New York State
Department of Environmental Conservation

Division of Lands & Forests

Siamese Ponds Wilderness

and Dug Mountain, Forks Mountain and Chatiemac Primitive Areas

Unit Management Plan/
Environmental Impact Statement

Towns of Johnsburg and Thurman in Warren County
Towns of Indian Lake, Lake Pleasant and Wells in Hamilton County

May 2005

George E. Pataki, Governor Denise M. Sheehan, Acting-Commissioner

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GEORGE E. PATAKI
GOVERNOR

STATE OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
ALBANY, NEW YORK 12233-1010

DENISE M. SHEEHAN
ACTING COMMISSIONER

MEMORANDUM

TO: The Record

DATE: MAY 2 4 2005

SUBJECT: Siamese Ponds Wilderness Area Final Unit Management Plan/FEIS (Final UMP/FEIS)

The Final UMP/FEIS for the Siamese Ponds Wilderness Area has been completed. The Final UMP/FEIS is consistent with the guidelines and criteria of the Adirondack Park State Land Master Plan, the State Constitution, Environmental Conservation Law, and Department rules, regulations and policies. The Final UMP/FEIS includes management objectives, a five year budget and an Environmental Impact Statement accepted as Final on April 7, 2005. This Final UMP/FEIS is hereby approved and adopted.

Denise M. Sheehan
Acting Commissioner

Preface

This document is a revision of the 1987 Siamese Ponds Wilderness Unit Management Plan (SPW UMP). This UMP 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, Department of Environmental Conservation ("Department") rules and regulations, Department policies and procedures and the State Environmental Quality and Review Act.

Most of 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 Siamese Ponds Wilderness.

The Adirondack Park State Land Master Plan ("Master Plan") 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 Master Plan 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.

The Master Plan 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 Master Plan classifies the lands which are the subject of this UMP as the Siamese Ponds Wilderness and the Dug Mountain, Forks Mountain and Chatiemac Primitive Areas.

The Master Plan 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 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 areas of 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." Thus, the Master Plan and the UMPs have the force of law in guiding Department actions.

From a legal perspective, the "No Action" alternative of not writing an UMP is not an option. Executive Law §816 requires the Department of Environmental Conservation to develop, in consultation with the Adirondack Park Agency (APA), individual unit management plans (UMPs) for each unit under its jurisdiction classified in the Adirondack Park State Land Master Plan (APSLMP). In addition an UMP serves as a mechanism for the Department to study and identify potential areas for providing access to the SPW for persons with disabilities in accordance with the Americans with Disabilities Act (ADA of 1990). The UMP also serves as an administrative vehicle for the identification and removal of nonconforming structures as required by the APSLMP.

From an administrative perspective, the "No Action" alternative is not an option. The UMP provides guidance necessary for staff to manage the lands of the unit in a manner that is most protective of the environment while at the same time providing the most enjoyable outdoor recreation opportunities for the public. Without the UMP the sensitive environmental resources of the unit could be negatively impacted and it is highly likely that the public enjoyment of such resources would decrease. Management of the Siamese Ponds Wilderness via an UMP will allow the Department to improve public use and enjoyment of the area, avoid user conflicts and prevent over use of the resource (e.g., through trail designations, access restrictions, placement of campsites and lean-to in relation to a sensitive resource, etc.).

For a discussion of the alternatives to the proposed management activities see section IV. Proposed Management.

Executive Summary

The Siamese Ponds Wilderness (SPW) is one of the larger Wilderness designated areas in the Adirondack Park. It extends some 24 miles north and south and 18 miles east and west and contains approximately 46,138.43 hectares (114,010.1 acres) of Forest Preserve lands. Associated with the SPW are the Dug Mountain, Forks Mountain and Chatiemac Primitive Areas. During the early part of the nineteenth century, logging became an important industry in the region, and most of the Wilderness was heavily cut over. Devastating fires at the turn of the century continued to significantly impact this natural resource.

Today, however, the area shows little evidence of these past impacts and has become known for its natural beauty. Popular points of interest include the Siamese Ponds that gave the area its name, Puffer Pond, Puffer Mountain, Chimney Mountain, Auger Falls, and Thirteenth Lake.

There are several key issues related to the management of the Siamese Ponds Wilderness. They include:

Horse Trails

Currently there are no designated horse trails in the Siamese Ponds Wilderness, but the area does receive use from horses on non-designated trails. In general, 6 New York Codes Rules and Regulations ("NYCRR") §190.8(n) authorizes the use of state owned lands by horses and equestrians. However, the use of horses on designated foot trails is prohibited unless the trail is also specifically designated as a horse trail.

Page 22 of the APSLMP, June 2001, limits the designation of horse trails in a Wilderness area to: "those that can be developed by conversion of appropriate abandoned roads, snowmobile trails, or state truck trails." Several such abandoned roads within the Siamese Ponds Wilderness may be appropriate for horse riding. The Eleventh Mountain trail and the Old Kunjamuk Road are just two of the possibilities. These abandoned roads are both currently designated as hiking and skiing trails.

The use of horses is an excellent means by which persons with mobility impairments can access recreational programs in a wilderness setting. The use of horses in the SPW is a historical use that occurred long before the land came under public ownership. Therefore, this plan proposes the creation of several horse trails in the SPW at locations which can sustain such use and that meet the requirements of the APSLMP.

Motor Boat Use on Thirteenth Lake

Currently, there is no law or regulation that prevents the use of motor boats on Thirteenth Lake. The Garnet Hill Home Owners Association does have a 5 horse power limit on boats launched from its property, but there does not appear to be a legal limitation on the size boat that can be launched from the public access to Thirteenth Lake. Additionally, the Town of Johnsburg has passed a town law prohibiting the use of personal water craft on Thirteenth Lake. There is a physical limitation, in that a gate located approximately 500 feet from the lake prevents vehicle

access and limits the boat size to those that can be pulled by hand. It is important to note that the Wilderness boundary is the shoreline of Thirteenth Lake, but does not include Thirteenth Lake.

Numerous letters and phone calls have been received requesting that motors be banned from Thirteenth Lake. The primary points of contention are that the noise, air and water pollution created by motor boats has a negative impact on the wilderness experience, and that the wake created from motor boats negatively impacts nesting loons and makes canoeing difficult.

Thirteenth Lake provides a unique experience in that a wilderness-like lake is easily accessed from a public road. This is an excellent location to develop opportunities for mobility impaired individuals. Therefore, it may not be appropriate to completely eliminate motorized use of the lake.

Several alternatives have been explored:

- No motors.
- Electric motors only.
- Horse power limit on motors.
- No regulation regarding motor size.

This plan proposes that motorized use on Thirteenth Lake be limited to electric motors only. This alternative would eliminate the noise, air and water pollution associated with gas powered engines. Furthermore, the use of electric motors would reduce the size of the wake created by boats thus minimizing the potential impact on nesting loons and other boaters on the lake. Additionally, electric motors would still allow access to the lake by those individuals who want the assistance of a motor, including persons with disabilities.

Thirteenth Lake Primitive Tent Sites

Thirteenth Lake currently has 15 primitive tent sites along its shoreline. Of these sites, 6 are clustered within 250 feet of each other at the north end of Thirteenth Lake. The APSLMP allows for primitive tent sites in Wilderness, but requires that such sites be "out of sight and sound and generally one-quarter of a mile from any other primitive tent site or lean-to." (APSLMP, June 2001, page 21) The cluster of tent sites at the north end of Thirteenth Lake would normally be considered non-conforming with these requirements.

However, the APSLMP also provides on page 25 that "where a Wilderness boundary abuts a public highway, the Department of Environmental Conservation will be permitted, in conformity with a duly adopted unit management plan to locate within 500 feet from a public highway right-of-way, on a site-specific basis, trailheads, parking areas, fishing and waterway access sites, picnic areas, ranger stations or other facilities for peripheral control of public use, and, in limited instances, snowmobile trails." The APSLMP therefore allows some flexibility regarding separation distance of primitive tent sites within 500 feet of the Wilderness boundary.

Another factor to consider in the discussion of alternative management strategies for primitive tent sites on Thirteenth Lake is the opportunity to provide access to the Wilderness for

people with mobility impairments. This area is unique in that a wilderness setting is accessible from a public road. Furthermore, the north end of Thirteenth Lake would be an excellent location to develop accessible camping sites, due to the flat terrain and stable soils of the area, as well as ease of water access.

It is proposed that four universally accessible sites be developed at the north end of Thirteenth Lake. These sites would be available to all users on a first-come, first-served basis. A path would be hardened to each of the four sites to improve access and protect the resource. Each site would have access to a privy and fire ring that are designed to be universally accessible. The two remaining primitive tent sites at the north end of Thirteenth Lake will be closed and efforts will be taken to encourage re-vegetation. Additionally, a picnic area for day use only will be developed in this area. The picnic area will have three picnic tables and three fire rings that are designed to be accessible.

Foot and Ski Trails

There are only a few opportunities for short (less than 5 miles) day trips within this area. Most of the more popular destinations are accessed by the same trail out and back. Few, if any, of the trails provide a loop that can be easily hiked in a day. Loop trails may assist in protecting the resource and the experience by spreading use across a larger area and reducing encounters with other users. The construction of several loop trails is recommended in this UMP, particularly within those areas on the periphery of the unit that provide for hikes of less than 5 miles. All the proposed foot trails are existing herd paths that warrant upgrading to designated foot trails or are reroutes of existing trails.

Much of the southeastern portion of the SPW is not easily accessible due to the lack of crossings over the Sacandaga River. The 1987 SPW UMP proposed the building of a bridge over the East Branch of the Sacandaga River in the vicinity of Shanty Brook. This bridge would have provided access to the trail-less area. However, due to limited funds the bridge was never built. Without a bridge access to the trail-less area is limited during the wettest times of the year. The limited access is actually curtailing use when use can least be accommodated. A bridge a this location would encourage the use of the informal foot paths and likely result in significant degradation of the paths and the user experience. This UMP will not recommend the building of a bridge over the East Branch of the Sacandaga River in the vicinity of Shanty Brook as it is in the best interest of the Wilderness resource and user experience to leave this portion of the unit as essentially trail-less.

Fisheries

Efforts will be made to preserve, enhance and restore native Adirondack strains of brook trout in selected SPW waters. Quality Wilderness fisheries for brook trout are proposed to be established and/or maintained in several waters. This would disperse angling pressure on fisheries and reduce the chances of anglers focusing on a few "blue ribbon" fisheries.

Group Size Limit

Generally, large groups tend to have a disproportionate impact on the resources of an area. If they attempt to camp close together, large numbers of people may cause damage that would not occur if the group were to spread out or break up among designated campsites.

6NYCRR 190.4(c) requires groups of 10 or more persons who intend to camp together to obtain a permit from the local Forest Ranger. This regulation is inconsistent with the APSLMP. To conform with the APSLMP guidelines, the maximum overnight group size in the SPW will be limited to 8 people, and 6NYCRR 190.4(c) will be amended accordingly.

6NYCRR 190.13(c) will be amended so that it also applies to the SPW. Camping permits will not be issued for groups of more than 8 persons in SPW to comply with this regulation. Persons camping in groups of 8 or less will still be allowed to camp without a permit at one location for up to 3 days. Day use group size will be limited to less than 16 people.

Indian Lake Designated Camping Sites

There are 20 designated camping sites located on SPW lands that were previously classified as Intensive Use as part of the Indian Lake Islands Campground. These lands were reclassified as Wilderness in 1979. As a result, several non-conforming uses were created: campsites that do not conform to the 1/4 mile separation distance, picnic tables and fireplaces at most sites. An obvious solution would involve eliminating the non-conforming uses by removing the fireplaces and picnic tables. Additionally those sites that are within 1/4 mile of each other could be closed and relocated, while still retaining 20 sites. This seems obvious but has some practical limitations: it may be difficult to attain the 1/4 mile separation distance for all sites given the terrain constraints of the surrounding area.

There is currently a Department presence in the form of a caretaker and additional Operations staff associated with the Indian Lake Islands Campground. This presence in conjunction with routine patrol from the local Forest Ranger and Environmental Conservation Officer has eliminated the overuse and associated effects from it that occurred in the 1950s and 1960s, such as garbage and human waste disposal, soil erosion, large groups and parties.

This plan proposes that an administrative campground be created to include those 20 campsites located in the SPW and the 35 campsites located in the adjacent Jessup River Wild Forest. As an administrative campground the land on which the camping sites are located would retain their current classification of Wilderness, Wild Forest or Intensive Use. However, as an administrative campground the campground rules and regulations would apply and be available to law enforcement personnel.

The sites located in the SPW will be brought into compliance with the APSLMP by removing the non-conforming facilities. Additionally, this plan proposes that lean-tos be built on some of the sites. Furthermore, it is proposed that 4 of the sites be relocated to adjacent Wild Forest lands to meet the minimum separation requirements.

Planning Team

In October of 1999 a unit management planning team was formed to revise the March 1987 Siamese Ponds Wilderness Unit Management Plan. The UMP team consisted of:

Real Property	Les Eggleton
Wildlife	Paul Jensen, Kurt Armstrong and Bob Inslerman
Fisheries	Leo Demong and Bill Miller
Operations	Dick Wojcik and Don Smith
Lands & Forests	Tad Norton
Bureau of Public Protection	Forest Ranger Steve Ovitt
Adirondack Park Agency	Walt Linck

The attached UMP is a compilation of the efforts by the UMP team, as well assistance provided by: John Banta, Wayne Blanchard, Sue Clickner, Rick Fenton, Brian Finlayson, Tom Folts, Peter Frank, Carole Fraser, Sandra Garlick, Mike Grove, Ken Hamm, Sunita Halasz, Tom Kapelewski, Mary Lupo, Tom Martin, Rob Messenger, Karen Roy, Chuck Scrafford, Chuck Vandrei, Carl Wiedemann and Tom Wolfe.

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I. INTRODUCTION

A. Area Description

The Siamese Ponds Wilderness (SPW) is located in the south-central portion of the Adirondack Park in the Towns of Johnsburg and Thurman in Warren County and Wells, Lake Pleasant and Indian Lake in Hamilton County. It is one of the largest areas classified as Wilderness in the Adirondack Park, extending about 24 miles from north to south and about 18 miles from east to west, at its widest points. The SPW is composed of approximately 46,138.43 hectares (114,010.1 acres) of State land.

The Siamese Ponds area is classified by the APSLMP as Wilderness. This area is situated east of Route 30, north of Route 8, south of Route 28, and west of Routes 8 and 28. It is bounded on the east by the East Branch of the Sacandaga River and State land boundary, on the north by Route 28 and State land boundary, on the south by the Sacandaga River, and on the west by the east shore of Indian Lake and State land boundary.

There are three areas associated with the SPW that are classified as Primitive on page 75 of the APSLMP, June 2001. The first primitive area, known as the Forks Mountain Primitive Area, is composed of 5 acres of land stretched over the length of 2.2 miles of snowmobile trail, and is described in the APSLMP as follows:

> This area in the Town of Wells includes the fifty-foot wide corridor of the snowmobile trail which cuts across the southern tip of the Siamese Ponds Wilderness between the Teachout Road on the East Branch of the Sacandaga and the state land boundary on the Sacandaga River. (APSLMP, June 2001, Page 75)

> The second primitive area, known as Dug Mountain Primitive Area, is composed of 60 acres of land alongside 0.2 miles of road. The APSLMP description of the area is as follows:

> This is a small appendage of state land adjacent to the SPW in the village of Speculator, Hamilton County. It is bounded on the north, west and south by private lands. The private lands to the north constitute a virtual inholding within the Wilderness. This appendage is separated from the Wilderness by a private road approximately 600 feet in length leading to the private holdings in the north. In the event that the private lands ever are acquired by the state, the road should be closed, and this area together with the private inholdings reclassified to Wilderness. (APSLMP, June 2001, Page 75)

> The third primitive area, known as the Chatiemac Lake Primitive Area, is composed of 0.5 miles of road. The APSLMP description of the area is as follows:

> This area is located in the town of Johnsburg, Warren County, and consists of the right-of-way of Chatiemac Road, a town road. The road provides access through the eastern edge of the SPW to a private inholding at Chatiemac Lake. Should this inholding ever be acquired, the road should be abandoned and made part of the SPW. (APSLMP, June 2001, Page 75)

Access to the SPW is mainly through the following areas:

1. Old Farm Clearing near Thirteenth Lake.
2. Eleventh Mountain Trailhead on Route 8 approximately 4 miles west of Bakers Mills.
3. John Pond Trailhead off Starbuck Road approximately 4 miles southeast of the Village of Indian Lake.
4. Kings Flow property from Big Brook Road. This property is privately owned. Public access and parking has been permitted for a nominal fee.
5. North end of Thirteenth Lake at the end of Beach Road.
6. Elm Lake Road from Speculator via lands of International Paper Company, Inc.
7. Trail easement crossing International Paper Company, Inc. Crotched Pond property to Round Pond.
8. By boat or canoe from Indian Lake.
9. Edward Hill Road in the Town of Johnsburg.
10. Auger Falls Trailhead off of Route 30.
11. Forks Mountain Primitive Area from Teachout Road near Griffin, New York.
12. Access can also be gained along Route 28 on the north and Route 8 on the south, where the SPW is near these highways.

B. History

The history of the Siamese Ponds area is similar to that of much of the Adirondacks. In the first half of the nineteenth century, early settlers cut timber and cleared the land for farming. Most of these first settlements had one or more small sawmills to help supply the needs of the local community. Farming, although not extensive in the Siamese Ponds Area, was important in much of the low land area. After most of the softwood timber had been cut and removed, farms were started in the cleared areas. The names of such areas reflect the presence of these original farms; including Burnt Shanty Clearing, Curtis Clearing, and Old Farm Clearing. Farming was also important in the hamlets that sprang up at Christian Hill and around Elm Lake and Kings Flow (McMartin, *Discover the Adirondacks*, I, 1979).

During the latter half of the century, various industries became established. Lumbering became commercially important and most of the Siamese Ponds area was cut to remove pine and spruce for lumber and pulp.

Tanneries were built at Wells, Griffin, North Creek, and Oregon. Much of the hemlock cut to supply bark for these tanneries came from what is now the SPW.

Mining was another industry of importance in the area. In 1878, Henry Barton opened the first garnet mine on Gore Mountain. Later, in 1894, Frank Hooper started an open pit garnet mine on Ruby Mountain, and in 1908 he moved his mining operation to an area near Thirteenth Lake (which was located on State owned land). In 1928 he sold his business to the Barton Mine Corporation. Another open pit mine, located on Humphrey Mountain, was in operation during the early 1900's (McMartin, Discover the Adirondacks, 1, 1979). All these mines have now closed, except for Barton Mines on Ruby Mountain.

With the turn of the century, vast changes took place in the ownership and land use of the Siamese Ponds area. After extensive logging removed much of the timber, the land reverted to State ownership through tax sales in 1877, 1885, 1890, and 1895. Most of the remaining land was purchased outright in the years 1897, 1899, 1905, and 1910 consequently by the year 1910 over 80% of this area was in State ownership (NYS Legislative Document #84,1920).

By the late 1800s, most logging of softwoods had ended in the Siamese Ponds Area leaving behind large piles of slash and debris. With the drought of 1903 and later years, fire soon burned thousands of acres of timberland. In more recent years the "1950 Blowdown," caused by hurricane force winds, resulted in severe damage to the forests in the western portion of the Wilderness. Additionally, in the 1960's and through to the present, the impact of beech bark disease has significantly altered the hardwood forests of this area. Finally, a wind storm in 1995 caused blowdown throughout the area. Current forest ecosystems, therefore, reflect the cumulative effects of farming, logging, fire, wind, insects and disease over the past 150 years.

II. RESOURCE AND PUBLIC USE INVENTORY OVERVIEW

A. Physical Natural Resources

1. Geology

The SPW is located within the Adirondack Highlands physiographic unit which is part of the Grenville Province of the Canadian Shield. The Grenville series are part of the oldest rock formations, being formed 1.1 billion years ago. Eventually, these Precambrian sedimentary rocks were uplifted by igneous intrusions of granite, syenite, gabbro, and anorthosite. With later cycles of uplift and erosion, most of the overlying Grenville rocks have been removed, leaving igneous mountains, such as Gore and Puffer, and Grenville remnants of metamorphosed marble, schist, and quartzite (Medora, et al, 1937).

Most lower elevations (under 2000 feet) have developed in the softer Grenville sediments or along fault lines. Examples are Center Brook, Thirteenth Lake, and the East Branch of the Sacandaga River. Higher elevations represent the more resistant igneous rocks; anorthosite and syenite. An example is Gore Mountain which is composed of gabbro metamorphosed into garnet. An exception to this is Chimney Mountain whose peak is quartzite (metamorphosed sandstone) resting upon the main granite mass. The shape of the peak is a result of a rift in this Grenville series (Ibid).

Another unique geologic feature of the Siamese Ponds area is the presence of anorthosite. This represents the largest mass of anorthosite outside the main formation in the High Peaks area of the Adirondacks.

Although the larger valleys are preglacial, much of the drainage of smaller streams and valleys have been modified by Pleistocene glaciation. Glaciation has rounded the hills and ridges, picked up and deposited debris, and upon receding left till and outwash which often created lakes and ponds in the lowlands. But none of this resulted in any significant changes in the major topographic features (Ibid).

The bedrock in the Siamese Ponds area is composed of (a) granitic gneiss, (b) meta-anorthosite and (c) charnockitic and syenitic gneiss. The soils reflect the composition of this underlying material and thus contain mainly granitic and quartz material (Ibid).

2. Soils

Soils in the Siamese Ponds Wilderness developed from sandy glacial till which was derived from granitic rock. Soils are acid, deep, coarse, loamy, and very stony. These soils occupy rolling to hilly landscapes and are mostly forested, except for remnants of cleared areas along roads. Upland and steep areas are mostly rock outcrop with a shallow soil layer.

The soils are classified into the following great groups: Haplorthods, Pragiorthods, or very stony Fragiaquods. In these soils iron and humus are translocated to subsoils leaving a light colored horizon above, called the spodic horizon.

The three main soil series are Becket, Berkshire and Potsdam. Berkshire soils have spodic horizons, but are lacking a fragipan. They are formed from mica schist, phyllite and granite till. Becket and Potsdam soils have the spodic horizon as well and a defined fragipan below this layer. Becket soils are formed from granite and gneiss till whereas Potsdam is composed of silty deposits over granite or sandstone. Other soils associated with all three soil series are Skerry, Hermon, Waumbek, Dixmont, Canaan, Adams, Colton, Naumburg, Starboro, and Peat (Cline and Marshall, 1977).

The dominant soils which have a fragipan or compact substrata can cause problems for uses that depend on internal disposal of water. Site specific soils information is available from the Natural Resources Conservation Service of the United States Department of Agriculture. This information will be obtained if necessary for specific projects. Soil type is an important consideration for the planting of trees, but is generally not the limiting factor for trail layout. Topography, water and existing wetlands are normally the limiting factors for most trail projects considered within this unit. A map of the soils in the SPW is attached to this document as Appendix 12.

3. Terrain

The SPW comprises part of the Adirondack Highlands physiographic unit. The topography consists of relatively low rolling hills with a few mountain summits such as Bullhead, Eleventh, Puffer, and South Pond Mountains above the 3,000 feet level. The highest of these, Puffer Mountain, is 3,472 feet in elevation. The lowest point in elevation lies along the East Branch of the Sacandaga River near Griffin at 1,280 feet elevation.

4. Climate

Several climatological factors are important to plan development for the SPW. The mean annual total precipitation averages between 45 and 50 inches. Few areas in New York State receive more precipitation. Of this precipitation, snowfall normally constitutes about 20% or 100 inches, and covers the ground for about four months, December thru March (A Forest Atlas of the Northeast, 1968).

5. Water

The SPW is drained by the Sacandaga River on the east and south, and by the Hudson River on the north and west. All waters within the unit are part of the Upper Hudson watershed.

Eighty identified ponds and lakes occur within or border the unit. Waters are scattered throughout the unit and range in size from about an 0.5 acre to Thirteenth Lake with a surface area of 329 acres.

Ponded waters in or bordering the unit have a total acreage of 1,483 acres. The area also contains hundreds of miles of small, coldwater streams and beaver flows. The East Branch of the Sacandaga River and the Kunjamuk River are two prominent streams in the area.

The Fisheries section of this plan lists the major ponded waters in and bordering the SPW with a brief narrative statement pertaining to their important features including past and current management, accessibility, size, water chemistry, and fish species composition. Appendix 7 gives additional statistical information about ponded waters of the area including watershed, fisheries management classification, and depth. The most recent biological/chemical data are summarized in Appendix 7.

6. Wetlands

Freshwater wetlands are inventoried, mapped and protected under the 1975 NYS Freshwater Wetlands Act by the Department of Environmental Conservation and the Adirondack Park Agency. Using the Cowardin National Wetlands Inventory and Classification System, the Adirondack Park Agency has completed a comprehensive wetlands inventory for this area including the filing of final maps under the NYS Freshwater Wetlands Act for Hamilton County.

This inventory identified a total of 2,407 freshwater wetlands in the SPW from the APA's map of "Wetlands in the Greater Upper Hudson River Watershed." The wetlands were mapped from aerial photographs that were flown between 1985 and 1995. 291 of these wetlands were 2.5 hectares (6.2 acres) and larger, and 2,116 of these wetlands were less than 2.5 hectares in size. The total area in the SPW classified as wetlands is 2,943.54 hectares (7,273.61 acres) or 6.38%.

