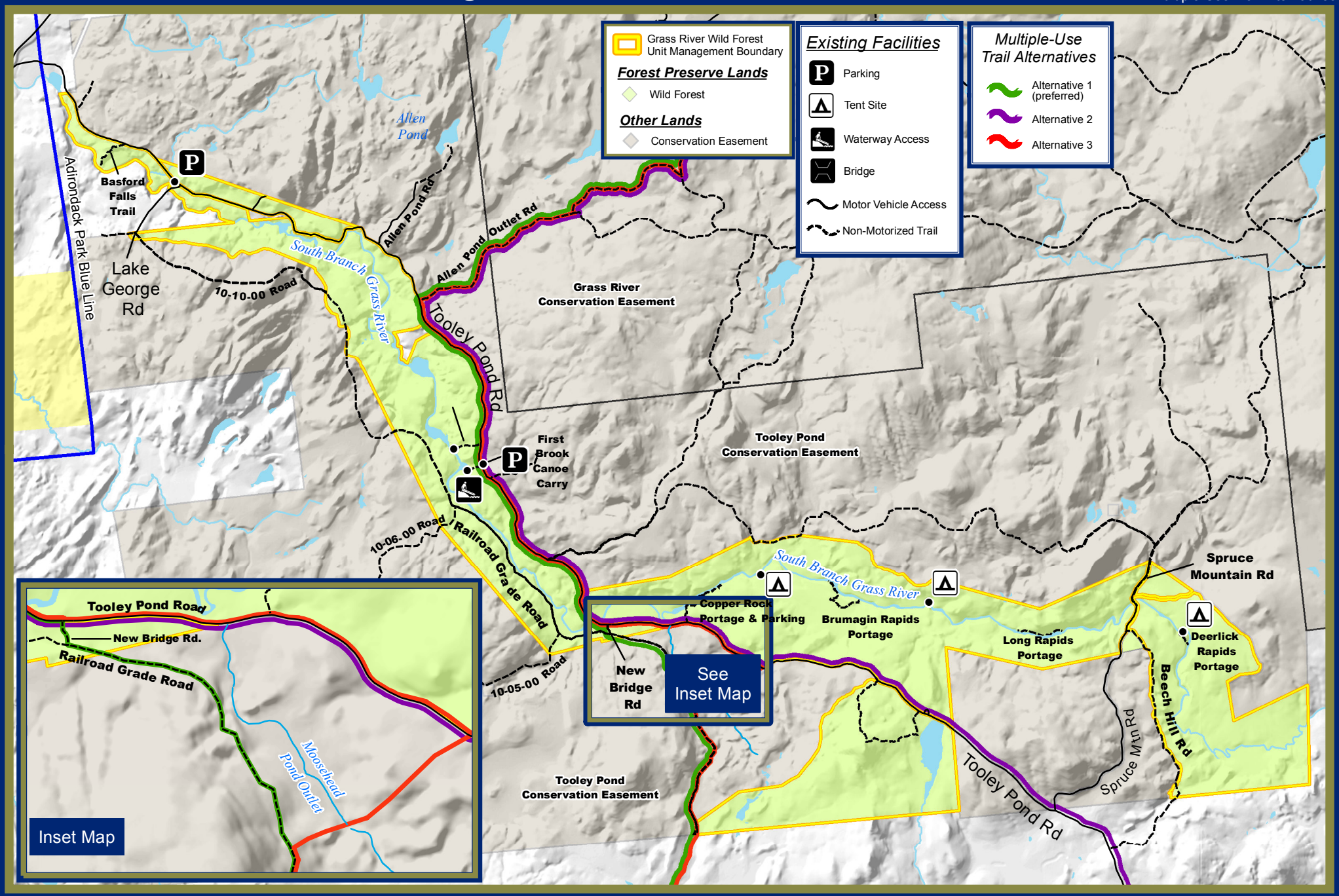
New York's Forest Preserve

Grass River Wild Forest Unit Management Plan

Map 8
Proposed St. Lawrence County
Multiple-Use Trail Alternatives



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