There are several factors that may account for the relatively low percent of wetlands in the SPW. First, there are few flat areas in the unit for large wetlands to develop. A review of the topography reveals that most of the area is the slopes of hills and mountains which do not allow water to accumulate and create wetlands. Additionally, the boundaries of the unit follow several large river drainages, the Main and East Branches of the Sacandaga River and the Kunjamuk River. These rivers allow water to flow out of the unit rather than pool within the unit. As a result there are many wetlands associated with these rivers outside the unit. Finally, the sampling methods used to delineate the wetlands in SPW were not used in wetland delineation throughout the Adirondack Park. This variation in sampling methods may have resulted in wetland acreage different than would have been found using other sampling methods .

The wetlands data are summarized in the table on the following page and the attached map.

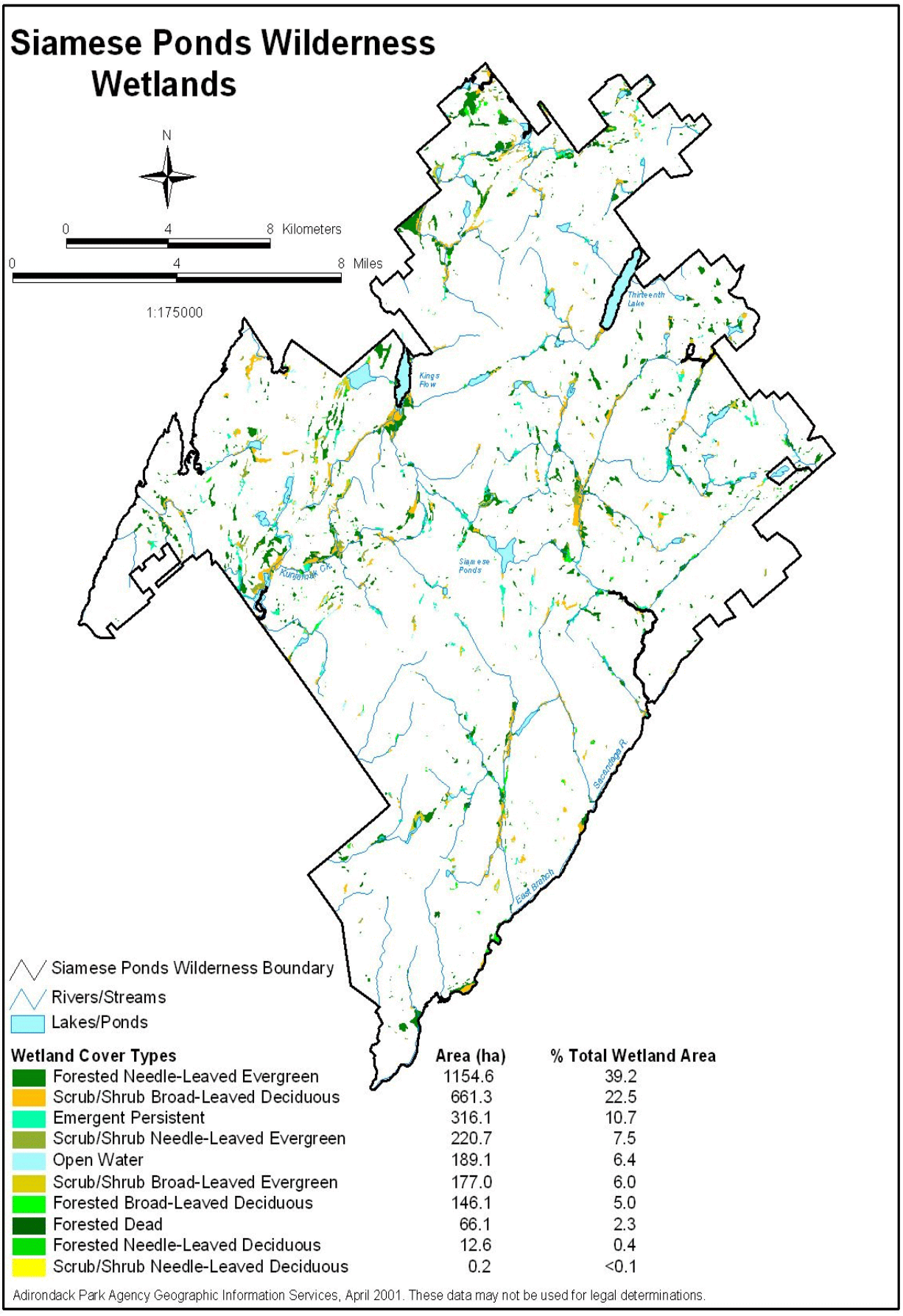
Hectare Class	Number of Wetlands
< 2.50	2,116
2.50 - 4.99	174
5.00 - 9.99	94
10.00 -14.99	17
15.00 - 19.99	3
20.00 - 32.00	3

Code	Coverage	≥ 2.5 ha. (count)	< 2.5 ha. (count)	Total Area (ha.)	% of Total Wetland Area
EM1	Emergent Persistent	39	201	316.05	10.74
FO1	Forested Broad-Leaved Deciduous	8	317	146.05	4.96
FO2	Forested Needle-Leaved Deciduous	1	10	12.57	0.43
FO4	Forested Needle-Leaved Evergreen	120	776	1,154.57	39.22
FO5	Forested Dead	7	60	66.14	2.25
OW	Open Water/Unknown Bottom	17	190	189.05	6.42
SS1	Scrub/Shrub Broad-Leaved Deciduous	66	244	661.25	22.46
SS2	Scrub/Shrub Needle-Leaved Deciduous	0	1	0.18	0.01
SS3	Scrub/Shrub Broad-Leaved Evergreen	24	58	176.98	6.01
SS4	Scrub/Shrub Needle-Leaved Evergreen	9	259	220.70	7.50
	Total	291	2116	2943.54	100

The wetlands typically occur along brooks and in association with ponds and lakes. One wetland is partially created by the installation of a fish barrier dam on the Kunjamuk River. However, the barrier dam has blown out and is no longer functioning. Beaver activity has resulted in the creation and expansion of several of the wetlands located along brooks. Wetland

vegetation, as typified by the covertype classes in the previous table, is quite variable among and within wetlands of the SPW. The most common plants encountered in each covertype are listed below. Not all covertypes occur in each wetland, nor is the list complete. Finally, not all the plants listed per covertype can be found wherever the covertype occurs. Exemplary wetlands within the SPW include: Bog Meadow located southwest of Height of Land Mountain, Buck Meadow located south of Thirteenth Lake, the south end of Kings Flow and the Kunjamuk River near its intersection with Cisco Brook.

Inventory Code	Covertype	Common Plants
EM1	Emergent Persistent	Cattail, grasses, sedges
FO1	Forested Broad-Leaved Deciduous	Red maple, silver maple, black ash, green ash
FO2	Forested Needle-Leaved Deciduous	Forested Needle-leaved Deciduous
FO4	Forested Needle-Leaved Evergreen	Balsam fir, red spruce, black spruce
FO5	Forested Dead	Standing dead trees
OW	Open Water/Unknown Bottom	Pondweed, milfoil, eelgrass, or none
SS1	Scrub/Shrub Broad-Leaved Deciduous	Speckled alder, willow
SS2	Scrub/Shrub Needle-Leaved Deciduous	Eastern larch
SS3	Scrub/Shrub Broad-Leaved Evergreen	Leatherleaf
SS4	Scrub/Shrub Needle-Leaved Evergreen	Stunted or young black spruce or balsam fir
(2) Species list modified from Part 578, "Special Provisions Relating to Freshwater Wetlands." Rules and Regulations of the Adirondack Park Agency, 6NYCRR Subtitle Q.		



Wetland Cover Types	Area (ha)	% Total Wetland Area
Forested Needle-Leaved Evergreen	1154.6	39.2
Scrub/Shrub Broad-Leaved Deciduous	661.3	22.5
Emergent Persistent	316.1	10.7
Scrub/Shrub Needle-Leaved Evergreen	220.7	7.5
Open Water	189.1	6.4
Scrub/Shrub Broad-Leaved Evergreen	177.0	6.0
Forested Broad-Leaved Deciduous	146.1	5.0
Forested Dead	66.1	2.3
Forested Needle-Leaved Deciduous	12.6	0.4
Scrub/Shrub Needle-Leaved Deciduous	0.2	<0.1

See Appendix 12 for a color map

7. Air Resources and Atmospheric Deposition

The effects of various activities on SPW 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 SPW, 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.

- Decrease 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 Hydrologic 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.

Acid Precipitation Impact on Fisheries

Recently acidic deposition has impacted the aquatic resources of the Adirondacks. The ALSC surveyed 1,469 Adirondack waters, 24 percent of which had pH levels less than 5.0 (Kretser el al. 1989). Water bodies with a pH level below 5.0 generally have difficultly supporting fish. Historic data and water chemistry analysis demonstrates that many of those waters were historically circum-neutral and able to support fishes. Although less well studied, streams have also been impacted by acidification (Colquhoun 1984). The available water chemistry data does not indicate an acidification problem for ponds in the SPW. Of the 37 waters with chemistry data, pH values range from 4.43 to 7.64. Although 45 of the waters have not had recent (since 1975) water chemistry surveys, the majority of these are the smaller unnamed ponds. The pH of area ponds is in excess of 5.7, except for Lower Buckhorn Pond (4.43), Upper Buckhorn Pond (4.75), South Pond (5.12) and Round Pond (UH-P 296) (5.66).

References for this section include the following:

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).

Summaries of those data can be found at (http://www.adirondacklakessurvey.com) 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.

B. Biological Natural Resources

1. Vegetative Inventory

The vegetative cover types associated with the SPW are the result of past historical events and their subsequent effects on existing ecosystems. Lumbering and windstorms removed much of the overstory of pine, spruce, and hemlock. On the better drained soils this accelerated the succession of hardwoods. In other areas, farming and fire reverted successional trends back to nearly pure stands of pioneer species of birch, aspen, cherry, or pine. Many of these stands are now transitional with beech, maple, and birch or fir and spruce understories replacing the shade intolerant species in the overstory. Some stands exist where the softwood timber was harvested many years ago, while the hardwoods were left standing by the loggers. As a result, today large hardwood trees can be found in these areas. Additionally, several plantations, consisting of Norway spruce were established in the vicinity of Old Farm Clearing. It is believed that these plantations were established by the Civilian Conservation Corps in the 1930s.

A detailed inventory of the stand types has not been completed. However, the major cover types are (1) northeastern spruce-fir and (2) northeastern northern hardwoods. The spruce-fir type consists predominantly of red spruce, white spruce, and balsam fir. Black spruce is also a minor component. Associated species include northern white cedar, eastern hemlock, eastern white pine, tamarack, red maple, paper birch, aspens, white ash, American beech, sugar maple, and yellow birch. This type will grow on a variety of soils, but it is found most commonly where sites are cool and moist; poorly drained lowlands, mountaintops and north facing slopes (USDA, 1973).

The northern hardwood type consists of sugar maple, American beech, and yellow birch with associated paper birch, white ash, red maple, and other hardwoods. Conifers such as eastern hemlock, balsam fir, and red spruce grow with the hardwoods, especially on cool steep slopes and poorly drained sites at lower elevations (USDA Handbook #271, 1973). Northern hardwoods occur on the better drained sites and more fertile slopes.

The understory vegetation consists of shade tolerant hardwood and softwood seedlings and saplings which include sugar maple, beech, red spruce and hemlock. Associated shrubs include, but are not limited to dogwoods, alders, honeysuckle, witch hobble, wild raisin, and other species of viburnum. Some of the common ground plants present are trillium, dwarf dogwood, adder's tongue, spring beauty, sarsaparilla, winter green, partridge berry, Indian cucumber, Solomon's seal, Canada mayflower, clintonia, jewelweed, various club mosses, ground cedar, and various ferns.

At present no detailed inventory or vegetative mapping has been completed. The Siamese Ponds Wilderness has not had a complete survey for rare and endangered plants. However, the Natural Heritage Data Base does indicate the presence of *Rhododendron canadense*, a threatened plant, within the unit.

Invasive Plants

Nonnative, invasive species directly threaten biological diversity and the high quality natural

areas in the Adirondack Park. Invasive plant species can alter native plant assemblages, often forming monospecific stands of very low quality forage for native wildlife, and drastically impacting the ecological functions and services of natural systems. Not yet predominant across the Park, invasive plants have the potential to spread - undermining the ecological, recreational, and economic value of the Park's natural resources.

Because of the Adirondack Park's continuous forested nature and isolation from the normal "commerce" found in other parts of the State, its systems are largely functionally intact. In fact, there is no better opportunity in the global temperate forested ecosystem to forestall and possibly prevent the alteration of natural habitats by invasive plant species.

Prevention of nonnative plant invasions, Early Detection/Rapid Response (ED/RR) of existing infestations, and monitoring are primary objectives in a national strategy for invasive plant management and necessitates a well-coordinated, area-wide approach. A unique opportunity exists in the Adirondacks to work proactively and collaboratively to detect, contain, or eradicate infestations of invasive plants before they become well established, and to prevent further importation and distribution of invasive species, thus maintaining a high quality natural landscape.

The Department has entered into a partnership agreement with the Adirondack Park Invasive Plant Program (APIPP). The mission of the APIPP is to document invasive plant distributions and to advance measures to protect and restore native ecosystems in the Park through partnerships with Adirondack residents and institutions. Partner organizations operating under a Memorandum of Understanding are the Adirondack Nature Conservancy, Department of Environmental Conservation, Adirondack Park Agency, Department of Transportation, and Invasive Plant Council of NYS. The APIPP summarizes known distributions of invasive plants in the Adirondack Park and provides this information to residents and professionals alike. Specific products include a geographic database for invasive plant species distribution; a central internet website for invasive plant species information and distribution maps; a list-serve discussion group to promote community organization and communication regarding invasive species issues; and a compendium of educational materials and best management practices for management. 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. APIPP has prepared a report for NYS DEC staff with current inventory and management information on documented invasive plant species infestations that threaten exemplary communities and conservation targets within the unit.

Terrestrial Invasive Plant Inventory

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 10 plant species throughout the area surveyed, namely NYS Department of Transportation (DOT) Right-of-Way (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 15 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 (4) 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 plants species are **purple loosestrife** (*Lythrum salicaria*), **common reed** (*Phragmites australis*), **Japanese knotweed** (*Polygonum cuspidatum*) 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 species documented in, or within proximity to, the SPWA include the following: **purple loosestrife** (*Lythrum salicaria*), **common reed** (*Phragmites australis*) and **Japanese knotweed** (*Polygonum cuspidatum*). Newly documented infestations of an invasive species of critical concern, **yellow iris** (*Iris pseudacorus*), have been recorded along the boundary of the SPWA. It is recommended that these Yellow iris infestations be considered a **High Priority**.

For species specific information regarding natural history, ecology, and reproduction, please refer to the Invasive Plant Atlas of New England program website http://webapps.lib.uconn.edu/ipane/search.cfm.

Terrestrial Locations

There are fifteen (15) **purple loosestrife** (*Lythrum salicaria*) infestations in proximity of the SPWA.

There are twenty (20) **Japanese knotweed** (*Polygonum cuspidatum*) infestations in proximity of the SPWA.

There are two (2) **common reed** (*Phragmites australis*) infestations in the proximity to the SPWA.

Please refer to the terrestrial invasive plant species distribution map (Appendix 12).

Observances of New Non-Native Invasive Plant Species

There are multiple **yellow iris** (*Iris pseudacorus*) infestations in the vicinity of the Vanderwhacker Mountain Wild Forest as well as Siamese Ponds Wilderness Area.

Multiple infestations of a terrestrial invasive species of critical concern, **yellow iris** (*Iris pseudacorus*), occurs within the Vly Pond outlet and headwaters of the East Branch Sacandaga River. Multiple Yellow iris infestations also occur within a tailings pond on Barton Mines property. This tailings pond has an outlet into the Vly Pond outlet and is likely serving as a nursery infestation to the SPWA. The geophysical settings of these Yellow iris infestations make them imminent threats to both Vanderwhacker Mountain Wild Forest and SPWA as both Units' boundaries border the infestations.

Aquatic Locations

Longitude and latitude coordinates are used to indicate a lake with a documented infestation. Infestations may range from an isolated population to a lake-wide invasion. Knowledge of locations and coordinates of specific infestations within the lake is limited and variable and will be provided as available.

Initial surveys do not detect occurrences of aquatic invasive plants within the SPWA; however Eurasian watermilfoil is confirmed nearby in Lake Algonquin, Daggett Pond, and Great Sacandaga Lake.

Fanwort is confirmed nearby in the following lakes Hunt Lake, Jenny Lake, Efner Lake and Mill Pond (Ephemeral pond adjacent to Efner Lake)

2. Wildlife Inventory

The distribution and abundance of wildlife species is basically determined by physical factors such as elevation, topography and climate, as well as various biological factors such as forest types, population dynamics, each species' habitat requirements and the social factor of land use. Although no site specific inventories of wildlife species have been made in the SPW, some general literature pertaining to similar areas is discussed to supplement the available information. Wildlife occurring in the SPW is discussed by group; birds, mammals, amphibians and reptiles, along with a section discussing unique, endangered and extirpated species.

Birds

The avian community varies seasonally. A few species remain all year while the number and variety increases during the summer breeding season. A total of 126 birds may occur in general habitats typical of the SPW (Appendix 3). The species vary in seasonal occurrence, habitat preference and abundance. The major sources of information are Birdlife of the Adirondack Park by Bruce Beehler (1978), Birds of New York State by John Bull (1974) and knowledgeable members of ornithological clubs who participated in the Breeding Bird Atlas project. Some species noted as rare and transient by Beehler (1978) were usually not included in Appendix 3 unless the birds were observed in locations where their migration pathway would probably cross the SPW.

Two studies are helpful in documenting the breeding birds in the Adirondacks. Webb et al. (1977) studied the long term effects of different intensities of logging on breeding bird populations within 15,000 acres of the Huntington Ecological Forest Experiment Station near Newcomb, New York, approximately 23 miles north of SPW. One study plot (control) included a mature, undisturbed northern hardwood forest. In the opinion of this author the breeding birds cataloged during the ten year intensive study is representative of the breeding birds in similar habitats in the SPW.

The second study, called the Breeding Bird Atlas (BBA) Project was performed by the New York Federation of Bird Clubs with administrative and computer assistance provided by the Non-Game Unit, Bureau of Wildlife Research Laboratory, Delmar, New York. The five-year program was designed for volunteers to census breeding birds statewide. The project divided the state into 10 regions with each region divided into a grid of blocks comprised of nine square miles. Each volunteer was assigned one or more blocks. A second BBA project was initiated in 2000 and will conclude in 2004.

Birds observed during the 1980 and 2000 Breeding Bird Atlas Projects are presented in Appendix 3. Thirteen birds that were recorded during the 1980 atlas have not been observed during the 2000 project (Green Heron, Eastern Saw-whet Owl, Northern Screech Owl, Whippoorwill, Yellow-throated Vireo, Northern Rough-winged Swallow, Bank Swallow, Boreal Chickadee, Brown Thrasher, Bay-breasted Warbler, Field Sparrow, Eastern Meadowlark, Red Crossbill). However, six new species have been recorded during the present atlas (Canada Goose, Gadwall, Double-crested Cormorant, Merlin, Bicknell's Thrush, Pine Warbler). Some species, such as the Whippoorwill, have been declining in New York State since the early 1900s (Andrle and Carroll, 1988); therefore, the absence of the species from the present list is not surprising. Bicknell's Thrush, a new species observed during the present atlas project, was recently elevated to the species level (1995). It is extremely rare due to its limited distribution, its small population size rangewide, and its vulnerability to deforestation both in the species' breeding range and winter range.

A general review of important groups of birds is offered below. See Appendix 3 for more specific information and sources.

The common loon, grebes, herons, bitterns, ducks, geese and shorebirds are associated with mud flats, marshes, flooded trees and/or permanently or seasonally wet riparian habitats. The Department of Environmental Conservation is documenting the distribution of the common loon, both nesting pairs and migrants. Single loons were sighted by Bureau of Wildlife staff on Long Pond during the 1977 spring migration. A nesting pair of loons was sighted on Thirteenth Lake by Tad Norton, DEC Senior Forester in the Spring of 2001. Among the water birds, the common and hooded merganser, wood duck, black duck, mallard and spotted sandpiper are known to nest near Adirondack waters.

The wood duck, hooded merganser, and common mergansers utilize tree cavities as nest sites. The distribution of suitable cavities is often considered a limiting factor that can regulate the abundance of all three species. The mature northern hardwood forest adjacent to ponds and marshes within the SPW includes numerous trees containing cavities, some of which are suitable for nest sites.

The other species of waterfowl listed in Appendix 3 migrate through the region following the Atlantic Flyway. Waterfowl harvest in the SPW is unknown but believed to be negligible. Occasionally ducks are taken on waters adjacent to the SPW, such as the Kunjamuk River, East Branch of the Sacandaga River, Indian Lake and Thirteenth Lake.

The goshawk, red-tailed hawk, sharp-shinned hawk, broad-winged hawk, barred owl, saw-whet owl, screech owl, osprey, golden eagle and bald eagle are birds of prey identified as nesting in the forests of the Adirondacks (Beehler 1978). One nesting pair of goshawks was observed near Shanty Brook in 1980 by Terry Crannell (personal communication). The broad-winged hawk is a common breeding diurnal raptor in the Central Adirondacks (Matray, 1974).

The three species of owls are also quite common although rarely observed because they forage at night. The barred owl is usually heard rather than seen. The osprey and bald eagle are discussed in the section titled Unique, Endangered, and Extirpated species, where the golden eagle is also mentioned.

Songbirds are a diverse group filling different niches in the Adirondacks. The three common habitat categories recognized in the SPW include deciduous forest, coniferous forest, and open areas formed by ponds, bogs, beaver meadows, and brooks. Although each category can be further divided into sub groups by forest age or species composition, the species composition of birds generally does not change significantly in response to these factors.

The deciduous forest, the most common cover type, supports a variety of birds in the SPW. The most common species include the screech owl, barred owl, pileated woodpecker, downy woodpecker, yellow-bellied sapsucker, black-capped chickadee, blue jay, brown creeper, wood thrush, robin, oven bird, red-eyed vireo, and black and white warbler.

The coniferous forest is often adjacent to streams, bogs, and ponds. A mixture of coniferous and deciduous trees is more common than the pure coniferous forest type. Most songbirds observed in the deciduous forest are also found in the mixed forest. The golden-crowned kinglet, purple finch and black-throated green warbler are species that exhibit a strong preference for coniferous habitat.

The open areas in the SPW are usually associated with water along brooks, ponds, beaver flows and meadows. Vegetation offers considerable variation from the second growth deciduous thickets along the shores of most ponds, to grass-sedge meadows with standing dead snags on abandoned beaver flows. Songbirds typical of these sites include the great crested flycatcher, tree swallow, black-capped chickadee, catbird, robin, wood thrush, cedar waxwing, myrtle warbler, pine warbler, common yellow throat, American redstart, red-winged blackbird, rose-breasted grosbeak, white-throated sparrow and song sparrow. The chimney swift, generally associated with nesting in the air shafts of chimneys, has been observed along the East Branch of the Sacandaga River in the interior of the SPW. A nesting pair of Great Blue Herons was observed on the Kunjamuk flow by Barbara McMartin (personal communication).

Mammals

Mammals known to occur in the Central Adirondacks are also believed to be common inhabitants of the SPW and include the following: white-tailed deer, black bear, coyote, bobcat, raccoon, red fox, gray fox, fisher, weasels, mink, muskrat, otter, beaver, porcupine, snowshoe hare, red squirrel and marten.

Small mammals that may be found in deciduous woodland areas (special habitats are in parenthesis) include the following: smokey shrew (moist-rocky sites), keen myotis, little brown myotis, Indiana bat, silver haired bat, eastern pipistrel, red bat, big brown bat, hoary bat, and the pine vole.

Small mammals occurring near open fields or brushy areas near water include the northern water shrew, pygmy shrew, shorttail shrew, eastern mole, hairy tail mole, white-footed mouse, meadow jumping mouse, and woodland jumping mouse. The deer mouse and eastern chipmunk are inhabitants of all the dry, upland habitats.

The numbers of white-tailed deer, bear and beaver in the SPW and the surrounding area have been estimated from hunting or other census techniques. Harvest figures are available for beaver, otter, fisher, marten, bobcat and coyote as a result of the mandatory pelt tagging required of trappers. The harvest figures are not estimates of species abundance but are related to the species abundance and trapping pressure. Available inventory information for white-tailed deer, bear, beaver, otter, fisher, bobcat, and coyote will be discussed in more detail below.

White-tailed Deer

The white-tailed deer is the most popular big game species in New York. Deer hunting has a tremendous impact on local economies and recreational opportunities. The deer population size is directly correlated to habitat conditions. From early spring (April) to late fall (November) deer are distributed generally throughout the SPW on their "summer range." During this period deer forage on a variety of plants ranging from various herbs to aquatic vegetation to the buds and leaves of woody plants. Although these food sources are not overly abundant due to the mature nature of the forest canopy, they supply sufficient forage to meet the minimal requirements of the deer population during the summer months. When snow accumulates to 15 inches, deer travel to their traditional wintering areas. In the SPW, winter range is characteristically composed of spruce-fir coniferous or, to a lesser degree, a combination of mixed deciduous and coniferous cover types. Often found at lower elevations along water courses, this habitat provides deer with protective cover from adverse weather and easier mobility in deep snows. Located within or partially within the SPW there are fourteen identified deer wintering areas.

During November and December and throughout mild winters (mild in respect to snowfall and temperature), deer may forage beyond the limits of each wintering area. During the more adverse winters, with deeper snows (or more importantly, the depth to which the deer sink) the deer use 60 percent or less of a wintering area. During the winter months when deer movement is restricted by deep snow, deer survive on the fat they acquire during the summer and the available browse on the wintering range.

When deer are confined to winter yards during extended periods of deep, soft snow, they severely deplete the available browse needed to sustain them during the winter. Two serious problems occur. First, the lack of food results in starvation of deer. Usually fawns are lost first, followed by older deer in poor physical condition. Second, there is a long-term impact on food resources; woody vegetation does not regenerate rapidly enough during the summer to insure adequate food supply for the deer during the following winter, especially a severe winter. In addition, the dense canopy of the mature softwood stands of the wintering area inhibits the production of browse on the forest floor. The result is a decline in the carrying capacity of the winter range. The winter carrying capacity fluctuates annually depending on the severity of over-browsing during harsh winters and the frequency of such winters. The carrying capacity for deer in the wintering areas essentially controls the carrying capacity of their entire annual range.

An estimate of the deer population can be derived by analyzing the deer harvest. Historically the average buck harvest in the Towns of Wells, Indian Lake and Johnsburg has been 0.5 bucks per square mile. If this is also typical of the SPW, then the area produces an annual harvest of around 85 adult males. It is generally accepted that for each buck harvested approximately 14 deer exist on the range. This means an average annual population of 7 deer per square mile or approximately 1,190 deer might be expected to exist SPW.

The up and down appearance of harvest is typical of a deer population being controlled by winter food shortages rather than hunter harvest. The fluctuations show white-tail abundance plummeting during the severe winters of 1968 through 1970 and again in 1977. The deer population was unable to recover from their own destruction of winter food supplies as the carrying capacity of the winter range declined rapidly.

Age composition data indicate that hunting has negligible impact on the deer population. The number of deer annually removed by sport hunting would be removed by other means (i.e. starvation, predation, disease) if hunting were not allowed.

Access is the main factor which controls the management of deer by sport hunting. It also dictates the distribution of hunting pressure and corresponding harvest. Studies in the past have shown that over 90 percent of the hunting pressure occurs within one mile of a driveable road. Over 80 percent of the SPW is outside of this limit. Although several parties do pack into the interior of the SPW, hunting cannot be considered as a major management tool within most of the area. Hunting recreation can be significantly increased if additional incentives are offered to get the hunter into the interior of the Wilderness.

The SPW offers a unique wilderness hunting experience. That is, hunters who walk deep into the interior are unlikely to meet other hunters and may have an opportunity to harvest a trophy antlered deer.

Black Bear

A conservative estimate of the black bear population in the SPW is 66 animals. This is based on a population estimate of 3,600 black bear on 9,300 square miles of range in the Adirondacks assuming all bear are uniformly distributed over the entire bear range including the 169.5 square miles in the Wilderness (John O'Pezio, personal communication). The reported harvest of black

bear for the years 1980 through 2000 in the Towns of Wells, Indian Lake and Johnsburg are shown in appendix 4.

There is no indication that the bear population is controlled by legal hunting in the Adirondacks. The bear harvest does not adequately reflect population levels in the SPW since, 1) few, if any, hunters pursue black bear beyond one mile from an accessible road or jeep trail, and 2) harvest is usually low when bears begin to hibernate in November. The potential exists for further liberalized hunting seasons and expanded recreational opportunity in the SPW without detrimental effects on the bear population.

Bear are occasionally encountered by hikers and/or hunters traveling into the SPW. No doubt each occasion offers an aesthetic experience for the observers. Too much human contact causes bears to lose their fear of humans. Once having lost this fear, bears frequently become a nuisance by raiding campers' supplies.

Furbearers

Beaver, mink, weasel, opossum, muskrat, fisher, marten, raccoon, skunk, coyote, red and gray foxes, otter and bobcat may be trapped. All but beaver, mink, muskrat, fisher, marten and otter may be hunted during appropriate seasons. Trappers are required to place a tag on the pelt of beaver, fisher, marten, bobcat, coyote, and otter. This allows the New York State Department of Environmental Conservation to obtain an estimate of harvest in each town. Harvest levels or other population indices for other furbearers are not collected by the Department. Harvests of the five furbearers that require pelt tagging in the Towns of Wells, Indian Lake and Johnsburg are shown in appendix 4.

The Bureau of Wildlife estimates the beaver population in the SPW to be 38 active colonies containing an estimated 152 to 228 beaver (4 to 6 beaver per colony). This estimation is based on: (1) fall aerial surveys of active beaver colonies in the eastern half of the SPW, (2) identification of potential beaver sites using the procedure of Dickenson (1971) throughout the SPW, (3) recognition that approximately 20 percent of the potential sites are occupied in similar areas and (4) application of calculations to the 170 square miles in the SPW. The estimate of total beaver colonies represents a minimum population which fluctuates annually depending on changing habitat quality and harvest pressure.

Amphibians and Reptiles

Reptile and amphibian species recorded during the New York State Amphibian and Reptile Atlas Project in 11 atlas blocks located within or partially within the SPW (USGS Topographic Quadrangles: Bad Luck Mountain, Baker's Mills, Bullhead Mountain, Griffin, Indian Lake, Kunjamuk Creek, North River, Page Mountain, South Pond Mountain, Wells) are presented below. This data represents species observed during the ten-year span of the project (1990-99).

	Common Name	Scientific Name
Toads and Frogs:	Eastern American Toad	*Bufo americanus*
	Gray Treefrog	*Hyla versicolor*
	Northern Spring Peeper	*Pseudacris crucifer*

	Bullfrog	*Rana catesbeiana*
	Green Frog	*Rana clamitans*
	Pickerel Frog	*Rana palustris*
	Northern Leopard Frog	*Rana pipiens*
	Mink Frog	*Rana septentrionalis*
	Wood Frog	*Rana sylvatica*
Salamanders:	Spotted Salamander	*Ambystoma maculatum*
	Northern Dusky Salamander	*Desmognathus fuscus*
	Allegheny Dusky Salamander	*Desmognathus ochrophaeus*
	Northern two-lined Salamander	*Eurycea bislineata*
	Northern Spring Salamander	*Gyrinophilus porphyriticus*
	Red-spotted Newt	*Notophthalmus viridescens*
	Northern Redback Salamander	*Plethodon cinereus*
Snakes:	Common Garter Snake	*Thamnophis sirtalis*
	Northern Red-bellied snake	*Storeria occipitomaculata*
	Northern Brown Snake	*Storeria decayi*
	Eastern Milk Snake	*Lampropeltis triangulum*
	Northern Ringneck Snake	*Diadophus punctatus*
Turtles:	Common Snapping Turtle	*Chelydra serpentina*
	Painted Turtle	*Chrysemys picta*
	Wood Turtle	*Glyptemys insculpta*

The extensive aquatic habitats found within the boundaries of the SPW provide ideal habitat for a number of reptiles and amphibians, many of which have very interesting life histories (Appendix 5). Many species require continuous moisture during a portion of or during their entire life cycle; most amphibians require an aquatic environment for egg deposition, egg development, and larval growth and metamorphosis.

The turtles and most of the snakes listed above select upland habitat for nesting and birthing. The Common Garter Snake, Northern Redbelly snake, and Northern Brown Snake give birth to live young in areas where the young are protected with ample cover. The egg-laying Eastern Milk Snake and Ring-necked Snake select sites under cover that are dry enough for successful egg development, yet moist enough to prevent dessication.

Unique, Endangered and Extirpated Species

Federally endangered and threatened species have their status determined by the U.S. Department of Interior. Species listed as federally threatened or endangered are defined in the Endangered Species Act of 1973 and its amendments. Additionally, New York State law protects all species designated by the federal government as endangered or threatened. New York State has classified protected species into three categories, endangered, threatened, and species of special concern (*6 NYCRR 182*).

Bald eagle (*Haliaeetus leucocephalus*)

The bald eagle is currently listed as a threatened species by the federal government and New York State. Buckhorn Mountain is believed to have been a center of eagle activity prior to 1970, although no nest sites had been verified. DEC has successfully hacked bald eagles in the Adirondack Park.

Bald eagles breed in forested and open areas that are usually near large bodies of water with an abundance of fish. Bald eagles construct their nests in large living trees, approximately 50 to 60 feet off the ground and occasionally on cliffs. Tree species used for nesting is not as important as its structural characteristics (e.g., size, shape) and distance to other nesting eagles. Nesting sites with an unobstructed view are preferred and access points to and from the nest (pilot trees) and perch trees are important components of bald eagle habitat. Bald eagles are sensitive to human disturbance.

Golden Eagle (*Aquila chrysaetos*)

The golden eagle is a species once found in the Adirondacks that is listed as endangered and extirpated by New York State. Although the Golden Eagle has never been a common raptor in New York State, historically the species has bred in the Hudson Highlands, Catskills, and Adirondacks. However, the last successful nest in New York State was recorded in 1970 (Andrle and Carroll, 1988).

The Golden Eagle favors undisturbed open areas and edge habitat with abundant small game prey. Although cliff ledges with a protective overhang such as a tree or rock are the preferred nesting habitat for Golden Eagles, the species also has been known to nest in white pines in New York State. Historically, Golden Eagles have nested at elevations between 1,500 and 2,600 ft. in the state. According to surveys conducted by the New York Habitat Inventory Unit, open habitat suitable for Golden Eagles has decreased at all but one historical site (Andryle and Carroll, 1988; Levine, 1998).

Indiana bat (*Myotis sodalis*)

The Indiana bat is an endangered species listed by the federal government (USFWS 1973) that may reside in the SPW. The Indiana bat may occur in the SPW, but its existence has not been confirmed. The summer dispersal and movement of the Indiana bat is currently being studied. The New York State Department of Environmental Conservation is searching existing caves throughout northern New York to locate winter hibernacula of the bat. The existence of a bat hibernaculum within the SPW has been noted in the Natural Heritage data base. The Indiana bat has been found to winter in three caves along the periphery of the Adirondacks.

During spring, Indiana bats disperse from their winter hibernacula, some traveling hundreds of miles. Females congregate in nursery colonies, only a handful of which have ever been discovered. Nursery colonies have been located along the banks of streams or lakes in forested habitat, under the loose bark of dead trees, and contained from 50-100 females. In August or early September, Indiana bats congregate at the entrance of selected caves or mines where mating occurs. Indiana bats spend the winter months in secluded caves or mines which average 37 to 43 degrees F. Selection of hibernacula by Indiana bats is not clearly understood and many apparently suitable sites are not occupied. Where this species is found, however, it can be extremely abundant, congregating in densities of more than 300/square foot. Year after year,

bats often return to exactly the same areas within individual caves or mines. Hibernation can begin as early as September and extend nearly to June.

Peregrine falcon (*Falco peregrinus*)

The Peregrine Falcon is listed as endangered in New York State. After extirpation of Peregrines in the 1960s, in 1974 New York initiated a program to reintroduce the falcons in the state. Peregrines were successfully hacked in the Adirondack Park with the release of the first birds in 1981. It is possible that Peregrines presently use the SPW or surrounding areas for nesting due to the following: (1) suitable nesting habitat exists within and surrounding the SPW, (2) Peregrines have previously been observed in the area (3) at least two historic sites are located in the nearby vicinity, and (4) young Peregrines hatched from Adirondack eyries are returning to the Adirondacks and consequently selecting new areas for nesting.

Three basic habitat requirements are necessary for nesting Peregrine Falcons including open country in which to hunt, sufficient food resources (i.e., other avian species), and steep, rocky cliff faces for nesting (Ratcliffe, 1993). The falcons typically nest 50 to 200 feet off the ground and often near a river, stream, or other water body. Nesting sites for Peregrines usually include a partially-vegetated ledge (with both herbaceous and woody species) that is large enough for at least several young to move about during the pre-fledging period. The nest is a well-rounded scrape that is sometimes lined with grass. Ideally, the eyrie ledge also is sheltered by an overhang that protects the chicks from inclement weather. Occasionally, Peregrines may nest in old Common Raven nests. Suitable perch sites (e.g., snags, live trees, ledges) are located on the cliff face near the eyrie, on more distant sections of the cliff, and on the cliff rim.

Osprey (*Pandion haliates*)

The American Osprey is listed by New York State as a species of special concern. Interest in the osprey had resulted in numerous sightings throughout northern New York, including one at Siamese Ponds in 1980. A pair of osprey nested on Kings Flow as recently as 1970 but have not returned.

Osprey breed near large bodies of water, including rivers and lakes, that support abundant fish populations. Osprey typically construct their nest in tall dead tress, but also use rocky ledges, sand dunes, artificial platforms, and utility pole crossarms. Nests are placed in locations that are taller than adjacent areas, which provide vantage points.

Red-shouldered hawk (*Buteo lineatus*)

The red-shouldered hawk is listed by New York State as species of special concern (*6 NYCRR 132*) that is believed to exist in the SPW. Red-shouldered hawks breed in moist hardwood, forested wetlands, bottomlands and the wooded margins of wetlands, often close to cultivated fields. Red-shouldered hawks are reported as rare in mountainous areas. Special habitat requirements include cool, moist, lowland forests with tall trees for nesting. Red-shouldered hawks forage in areas used as nesting habitat as well as drier woodland clearings and fields.

Jefferson salamander (*Ambystoma jeffersonianum*)

The Jefferson salamander is listed by New York State as species of special concern (*6 NYCRR 132*) that is believed to exist in the SPW. Jefferson salamanders are considered vernal pool obligates. The salamanders require pools that remain deep long enough to complete

metamorphosis. Typical breeding pools are ringed with scattered shrub vegetation in upland deciduous forest. Although vernal pools are a limiting habitat for this species annually, adults spend a very short period actually using the pools (approximately 1-2 weeks during the breeding season). Consequently, the surrounding forested habitat used during the remainder of the year (including hibernation) is of utmost importance.

Wood Turtle (*Glyptemys insculpta*)

The wood turtle is a semiaquatic turtle found in streams with sandy-pebbly substrates that are deep enough so that they do not freeze during hibernation, are well-oxygenated, and have good water quality. Streams used by wood turtles may flow through upland deciduous or coniferous forest, upland successional fields, forested wetlands, low compact shrub swamps, bushy shrub swamps, and emergent wetlands. Ideal habitat includes dense alder swamp and forested wetland habitat bordering the streams where the turtles can bask in filtered sunlight, yet have adequate cover from predators (Quinn and Tate, 1991; Kaufmann, 1992; Tuttle and Carroll, 1997; Compton et al., 2001). Turtles will often seek out open areas in forested habitat for basking. Wood turtles will use less desirable habitat for foraging on food items such as fungi and sparse herbaceous vegetation. Some researchers consider wood turtles an edge species, but this is more a function of seeking out suitable foraging or basking areas. Primary habitat also includes suitable nesting habitat in sandy open areas that is just moist enough for successful egg development. Wood turtles select both slopes and level areas for nest sites. Historically (and presently where suitable habitat exists) wood turtles nested on naturally-occurring sand banks along streams and rivers. Now many nests are excavated in man-made sandpits (Tuttle, 1996).

Wood turtles are listed as a Species of Special Concern in New York State where they also are protected as a small game species (with no open season). Populations of wood turtles are particularly vulnerable due to their low reproductive potential (including their late age of sexual maturity [usually 15 yrs] and high egg and hatchling mortality). Range-wide, the species is declining due to habitat degradation and both commercial and incidental collecting for the pet trade, a practice that has extirpated entire populations (Garber and Burger, 1995).

Common loon (*Gavia immer*)

The common loon is listed by New York State as species of special concern (*6 NYCRR 132*) that is known to exist in the SPW. Common loons use small and large freshwater lakes in open and densely forested areas for breeding and nest on lakes as small as 2 acres. Special habitat requirements include bodies of water with stable water levels with little or no human disturbance. Loons use islets for nesting and shallow coves for rearing their young. Nests are constructed on the ground at the water's edge on sand, rock, or other firm substrates. Loons prefer small islands for nesting (to avoid predators) but will also nest along protected bays and small peninsulas of the shoreline.

Cooper's hawk (*Accipiter cooperii*)

Cooper's hawk is listed by New York State as species of special concern (*6 NYCRR 132*) that is believed to exist in the SPW. Cooper's hawk uses a variety of habitat types, from extensive deciduous or mixed forests to scattered woodlots interspersed with open fields. Floodplain forests and wooded wetlands are also used by Cooper's hawk. Cooper's hawk construct nests typically at a height of 35 to 45 feet in both conifer (often white pine) and deciduous trees (often American beech). Nests are commonly constructed on a horizontal branch or in a crotch near the trunk. Cooper's hawk has been known to use old crow nests as well. Foraging areas are usually

located away from the nest in forested areas or open areas adjacent to forest.

Moose (*Alces alces*)

Moose sightings have become common throughout the Adirondack Park in the past few years. Moose have not yet been confirmed in the SPW, but their presence is likely, given the increasing frequency of sightings, sign and favorable habitat within the unit. In the northeastern United States, moose use seasonal habitats within boreal and mixed coniferous/deciduous forests. The southern distribution of moose is limited by summer temperatures that make the regulation of body temperature difficult. Moose select habitat primarily for the most abundant and highest quality forage (Peek 1997). Disturbances such as wind, fire, logging, tree diseases, and insects create openings in the forest that result in regeneration of important hardwood browse species such as white birch, aspen, red maple, and red oak. Typical patterns in moose habitat selection during the summer include the use of open upland and aquatic areas in early summer followed by the use of more closed canopy areas (such as upland stands of mature aspen and white birch) that provide higher quality forage in late summer and early autumn. After the fall rut and into winter, moose intensively use open areas again where the highest biomass of woody browse exists (i.e., dormant shrubs). In late winter when browse quantity and quality are lowest, moose will use closed canopy areas that represent the best cover available within the range (e.g., closed canopy conifers in boreal forest). From late spring through fall, moose commonly are associated with aquatic habitats such as lakes, ponds, and streams. However, their use of aquatic habitats can vary geographically over their range. It is believed that moose use aquatic habitats primarily to forage on highly palatable plants, however, moose may also use these areas for relief from insects and high temperatures.

Bicknell's Thrush (*Catharus bicknelli)*

Throughout the range of Bicknell's Thrush, montane forest dominated by stunted balsam fir and red spruce is the primary habitat. Bicknell's Thrush utilizes fir waves and natural disturbances as well as the dense regenerated ecotones along the edges of ski slopes. The breeding habitat of Bicknell's Thrush is located in the Adirondacks at elevations greater than 2800 ft. (11 mountains in the unit have areas that are above this elevation, totaling roughly 4,600 acres. Individually, these areas range from less than 15 acres to over 800 acres.) The species is most common on the highest ridges of the Adirondacks, preferring young or stunted dense stands of balsam fir up to 9 ft. in height. Here they lay their eggs above the ground in the dense conifer thickets.

The eastern timber wolf, eastern cougar, lynx, and moose are species that were extirpated from the Adirondacks. During the mid to late 1980s an attempt was made by scientists at the State University of New York College Environmental Science and Forestry to re-introduce the lynx to the Adirondack Park. The re-introduction was not successful.

An official list of endangered, threatened and species of special concern is available through the DEC website at www.dec.state.ny.us.

3. Fisheries Inventory

Aquatic communities in the Adirondacks are a result of geological and human influences. Prior to human influences relatively simple fish communities were common, particularly in the SPW. Human-caused changes in habitat and introduction of fishes have altered those natural communities. Nonnative fishes, especially golden shiner, now are widespread.

Two native fishes, brown bullhead and creek chub, are more widely distributed in the SPW than they were historically. Other native species common in the unit are pumpkinseed, blacknose dace, white sucker and northern redbelly dace. Redbreast sunfish apparently have declined in abundance in the SPW.

Lake trout were reported or collected from three waters in the SPW during the Biological Survey of the Upper Hudson Watershed, conducted in 1932. Today lake trout occur in Upper and Lower Siamese Ponds. It is not known if lake trout were native to the unit.

Brook trout were well represented in the historic fish community of the unit, but their exact distribution remains obscure because the area was heavily impacted by the early introductions of nonnative and native-but-widely introduced species. Today brook trout are maintained principally through routine stocking and by removal of introduced fishes through reclamation. Brook trout populations remain suppressed because of competition with nonnative and native-but-widely-introduced species. Self-sustaining brook trout populations are rare in the unit.

Twenty-four ponds in the SPW are currently managed for brook trout. The SPW has a high number of brook trout ponds relative to other nearby units such as the Black Mountain Section of the Lake George Wild Forest (8 in number), Blue Mt. Wild Forest (7 in number), Hudson Gorge Primitive Area (8 in number), Pigeon Lake Wilderness (18 in number), Blue Mountain Wild Forest (8 in number) and Blue Ridge Wilderness (7 in number). The continued presence of brook trout in the unit is largely attributable to stocking and reclamation by DEC. Sixteen (67 percent) of the 24 ponds in the unit managed for brook trout are maintained by stocking.

Geological History Related to Fisheries

The Fishes of the Adirondack Park, a DEC publication (August 1980) by Dr. Carl George of Union College, provides a summary of geological events which influenced the colonization of the Adirondack ecological zone by fishes. A limited number of cold tolerant, vagile, lacustrine species closely followed the retreat of the glacier. Such species presumably had access to most Adirondack waters. About 13,000 B.P. (before present), glacial Lake Albany with a surface elevation of 350' a.s.l. (average sea level), provided a colonizing route for Atlantean and eastern boreal species to the southern Adirondacks. Barriers above that elevation would have excluded those species from interior portions of the Adirondacks, including the SPW.

By about 12,300 BP, the Ontario lobe of the glacier had retreated sufficiently to allow species associated with the Mississippi drainage access to fringes of the Adirondacks via the Mohawk Valley and the St. Lawrence drainage including Lake Champlain.

The sequence of colonization routes to surrounding areas, combined with Adirondack topography, resulted in highly variable fish communities within the Adirondacks. The number of species present in lowland ponds would have had the most diverse communities while the number of species present in upland ponds would have decreased progressing toward headwater, higher elevation sections. Chance and variability in habitat would have complicated this trend. Consequently, a diversity of fish communities, from no fish to monocultures to numerous species, would have occurred in various Adirondack waters.

Topography Related to Fisheries

Watershed morphometry probably severely limited the diversity of fishes in the SPW. The SPW includes first and second order streams, and fish diversity is normally low in such headwater portions of watersheds (Hynes 1972). Topography would have made that lack of diversity particularly prominent in the SPW. One hundred percent of the SPW either drains via the Sacandaga River to the Hudson River on the south, east and west, or to the Hudson River itself on the north. On the main stem of the Hudson, the Hadley-Luzerne Falls and possibly Spier Falls were barriers at elevations above historic Lake Albany. As Lake Albany drained, two additional barriers, Glens Falls and Bakers Falls, formed. An additional 242 feet of elevation from above the Hadley-Luzerne Falls to Schroon Lake, and the resulting lotic habitat, would have acted as a strong filter, if not a barrier, to many species.

Furthermore, the individual streams draining the SPW have extended stretches of extremely high gradient which include additional barriers to upstream movement of fishes. A gradient of 180 feet per mile is found on the East Branch of the Sacandaga River, 1 mile downstream of Griffin. A number of small waterfalls exist in this reach of the Sacandaga which are probably barriers to the upstream movement of fish. A gradient of 160 feet per mile is found on the West Branch of the Sacandaga River 1 mile downstream of Christine Falls. Christine Falls is a 10-foot-high upstream barrier impassable by fish.

Its headwater nature and the extreme gradients of streams draining the area would have caused low fish species diversity in the SPW relative to much of the Adirondacks. Furthermore, the Adirondacks in general had low fish species diversity relative to surrounding lowland regions. Consequently, the SPW historically supported particularly low species diversity on a region-wide basis. Brook trout have the extreme agility necessary to have naturally colonized the SPW waters and, therefore, were probably particularly abundant in the unit. Also historic brook trout monocultures were most likely to have occurred in such headwater areas.

Human Influences Related to Fisheries

Approximately 300 years ago the influence of human cultures from the Old World initiated a period of rapid manipulation of the natural environment. Slightly more than 150 years ago, canal construction opened new travel routes for fishes into peripheral Adirondack areas. Commercial lumbering precipitated substantial impacts to natural ecosystems. Railroads and eventually roads were developed to support the tanning, lumbering and mining industries (George 1980). Exploitation of pristine fisheries combined with environmental degradation resulted in the decline of fish populations and stimulated early management efforts consisting primarily of stocking.

Early Stocking of Fish

In the pioneering days of fishery management, volunteers who applied for fish from the state and federal hatcheries would drive to the hatchery or to train depots with horse and buggy to pick up their allocated cans of fish for stocking. Later on, hatchery employees would employ wagons and teams to haul fish to individual waters or to train depots for more distant delivery (Pieffer 1979). In the 1891, the state purchased its own specially designed wooden railroad car for fish stocking appropriately named "The Adirondack". Initially, the railroad companies furnished free transportation as a public service (Lindsey 1958).

Despite the difficulty of moving live fish, "enthusiastic citizens secured and distributed all sorts of fish for New York's inland waters" (Fifteenth Annual Report of the Forest, Fish and Game Commission 1909). Brook trout, brown trout, landlocked salmon, rainbow trout, lake trout, lake whitefish, round whitefish, cisco, smelt, walleye, yellow perch, crappie, largemouth bass, smallmouth bass and rock bass were among the species distributed by the state hatcheries. (Fifteenth Annual Report of the Forest, Fish and Game Commission 1909).

Although millions of fish were stocked in waters selected by volunteers, prior to the 1930's stocking was not done scientifically. Few waters were stocked every year and many waters were stocked only occasionally, because volunteers were not available in all areas of the Adirondacks. Data collected during the first biological surveys established stocking policies that resulted in planned annual stocking.

Stocking of fish from the New York Forest, Fish and Game Commission (now the DEC) was frequently not carried out as planned. The Fifteenth Annual Report of the Forest, Fish and Game Commission, in the year 1909 cited that, "The messenger (railroad) is obliged to take the fish to the next applicant on his route if applicants for fish failed to meet messengers. Often the applicants were not on hand to meet the messenger because certain persons who occupy summer homes in the Adirondacks or some other resorts apply for fish which have to be sent after those persons have returned to their winter homes." Consequently, fish were sent to the next applicant on the route, who stocked the fish in nearby waters. Fishes may have become established in waters where stocking was not intended by the Forest, Fish and Game Commission because of difficulties in distribution and because unclaimed fish were disposed of along the route.

The New York Forest, Fish and Game Commission, feared that many of our Adirondack lakes had received bass and other fish from the United States Commission of Fisheries (obtained by volunteers via application) "which never should have been placed in trout waters." In its report to the legislature in the year 1909, the Forest, Fish and Game Commission expressed concern about stocking nonnative fishes via the federal stocking program and cited New York law "prohibiting the placing of anything but trout in Adirondack waters. We most certainly desire to continue to produce from the Federal hatcheries every year such allotments as are necessary to keep up the stock in our inland waters, but we respectively submit that this allotment should only be made with the advice of this Commission based on the scientific knowledge of the State Fish Culturist." (Fifteenth Annual Report of the Forest, Fish and Game Commission 1909).

The importance of the loss of trout ponds caused by the widespread establishment of nonnative species was expressed again in the 1932 Biological Survey Report of the Upper Hudson Watershed. "Many Adirondack streams which are still well protected by forested watersheds have suffered severe damage in respect to trout fishing, from unwise introduction of pickerel, bass and perch. This is even more true of lakes and ponds, where the introduction of any of these fishes has often been followed by extermination of the trout fishing."

To help compensate for the loss of trout waters caused largely by the establishment of nonnative species, the Forest, Fish and Game Commission established small local fish rearing stations in the Adirondacks in the late 1800's. These facilities produced trout fry for stocking in local waters, but some did not operate for long due to their inability to rear fish. The first trout hatchery to be located close to the Adirondacks was a private operation conducted by General Martin Schenck in the Town of Palatine, Montgomery County in the year 1873. The first state facility was the Fulton Chain Hatchery on Fourth Lake around 1895. A marginal water supply plagued this facility for years and it was abandoned in 1933. (Pfeiffer 1979).

"The Sacandaga Hatchery located near Newton's Corners in Hamilton County was one of the pioneers of the State force. The region around the hatchery certainly is in great need of all the fry that a large hatchery could turn out, as it is in a section far back from a railroad where it is almost death to fish to transport them from the railroad stations." (Report of the Commissioners of Fisheries, Game and Forests 1895). The Sacandaga Hatchery was abandoned in 1904 because it was impossible to raise fingerlings or yearlings at this hatchery as the water supply was so very uncertain during the summer months and because the facility was subject to periodic flooding. "In this respect the location of the plant was most unfortunate, but the section of country accessible from this hatchery abounds in numerous lakes and ponds, some of them the very finest for trout in all the Adirondacks, and as the Forest Preserve Board has recently purchased tracts of land and waters in the Adirondacks." (Report of the Commissioners of Fisheries, Game and Forests 1897).

The wooden "Adirondack" railroad car was replaced by a steel car in 1928. The railroad car's primitive fish cans gave way to oxygen tanks around 1938. Trucks came into fashion for fish delivery around 1921, and the railroad fish car was finally abandoned following World War II. Some of the trucks were mounted with steel oxygen tanks by 1933 (Pieffer 1979).

As early as 1932 a few remote Adirondack Ponds were stocked by private planes via contracts with bush pilots. The 1932 Biological Survey of the Upper Hudson Watershed Report mentioned that "Transportation of trout by airplanes has been done very successfully in the relatively few times it has been tried. Both the major difficulties; the time consumed in transportation and the heavy labor incident upon it [stocking], may be avoided by the use of the airplane." A Department amphibious fixed wing plane assisted in this program by 1947 and was later replaced by helicopter. The importance of aerial stocking, cannot be overestimated since it has greatly expanded DEC's fish planting capabilities (Pieffer 1979).

Impacts of Fish Introductions

"... the one outstanding reason why so many of the lakes, ponds and streams of this and other Adirondack areas are now unfit for the native species is that small-mouthed bass, perch, northern

pike and other species of non-native warm water fishes have been introduced" (1932 Biological Survey of the Upper Hudson Watershed).

The decline in brook trout resulting from the introduction of other fish species is a result of both predation and competition for food. Brook trout feed primarily on invertebrates. Many other fish species, including white sucker, longnose sucker, redbreast sunfish, pumpkinseed, brown bullhead, yellow perch, and the cyprinids (shiners, dace, etc.) also feed primarily on invertebrates (Scott and Crossman 1973). In low fertility waters such as Adirondack ponds, competition for such forage can be intense.

In addition to competing with brook trout for food, many fishes prey directly on brook trout. Northern pike, largemouth bass, smallmouth bass, and rock bass are highly piscivorus. Species which may feed on eggs and/or fry include yellow perch, brown bullhead, pumpkinseed, creek chub, common shiner, white sucker and longnose sucker (Scott and Crossman 1973). The relative importance of competition versus predation in the decline of brook trout is not known for individual waters, but the result is the same regardless of the mechanism.

Competition and predation by introduced species has greatly reduced the abundance of brook trout sustained by natural reproduction. Only about 40 (10%) of the traditional brook trout ponds in public ownership in the Adirondack Park now support viable, self-sustaining brook trout populations, and they are vulnerable to reproductive failure if other fish species become established. Brook trout in only two of the SPW ponds (Peaked Mtn. Pond and Hour Pond) are presently known to be sustained in adequate numbers by natural reproduction. Hayes Flow, Long Pond, Prier Pond and Thirteenth Lake are not stocked, but their brook trout populations are sparse.

Human introductions of nonnative and native-but-widely-introduced (NBWI) fishes have nearly eliminated natural brook trout monocultures in the Adirondacks. The presence of brook trout monocultures is well known, and the survival of even a few such unique communities through the massive environmental disturbances and species introductions of the 19 th and 20 th centuries is quite remarkable. The SPW now contains no known naturally occurring brook trout monoculture. South Pond was reclaimed[1] in 1970 and restored as a monoculture maintained by stocking. Brown Pond is believed to have been reclaimed in 1970 during the extensive reclamation of Thirteenth Lake and its tributary waters. McComb Pond was probably a historic monoculture, but it too is presently maintained by stocking, and the most recent survey of McComb Pond shows that brown bullhead also are now present.

[1] **Reclamation** - A management technique involving the application of a fish toxicant called rotenone to eliminate nonnative and/or competing fishes. Upon detoxification, these waters will be restocked with fish appropriate to meet the management objectives of this unit.

Fish Community Changes

A variety of nonnative species were distributed into the Adirondack uplands via stocking efforts described by George (1980) as "nearly maniacal". He notes that many species were " ... almost endlessly dumped upon the Adirondack upland." Nonnative species were introduced and the ranges of native species, which previously had limited distributions, were extended. The result has been a homogenization of fish communities. Certain native species, notably brook trout and round whitefish, have declined due to the introduction of other fishes. Other natives, brown bullhead and creek chubs, for example, are presently much more widespread than in the past, having been spread to many waters where previously absent. Consequently, fish populations in the majority of waters in today's Adirondack Wilderness areas have been substantially altered by the activities of mankind. Of the 1,123 Adirondack ecological zone waters surveyed by the Adirondack Lakes Survey Corporation (ALSC) during the years 1984-1987, 65% contained nonnative species.

Detailed documentation of the SPW's historic fish communities is not available. Extensive fishery survey data was first collected in the 1930's, decades after the massive stockings and introductions of the late 1800's. Reviewing work by Mathers from the 1880's and others, George (1980) has summarized what is known. Appendix 7 presents information on SPW fish species known to be native, native-but-widely-introduced, and nonnative. It should be noted that the native classification does not mean those species were found in every water nor even in a majority of waters. For example, of 1,123 waters surveyed by the Adirondack Lakes Survey Corporation in the 1980's which contained fish, white suckers and northern redbelly dace were found respectively in 51 and 19 percent of the lakes. The other species listed in Appendix 7 as native are less widely distributed. Such distributions, after a century of introductions, demonstrates that "native" does not necessarily imply a historically ubiquitous distribution. Barriers, high stream gradients, low stream fertilities, and rigorous climatic conditions following retreat of the glacier resulted in low species diversity for fishes in most Adirondack waters. Low diversity allowed the brook trout to occur in large areas of the Adirondack upland.

Widespread fish introductions have occurred in the SPW. The 1932 Biological Survey of the Upper Hudson Watershed, the first comprehensive fisheries survey of the SPW, established the presence of nonnative fishes throughout most of the unit. By 1932 most of the lakes and ponds in SPW contained at least one nonnative species. During the late 19th and early 20th century, fishes such as golden shiner and yellow perch were introduced in the unit. Later surveys show introductions are continuing even though reclamations reduced the occurrence of a few species. (See Appendix 7).

For purposes of this plan the early period is referred to as the era from 1932 through 1957 and the latter period as the era from 1957-1994. The ranges of two native fishes (brown bullhead and creek chub) continued to increase between the early and later periods (Table 3). Brown bullhead may have been introduced by bullhead fishermen and creek chub via the bait pail. Native species often were introduced concurrently with the nonnatives. Native-but-widely-introduced (NBWI) fishes were stocked along with the native fishes. Therefore, it is difficult to determine if NBWI fishes are actually native to a pond or introduced. NBWI introductions are just as unnatural as nonnative introductions.

Brook trout and lake trout were particularly successful at colonizing the Adirondack region and thrived in the relative absence of competing and predacious fishes. George (1980) states: "Under primeval conditions, the brook trout was nearly ubiquitous in the Adirondacks. Its agility, great range in size and facility in rapidly flowing water allowed it to spread widely, perhaps even concurrently with the demise of the glaciers, thus explaining its presence in unstocked waters above currently impassable waterfalls." Brook trout were reported to be native to nearly all Adirondack waters according to Calvins's Report to the Commissioners of Fisheries, Game and Forests, 1902-1903. The 1932 Biological Survey of the Upper Hudson Watershed Report reiterated that "Above the 1000 foot contour line most Adirondack waters are naturally suited and were originally inhabited by brook trout."

Many Adirondack waters were originally inhabited by brook trout or brook trout in combination with only one or two other species as indicated by the following passage, also from the 1932 Biological Survey: "In the survey of the Upper Hudson drainage, 51 trout ponds were studied where the trout is found in company with only a few other species" (page 37). Natural fish barriers prevented the establishment of NBWI fishes found downstream. Today, natural fish barriers are considered to be an indicator that a pond historically contained a very simple fish community. In these circumstances brook trout would have been capable of maintaining themselves by natural spawning.

Historic Trout Waters

The discussion of private waters on page 134 in the 1932 Biological Survey of the Upper Hudson Watershed describes widespread stocking of natural trout waters to offset the effect of angler harvest. The Forest, Fish and Game Commission and, in it's early days, the Conservation Department (now DEC), often stocked brook trout to augment existing populations documented by netting or angler reports. "Waters that already contain trout that do well in them can be planted, as the fact that trout thrive in them is prima facie evidence that the waters are suitable for the fish" (Report of the Commissioners of Fisheries, Game and Forests 1896). If this were the case in a particular pond (that is, brook trout were stocked because they were already present), it means that the pond was an historic brook trout pond formerly maintained by natural spawning.

Fry stocking by the Forest, Fish and Game Commission was carried forward into the 1930's when most ponds deemed suitable for stocking were given formal, annual stocking policies with larger fingerlings and yearling-sized fish. This included many of the historic trout waters, but waters were not stocked if wild trout were abundant (natural spawning adequate to maintain a fishery without stocking - NSA). Apparently, stocking was recommended if a pond contained some wild fish yet less than enough to consider it NSA. For example, Cheney Pond and Henderson Lake are listed in Table 2, Appendix III in the 1932 Biological Survey of the Upper Hudson Watershed as brook trout "fairly common", but a trout stocking policy was recommended. The Biological Survey declined to stock brook trout in waters severely impacted by species introductions and recommended managing them for introduced fishes such as bass, northern pike and yellow perch. Early brook trout stocking in Adirondack ponds is a strong indication of their historic presence, yet many historic trout waters already had been lost to competing fishes by the 1930's.

Many of the brook trout populations in the unit are marginal in nature and face competition from nonnatives and native-but-widely introduced species. The average gill net catch-per-lift (all ages) in SPW brook trout ponds is low at 2.8 brook trout-per-lift compared to 6.0 age II and older brook trout-per-lift found on average in good (upper 20 percent) brook trout ponds surveyed by the Adirondack Lake Survey Corporation and open to public fishing in Region 5. For management purposes we suggest that a good catch-per-lift of brook trout older than age II^{+} in experimental Swedish gill net is around 5 to 6, while an exceptional catch-per-lift exceeds 9 to 10 brook trout. The low average gill net catch-per-lift in the unit is even more troubling than it seems because it includes yearling brook trout which are not represented in the comparative data.

Early handwritten fish stocking logs from each of the state's fish hatcheries archived at the Rome Hatchery were reviewed by hatchery staff (Cliff Talbot, 1997). In 1895 there were eleven state fish hatcheries. The number of state hatcheries grew to 29 in 1933 with the onset of the Civilian Conservation Corp (CCC) Camps. The number had decreased to 21 by 1940 when the CCC Camps were being closed. These records provide specific examples of early stocking in the unit:

Year	**Waters**					
1895	Thirteenth Lake [1]					
1897	Siamese Pds [2]					
1899	Siamese Pds [2]					
1900	Crotched P.	John Mack P.				
1904	Crotched P. [3]	John Mack P. [3]				
1906	South P.	Browns P.	Peaked Mt. P.	Hour P.	Second P.	Botheratio n P.
1909	Grassy P.	Long P.	Clear P.	South P.		
1910	Brown P.	Botheration P.	Puffer P.			
1914	South P.	John Mack P.	Brown P.			
1916	Round P.	Kings Flow				
1918	Buckhorn P.					
1920	Twin Ponds	Buckhorn P.				
1921	Little Pine	Buckhorn P.	Kings Flow	Round P.		

Year	Waters					
1922	Long P. [4] Owl P. [4] Siamese Pds [4]					
1926	Kings Flow					
1927	Buckhorn Ponds					
1928	Buckhorn P.					
1930	Buckhorn P.	Rock P	Puffer P.	Clear P.		

[1] Brook trout and frostfish (Sacandaga Hatchery)
[2] Lake trout
[3] Whitefish
[4] Brook trout (1922-1931, year unknown)

Because of a lack of survey data it is difficult to determine precisely the number of brook trout ponds historically present in the unit; however, a combination of fish barrier dam information and early fisheries reports and modern survey data provide insight into the relative abundance of historic brook trout ponds. Early guidebooks can also give us clues. A few SPW waters are specifically mentioned in Wallace's Guide to the Adirondacks (1894) as being good trout waters. These include Long Pond, Rock Pond and Round Pond. Moreover, a number of waters; Hour Pond, Botheration Pond, Puffer Pond, John Mack Pond and Crotchet Pond are described with Thirteenth Pond as being a good sporting-ground. As the guide's focus is on trout fishing and deer hunting, we can infer that trout were plentiful. Later on, the same area is described as follows: "These lakelets, though not noted for fine scenery, offer excellent sport...

John Mack Pond was stocked with brook trout only twice before the first fisheries survey in 1932. Brook trout, white sucker, creek chub, brown bullhead, redbreast sunfish and pumpkinseed were collected in the 1932 survey... all native and NBWI species. Brook trout were probably stocked because they were already present; that is, ponds known to contain brook trout were often stocked with supplemental fish. Species other than brook trout found in the 1932 Biological Survey and those present at the time of the first stocking in 1904 were probably very early introductions because a natural barrier on the outlet of the pond prevents movement of fishes into the pond from downstream. Today we know that brook trout natural reproduction sufficient to maintain a popular fishery does not occur in ponds with a number of competing fishes. It is believed that brook trout reproduction would not have been sufficient to maintain a well known brook trout fishery if there were a significant number of competing species present. It is believed that the number of species present in John Mack Pond at the time of the first stocking in 1904 was far less than the number of species collected in 1932. Brook trout would not have been present in 1904 unless they were maintained by natural reproduction. A popular fishery for brook trout that was maintained by natural spawning is unlikely in the presence of five additional species other than brook trout.

John Pond had only brook trout, white sucker and brown bullhead in 1932--all native species. There is no record of stocking before the 1932 survey.

Hour Pond was stocked with brook trout fry in 1906 according to hatchery logs. Hour Pond likely was first stocked because the pond already supported brook trout. Brook trout were collected in the first fisheries survey in 1932 and were maintained by natural spawning as there was a single occurrence of prior stocking in 1906. Only one other species, the brown bullhead, was collected along with brook trout in 1932. Today the pond contains only two species (brook trout and creek chub) and is maintained entirely by natural reproduction.

Long Pond has a natural fish barrier and had brook trout present in 1932. Brook trout fry were stocked in 1909 and one time between 1922 and 1932 (exact year is unknown) according to hatchery logs. Brook trout were probably stocked in Long Pond because they were already present. Further, Wallace's Guide to the Adirondacks (1894) describes Long Pond as good ".....for large specked trout." Long Pond is an excellent example of the accrual of nonnative and native-but-widely-introduced species even by the time of the 1932 Biological Survey. The 1932 Biological Survey collected brook trout, white sucker, northern redbelly dace, and blacknose dace; native-but- widely-introduced pumpkinseed and creek chub and nonnative golden shiner. A 1957 survey collected the same species as well as brown bullhead. After reclamation in 1967, the pond re-accrued species, both native and nonnative, to the point where brook trout reproduction became unlikely because of the large number of competitors.

Second Pond was stocked with brook trout fry in 1906 by the Forest, Fish and Game Commission. There is no record of other stocking prior to 1932. Second Pond was not netted during the 1932 Biological Survey, but was reported to be a good brook trout pond despite only one fry stocking 26 years earlier. Brook trout were probably already present at the time of the first stocking in 1906. A high gradient shown on the topographic map of the area suggests that a natural barrier exists on the outlet of the pond before it flows into Second Pond Brook which would have prevented the movement of fishes into the pond from downstream.

Routine stocking of South Upper Pine Pond began in 1932. It's first survey in 1957 collected only brook trout. Brook trout stocking probably began because they were present and providing a fishery. South Upper Pine Pond was likely a historic brook trout monoculture; today the pond has been invaded by nonnative golden shiner and native-but-widely-introduced brown bullhead.

North Upper Pine Pond contains brook trout and golden shiner, with the latter a modern introduction. Brook trout were present at the time of the 1932 Biological Survey, but stocking was reported. As late as 1961 the pond lacked other species which would have precluded brook trout natural reproduction; therefore, it is very likely that North Upper Pine Pond historically supported brook trout by natural reproduction. Natural fish barriers are not visible on the immediate outlets of both North Upper Pine Pond and South Upper Pine Pond. However, a natural fish barrier must be present on Shingletree Stream between Upper Pine Ponds and the Kunjamuck River because yellow perch, suckers, bullheads and pickerel present in the drainage downstream of Shingletree Stream are not found in Upper Pine Ponds.

Mud Ponds were not studied during the 1932 Biological Survey, but the first netting (1960) collected brook trout and native-but-widely-introduced creek chub. The initial stocking in 1942 probably took place because brook trout were already present and providing a fishery. The single competing species indicates the presence of a natural fish barrier on the outlet of Lower

Mud Pond that prevents the movement of fishes into the ponds from downstream.

McComb Pond was one of the few brook trout monocultures to survive into the late 20th century. A brook trout monoculture was present in 1975 despite no known prior stocking, but brown bullhead were determined to be present in 1995. A natural barrier 0.25 mile downstream from the pond prevents the movement of fishes into the pond from downstream.

Prier Pond was not netted in 1932 Biological Survey, but brook trout were reported to investigators. Routine stocking did not commence until 1963.

Peaked Mountain Pond contained only brook trout and creek chub as late as 1957. Peaked Mountain Pond was stocked with brook trout fry in 1906; there is no record of stocking between 1906 and 1932. Routine stocking began after the 1932 Biological Survey. The pond supported a self-sustaining brook trout population following reclamation in 1970. This suggests that brook trout were present naturally because the pond has the demonstrated ability to produce a self-sustaining population. A natural barrier exists on the outlet which prevents the movement of fishes into the pond from downstream as shown by the persistence of simple fish communities (also, the remote setting of the pond minimizes the likelihood of bait pail introductions).

Puffer Pond was stocked only twice with brook trout fry by the Fisheries, Game and Forests Commission (1910 and 1930) probably because brook trout were already present. The brook trout found in Puffer Pond during the 1932 Biological Survey apparently were maintained by natural spawning due to the infrequent stocking prior to 1932. The nonnative golden shiner was an early introduction as reported in the 1932 Biological Survey. Brown bullhead were collected first in 1959. Puffer Pond appears to have been a brook trout monoculture maintained by natural reproduction before golden shiner and brown bullhead were introduced. Puffer Pond has a natural fish barrier on the outlet which prevents the movement of fishes into the pond from downstream.

Brook trout fry were stocked one time in Rock Pond in 1930. It contained only natives (including brook trout) and native-but-widely-introduced species in 1932. Brook trout were stocked in Rock Pond probably because they were already present.

The number of historic brook trout ponds present in the unit probably exceeded the 14 ponds listed above. Botheration, Clear, Crotched, Kings Flow, Round (UH-P 590), South, Thirteenth Lake, the three Buckhorn Ponds and Lower and Upper Twin Ponds are believed to be historic brook trout ponds that were stocked because brook trout were already present. The number of historic NSA brook trout ponds in the SPW is estimated to be 26 ponds.

Current Status of Brook Trout Ponds

Today, brook trout remain in 21 (16 stocked, 2 NSA, others low abundance) of the 26 estimated historic brook trout ponds in the unit largely as a result of management through stocking. Brook trout are no longer stocked in five of the historical brook trout ponds (Botheration Pond, Kings Flow, Rock Pond, Round Pond (UH-P 590) and Thirteenth Lake) because the accrual of competing species has reduced brook trout survival to the point where stocking no longer maintains a fishery. Two of these waters, Rock Pond and Kings Flow are

managed as warmwater fisheries; two of the waters, Round Pond (UH-P 590) and Thirteenth Lake, are managed as coldwater ponds. Self-sustaining brook trout populations only exist in 8% of the 26 ponds. The number of ponds that are presently either brook trout monocultures (South Pond) or sustained solely by natural reproduction (Hour Pond, Peaked Mountain Pond, Hayes Flow) is significantly lower than the number of historical brook trout waters.

Many Adirondack brook trout ponds in the unit that contain nonnatives cannot be returned to natural conditions (natives only). Either wetlands preclude effective treatment with rotenone or no natural fish barrier or site to construct a fish barrier exists. If other fishes become established in these waters, it is likely that brook trout will be eliminated from these ponds. These ponds are Botheration Pond, Crotched Pond, Hayes Flow, Long Pond, South Upper Pine Pond, Prier Pond, Rock Pond, Round Pond, Second Pond and Upper and Lower Twin Ponds.

Habitat Changes of Fisheries

Natural reproduction by brook trout is also very sensitive to impacts from sedimentation caused by extensive logging, fires and other human activities. During the 1800's, the Siamese Ponds area supported a logging industry including several sawmills. Industry products included lumber, hemlock bark for tanning, and charcoal for iron processing. In addition to logging, garnet mining occurred in the SPW, and continues today near the Wilderness boundary. Due to their reproductive behavior, brook trout are among the most susceptible of all Adirondack fish fauna to the impacts of sedimentation. Brook trout spawn in the fall, burying their eggs in gravel. Water flow must be maintained through the gravel, around the eggs, until they hatch the following spring. Sand or fine sediments restrict water flow around the eggs resulting in hatching failure due to an inadequate supply of oxygen.

“Streams that were once natural trout streams may have become unfit for trout through lack of shade and the drying up of the fountain head during a part of the season, caused by lumbering operations” (Report of the Commissioners of Forest, Fish and Game, 1896)

The long incubation period, the lack of care subsequent to egg deposition and burying of the eggs, all contribute to the brook trout's susceptibility to sedimentation. Most other Adirondack fishes are spring spawners, their eggs have short incubation periods and are not buried. These strategies along with the suspension of eggs from vegetation (e.g.. yellow perch, northern pike, and certain minnow species) and fanning of the nest during incubation (e.g.. bullhead, pumpkinseed, smallmouth bass and largemouth bass) minimize the vulnerability of these species eggs to sedimentation. Consequently, the species whose eggs are less susceptible to sedimentation have thrived during the recent history of the Adirondacks.

Acid Precipitation Impact on Fisheries

Recently acidic deposition has impacted the aquatic resources of the Adirondacks. The ALSC surveyed 1,469 Adirondack waters, 24 percent of which had pH levels less than 5.0 (Kretser el al. 1989). Water bodies with a pH level below 5.0 generally have difficultly supporting fish. Historic data and water chemistry analysis demonstrates that many of those waters were historically circum-neutral and able to support fishes. Although less well studied, streams have also been impacted by acidification (Colquhoun 1984). The available water

chemistry data does not indicate an acidification problem for ponds in the SPW. Of the 37 waters with chemistry data, pH values range from 4.43 to 7.64. Although 45 of the waters have not had recent (since 1975) water chemistry surveys, the majority of these are the smaller unnamed ponds. The pH of area ponds is in excess of 5.7, except for Lower Buckhorn Pond (4.43), Upper Buckhorn Pond (4.75), South Pond (5.12) and Round Pond (UH-P 296) (5.66).

Conclusion for Fisheries Inventory

Habitat changes, widespread introductions of nonnative fishes and the broad dispersal of native fishes which historically had limited distributions have drastically altered the fish fauna of Adirondack waters.

Throughout the Adirondack Park, native species sensitive to competition and habitat changes have declined. Distribution of other natives, and nonnatives, has increased due to stocking. Within the SPW, brook trout populations maintained by natural reproduction have been nearly eliminated.

Simple fish communities containing only brook trout, or brook trout in association with one or a few other fishes, are depressed within the unit. In ponds currently managed for brook trout their abundance is low compared to other DEC managed waters.

Stocking and fisheries management can be broken into three periods. In the mid- to late 1800's many fishes were widely distributed by New York State and the United States Commission of Fisheries often with assistance of volunteers. These early stockings introduced nonnative species throughout the Adirondack Park.

From the late 1800's through the early 1900's New York State developed hatcheries and provided irregular stocking of brook trout fry and fingerlings, often in waters where brook trout were reported or known to exist.

Modern fisheries management followed the 1932 Biological Survey, the first comprehensive fisheries survey in the SPW. Annual stocking policies based on those surveys were facilitated by the advent of modern transportation.

4. Visual Resources Inventory

Severe forest fires nearly one hundred years ago burned many of the higher mountaintops down to bedrock, leaving behind a considerable number of vantage points with excellent views of the surrounding country. These vantage points are isolated and require a bushwhack to reach. Consequently, these areas sustain very low use.

Scenic views of much of the SPW can be had at the following locations:

- Turnout on Route 30 south of Indian Lake Village
- Along Route 28 on the north
- Gore Mountain on the east

The following locations within the SPW provide outstanding vistas:

- Buckhorn Mountain
- Black Mountain
- John Pond
- Siamese Ponds
- Cliffs on John Pond Ridge
- Chimney Mountain
- Shanty Cliffs on the Blue Hills
- Eleventh Mountain
- Cliffs above Long Pond
- Baldface Mountain
- Puffer Mountain
- Peaked Mountain
- Macomber Mountain
- Balm of Gilead Mountain

5. Unique Areas and/or Historic Areas Resource Inventory

The following areas are unique and/or have historical value:

Fox Lair	- The location of the Oregon Tannery, one of the largest tanneries to be built in the Adirondacks. The majority of the old tannery site is located in the Wilcox Lake Wild Forest as it is located on the south bank of the East Branch of the Sacandaga River.
Auger Falls	- A series of cascades over 100 feet in length.
Chimney Mountain	- Unique geologic formations and a series of “ice caves”.
Humphrey Mt. Garnet Mine	- An early garnet mine (1900 - 1918).
Hooper Garnet Mines	- An early garnet mine which opened in 1908 located near Thirteenth Lake.
Griffin	- The location of a tannery and a small “boom” town.
Burnt Shanty Clearing	- The location of an old logging camp.
“Little Canada”	- An area in the vicinity of John Pond that was the location of a small French-Canadian community. Its location is the mid-section of Lot 15 of the Totten and Crossfield purchase and was known as “Little Canada”. One of the first settlements in the Indian Lake area, it was inhabited principally by French-Canadians, who came here originally for lumbering, then turned to farming.

6. Wilderness Resource Inventory

Visitors to a Wilderness seek a wide range of experiences. These range from individuals seeking maximum solitude and contact with nature, to others seeking largely a social experience in which the Wilderness is simply a convenient setting.

The primary value of the Wilderness resource in the SPW is its ability to provide a high degree of solitude to the users throughout most of its area. Any areas which do receive heavy use, such as Thirteenth Lake and the Indian Lake shoreline, are primarily located on the periphery of the Wilderness. The relatively low use of the interior of the Wilderness minimizes encounters between parties. With an average of three persons per party, this impact is even less. An additional factor which helps maintain a high level of solitude is seasonal use patterns. Since the primary users of the Siamese Ponds Area are fishermen, hikers, campers, hunters and skiers, use is well dispersed throughout the year. Trail register data indicate use of the SPW is highest during the fall hunting season and the winter cross country ski season.

There are five physical features or characteristics of the SPW which have contributed to or resulted in the current availability of a high degree of solitude. These five are as follows: remoteness; limited access to the area; limited access within the area; the location of major attractions on the periphery of the SPW; and the variation in topography. These features are explained further below.

The SPW is not accessible by any interstate or major highway. It is located at some distance from major population centers and is not readily accessible to them. These facts create a sense of remoteness.

There are a limited number of access points to the SPW. There are nine trailheads, three of these cross private land (Kings Flow, Round Pond and Cisco Brook) and only two are from a paved road (Eleventh Mountain and Auger Falls).

The SPW is one of the largest Wildernesses in the Adirondack Forest Preserve. There are approximately 40 miles of marked trails within the area. Although there are approximately 50 miles of additional foot paths, these are unmarked and primarily used by hunters and fishermen. Most of these paths dead end at a lake, pond or camping area. There are few trails, marked or unmarked, which traverse the area or loop back to a trailhead. Furthermore, the 1987 Siamese Ponds Wilderness UMP designated an area in the west central portion of the unit that was to be maintained as a trailless area. Therefore, access within the unit is limited.

The major attractions are the caves on Chimney Mountain, fishing and camping on Thirteenth Lake, camping at Indian Lake and hiking to Auger Falls. These features are all located on the periphery of the Wilderness. The majority of users of the SPW only access the attractions located on the periphery of the unit. Therefore, back country users of the unit are less likely to encounter other people within the interior of the SPW.

Although there are few unique physical features, the area does provide a relatively high variety of scenery. The many small and isolated lakes, streams, ponds, and wetlands tend to

"break up" the forested vistas. The maximum elevation is 3,472 feet. The elevation varies from 1,200 to 3,400 feet. This 2,200 foot differential is equal to the elevation change at many of the mountains found in the High Peaks Region of the Adirondacks. Numerous clearings are also present as a result of beaver activity or historic events. As a result of the numerous mountains within the unit sight distance is limited. Therefore, it is difficult to see roads, utility lines and other evidence of man from many of the interior locations.

Page 20 of the APSLMP indicates that areas classified as Wilderness should have "outstanding opportunities for solitude or a primitive and unconfined type of recreation." Therefore, it is essential that some areas in wilderness classification sustain very light use (Stankey, Lucas, Lime, 1976). The SPW provides such an area for hunters, fisherman, hikers and others who desire a high degree of solitude as part of their recreational experience.

C. Man-Made Facilities Inventory

There are a number of man-made facilities in the SPW. The APSLMP provides guidance for those facilities that are allowed (conforming) in Wilderness and those which are not (non-conforming) in Wilderness.

1. Non-conforming Facilities Inventory

The following is a list of known non-conforming facilities in the SPW:

- Cable bridge on the East Branch of Sacandaga River near the Sacandaga lean-to, provides access to Siamese Ponds trail
- Picnic tables and fireplaces at 20 primitive tent sites associated with the Indian Lake Islands Campground but within SPW
- Fireplaces and picnic tables at John Pond and Sacandaga lean-tos
- Fireplaces at Puffer Pond lean-tos
- Cluster of 6 designated camping sites at the north end of Thirteenth Lake and the picnic tables and fireplaces associated with these sites
- Fireplace near Auger Falls

2. Conforming Facilities Inventory

The following is a list of known conforming facilities in the SPW:

Lean-tos

John Pond - This lean-to was originally built in 1966 within 100 feet of the shore of John Pond. The lean-to was rebuilt in May 2003 at a location approximately 150 feet from the shore of John Pond to

comply with APSLMP 100 foot set back requirement.

Sacandaga River - This lean-to is located at the Sacandaga River Crossing near the intersection of the Siamese Pond Trail and the east branch of the Sacandaga River. The lean-to is located within 100 feet of the Sacandaga River. The Wild, Scenic and Recreational Rivers Act allows for the existence of the lean-to as it is a pre-existing structure. However, once the lean-to has exceeded its useful life it must be relocated outside the river area (0.5 mile from either bank of the river).

Puffer Pond - There are two lean-tos located on Puffer Pond. They were both built around 1940 or 1950. They are both in poor condition, and both are in conformance with the APSLMP set back requirement.

Privies

John Pond - This privy is associated with the lean-to on John Pond. It is located approximately 200 feet from the southeast end of John Pond and is in fair condition.

Puffer Pond - There is a privy at each of the two lean-tos on Puffer Pond. Both of these privies are located approximately 200 feet from the water and are in fair condition.

Sacandaga River - This privy is associated with the lean-to on the Sacandaga River. It is located approximately 150 feet from the water and is in good condition.

Thirteenth Lake - There are 3 privies associated with the group of designated sites at the north end of Thirteenth Lake. They are all in fair condition.

Indian Lake - There are 20 privies associated with the Indian Lake Islands Campground within the SPW. Refer to the Proposed Management Section for addition information regarding the location and condition of these privies.

Fish Barrier Dams

John Pond Dam - Located at the outlet to John Pond. The dam was built during the 1960s. It is maintained by the Division of Fish and Wildlife. It was in poor condition; replacement was begun in the summer of 2000 but has not yet been completed.

Kunjamuk River Dam - Located near the end of the Elm Lake Road on the Kunjamuk River. This dam was built in 1967. Subsequently it was transferred to the Division of Lands and Forests because it did not

function as an effective fish barrier. The dam failed in the late 1990s and no longer functions as a barrier or impoundment.

Clear Pond Dam - Located at the outlet of Clear Pond. The dam was constructed around 1949-1950. It is maintained by the Division of Fish and Wildlife. The dam was in poor condition; replacement was begun in the summer of 2000, but has not yet been completed.

Marked Trails (52.1 Miles)

The following is a list of Class I and Class II trails in the SPW. For a discussion of the trail classification system, see page 75.

John Pond Trail - (2.3 miles) from the parking area at the end of Starbuck Road to John Pond; designated as a Class II foot and ski trail.

East Branch Trail - (11.1 miles) from the Wilderness boundary at Old Farm Road parking area through to Route 8 trailhead at Eleventh Mountain; designated as a Class I foot and ski trail.

Siamese Ponds Trail - (2.6 miles) from intersection with East Branch Trail to Siamese Ponds; designated as a Class II foot and ski trail.

W. Puffer Pond Trail - (2.2 miles) from the Kings Flow Trailhead. This trail travels around the south side of Chimney Mountain and continues past the John Pond Crossover Trail until it ends at the western most lean-to on the shore of Puffer Pond; designated as a Class II foot trail.

E. Puffer Pond Trail - (4.3 miles) from its intersection with the East Branch Trail near Old Farm Clearing west to Puffer Pond and its intersection with the W. Puffer Pond Trail at the western most lean-to on Puffer Pond; designated as a Class II foot and ski trail.

Chimney Mt. Trail - (1.0 miles) from Kings Flow Trailhead northeast to the top of Chimney Mountain; designated as a Class II foot trail.

John Pond Crossover - (3.4 miles) from its intersection with the John Pond trail in the vicinity of "Little Canada" south to its intersection with the W. Puffer Pond Trail; designated as a Class II foot trail.

John Mack Pond Trail - (4.0 miles) from shore of Indian Lake to John Mack Pond and continuing east to the north end of Long Pond; designated as a Class II foot trail.

Peaked Mt. Trail - (3.0 miles) from the parking area at north end of Thirteenth Lake to the top of Peaked Mountain; designated as a Class II foot trail.

Hour Pond Trail - (1.6 miles), from its intersection with the E. Puffer Pond Trail to Hour Pond; designated as a Class II foot and ski trail.

Second Pond Trail - (2.0 miles*) from the trailhead off Chatiemac Lake Road to Second Pond; designated as a Class II foot trail.

Long Pond Trail - (2.8 miles*) from the Cisco Brook Trailhead at the end of Elm Lake Road to the northern shore of Long Pond; designated as a Class II foot trail.

Kunjamuk Trail - (6.4 miles*) the majority of this trail formed the "Old Kunjamuk Road." This section of trail begins at its intersection with the Long Pond Trail and travels north east to its intersection with the State land boundary north east of Round Pond. This trail had been designated as a Class II foot trail in the 1987 SPW UMP and work began during the summer of 2001 to re-open and mark this trail. The trail has been re-opened and marked from the Long Pond Trail to the boundary between forest preserve land and the International Paper Round Pond property. However, the last 1.2 miles of the Old Kunjamuk Road connect the trail from the state land boundary to the Big Brook Road. This section of trail crosses private property owned by International Paper Company, Inc. and public land in the Jessup River Wild Forest. The Department has an easement with International Paper Company, Inc. to permit the use of this trail where it crosses their land. The designation of that portion of trail in the Jessup River Wild Forest will be determined in the UMP for the Jessup River Wild Forest.

Auger Falls Trail - (1.0 miles*) from the east side of Route 30 in the vicinity of Forks Mountain to Auger Falls; designated as a Class II foot trail.

Clear Pond Trail - (0.9 miles*) from Starbuck Road to the north end of Clear Pond; designated as a Class II foot trail.

Forks Mt. Trail - (0.5 miles*) from the end of the town road to private lands owned by International Paper; designated as a Class I foot trail and snowmobile trail.

Wm. Blake Pd. Trail - (3.0 miles*) from the intersection with the East Branch Trail northeast along the foot of Balm of Gilead Mountain, southeast past William Blake Pond and continuing southeast past The Vly and out to the Barton Mine Road; designated as a Class II trail and marked with blue trail markers.

Unmarked Trails (28.4 Miles)

The following is a list of recognized Class III and Class IV trails in the SPW:

Balm of Gilead Mt. - (approx. 1.0 miles*) from the intersection with the William Blake Pond path to the top of Balm of Gilead Mountain; designated as a Class III trail.

Shanty Br. Path - (3.0 miles*) from the intersection of Shanty Brook and the East Branch of the Sacandaga River north along Shanty Brook and then west to Mud Ponds; designated as a Class III trail.

County Line Br. Path - (5.5 miles*) from the intersection of County Line Brook and East Branch of the Sacandaga River north until the trail becomes indistinguishable; designated as a Class III trail.

Hour Pond Path - (1.5 miles*) from the intersection with the Peaked Mountain Trail to the intersection with the Hour Pond Trail; designated as a Class IV trail.

Extract Brook Path - (2.0 miles*) follows Extract Brook north until the trail becomes indistinguishable; designated as a Class IV trail.

Macomber Cr. Path - (1.0 miles*) follows Macomber Creek north from its intersection with the Sacandaga River; designated as a Class IV trail.

Bog Meadow Path - (4.0 miles*) from the end of Edwards Hill Road northwest past Bog Meadow and continuing northwest and then southwest until the trail is no longer evident. This unmarked trail is an old farm road; designated as a Class III trail.

Puffer Pond Br. Path - (2.6 miles*) this path begins on private property near Kings Flow and travels along the eastern shore of Kings Flow until it meets Puffer Pond Brook and then follows the brook to the western most lean-to on Puffer Pond; designated as a Class III trail.

Humphrey Mt. Path - (2.5 miles*) from intersection with Puffer Pond Brook Path to the top of Humphrey Mountain; designated as a Class III trail. Heavy blow down near Humphrey Mountain has obstructed a portion of this path.

Botheration Pd. Path - (2.0 miles*) from Old Farm Clearing to Botheration Pond; designated as a Class III trail.

Curtis Clearing Path - (2.0 miles*) from intersection with East Branch Trail to Curtis Clearing; designated as a Class III trail. This is an old farm road.

E. Branch Gorge Path - (1.0 miles) begins due east of Barker Mountain off Route 8. The path first crosses Martha's Brook and then crosses the East Branch of the Sacandaga River and continues north along the river; designated as a Class IV trail.

Dug Mt. Brook Path - (0.3 miles) begins on the shore of Indian Lake and continues southeast along Dug Mt. Brook and ends at Dug Mt. Brook Falls; designated as a Class III trail.

* Mileage is an estimate scaled from USGS Topographic Maps

Trailheads

John Pond - Registration box with parking area for 5 vehicles located at the end of Starbuck Road. The registration booth was originally erected in 1981.

Eleventh Mt. - Registration box with parking area for 20 vehicles located north of Route 8. The registration box was originally erected in 1979.

Thirteenth Lake - Registration box with parking area for 15 vehicles. The registration box was originally erected in 1977.

Old Farm Clearing - registration box with parking for 30 vehicles. The registration box was originally erected in 1966. It was subsequently moved back to within 100 feet of the new parking area when the road to Old Farm Clearing was closed to motor vehicles.

John Mack Pond - The registration box is located on the shore of Indian Lake in the vicinity of John Mack Bay.

Chimney Mountain - Registration box was originally erected in 1982. Parking is available on private property for a nominal fee. Access to the trailhead requires crossing private property. The current owners permit the public to access State lands by crossing private property. However, there is no formal agreement to ensure public access. Periodic discussion should occur between the Department and the private property owner regarding the development of a permanent agreement to insure future public access.

Puffer Pond - A register box was originally erected in 1982.

Cisco Brook - (a.k.a. the Long Pond Trail) Registration box with parking area for 5 vehicles. The registration box was originally erected in 1980.

Crotched Pond - A trail easement exists on the Crotched Pond property of International Paper Company, Inc. from the Big Brook Road to

Round Pond. This trail begins on public land in the Jessup River Wild Forest, crosses private property owned by International Paper Company, Inc. and becomes the Kunjamuk Trail on public land in the SPW.

Auger Falls - Register box and parking area for 5 cars provides access to Auger Falls. Access is across private property owned by International Paper Company, Inc.

Second Pond - A register box was originally erected in the mid 1990s. Parking is available for approximately 2-3 cars on the shoulder of the road.

Primitive Tent Sites

There are 124 primitive tent sites within the SPW. This is down from 157 sites that were in the unit in 1987. This plan does not propose to change the total number of designated tent sites in the unit. A complete inventory of the primitive tents sites that existed in 1987 and those proposed for closure and re-location is given in the Proposed Management section. See appendix 12 for a map of the Siamese Ponds Wilderness and the man-made facilities found in the unit.

Bridges

Diamond Brook - A foot bridge constructed of log stringers with 2"X6" treated lumber decking, good condition as of 3/00

Cross Brook - A foot bridge constructed of timber stringers and 2"X6" treated lumber with railings, good condition as of 11/00

Cisco Brook - A foot bridge constructed of log stringers with 2" x 6" treated lumber. Good condition as of 12/03

Hour Pond Outlet 1 - A foot bridge constructed of treated timbers and treated 2"X6" decking, good condition as of 11/99

Hour Pond Outlet 2 - Located on the Puffer Pond Trail, washed out as of 7/04

Wilderness Pond - Located on the Puffer Pond Trail, design and status unknown

Buck Meadow Flow - Located on the Puffer Pond Trail, design and status unknown

Beaver Flow - Identified in 1987 SPW UMP, status and location unknown

Sacandaga River - Near the intersection of the East Branch of the Sacandaga River and Second Pond Brook, constructed of treated utility poles and 2"X6" treated decking, excellent condition as of 12/00

Frazer Brook - Status and location unknown

Macomber Creek - Log stringer and lumber decking, provides access for snowmobiles through primitive corridor, poor condition 11/00

Unnamed Brook - Identified in 1987 SPW UMP, status and location unknown

Crossing at Hour Pond- Identified in 1987 SPW UMP, status and location unknown

Road Barriers

Thirteenth Lake - A gate exists at the end of the Thirteenth Lake Road adjacent to the parking area at the north end of Thirteenth Lake

Old Farm Clearing - A gate was constructed on the Farm Clearing Road around 1990 near the parking area

Round Pond - A barrier was installed in 1978 at the Wilderness boundary

Kunjamuk River - A barrier was constructed in 1975 to prohibit motor vehicle access to the Kunjamuk dam

John Pond Trail - a barrier was constructed of boulders around 1990 to close the road to motor vehicle traffic

Cisco Brook - A barrier was constructed in 1975 to prohibit motor vehicle access beyond the parking area, currently the cable is missing and the foot bridge now acts as a barrier to motor vehicles

Rob Creek - A gate was installed near the intersection of Rob Creek and the state boundary

Signs

Numerous direction signs and trail markers exist throughout the unit.

D. Cultural Resources Inventory

Fox Lair and Griffin were both tannery sites in the late 1800's. After the State purchased the Hudnut Estate (Fox Lair), all the buildings were removed. All that remains at this site are a few walkways, stairs and other remnants from the buildings. The majority of Fox Lair is located in the Wilcox Wild Forest as the East Branch of the Sacandaga River forms the Wilderness boundary at this location. The Village of Griffin was located in the southern end of the area.

Many farms were scattered throughout the area. However, as poor soils were depleted, the early settlers sold their land and moved on. All that remains are the clearings and the old stone

foundations. One such community was known as “Little Canada”. Little Canada was settled by French-Canadians who came originally for lumbering and later took up farming. During 1897 several people in the community died of diphtheria. The cemetery and the abandoned community of “Little Canada” is located adjacent to the John Pond trail; near the trails intersection with the Hamilton and Warren County line.

Also of cultural importance to the area are various garnet mines. Two of the earliest mines, one on Humphrey Mountain and the Hooper Mine on Thirteenth Lake, began operation early in the 20th century. Many of the buildings of the North River Garnet Company (Hooper Mines) are found adjacent to State land near Garnet Hill Lodge. The only remains of the Hooper Mines on State land are tailings, pit and building foundations. The only remains of the Humphrey Mine are the tailings and the pit.

E. Economic Assessment

The economic impact of the SPW is difficult to assess. There are few estimates of total recreational use, so an overall impact assessment cannot be completed. (See “Use of Lands and Forest Resources” below.)

Quantitative angler use estimates and their economic impact for the SPW are not available.

The following list represents economic factors that are partially dependent on the SPW. However, quantitative values for these impacts are lacking.

- Housing developments such as the Wilderness Lodge near Chimney Mountain and increased popularity of the Garnet Hill Lodge result in part from their proximity to the Wilderness and recreational opportunities it provides. The impact of these developments on the area’s economy is uncertain.

- Hunting activity takes place in the SPW during the fall. Some of this use takes the form of “packing” into the area for one or two weeks of hunting. Additionally, many of the adjacent private lands have leased hunting camps that benefit from their proximity to the SPW. Some hunting equipment and supplies are purchased locally.

- Gore Mountain is an attraction for families seeking opportunities for hiking, cross country skiing and down hill skiing. Gore Mountain itself is classified as an Intensive Use Area. However, it is adjacent to portions of the SPW. Cross country and telemark skiers may leave the designated trails at Gore Mountain and explore the areas in the surrounding Wilderness.

F. Public Use

Use of Lands and Forest Resources

From 1966 to the present a register has been kept at the Old Farm Clearing near Thirteenth Lake. In 1977 an additional register was placed at the north end of Thirteenth Lake. In 1979 a register and sign-in booth were established at the Eleventh Mountain trailhead. Trail register were also established at Auger Falls, Cisco Brook, Chimney Mountain. However, data from these registers are incomplete due to vandalism and the lack of registration by many users. These facts should be kept in mind when analyzing the data, since it represents information about users at a few access points to the Wilderness. The amount of each use would be expected to vary considerably throughout the area, and at different access points and times of the year.

A review of the trail register data from 1996 through 2000 indicated the following:

Chimney Mountain

From 1996-2000 the Chimney Mountain trailhead received the most visitors with an average of approximately 5,000 visitors per year. During the year 2000, 9,401 visitors signed the register. This significant increase in use is attributed to an article in a hiking magazine that promoted the day hike. Nearly 50% of the visitors to this area were here in July, August or September. These were predominately day users.

Auger Falls

Auger Falls had approximately 2,700 visitors per year from 1996-2000. Nearly all use was day use with an average group size of approximately 3 people. July and August were the most popular months to visit this area.

Thirteenth Lake

The data for this trailhead is incomplete for most years due to vandalism. However, most years average approximately 1,700 people. The average group size was approximately 2.8 people. Nearly 50% of the registrants had listed Peaked Mountain as their destination.

Casual observation and review of the trail register sheets indicate that most day users at the Thirteenth Lake access off Beach Road do not sign the trail register. It may be possible to relocate the trail register to get a more accurate count of these day users.

Eleventh Mountain

The Eleventh Mountain trail register received approximately 1,000 visitors per year with an average group size of 2.5 people. More than 20% of the users indicated they were spending at least one night in the interior. Siamese Ponds and the Sacandaga lean-to were the two most popular destinations. This trail has been most popular during the fall and winter.

Old Farm Clearing

From 1996-2000 the register averaged 1,000 visitors per year with an average group size of 2.4 people. This trailhead received significant use during the fall hunting season and the winter ski season. Popular destinations during the winter include the Puffer Pond lean-to and the Sacandaga lean-to. The trip from Old Farm Clearing through to the Eleventh Mountain trailhead is also popular among cross-country skiers.

John Pond

John Pond trailhead averages 763 visitors per year. This trail is a popular ski and an easy overnight trip.

See Appendix 8 for a summary of the trail register data.

Additional Information

Other factors that have resulted in an increased use in the Thirteenth Lake area include the White Water Derby at North River, Gore Mountain Ski Center (NYS), Garnet Hill Lodge and the housing development nearby.

Twenty of the 55 campsites associated with the Indian Lake Islands Campground are situated on the east shore of Indian Lake and within the SPW. Use figures for these sites are provided in the Indian Lake Islands Campground section of this plan.

Throughout the SPW, 157 camping sites, both designated and informal, had been located in preparation for the 1987 SPW UMP. In addition there is one partially developed area (approximately 8 designated camp sites) at the north end of Thirteenth Lake (see Past Management section). Appendix 12 contains a map which shows the SPW and the man-made facilities in the unit.

Ninety-seven percent of the camping sites were located next to or in close proximity to a stream, lake or pond. The remaining three percent were situated near trailheads. Nearly half of the camping sites were rated as being in poor condition, primarily due to excessive amounts of debris and garbage. The 1987 SPW UMP recommended that 21 of the 157 camping sites be eliminated. All sites recommended for closure were in violation of the regulation requiring a set back of 150 feet from trails, streams, lakes or ponds. In addition, each site had other management problems such as erosion, shallow or poor soil condition, lack of sufficient screening, location in a high day use area (Chimney Mt.) and in four cases, excessive accumulation of debris and garbage. The identified sites were either closed, relocated or rehabilitated.

Use of Fisheries Resources

Quantitative information about the numbers of anglers who visit the waters of the SPW is unavailable. However, fishing is a popular activity in selected waters (NYSDEC 1979). Fishing pressure is generally higher on the more readily accessible lakes and streams. Angler use of the

unit's streams is believed to be light. Most of the fishing activity in the SPW is concentrated on Thirteenth Lake, a coldwater lake and one of the Adirondack brook trout ponds in the unit. Trout fishing on lakes and ponds typically peaks in April, May, and June when trout can still be found in the cool water near the surface. Surface fishing activity declines in the summer due to formation of a thermocline which causes fish to move to deeper water. Warmwater angling on the unit's warmwater lakes (Kings Flow and Lake Snow) peaks in July-August. However, use of these two fisheries is low due limited access.

Use of Wildlife Resources

Census data regarding public use of the SPW wildlife is generally lacking. Use related to the wildlife resource occurs in two ways: harvest for meat or fur by hunters and trappers; and observation by hiking and photography buffs.

The majority of the SPW is not heavily used by hunters because of its rough terrain and limited access. Many hunters traditionally enter the SPW at specific localities including the access points along Route 8, Griffin, Auger Falls, the Kunjamuk River, Old Farm Clearing Road and Chatiemac Road. A group of local residents frequently hunt the area surrounding Thirteenth Lake, while several groups spend at least part of the season at interior locations. Even so, annual buck harvest is insufficient to reduce the deer population to a level closer to the winter carrying capacity. Hunters willing to pursue deer in the interior will enjoy a Wilderness hunting experience.

Specialized hunting seasons, such as muzzleloading, appear to have increasing appeal and are one way to increase the opportunities to utilize a resource and enjoy the solitude afforded by a Wilderness. In 1977 the first muzzleloading season was instituted for big game in 13 Wilderness areas. Statewide, 1,547 muzzleloading stamps were sold. In the Siamese Ponds area, five deer were harvested as the result of 47 man-days of hunting. The 1978 muzzleloading season included all of Hamilton County and much of Warren County (Bureau of Wildlife files), hence, hunters had less incentive to hunt on the Wilderness. Information on the effort expended by hunters in the SPW since 1977 is unknown.

The importance of wildlife to other recreational users is more difficult to measure because no accounting system is available similar to licensing hunters and trappers. It is generally recognized that encounters with wildlife often enhances the recreational experience of hikers, campers, sportsmen and other outdoor recreationists. In the SPW, a substantial percentage of the people who enter the area may have their experience enhanced by wildlife observation.

Sites that are appealing places for bird-watching enthusiasts include the East Branch of the Sacandaga River along the Siamese Ponds trail via State Route 8, the Kunjamuk River around the flow created by the fish barrier dam, Carroll Brook, Buck Meadows Flow, Burnt Shanty Clearing, and the shores of the ponds throughout the SPW.

Recreational Opportunities for Persons with Disabilities

The Federal Americans with Disabilities Act of 1990 ("ADA") along with the Architectural Barriers Act of 1968 (ABA) and the Rehabilitation Act of 1973, have important implications for the management of all public lands, including the SPW. An explanation of the ADA and its influence on management actions is provided under Section III, Management Policy.

There are several areas located on the periphery of the unit that could readily provide opportunities for mobility impaired users. Thirteenth Lake could be easily improved to provide access to the lake from Beach Road for car top boats, picnicking and camping. Indian Lake has a motorized boat launch affiliated with the DEC Indian Lake Islands Campground which will allow mobility impaired access to many of the campsites on Indian Lake. There are several horse trails proposed in this plan that will also provide opportunities for mobility impaired users. See Section IV, Proposed Management for specific proposals for improving access to mobility impaired users in the SPW.

G. Capacity of the Resource to Withstand Use

Capacity of the Land Resource

The SPW, 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. That much is intuitive. What is not intuitive, though, is how much use and of what type the whole area - or any particular site or area within it - can withstand before the impacts of such use cause serious degradation of the very resource being sought after and used. 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 sciences. As defined in the range 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 of 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 the outcome sought has been the "maximum number" of people who should visit and recreate in an area such as the SPW. Much research had shown that the derivation of such a number is not useful.

Essentially, this is because the relationship between the amount of use and the resultant amount of impact is not linear (Krumpe and Stokes, 1993). For many types of activities, for instance, most of the impact occurs with only low levels of use. In the case of trail erosion, once soil starts to wash away, additional foot travel does not cause the impact upon the trail to increase proportionately. It has been discovered that visitor behavior, site resistance/resiliency, type of use, etc. may actually be more important in determining the amount of impact than the amount of use, although the total amount of use is certainly (and obviously) still a factor (Hammit and Cole, 1987).

This makes the manager's job much more involved than simply counting, redirecting, and (perhaps) restricting the number of visitors in an area. Influencing visitor behavior can require a well-planned, multi-faceted educational program. Determining site resistance/resiliency always requires research (often including much time, legwork and experimentation). Shaping the types of use impacting an area can call not only for education and research and development of facilities, but also the formulation and enforcement of a set of regulations which some users are likely to regard as objectionable.

Nevertheless, 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?" The DEC embraces this change in approach while recognizing the tasks it calls for in developing the best foundation for management actions. Professionally-informed judgements must be made such that carrying capacity is given definition in terms of resource and social conditions that are deemed acceptable; these conditions must be compared with the real, on-the-ground conditions; certain projections must be made; and management policies and actions must be drafted and enacted with an aim toward maintaining or restoring the conditions desired.

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 Wilderness such as the SPW. All such areas are Forest Preserve units which must be protected, as per the State Constitution, as "forever wild." Furthermore, the APSLMP dictates in the very definition of Wilderness.

Clearly, a delicate balancing act is called for, and yet just as clearly, the Department's management focus must remain on protecting the resource.

A central objective of this plan is to lay out a strategy for achieving such a balance in the SPW. This strategy reflects important guidelines and principles, and it - along with the guidelines and principles - have directed the development of the management proposals which are in the Proposed Management Section.

Strategy

The long-term strategy for managing the SPW uses a combination of three generally accepted planning methods: (1) the goal-achievement process; (2) the Limits of Acceptable Change (LAC) model employed by the U.S. Forest Service; and (3) the Visitor Experience and Resource Protection (VERP) model employed by the National Park Service. Given the distinctly different, yet important purposes of these methods (particularly between the first method and the second two), there are clear benefits offered by employing a blend of these approaches here.

Goal-Achievement Process

The goal-achievement process provides a framework for proposed management by means of the careful, stepwise development of key objectives and actions that serve to prescribe the Wilderness conditions (goals) outlined by APSLMP guidelines. DEC is mandated by law to devise and employ practices that will attain these goals. For each management activity category

included in this plan, there is a written assessment of the current situation and a set of assumptions about future trends, in which the specific management proposals which follow are rooted.

Limits of Acceptable Change (LAC) and Visitor Experience and Resources Protection (VERP) Models

These methods both employ carrying capacity concepts, not as prescriptions of the total number of people who can visit an area, but as prescriptions of the desired resource and social conditions that should be maintained to minimum standards regardless of use.

Establishing and maintaining acceptable conditions depends on well-crafted management objectives which are explicit and which draw on managerial experience, research, inventory data, assessments and projections, public input, and common sense. When devised in this manner, objectives founded in the LAC and VERP models essentially dictate how much change will be allowed (or encouraged) to occur and where, as well as how management will respond to changes. Indicators (measurable variables that reflect conditions) are chosen, and standards (representing the bounds of acceptable conditions) are set, all so that management efforts can be effective in addressing unacceptable changes. A particular standard may be chosen so as to act as a simple trigger for management action (as in VERP), or it may be chosen to act as a kind of boundary which - given certain assessments - allows for management action before conditions deteriorate to the point of no longer meeting the standard (as in LAC).

Even well-conceived and executed efforts can prove ineffective, but when this is the case, management responses must be adjusted. Monitoring of resource and social conditions is absolutely critical. Both the LAC and VERP models rely on monitoring to provide systematic and periodic feedback to managers concerning specific conditions. However, since the VERP model was developed to apply only to impacts from visitor use, some management issues in the SPW (for instance, the impacts of acid deposition) call for an approach that is properly in the LAC vein.

Since differences between LAC and VERP are not significant, choices are left up to managers. These choices are as evident as they need to be wherever this plan, in the Proposed Management Section, calls for sets of management actions which incorporate them.

In outline, DEC's approach applies four factors in identifying potential management actions for an area:

1. The identification of acceptable resource and social conditions as defined by measurable indicators;
2. An analysis of the relationship between existing conditions and those desired;
3. Determinations of the necessary management actions needed to achieve desired conditions; and,
4. A monitoring program to see if objectives are being met.

A list of indicators which may be used by the DEC for measuring and evaluating acceptable change on the SPW are:

1. Condition of vegetation in camping areas and riparian areas near lakes and streams;
2. Extent of soil erosion on trails and at campsites;
3. Noncompliant behavior;
4. Noise on trails and in campsites;
5. Conflicts between different user groups;
6. Diversity and distribution of plant and animal species;
7. Air and water quality.

These indicators form the basis for the proposed management actions presented. Each applicable resource area or facility type 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 plan's 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 this SPW 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 SPW.

Generally it is easy to identify areas where people have concentrated and caused site degradation beyond tolerable limits. The determination of the carrying capacity for a given area is dependent upon the area's popularity and concentration within an overall area. Methods must be applied to separate individuals and/or restrict user numbers in a specific area to keep within the physical capacities of that area. If this is done in all areas where users tend to concentrate within a specific Wilderness a general guideline can be developed for total use capacity. This will result in a "design" capacity.

The SPW exemplifies what has been discussed above. Much of the day use is related to hiking for scenic vistas, cave exploration (Chimney Mountain), or activities which are water oriented. Overnight use occurs almost entirely in close proximity to bodies of water.

Highest Priority Areas for Management Action

Chimney Mountain - This area is accessible via a short, one mile trail from the Kings Flow Area. Of special note is the substantial amount of day hiking and cave exploration that occurs on Chimney Mountain. The heavy picnicking and hiking pressure placed on the area is directly related to its uniqueness and easy access. Day use pressures such as these can adversely effect an area as undesignated trails are established to every vista and suitable picnic spot with little or no concern for the impacts they cause on the resource.

Heavy day use of Chimney Mountain has caused significant trail erosion to a point where steps were taken to curtail or halt progression of this problem. Work performed and organized by the Forest Ranger assigned to the area with assistance from local organizations has greatly reduced the erosion problem that once existed.

Thirteenth Lake - This area has historically been a popular camping, fishing, and hiking use area. The heavy public use particularly at the north end of the lake, has been encouraged by the provision of facilities such as fireplaces, privies and picnic tables. Soil compaction, sheet erosion and loss of vegetation became major problems. A site designation program has been enacted to control use within the capacity of the resource to withstand use. The closure of several designated tent sites has allowed much of this area to re-vegetate.

John Pond - The area once received heavy public use as a popular trout lake accessible by four wheel drive vehicles. The early spring was the period of greatest use, it is also the period when the resource is least capable to withstand use. The access route was, as a result, very rutted and eroded. Soil compaction, loss of vegetation and erosion were also evident along the lake shore. The access to this area by motor vehicle has been eliminated to bring the area into conformance with the APSLMP and to protect the resource itself. The trail and lakeshore have begun to stabilize naturally.

Peaked Mt. - The summit is a very popular hike which now has a marked trail. However, the trail is in poor condition due to the steep slope and lack of adequate erosion control devices. See the Proposed Management section for recommendations regarding a reroute of the trail to the summit.

Eleventh Mt. - The trail over Eleventh Mountain is a popular hike and ski route that receives regular use. The grade is fairly steep with sections of the trail exceeding 30%. Additionally the trail passes through a wetland where it crosses Diamond Brook. Use of this trail during Spring "mud season" will be limited when necessary to protect the resource.

Indian Lake Shore- The 20 designated sites on Indian Lake that are administered through the Indian Lake Islands Campground are normally occupied throughout the summer season. See the Proposed Management section for additional information regarding the designated tent sites on Indian Lake.

Capacity of the Fisheries Resource

DEC angling regulations for the SPW incorporate the Wilderness values expressed in the Wilderness fish management guidelines. Trout creel limits were reduced in wilderness areas years ago and these same regulations now apply to all Regional 5 waters. Also, the use of fish is bait is prohibited in all wilderness areas and signs are posted to this effect. In addition to angling regulations, factors at work in the SPW which serve to limit use include the relative remoteness of ponds from roads and the seasonal nature of angling in coldwater ponds.

Degradation of spawning habitat and an abundance of competing and predaceous fishes severely limit natural brook trout reproduction. Therefore, the populations of many of the unit's brook trout ponds are maintained by DEC's annual stocking program. Most of the historic trout ponds in the SPW cannot be restored to a state of natural reproduction due to technical or logistical reasons. For instance, reclamation is precluded in ponds having extensive bog and swamp areas which provide refuge for fishes during treatment. The lack of suitable barrier dam sites or natural waterfalls to prevent re-infestation is another constraint. Thus, maintenance stocking is needed in many wilderness waters to recreate an approximation of natural conditions and to afford a quality fishing experience. For a more detailed discussion of this issue, see the Fisheries Inventory section on page 37.

Under existing regulations and stocking efforts, the trout populations of stocked ponds are capable of withstanding current and anticipated levels of angler use. DEC has found from decades of experience on Adirondack trout ponds that the invasion of competing species is much more detrimental to trout abundance, size, and natural reproduction than angling.

Black Pond (P256 SLC) on publicly accessible Paul Smith's College property in Franklin County and Jabe Pond (P394 CH) within the Lake George Wild Forest in Warren County are cases in point. Both waters have been shown to be capable of producing high-quality fisheries in terms of numbers and sizes of fish when their fish communities consisted of brook trout with few or no competitive species. Both received heavy fishing pressure and yielded high trout harvest rates. Both fisheries were sustained totally by natural reproduction after reclamation in the 1970's. More recently, Black Pond was again reclaimed in 1997 after the introduction of yellow perch destroyed the brook trout fishing. The pond was stocked with Windfall strain brook trout in the spring and fall of 1998. Natural spawning sufficient to sustain the fishery developed quickly and the pond again supports a popular and high quality fishery without annual stocking.

In certain instances, overfishing, or more accurately, overharvest, may contribute to a reduction in the numbers of large trout. However, brook trout reach sexual maturity at very small sizes (smaller than what most anglers consider "keeping" size). Consequently, there are no known examples of waters in which regulated harvest has led to reproductive failure. If necessary, DEC fisheries staff have the regulatory authority to enact more restrictive harvest regulations.

The reclamation of two ponds within the unit will lead to a more even distribution of angler use among ponds. This will prevent an over concentration of use which would occur if only one or two ponds were reclaimed. Furthermore, the closure of the Old Farm Clearing Road, which previously provided motorized access to some of the interior waters of the SPW, has reduced

angler use in many waters.

Because angler use of streams in the unit is believed to be light, the brook trout populations which they support can sustain anticipated harvest levels without damaging their capacity to maintain themselves naturally. The warmwater game fish species found in the unit also have proven to be able to maintain themselves under existing regulations without the need for stocking.

DEC monitors the effectiveness of angling regulations, stocking policies and other management activities by conducting periodic biological and chemical surveys. Based on analysis of biological survey data, angling regulations may be changed as necessary to protect the fish populations of the SPW.

Capacity of the Wildlife Resource

The level of human density established to meet an acceptable level of solitude will be below the capacity of most wildlife to withstand use. There are two categories of use to be considered. Viewing and/or photographing wildlife is the first, while the second is the harvest of wildlife by hunting and trapping.

For the first category there may be a few species in the SPW that are vulnerable to disturbance from only a few people. One species in this category found in the SPW is the common loon.

Nests along shore or on islands are more susceptible to human disturbance if boats or canoes can readily be carried into lakes occupied by loons (Titus, 1978). Nests along the shore are also more susceptible to human disturbance where trails follow the shoreline of a lake (Titus, 1978). However, nest desertion or mortality of newly hatched young will only occur when the incubating adult is forced to leave the nest or newly hatched young are chased by people. At present, loons are known to nest within the SPW only on Thirteenth Lake, which is readily accessible to boat traffic. Feeding adults have been observed on other ponds. The elimination of motor boats from Thirteenth Lake will be considered and discussed in the Proposed Management Section to protect the nesting sites of loons and the surrounding Wilderness resources.

The second category, consumptive use, refers to the recreational pursuit of game animals by hunters and trappers. The density of hunters and trappers in a Wilderness is a function of access, topography and distribution of target species. Although hunters and trappers do not necessarily follow designated trails, it is improbable that enough people would spread out throughout the SPW to impact game population. Overall, the number of consumptive users in the SPW is too low to have any detrimental effect on the capacity of the game resources to withstand use.

A few species including the fisher and beaver may be vulnerable to over harvest. Therefore, fisher and beaver harvest levels are monitored. If over harvest appears to have occurred, corrective action can be taken by changing the harvest regulations.

III. MANAGEMENT POLICY

A. Past Management

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.

1. Land Resource Past Management

Cable Crossings

There were eight steel cables within the SPW which were used to cross rivers when the water level was high. Actual intrusion into the SPW was on the west bank of the East Branch of the Sacandaga River for the three cables located adjacent to Route 8 and in the vicinity of County Line Brook, Shanty Brook and Oregon. Four additional steel cables crossed the East Branch of the Sacandaga River in the vicinity of Square Falls Mountain, Burnt Shanty Clearing, Big Shanty Mountain and the Sacandaga lean-to. There was also a steel cable across Shanty Brook between Black Mountain and the Blue Hills. The 1987 SPW UMP required that the cables be removed. The cables were removed by the Department in July 2003.

Campgrounds

Indian Lake Islands - 20 of the 55 campsites located on Indian Lake are on the east shore of the lake and in the SPW. These campsites were built in 1959 and opened for use in 1960. Previously, these campsites were in an area classified as Intensive Use, but the area is now classified as Wilderness. As a result of the reclassification, the fireplaces and picnic tables present at each site do not conform to guidelines of the APSLMP. This area will be discussed further in the Proposed Management Section.

Thirteenth Lake - As a result of heavy use during the early 1960's, four latrines and ten picnic tables were added to this area in the late 1960's. Prior to the classification of the area as Wilderness in 1972, boats could be launched directly into the north end of the lake. This access was closed in subsequent years. A gate was installed at the parking area to limit access to car top boats and small outboard motor boats. The area still sustains heavy use for camping, picnicking, fishing, boating, and swimming. There are currently 6 designated camping sites at the north end of the lake and 9 additional designated camping sites on the lake. This area will be discussed further in the Proposed Management Section.

Fish Barrier Dams

Kunjamuk Dam - This dam was built in 1967. Subsequently, management responsibility for it was transferred to the Division of Lands and Forests because it served no useful fisheries function. The barrier dam failed in the mid-1990s.

John Pond Dam - This dam was built during the 1960's. It is maintained by the Division of Fish and Wildlife as a fish barrier. By the late 1990's, the dam was in poor condition. Replacement of the dam was initiated during the summer of 2000.

Clear Pond Dam - This dam was built during the 1960's. It is maintained by the Division of Fish and Wildlife as a fish barrier. By the late 1990's, the dam was in poor condition. Replacement of the dam was initiated in the summer of 2000.

Lean-tos

Kunjamuk River - This lean-to was built by the CCC. In 1967 it was dismantled and destroyed, due to lack of use.

Bridge at the Crossing of the East Branch of the Sacandaga River

A steel cable footbridge over the east branch of the Sacandaga River on the trail to Siamese Ponds was constructed in 1968. The bridge is considered non-conforming according to the APSLMP because it is not constructed of natural materials. Several attempts had been made to provide access across the Sacandaga River with wooden bridges. However, due to the width and force of the stream during spring runoff, these bridges were washed downstream. The 1987 UMP called for a study to be performed to determine ," a) the impact of the bridge on the Wilderness resource in relation to its use, and b) the attitude of the Wilderness user towards this bridge." This study was not completed.

Tent Platform

One tent platform existed in the Puffer Pond - Twin Ponds Area. It was removed in 1965.

Trails

There are 52.1 miles of marked and maintained trails, and numerous unmarked trails in SPW. The DEC trail classification system is outlined in the Forest Preserve Policy Manual. This classification system recognizes four trail classifications as outlined below:

Class I trails, also referred to as trunk trails, are those trails that provide a major route of travel from one destination point to another and are designed for constant and heavy use in all seasons. The locating of any additional trunk trails in Wilderness areas will be kept to an absolute minimum. Trunk trails will be well marked and signed. The width and height of trunk trails shall be in accordance with the specifications of the Department's Trail Construction and

Maintenance Manual, which states in part: "...the overhead clearing should be as high as a man can reach with his axe. Width (of clearing is determined)...by removing obstructions that are within a foot of the finger tips when standing in the center of the tread with arms outstretched."

Class II trails may have moderate to infrequent use. Class II trails may be dead-ended at a scenic vista, fishing area or other similar destination. Class II trails may receive less maintenance than that of trunk trails and clearing width may vary from about a two foot wide Wilderness foot path to about four feet. Class II trails will be marked and signed, but with less detail than trunk trails. In general, the width and height will be sufficient to allow passage in wet weather or by snowshoe in winter.

Class III trails, also referred to as paths, are traditional routes that are unmarked and receive little maintenance. Paths may be signed at their trailhead and at their intersection with trunk trails and Class II trails. Maintenance and removal of blowdown and other hazards will be at infrequent schedules and only as necessary to prevent development of herd-paths around obstacles.

Class IV trails, also referred to as wilderness trails, are routes of travel that lead to destinations and evolve through use. Wilderness trails are not constructed, maintained, marked or signed. They are, however, described in and appear on the maps that are part of the UMP for the area.

A complete list of trails in the SPW and their classification is provided in the Inventory section of this UMP.

Major Trails - The trail from Eleventh Mountain trailhead through to Old Farm Clearing and the spur to Siamese Ponds, were formally constructed around 1966. These trails and the majority of the other trails in the area are a combination of old farm roads and herd paths.

Peaked Mt. Trail - As proposed in the 1987 SPW UMP a trail was officially designated and marked from Peaked Mountain Pond to the top of Peaked Mountain. Previously, many herd paths followed the shore of Peaked Mountain Pond and up the western ridge of Peaked Mountain. These herd paths resulted in erosion problems caused by the dispersal of use over unplanned routes on thin and rocky soils. To rectify this problem, a marked and maintained trail was laid out and constructed, starting at the terminus of the Peaked Mountain Pond trail, following the east shore of the pond for about 0.6 mile to the west ridge of Peaked Mountain and thence about 0.4 mile along the ridge to the summit, for a total of approximately 1.0 mile.

Long Pond Trail - As proposed in the 1987 SPW UMP the trail from the Cisco Brook Trailhead to Long Pond was designated as a trail and marked. This consisted of marking the trail and performing maintenance as needed on the 3.5 miles of trail.

Hour Pond Trail - As proposed in the 1987 SPW UMP the 1.2 mile trail to Hour Pond from the Puffer Pond trail was designated as a foot and ski trail and marked.

Kunjamuk Trail - As proposed in the 1987 SPW UMP the trail from Round Pond to the Kunjamuk River near its intersection with the Long Pond Trail was re-opened in the Summer of 2001. This project involved brushing, blow down removal and the marking of the trail. This section of trail is approximately 6.0 miles long and is designated as a foot trail.

Wm. Blake Pd. Trail - As recommended in the 1987 SPW UMP this trail was marked and brushed out in Fall 2004. The trail starts near the Barton Mine Road and its intersection with Halfway Brook, northeast of The Vly. The marked trail (approximately 3.5 miles) travels in a southwesterly direction past The Vly and continues northwest past William Blake Pond and around the base of Balm of Gilead Mountain until it intersects with the Old Farm Trail in the vicinity of the Old Farm Clearing parking area. This trail is approximately 3.5 miles long and designated as a foot and ski trail.

Monitoring and Management

Monitoring and management of this unit has been accomplished primarily by Forest Ranger patrol. Employment of a Forest Ranger for patrol was initiated in 1980. The SPW has historically been the responsibility of four different Forest Ranger districts. Specifically, the Forest Rangers assigned to the towns of Wells, Indian Lake, Johnsburg and Thurman each cover part of the SPW. Public use management of the area has been in accordance with applicable portions of 6 NYCRR Part 190. The 1987 SPW UMP recommended assigning two Assistant Forest Rangers to this unit. There is currently one Assistant Forest Ranger assigned to this unit.

Trail work has been accomplished primarily with Operations staff assigned to the Indian Lake, Northville and Warrensburg offices of DEC. Additional trail assistance has been provided by Student Conservation Association crews assigned to the Whitney Headquarters and through an Adopt A Natural Resource Agreement that exists with the Albany Chapter of the Adirondack Mountain Club (ADK). ADK has assisted DEC staff with trail maintenance, garbage removal and by communicating facility needs. Additionally, the ADK has assisted the with the upkeep of lean-tos in the SPW through their Adopt A Lean-to Program.

Roads and Barriers

Two town roads in the unit were identified in the 1987 SPW UMP as nonconforming uses. The Town of Indian Lake, Hamilton County, had jurisdiction over the John Pond Road to the Hamilton-Warren County line. The Town of Johnsburg, Warren County, had jurisdiction over the Old Farm Clearing Road. Both towns had indicated their desire to keep these roads open for motor vehicle use.

The Department, lacking voluntary abandonment of these roads by the respective towns, exercised its authority under Section 212 of the Highway Law to effect their abandonment in order to comply with the provisions of the APSLMP. The necessary documentation was submitted to the Commissioner of the NYS Department of Transportation to effect abandonment of both roads.

John Pond Road - The section of the John Pond Road that was abandoned is located in the Town of Indian Lake, Hamilton County, New York and begins at the State land boundary being also the boundary of the SPW and the division line between lots 79 and 90 in Township 15, Totten and Crossfield's Purchase and continues in a south-southeasterly direction through lots 90, 89 and 1014, Township 15, Totten and Crossfield's Purchase, to the Hamilton-Warren County line, a total distance of 1.2 miles.

The old road continues in a northeasterly direction through lots 1014, 113, 1114, and 103, Township 15, Totten and Crossfield's Purchase. However, this 0.9 mile section is in the Town of Johnsburg, Warren County and did not have public road status and did not require action under Section 212 of the Highway Law.

A rock barrier was installed adjacent to the parking area on the John Pond trail. This resulted in the closure of approximately 2.1 miles of road to motorized access.

Old Farm Clearing Rd. - The section of the Old Farm Clearing Road that was abandoned begins at the boundary of State land being also the boundary of the SPW and the division line between Lots 13 and 114 of Township 13, Totten and Crossfield's Purchase. The road then runs in a southerly direction through Lots 114 and 35, terminating near the southerly corner of Lot 314, all in Township 13, Totten and Crossfield's Purchase, a total distance of 1.2 miles. The entire portion of the road that was closed lies in the Town of Johnsburg, Warren County. The original barrier at the Old Farm Clearing was constructed in 1965. The gate on the Old Farm Clearing Road was relocated to within 500 feet of the Wilderness boundary as required by the 1987 SPW UMP. As a result, approximately 1.2 miles of road were closed to motor vehicle use.

Forks Mt. Primitive Area - At present, a town road and snowmobile trail traverse a section of the Primitive Area from Griffin west to the lands of International Paper Company, Inc., in the form of the Forks Mountain Primitive Corridor. The section of snowmobile trail provides an important connection between the southeastern Adirondacks and areas to the north of the village of Speculator.

Given the constraints due to topography and the East and West branches of the Sacandaga River this trail currently forms the only feasible connection between the Towns of Stony Creek and Speculator. A barrier was installed beyond a point necessary for access to the existing private inholdings where maintenance of the road by the Town of Wells terminates. The barrier is opened in the winter to accommodate snowmobiles and closed during the remainder of the year to prevent motor vehicle access.

Round Pond - The jeep trail between Round Pond and International Paper Company, Inc. property was closed by a barrier in 12/78.

Long Pond Trail - This trail, also known as the Cisco Brook Trail, was closed to motor vehicles by barrier in 8/70. However, upon completion of a foot bridge in this area the barrier was removed. The foot bridge is narrow enough that it effectively acts as a barrier to motor vehicle traffic.

Kunjamuk Dam - The road access to the fish barrier dam on the Kunjamuk was barricaded in 10/75 at the State land boundary.

Thirteenth Lake - A barrier at the north end of Thirteenth Lake was constructed in 1965. Currently there is a gate across the trail to prevent motor vehicle access.

Parking Areas

Old Farm Clearing - A parking area was established at the intersection of the Wilderness boundary and the trail to Old Farm Clearing. The parking area was necessary to accommodate parking as a result of the closure of Old Farm Clearing Road. The parking area accommodates approximately 30 cars and is located within 500 feet of the Wilderness boundary to conform with the APSLMP (APSLMP, June 2001, page 25). However, the parking lot is not currently plowed in the winter. The Town of Johnsburg stops plowing approximately 0.3 mile prior to the parking area and the Department does not maintain the parking lot in the winter.

John Pond Trail - A parking area to accommodate 5 cars was developed in the area between the State land boundary and the barrier on the trail to John Pond. The parking area is within 500 feet of the Wilderness boundary to conform with the APSLMP. Two culverts were installed on the access road to control water drainage and erosion. The culverts are considered to be an integral part of the road and their existence is permissible given that the APSLMP, June 2001, on page 25 does allow for "other facilities for peripheral control of public use" within 500 feet of

a public highway right of way. Without the culverts, access to the parking area would be difficult during the wettest times of the year and erosion may become a problem. The parking lot is not plowed in the winter.

Cisco Brook - A parking area exists within 500 feet of the Wilderness boundary at the end of the Elm Lake Road. There is room for approximately 5 cars. Neither the parking lot nor Elm Lake Road are plowed in the winter.

Eleventh Mt. - A parking area exists within 500 feet of the Wilderness boundary in the vicinity of Eleventh Mountain on the north side of State Route 8. The parking area will accommodate approximately 15 - 20 cars. The parking lot is currently plowed by the Department of Transportation during the winter.

Thirteenth Lake. - A parking area exists at the Wilderness boundary near the north end of Thirteenth Lake. The parking area will accommodate approximately 10-15 cars. The parking lot is currently plowed by the Town of Johnsburg.

Trail-less Area

A trail-less area was designated in the 1987 Siamese Ponds Wilderness UMP. One of the features of the Siamese Ponds Wilderness is its lack of trail development, which has provided a unique opportunity for people to enjoy the Wilderness resource. In order to maintain this opportunity, an area of approximately 21,000 acres or 33 square miles was left trail-less. This area is bounded as follows: Starting at a point where the Kunjamuk River intersects the State land boundary; thence northerly along the Kunjamuk River to a point where it intersects the old "Kunjamuk Trail," thence northeasterly along said trail to a point where the trail intersects the Wakely Brook/Kunjamuk River Watershed boundary; thence easterly along this watershed boundary to the top of Humphrey Mountain (elev. 2984 feet); thence northeasterly to Humphrey Brook; thence southeasterly along Humphrey Brook to the west shore of Siamese Ponds; thence along the shore to the Siamese Ponds Trail; thence southeasterly in a straight line which intersects Curtis Clearing and the south end of Curtis Brook to Cook Brook; thence southwesterly through the notch between Black Mountain and Big Hopkins Mountain to Mud Ponds and the East Branch of County Line Brook; thence continuing in a straight line to Hayes Flow; thence westerly along Hayes Flow and Hayes Creek to the State boundary; thence along the State land boundary to the starting point.

The 1987 SPW UMP proposed the building of a bridge over the East Branch of the Sacandaga River in the vicinity of Shanty Brook. This bridge would have provided access to the trail-less area. The bridge was never built. Without a bridge access to the trail-less area is limited during the wettest times of the year. The limited access is actually curtailing use when use can least be accommodated. This UMP will not recommend the building of a bridge over the East Branch of the Sacandaga River in the vicinity of Shanty Brook as it is in the best interest of the Wilderness resource and user experience to leave this portion of the unit as essentially trail-

less. A bridge at this location would encourage the use of the informal foot paths and likely result in significant degradation of the paths and the user experience.

Adopt A Natural Resource Program

Section 9-0113 of the Environmental Conservation Law authorizes a stewardship program between the Commissioner and an individual, group or organization for the purpose of preserving, maintaining or enhancing a state-owned natural resource or portion thereof. There are several Adopt A Natural Resource agreements for the SPW.

Evelyn Greene of North Creek, NY holds (since April 2003) an AANR agreement with the DEC to allow for the removal of *Iris pseudacorus* (yellow iris). Yellow iris is an invasive plant that has been found in the Vly area in the Town of Johnsburg within the SPW.

The Adirondack Mountain Club has held an AANR since January 2003 with the DEC to allow the maintenance of the Chimney Mountain and East Branch trails within the SPW. The Adirondack Mountain Club also holds and AANR with the DEC to allow for the maintenance of the lean-tos at the East Branch of the Sacandaga River, John Pond and Puffer Pond.

2. Fisheries Past Management

Fish management in the SPW has emphasized brook trout through an active reclamation and stocking program. Several waters have also been stocked with lake trout, landlocked salmon, rainbow trout, and brown trout. Largemouth bass, smallmouth bass, and various panfishes maintain themselves without the aid of stocking. Twenty-three ponds are managed solely for brook trout and include Brown Pond, Upper, Middle and Lower Buckhorn Ponds, Clear Pond, Crotched Pond, Hayes Flow, Hour Pond, John Mack Pond, John Pond, Long Pond, McComb Pond, Lower (UH-P 290) and Upper Mud Ponds (UH-P 289), Peaked Mountain Pond, Prier Pond, Puffer Pond, Second Pond, South Pond, Lower and Upper Twin Ponds and North and South Upper Pine Ponds.

SPW waters have been subject to statewide angling regulations except for Hour Pond and Peaked Mt. Pond. Hour Pond and Peaked Mt. Pond are managed under special regulations consisting of a three-trout-per-day creel limit, a 12-inch size limit, and artificial lures only. The use of fish as bait is prohibited in all area brook trout ponds to minimize the likelihood of introduction of competing and/or exotic species. Between 1953 and 1970, ten SPW ponds with a total surface area of 564.5 acres were reclaimed with rotenone.

Most of the area's ponds have received at least one biological survey since the 1930's. Ten ponds were re-surveyed by the Adirondack Lakes Survey Corporation in 1987. Refer to Appendix 7 for additional information.

Very little survey work has been undertaken on streams within the SPW because of their remoteness. Few area streams in the unit are actively managed. Some of the larger accessible streams have been stocked with brook, brown, and rainbow trout.

Historical biological data is available for all ponded waters in the unit excluding 40 unnamed ponds and, Gardner Pond, Grassy Pond, Hayes Flow and Mud Pond (UH-P 595). Appendix 7 presents pond-specific survey and management data for all SPW waters.

3. Wildlife Past Management

Regulations controlling season dates, method of taking, and bag limits for wildlife were the only management techniques used in the past. All species harvest regulations, whether for big game, small game, or furbearers, were established to include land areas larger than SPW (ie., Wildlife Management Units). In fact, historically, regulations were consistently written for all of northern New York (equivalent to the Northern Zone).

Antlerless deer harvests were allowed by permit through northern New York from 1957 to 1970. The purpose was to reduce deer populations. Three consecutive severe winters from 1967-68 to 1970-71 resulted in overbrowsing of winter range and a consequent deterioration of carrying capacity. The precipitous decline in the deer population was blamed on the permit system. As a result, legislation was passed prohibiting the use of deer management permits as a management tool in most of the Adirondacks unless an emergency was declared. The DEC still lacks the authority to issue deer management permits in the Adirondacks.

Past efforts toward monitoring of non-game wildlife resources in the SPW include annual aerial surveys of the nesting success of ospreys, the development of the Breeding Bird Atlas and the Herpetological Atlas, and activities associated with the New York State Natural Heritage Program.

A number of changes have occurred over the past several decades that have impacted a variety of wildlife species within the SPW. Habitat changes have resulted from pre-Forest Preserve logging, wildfires, acid precipitation, recreation use, natural plant succession, protection of the forest and wildlife species through legislation, reintroduction of extirpated species of wildlife and immigration of extirpated species to the area. These factors tend to place SPW wildlife into three categories: (1) Wilderness-dependent wildlife, (2) Wilderness-associated wildlife, and (3) common wildlife. Most wildlife management activities have been directed to improving knowledge of the wildlife found in the unit.

One of the original attractions to the Adirondacks was the vast array of hunting, fishing and trapping opportunities. The APSLMP acknowledges these uses as legitimate and compatible with Wilderness concepts. DEC policy encourages these activities as part of a larger Wilderness experience, not just a quest for game (Doig, 1976).

The number of encounters between people and wildlife can be expected to rise proportionately to the number of visitors in the SPW. Habitat areas heavily used by wildlife are often also choice locations for human trails and campsites. (Hendee and others, 1990) Where people habitually camp bears often scrounge for food and garbage. Domestic pets, mainly dogs, may harass and stress wildlife.

4. Search, Rescue and Wildland Fire Past Management

The number of searches for persons lost in the SPW has been low due to the low number of interior users. The seriousness and level of response to each search call is determined through response guidelines listed in the Region Five Search, Rescue and Fire Preplan.

Rescue in the SPW in the last 20 years has been required for hiking accidents (leg fractures), campsite injuries (burns and lacerations), cross country skier injuries (rib and leg), spelunkers (hypothermia, fractures and contusions), drowning recoveries and stranded hiker/campers due to prolonged high water levels of the East Branch of the Sacandaga River. The areas receiving rock and ice climbing recreation are Shanty Cliffs (rock), Eleventh Mountain (rock), cliffs at Long Pond (rock) and water falls on Eleventh Mountain west of Bakers Mills (ice and rock). These areas have yet to require any rescue missions. The caves on Chimney Mountain are well used and have required multiple rescue missions (technical rope). It is common for the East and Main branches of the Sacandaga River to receive kayak and canoe use during periods of high water. The use of the water resources in this area and the remoteness will lead to an increasing probability of water related rescues and recoveries.

Wildland fires in this area have ranged from 0.1 acre to 300 acres in size over the last 20 years. In the fall of 1998 a human caused fire spread through hardwood leaf litter and burned 300 acres on the Big Range. In May of 1995 a campfire at Clear Pond burned 25 acres. In the summer drought of 1999 many small fires burned from 0.1 to 3 acres in size. In 1983 a fire consumed 30 acres of heavy fuels on Kunjamuk Mountain. These fires were started by campfires and lightning.

Historically many of the fires have started from campfires at pond and streamside campsites. These fires generally burn deep into the duff killing all vegetation in the burn, exposing rock and mineral soil. Due to the fragile shoreline environment and limited campsite clearings even a 0.1 acre fire is of concern.

During periods of high fire indexes in the Southeastern Adirondacks the SPW generally incurs wildland fire. The following factors make this area susceptible to large fires: lack of formal fire detection and natural fire barriers, difficult access, deep organic duff, susceptible fuel types, loading and continuity. Portions of the SPW were affected by the 1995 micro-burst and Hurricane Floyd in the fall of 1999. During periods of high fire danger patrols to enforce fire laws and regulations are important to prevent fire starts from campfires. Aggressive initial attack can also be effective in controlling these fires and preventing them from reaching intensity levels which destroy soil structure. The level of response for fire suppression is governed by the Region Five Search, Rescue and Fire Preplan.

Current Department policy calls for the extinguishing of all wildfires regardless of the source of ignition on either State or private lands. History of naturally occurring fires (lightning ignition) in the Adirondacks generally indicates infrequent fires of low severity. These should not be confused with the large fires that occurred in the early 1900's, which were man-caused and fed by heavy slash left by poor quality logging operations.

Access for emergency operations is primarily on foot or by aircraft. Emergency access by four wheel drive vehicles is limited primarily to the Old Farm Road, also known as the Old Farm Clearing Road, which is passable for approximately 1.2 miles. This allows quick access to multiple areas due to the trail intersection at Old Farm Clearing. Very few other opportunities for emergency motor vehicle access exist. During spring, summer and fall boat access is available on Thirteenth Lake, Kings Flow and Indian Lake.

The lack of motor vehicle access routes in the area requires the use of aircraft to supply personnel and equipment to interior emergency incidents. There are landing zones suitable for light and medium helicopter use throughout the area. Beaver meadows and stream/river corridors provide open areas for landing zones within the interior of the SPW. The area known as Fox Lair within the Wilcox Lake Wild Forest and along State Route 8 may provide a base for helicopter operations in the southeastern portion of the SPW. This area has been used many times for search, rescue and fire operations. It has the capability to handle multiple ships and be a base for long term operations. The northern and western portions of the SPW are served by the helipad at the Indian Lake DEC shop.

B. Management Guidelines

1. Guiding Documents

This unit management plan has been developed within the guidelines set forth by Article XIV, Section 1 of the New York 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, and established Department policy.

Article XIV, Section 1 of the New York 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.”

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

- Administrative Use of Motor Vehicles and Aircraft in the Forest Preserve (CP-17).
- 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).
- Snowmobile Trails - Forest Preserve (ONR-2).
- The Administration of Conservation Easements (NR-90-1).
- Acquisition of Conservation Easements (NR-86-3).
- Division Regulatory Policy (LF-90-2).
- Adopt-A-Natural Resource (ONR-1).
- Policies and Procedures Manual Title 8400 - Public Land Management.

The Department also maintains policy 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 camping 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. All proposed management activities will be reviewed and significant environmental impacts and alternatives will be assessed.

2. 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 applies to the Department and requires, in part, that reasonable modifications must be made to its services and programs, 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 to the Department. Since recreation is an acknowledged public accommodation program of the Department, and there are services and activities associated with that program, the Department has the mandated obligation to comply with the ADA, Title II and ADA Accessibility Guidelines, as well as Section 504 of the Rehabilitation Act.

The ADA requires a public entity to thoroughly examine each of its programs and services to determine the level of accessibility provided. The examination involves the identification of all existing programs and services and a formal assessment to determine the degree of accessibility provided to each. The assessment includes the use of the standards established by Federal Department of Justice Rule as delineated by the Americans with Disabilities Act Accessibility Guidelines (ADAAG, either adopted or proposed) and/or the New York State Uniform Fire Prevention and Building Codes, as appropriate. Each Unit Management Plan prepared by the Department will outline a proposed assessment process and a schedule for completing the assessment. This activity is dependent on obtaining an inventory of all the recreational facilities or assets supporting the programs and services available on the unit. The assessment will also establish the need for new or upgraded facilities or assets necessary to meet ADA mandates, consulting the guidelines and criteria set forth in the Adirondack Park State Master Plan. The Department is not required to make each of its existing facilities and assets accessible. The facilities or assets proposed in this UMP are identified in the “Proposed Management Recommendations” section.

The Americans with Disabilities Act Accessibility Guidelines

The ADA requires public agencies to employ specific guidelines which ensure that buildings, facilities, programs and vehicles as addressed by the ADA are accessible in terms of architecture and design, transportation and communication to individuals with disabilities. A federal agency known as the Access Board has issued the ADAAG for this purpose. The Department of Justice Rule provides authority to these guidelines.

Currently adopted ADAAG address the built environment: buildings, ramps, sidewalks, rooms within buildings, etc. The Access Board has proposed guidelines to expand ADAAG to cover outdoor developed facilities: trails, camp grounds, picnic areas and beaches. The proposed ADAAG is contained in the September, 1999 Final Report of the Regulatory Negotiation Committee for Outdoor Developed Areas.

ADAAG apply to newly constructed structures and facilities and alterations to existing structures and facilities. Further, it applies to fixed structures or facilities, i.e., those that are attached to the earth or another structure that is attached to the earth. Therefore, when the Department is planning the construction of new recreational facilities, assets that support recreational facilities, or is considering an alteration of existing recreational facilities or the assets supporting them, it must also consider providing access to the facilities or elements for people with disabilities. The standards which exist in ADAAG or are contained in the proposed ADAAG also provide guidance to achieve modifications to trails, picnic areas, campgrounds, campsites and beaches in order to obtain programmatic compliance with the ADA.

ADAAG Application

Current and proposed ADAAG will be used in assessing existing facilities or assets to determine compliance to accessibility standards. ADAAG is not intended or designed for this purpose, but using it to establish accessibility levels lends credibility to the assessment result. Management recommendations in each UMP will be proposed in accordance with the ADAAG for the built environment, the proposed ADAAG for outdoor developed areas, the New York State Uniform Fire Prevention and Building Codes, and other appropriate guiding documents. Until such time as the proposed ADAAG becomes an adopted rule of the Department of Justice, the Department is required to use the best information available to comply with the ADA; this information includes, among other things, the proposed guidelines.

C. 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; in making decisions, the key is to apply a systematic rationale based on monitoring and evaluation. In order to accomplish this, the following principles will be used to manage the SPW:

Protect and preserve the natural resources of the unit.

Management will stress sustaining the existing environmental conditions and restoring those areas and resources which have been or are being degraded. Resource conditions will be monitored and evaluated to assure they are not being degraded. Management actions will respond to specific areas, identified as "hot spots," which are damaged.

Preserve the wild forest character of the unit.

This unit is part of the Adirondack Forest Preserve and is protected by Article XIV, Section 1 of the New York State Constitution which requires that such lands "be forever kept as wild forest lands." All use and improvements will be consistent with this mandate. Management will be directed at uses which do not require a developed setting or otherwise detract from the natural wild character of the unit.

Provide for a variety of outdoor recreational uses so long as those uses do not degrade the natural resources or wild forest character of the unit.

Management will provide for a wide variety of outdoor recreation activities consistent with the resource capacity to withstand use and the wild forest character of the area. Care will be taken to prevent overuse of areas within the unit, and areas of the unit which provide some degree of solitude and sense of remoteness will be managed to retain those attributes.

Manage the unit as a composite resource.

All the resources of the unit - biological, physical and social - are interrelated and one management plan must deal comprehensively with those resources and their interrelationships.

Management will be accomplished with the "minimum tool."

All management actions will be reviewed to determine first if they are necessary, and then to determine the minimum action or tool (practices, tools, equipment, regulations and infrastructure) that will accomplish the task. Management will seek the approach from available alternatives that will have the least possible impact on the resources of the unit, the wild forest character and the visitor's experience. And whereas such review includes cost analysis, the potential degradation of wild forest character and resources will be considered before, and given more weight than economic efficiency and convenience. When public use must be controlled to prevent resource degradation, education will be the preferred option followed by the minimum degree of regulation or control necessary to meet management needs.

Establish specific management objectives, with public involvement, in comprehensive management plan for the unit.

Within the constraints of Article XIV, Section 1 of the New York State Constitution and the Master Plan, managers and the concerned public will define management objectives and specific actions for this unit. Resources and the visitor experience will be monitored and evaluated for consistency with the objectives, and management actions will be adjusted through the planning process, when necessary, to meet stated objectives.

Manage the unit with interdisciplinary scientific skills.

Wildland management involves acquiring a working knowledge of complex relationships and requires the skills of natural resource professionals and social scientists who work as a team in focusing on preserving the resources, wild forest character and visitor experience within the unit.

D. Management Goals

1. Land Management Goals

a. Perpetuate the SPW as Wilderness by preventing degradation and restoring Wilderness characteristics where degradation has occurred.

b. Maintain the opportunity for solitude and other experiences unique to Wilderness.

c. Provide opportunities for people to use, understand and enjoy the SPW consistent with the perpetuation of Wilderness. Maintain the opportunity for experiences unique to Wilderness. In attempting to meet these objectives an emphasis will be placed on expanding opportunities on the periphery of the Wilderness while minimizing the development of new facilities in the interior.

d. Protect the SPW from influences that diminish experiences unique to Wilderness values.

2. Fisheries Management Goals

A 1993 DEC Organizational and Delegation Memorandum regarding "Fishery Management Policy In Wilderness, Primitive, and Canoe Areas" forms the foundation for the following goals for SPW waters:

a. Restore and perpetuate indigenous fish species;

b. Provide recreational angling as part of a larger Wilderness experience emphasizing quality over quantity;

c. Protect the fishless state of naturally barren waters that have not been stocked.

Management actions appropriate to achieve these goals include stocking and reclamation.

3. Wildlife Management Goals

a. Inventory and monitor game and non-game species within the SPW.

b. Re-establish 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.

c. Monitor and afford protection, where warranted, to species which are endangered threatened, or of special concern that are currently using the SPW.

d. Maintain and perpetuate annual hunting and trapping activities as legitimate uses of the wildlife resources compatible with Wilderness recreation.

e. 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.

f. Develop and implement protocols, procedures and philosophies designed to minimize, alleviate and respond to nuisance wildlife complaints in the SPW.

E. Objectives

1. Land Management Objectives

The following is a list of land management objectives for the term of this UMP:

a. Mitigate or prevent further soil compaction and/or vegetative loss at each of the following locations within the next three years: Thirteenth Lake, Peaked Mountain Pond and Siamese Ponds.

b. Mitigate further soil compaction and/or vegetative loss at each of the following locations within the next five years: Puffer Pond, Twin Ponds, Hour Pond, Long Pond and the Sacandaga River.

c. Reduce soil erosion and/or siltation occurring from lack of proper trail maintenance by: preparing and analyzing a trail inventory and developing an annual plan for trail maintenance, and; prioritizing, scheduling and budgeting for trail maintenance and/or rehabilitation for each of the years covered by this plan.

d. Schedule for the replacement and/or construction of facilities on a priority basis using a policy of resource protection rather than user convenience for each of the five years covered by this plan.

e. Attempt to acquire, from willing sellers, interior parcels available for acquisition and parcels that improve access to Kings Flow area during the five year period covered by this plan.

2. Fisheries Management Objectives

a. Increase the abundance of the depressed population of native brook trout, through reduction in the distribution of nonnative and native-but-widely-introduced fish species

b. Maintain the security of all other native fishes.

c. Increase the abundance of the depressed population of native redbreast sunfish by reintroducing them to Kings Flow and Prier Pond.

d. Increase knowledge of the aquatic resources through continued surveys of unit waters.

These objectives are based on a thorough review of the inventory data and on the Guidelines for Fisheries Management in Wilderness, Primitive and Canoe Areas. Changes in the fish communities are discussed in the sections titled Projected and Proposed Management, Fisheries; and Resource Inventory Overview, Natural Resource, Biological, Fisheries, respectively.

3. Wildlife Management Objectives

Below is a list of wildlife management objectives for the SPW:

a. Study the feasibility of reintroducing spruce grouse into historical range in the SPW. If habitat conditions are favorable and a suitable source for birds is found, commence with a reintroduction and monitoring program.

b. Monitor peregrine falcons and bald eagles for nesting activity. Produce informational materials and signs to educate rock climbers that falcon nesting is occurring in certain sites and that climbing will be prohibited at these sites during nesting.

c. Monitor osprey nests to assess reproductive success.

d. Monitor moose that enter the area through visual observation, reports from the public and by radio collaring moose.

e. Continue pelt sealing of species to determine level of harvest. Protect against over harvest of species especially vulnerable to trapping (marten and fisher).

f. Stress the Wilderness aspect of hunting in the SPW by refraining from developing programs that would attract additional hunters to high use areas.

g. Promote education efforts stressing multiple use and hunting seasons that are concurrent with other anticipated uses of the area. Advise non-hunters of the fact that there is hunting in the Wilderness so that they may dress and act accordingly during the hunting season.

h. Distribute information regarding avoidance of wildlife conflicts and train interior staff of avoidance procedures for nuisance wildlife so that they may inform SPW visitors.

i. Provide assistance to the Operations Unit regarding water control structures used to address beaver flooded trails.

j. Educate Wilderness users to store their food and toiletries properly in order to minimize attracting wildlife.

k. Develop a plan and protocol for addressing nuisance bear problems in the unit.

l. Continue to develop a location and inventory record of rare and endangered plant species that are found on this unit. As this information is obtained it will be added to the existing Master Habitat Data Base (MHDB) that is administered by the Wildlife Unit.

m. Conduct aerial beaver colony surveys to assess occupancy levels and population density.

4. Public Use Management Objectives

Trail register information is incomplete for the majority of the trailheads in the SPW. However, use trends have indicated high levels of use at a few major attractions located on the periphery of the unit. The use patterns appear to indicate a preference for day trips and shorter hikes (less than 5 miles). Therefore, where single trails lead to a popular destination, loop trails will be developed to disperse users. The following is a list of objectives for public use management:

a. Obtain better SPW use data by maintaining existing trail registers.

b. Develop improved means to educate SPW users by assigning one additional Assistant Forest Ranger to the SPW.

c. Use a system of "campsite designation" where necessary to manage public use and reduce resource degradation.

d. Enhance existing trail systems to disperse use (i.e., loop trails).

e. Complete an inventory of the existing designated camping sites. The inventory will include information on percent vegetative cover, damage to surrounding trees and evidence of soil compaction and erosion within the site.

IV. PROPOSED MANAGEMENT ALTERNATIVES

A. Key Issues for Management Action (Including Environmental Impact and Mitigation Analysis)

1. Thirteenth Lake Primitive Tent Sites

Historically there were 20 primitive tent sites designated on Thirteenth Lake. Thirteenth Lake currently has 15 primitive tent sites along its shoreline. Six of these sites are clustered within 250 feet of each other at the north end of Thirteenth Lake. The sites are accessed from a public road, Beach Road, which ends at the Wilderness boundary.

A "primitive tent site" is defined on page 18 of the APSLMP, June 2001 as: " a designated tent site of an undeveloped character providing space for not more than three tents, which may have an associated pit privy and fire ring, designed to accommodate a maximum of 8 people on a temporary or transient basis, and located so as to accommodate the need for shelter in a manner least intrusive on the surrounding environment."

Furthermore, the APSLMP, June 2001 on page 21 allows for primitive tent sites in Wilderness but normally requires that such sites be "out of site and sound and generally one-quarter of a mile from any other primitive tent site or lean-to." The APSLMP on page 21 recognizes that severe terrain constraints may prevent the attainment of the one-quarter mile separation distance. In such instances the APSLMP allows for a lesser separation distance that is "generally not less than 500 feet from any other primitive tent site." The cluster of tent sites at the north end of Thirteenth Lake does not conform with these requirements.

However, the APSLMP, June 2001 provides on page 25 that "where a Wilderness boundary abuts a public highway, the Department of Environmental Conservation will be permitted, in conformity with a duly adopted unit management plan, to locate within 500 feet from a public highway right-of-way, on a site-specific basis, trailheads, parking areas, fishing and waterway access sites, picnic areas, ranger stations or other facilities for peripheral control of public use, and, in limited instances, snowmobile trails." Since picnic tables, fireplaces and designated primitive tent sites are "facilities for peripheral control of public use," less than 500 feet apart and within 500 feet of Beach Road, then they maybe authorized on a site specific basis in conformity with a unit management plan.

The Department's regulations contain a generic camping provision that is also relevant to this discussion. 6 NYCRR §190.3(b) prohibits camping on State lands under the Department's jurisdiction "within 150 feet of any road, trail, spring, stream, pond or other body of water except at camping areas designated by the department."

Therefore, even if the sites at Thirteenth Lake were "un-designated," an individual could continue to legally use any site that meets the 150 foot regulatory set back requirement, including those that were "un-designated." Thus, control of use could become problematic absent the adoption of a new regulation to address the issue. Generally, however, the promulgation of a regulation should be the last management strategy, to be used only when other options are inadequate to control use. More passive and less restrictive means can be used to encourage users to have a minimal impact on the environment.

Another consideration in the discussion of management strategies for Thirteenth Lake is the opportunity to provide access to Department programs in a wilderness setting for people with mobility or other impairments. This area is unique in having a wilderness setting that is accessible from a public road. Further, the north end of Thirteenth Lake is an excellent location to develop universally accessible camping sites because of the flat terrain and stable soils of the area, as well as ease of water access.

Management Alternatives

Several alternatives in compliance with the above guidance have been considered. One alternative would remove all 6 primitive tent sites and close the location to camping and day use through the promulgation of a new regulation. Although this option would meet the requirements of the APSLMP and 6 NYCRR §190.8(b) and allow this area to recover, it would likely create other undesirable environmental problems. Those individuals seeking an easily accessible primitive tent site would likely create new informal sites at the north end of the lake, possibly in environmentally undesirable locations even if in compliance with the 150 foot regulatory set back requirement. Additionally, the closure of the primitive tent sites at the north end of Thirteenth Lake would likely cause other recreationists to camp further down Thirteenth Lake and into the Wilderness. While this appears to be beneficial, it may actually do more harm than good to the resource. Many of the campers that are looking for campsites that are within easy walking distance to a vehicle may not have the necessary skills for low impact back country camping. Encouraging these campers to locate further into the SPW could place an added burden on the maintenance of the interior camp sites and the resource.

A second alternative is to allow current levels of use to continue on all 6 primitive tent sites at the north end of Thirteenth Lake. However, overuse has already caused soil compaction and loss of vegetation at this location. These sites need remediation, which would require at least even the temporary closure of several sites each year to promote re-vegetation and site stabilization.

A third alternative is to close the 6 primitive tent sites and develop a picnic area at this same location. In doing so only day use would be allowed. If determined to be conforming within 500 feet of the Wilderness boundary; picnic tables and fireplaces would be provided at several sites. Campers would need to venture down the lake to a primitive tent site or find a location that meets the 150 foot regulatory set back requirement. This alternative would require the promulgation of new regulations limiting use to designated sites. However, the opportunity to provide accessible primitive tent sites at this area would be lost. Additionally, many of the users who are seeking a road side primitive tent site experience do not likely have the knowledge required for low impact camping. Requiring individuals to camp further into the interior of the SPW will likely result in degradation of the interior sites. By providing opportunities for less experienced users on the periphery, these primitive tent sites can be more easily maintained and monitored by Department staff.

Recommended Management Alternative

The recommended management alternative is to designate four primitive tent sites at the north end of the lake and make them accessible to persons with mobility impairments. Paths to each of the four sites will be hardened to improve access and protect the resource. Each site will have a location for up to three tents and a fire ring that is designed to be universally accessible. Additionally two universally accessible privies will be installed, each adjacent to two tent sites. Picnic tables and fire places will not be developed at the primitive tent sites as they would not conform with the APSLMP definition of a primitive tent site. Assistance in designing the accessible sites will be sought from individuals specializing in the development of universally accessible sites. Although designed to be universally accessible, the sites will be available to all users on a first come first serve basis. New primitive tent sites will be developed elsewhere on Thirteenth Lake to replace the sites that will be closed at the north end of the lake.

The remaining primitive tent sites at this location will be closed and re-vegetated. Those areas closest to the lake that were formerly primitive tent sites will be designated as a picnic area for day use. Three picnic tables and three cement fireplaces will be provided at the day use area. The picnic tables will be secured such that they remain in the picnic area.

Several of the remaining primitive tent sites on Thirteenth Lake have picnic tables and fireplaces, in violation of APSLMP guidelines. These sites will be brought into compliance with the APSLMP by removing the picnic tables and replacing the fireplaces with fire rings and a 3' x 3' cement pad in fire prone areas. Additionally, several of these primitive tent sites do not meet the minimum quarter mile separation distance. These sites will be brought into compliance with the APSLMP. This will require the closure and relocation of two primitive tent sites to new locations on the lake. See the Siamese Ponds Wilderness map in Appendix 12 for details regarding which campsites will be re-located.

2. Motorboat Use on Thirteenth Lake

Thirteenth Lake is almost entirely surrounded by Forest Preserve classified as Wilderness. The use of motor boats not only affects other recreational use upon the lake, but can also impact the recreational use of the Wilderness resource in an area far beyond the shores of the lake. It is possible to hear a motor boat on Thirteenth Lake from the top of Peaked Mountain, over a mile and a half away. Thirteenth Lake is approximately two miles long and roughly one-quarter mile wide, with a surface area of 326 acres. Primary access to the lake is available at the north end, across public land, and along the east shore, across private land.

The shoreline of Thirteenth Lake forms the SPW boundary. The lake itself is not classified as Wilderness. However, management of the lake must give consideration to the impacts of motorized boats on the adjacent private property owners, the users of the Forest Preserve and the environment. Motorized watercraft can negatively impact other users through noise, air and water pollution. Two stroke engines are very inefficient in the burning of fossils fuels. As a result, approximately 30% of the fuel is released unburned as pollutants into the air and water. Furthermore, engines produce sufficient noise such that they are heard the length of Thirteenth Lake and into the surrounding SPW and private property. None of these impacts are conducive to a Wilderness setting.

Nonetheless, impact on the private property owners on Thirteenth Lake must be considered. In the 1987 SPW UMP, riparian landowners refused to voluntarily cease their use of motorboats on the lake. It is important that whatever alternative is adopted be consistent for both the adjacent property owners and the general public. Adoption of a management strategy that is more restrictive than the voluntary limit adopted by the adjacent private landowners will be difficult to enforce and confusing to the users of Thirteenth Lake.

Subsequent to the adoption of the SPW UMP in 1987 and at the current time, the Garnet Hill Homeowners Association has instituted a 5 horsepower maximum for both the private owners that have riparian rights to the lake and the private boat launch belonging to the Homeowners Association. However, no horsepower limitations exist for watercraft launched from the publicly owned lands. A practical physical limitation on motor boat size is imposed by the barrier that exists at the north end of Thirteenth Lake, limiting access from the Beach Road to those watercraft that can be dragged around the gate and approximately 500 feet to the lake.

The Town of Johnsburg has passed a local ordinance prohibiting the use of personal water craft (PWC) on waters within the town. However, this law only applies to PWCs (jet skis, water bikes, etc.). Regulations will be needed to further limit the use of motors on Thirteenth Lake.

Management Alternatives

Several options were considered in determining a preferred management strategy. The first option considered was to do nothing and allow public use to continue as is. This alternative would not enhance protection of the environment, people seeking a Wilderness experience and the adjacent property owners. Therefore, this option was not preferred.

A second option considered was adopting a horsepower limit, similar to that of the homeowners association. Discussions with the local Forest Ranger indicate that the majority of boaters currently use a motor of 10 horsepower or smaller, although there are some users who bring larger motors. A regulation could be adopted limiting the motor size to 10 horsepower or smaller. The motor size limit would reduce the size of wake created by a motor boat and consequently reduce conflict with non-motorized users. While the motor size limit would reduce air, water and noise pollution it would not eliminate it completely. This remains a viable alternative although it is not the recommended management strategy.

A third option is to limit the public use of Thirteenth Lake to electric motors only, it is expected that the homeowners association would adopt a similar restriction. By limiting access to electric motors only the noise, air and water pollution concerns on Thirteenth Lake would be eliminated. Yet the opportunity for access for all users would be viable. The use of electric motors is feasible on this particular lake because it would provide sufficient power to traverse this relatively small lake and therefore ensure accessibility for people with mobility impairments.

A fourth alternative is to ban all motors from Thirteenth Lake. While this may appease many users, it does not consider the opportunities for mobility impaired individuals. Furthermore, as the lake itself is not classified as Wilderness the Department is able to allow the use of motors. Therefore, this alternative will not be supported by this UMP.

Recommended Management Alternative

The recommended alternative is to limit boat use to electric motors and motorless craft only on Thirteenth Lake. By year 3 of the approval of this UMP boat use on Thirteenth Lake will be limited to electric motors and motorless craft only. This will not preclude the administrative use of fossil fueled out-board motors for search and rescue efforts and fisheries management purposes. This management strategy will require the promulgation of supporting regulations to limit the use of motors.

3. Horse Trails in SPW

Page 22 of the APSLMP authorizes horse trails in Wildernesses, provided that "new horse trails will be limited to those that can be developed by conversion of appropriate abandoned roads, snowmobile trails, or state truck trails." Horse hitching posts and rails, and horse trail bridges constructed of natural materials, are also allowed by the APSLMP. The APSLMP on page 25 also provides that "access by horses, including horse and wagon, while permitted in Wilderness, will be strictly controlled and limited to suitable locations and trail conditions to prevent adverse environmental damage."

The APSLMP on page 17 defines a foot trail as "a marked and maintained path or way for foot travel located and designed to provide for reasonable access in a manner causing the least effect on the surrounding environment." Since these were trails were designated only as foot trails in the 1987 SPW UMP they are not currently open to use by equestrians. The majority of the hiking trails in the area, however, are abandoned roads.

6 NYCRR §190.8(n) generally provides for the use of state owned lands by horses and equestrians as follows:

> (n) The riding, driving or leading of horses will be permitted anywhere on state lands under the jurisdiction of the Department of Environmental Conservation unless otherwise prohibited by law, regulation, posted notice or this subdivision. No person shall ride or permit a horse on:
>
> (1) land devoted to intensively developed facilities, such as boat launch sites, day use areas, campgrounds, ski centers, education centers, fish hatcheries, game farms or headquarters complexes, and lands managed for public safety, such as flood control levees;
>
> (2) foot trails, except where such trails are part of a publicly maintained road, or are specifically designated to allow travel by horses thereon; and
>
> (3) designated snowmobile trails and cross-country ski trails that are covered with ice or snow.

(Note: The reference to campgrounds in subsection (1) does not include camping areas specifically developed for horse use.)

Horse back riding and horse drawn wagon use has occurred in the unit since the area was settled in the 1800s. Historically, the trail from Old Farm Clearing to NYS Route 8 was used as a wagon road. It served as the main travel route used to supply the logging camps and settlements found in the area in the early 1800's. More recently, hunters have used horse and horse drawn wagon to transport their camping equipment into the interior of the Wilderness.

The Old Farm Clearing and the Siamese Ponds trails, which are abandoned woods roads remaining from the early logging operations, are examples of marked trails that have had historic horse and wagon use. However, the 1987 SPW UMP did not designate any horse trails in the unit. As a result there are no official horse trails in the SPW. However, the 1987 UMP did recognize the use of horse and wagon in the Wilderness by hunters. The Department has relied on the local Forest Ranger to issue a camping permit for the use of horse drawn wagons on the Old Farm Clearing Trail.

Management Alternatives

Several alternatives have been developed to address the issue of horse trails in the SPW. The first alternative is to not designate any horse trails. This would eliminate the potential for conflict between equestrians and hikers on designated foot trails. Although under applicable law it is legal to ride a horse on an unmarked trail in a Wilderness, as a practical matter riding a horse off trail is difficult due to the heavy underbrush encountered in most forest stand types. The SPW is composed of over 110,000 acres–a large enough area to meet the needs of equestrians and other recreational users without significant user group conflict. For these reasons this alternative is not preferred.

Another alternative is the development of a permit system for horses and horse drawn wagons. A permit system could include a limit on the maximum number of trips per week. This would allow the local Forest Ranger to deny permits when trail conditions were not suitable. This alternate is not preferred as it would place an unnecessary burden on equestrians that may not be necessary to protect the resource.

Recommended Management Alternatives

The preferred alternative is the designation of horse trails for horse and horse drawn wagon use. Horses and horse drawn wagons provide an alternative means of transportation into the SPW. The designation of horse trails would improve the accessibility within the Wilderness for persons with mobility impairments who are seeking to access Department programs in a Wilderness setting. In order to provide a wide variety of opportunities to the users of the SPW; horse trails will be designated. This will require the identification of suitable trails for designation as horse trails. The proposed alternative will include the designation of trails specific for horse riding and horse drawn wagon use. The requirements for horse drawn wagon use will be more demanding due to the width of the wagon and the need for a surface that can withstand wheeled traffic. Therefore, the UMP will differentiate between those trails that will be designated for horse use and those designated for horse and wagon use.

All horse trail construction projects will incorporate the use of Best Management Practices, including but not limited to such considerations as:

- Locating trails to minimize necessary cut and fill;

- 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;

- Limiting stream crossing construction to periods of low or normal flow.

- Locating trails on existing disturbed areas such as old roads.

Given the requirements of the APSLMP to locate any new horse trails "by conversion of appropriate abandoned roads, snowmobile trails or state truck trails," Department staff located known abandoned roads and truck trails in the unit. Known abandoned roads that have been considered for designation as horse trails in the SPW include:

- The foot trail from Old Farm Clearing to the Eleventh Mountain trailhead on Route 8

- An unmarked trail in the vicinity of Burnt Shanty on the east branch of the Sacandaga River to Curtis Clearing

- An unmarked trail from Route 8 and north along Cook Brook to its intersection with the unmarked trail to Curtis Clearing

- The John Pond Trail now designated as a foot and ski trail

- The Kunjamuk Trail, which begins at the end of Elm Lake Road and continues past Round Pond until it crosses private property owned by International Paper Company, Inc. and then intersects with the Big Brook Road

- An unmarked trail from Edwards Hill to Bog Meadow

After identifying potential locations for horse trails in compliance with APSLMP requirements, Department staff conducted field inspections and reviewed APA wetland maps to determine the condition of the trails and the ability of the trail to withstand horse use. The following is a summary of these potential trail locations:

Old Farm Clearing Trail

The abandoned Old Farm Clearing Road has been designated as a hiking and ski trail from the Wilderness boundary through to the trailhead on Route 8. The first section of the trail from the parking area at the Old Farm Clearing Trailhead to the intersection of the trail with Cross Brook (approximately 6.0 miles) still retains the character of a road. Much of this section has eroded to bedrock due to a lack of maintenance. The installation of erosion control devices such

as water bars, broad based dips and ditching can remove the water from the trail and minimize additional erosion. This section of abandoned road is proposed to be designated as a horse trail for use by both horses and horse drawn wagons. Additionally, two spur trails will be developed to provide access to primitive tent sites. The first primitive tent site is located approximately 200 feet east of the trail prior to the foot bridge at Cross Brook. Access to this site will require a spur trail that is approximately 400 feet in length. The second primitive tent site is located at the south end of Pine Mountain. Access to this site will require a designated horse trail from the intersection of the Old Farm Clearing Trail and Second Pond Brook. This spur trail will be approximately 0.5 miles long.

The section of the trail/abandoned road continuing south from Cross Brook to Big Shanty (approximately 2.0 miles) passes through a very wet area where the character of an abandoned road has been lost. This section of trail will not be opened for horse use as it is highly erodible and a wetland.

The section of the trail/abandoned road continuing south from Big Shanty past the Sacandaga lean-to to just west of the intersection with Diamond Brook (approximately 3.0 miles) retains the character of an abandoned road. This section is in fairly good shape with the exception of a few wet areas. However, it will not be opened as a horse trail because access is limited by wetlands at either end of the trail.

From Diamond Brook the trail/abandoned road continues southeast across Diamond Brook and over Eleventh Mountain where it ends at the Eleventh Mountain Trailhead on Route 8 (approximately 2.0 miles). This section begins by crossing a classified wetland at Diamond Brook. This area floods every Spring with 1-3 feet of water crossing the trail. The area remains wet during all but the driest times of the year. Continuing southeast the trail climbs over the western side of Eleventh Mountain, where the trail often exceeds 30 percent grade. Due to the classified wetland and the steep terrain, this section will not be opened as a horse trail.

Cook Brook Path

This abandoned road is now an unmarked path that begins at Route 8 near the intersection of Martha's Brook and the east branch of the Sacandaga River. It initially crosses Martha's Brook and then the east branch of the Sacandaga at two different fords. During wet periods of the year neither of these fords will be passable. A bridge to accommodate horses is not recommended, as the lack of a bridge will eliminate use during the times when the resource can least accommodate horse use.

Cook Brook Path travels in a northwesterly direction along Cook Brook for approximately 3.7 miles until it intersects the Curtis Brook Path. Curtis Brook Path continues until it ends in the vicinity of Curtis Clearing; the location of an old farm. The trail retains the character of an old road that would be suitable for horse use, but not horse and wagon.

This old farm road will be developed as a horse trail. However, the trail should begin in the vicinity of Oregon and follow an old spur road that connects with the abandoned farm road to Curtis Clearing. There is a much safer and more stable crossing of the East Branch of the Sacandaga River at this location. Furthermore, the need to cross Martha's Brook would be avoided. Additionally, there is ample room for parking of trucks and horse trailers in the vicinity

of Oregon. The abandoned settlement of Oregon is located in the Wilcox Lake Wild Forest (WLWF). Therefore, the development of an equestrian trailhead at this location must be addressed in the WLWF UMP.

Curtis Clearing Path

The abandoned road to Curtis Clearing is now an unmarked path. It begins at its intersection with the east branch of the Sacandaga River and travels approximately 2.0 miles in a westerly direction to Curtis Clearing. Curtis Clearing is the location of an abandoned farm and a desired destination by local hunters and equestrians. The abandoned road begins at Curtis Clearing, accessed from the Cook Brook Path, and travels approximately 2.0 miles in an easterly direction to the bank of the East Branch of the Sacandaga River near Burnt Shanty, and retains the character of an abandoned road for its entire length. This section does cross Curtis Brook in several locations and does have a few wet spots that will require maintenance. However, with the installation of proper erosion control measures this section can sustain horse use. Therefore it is recommended that this portion be designated as a horse trail for the use by horses but not horse and wagon. The horse trail designation will end at the river; a horse trail connection with the Old Farm Clearing Trail will not be developed.

John Pond Trail

This abandoned road is currently a designated hiking trail that begins at the end of Wilderness Road. This road was once a town road but has since been closed to motor vehicles. The road is fairly wet in several locations and passes through several classified wetlands. Because the trail is easily accessible from a town road and is a popular destination, it would likely receive use beyond the capacity of the resource. Therefore, the trail will not be opened as a horse trail.

Kunjamuk Trail

The Kunjamuk Trail, also known as the Old Kunjamuk Road, was designated as a foot trail in the 1987 SPW UMP. During the Summer of 2001 blowdown removal and brushing were performed by the DEC trail crews from Warrensburg and Indian Lake and the Student Conservation Association to re-establish this foot trail. The abandoned road begins at the end of the Elm Lake Road in the Town of Wells at the Cisco Brook Trail head. It crosses Cisco Brook where a foot bridge is in place. A minor relocation would be needed to safely cross Cisco Brook by horse, if it is decided to designate this section of the trail for horse use. The trail continues northeast along the Long Pond trail for approximately 1.5 miles. The Kunjamuk Trail then crosses a beaver meadow and the Kunjamuk River. A minor relocation will be necessary to avoid this wetland. The trail continues around the northeast side of Pete's Hill, where blowdown blocks portions of the trail. The trail than crosses Wakely Brook and several wet areas until it intersects with an unmarked trail up Kunjamuk Mountain. The Kunjamuk trail continues northeast towards Round Pond. This section from the Kunjamuk Mountain spur along the western shore of Round Pond is in the best condition to support horse use. From the western shore of Round Pond the trail/old road continues across private property owned by International Paper Company, Inc. and ends on public land in the Jessup River Wild Forest in the vicinity of Big Brook Road.

The last section of this abandoned road, from Big Brook Road to the western shore of Round Pond (approximately 2.5 miles), will be designated as a horse trail to be used by horse, but not a horse drawn wagon. This will include the development of two designated campsites on Round Pond and spur trails to provide access. This will involve extensive work on the section of trail that crosses International Paper Company, Inc. as much of this old logging road is in need of repairs. The public currently has a legal right to cross this private property by foot, ski, snowshoe or horse. Representatives from International Paper Company, Inc. will be contacted to ensure that horse use by the public does not conflict with their leases or forest management operations. The section of trail located in the Jessup River Wild Forest will need to be addressed in its respective UMP as it provides access from Big Brook Road.

The remainder of the Kunjamuk Trail will first be reopened as a foot trail. Opening the entire length to foot traffic will take several seasons and is likely beyond the 5 year term of this UMP. Once the foot trail on the Old Kunjamuk Road is re-established the Department will evaluate the ability of the entire trail to support horse use. If the remainder of the trail is determined to be suitable for horse use the plan may be amended to designate additional sections of the Kunjamuk Trail for horse use. Alternatively, this issue can be addressed during the next revision of this UMP.

Bog Meadow Path

The Bog Meadow Path is currently an unmarked and non-designated path that receives occasional use by hikers, skiers and horse back riders. The path begins at the end of Edwards Hill Road in the Town of Johnsburg and travels in a westerly direction to Bog Meadow. At Bog Meadow the path continues northwest and then southwest until it becomes indiscernible near Second Pond Brook. This path is in fair condition. However, it passes through some areas that are fairly wet in the spring. The occasional use that this trail receives appears to be within the capacity of the resource. However, the designation of this trail as an official trail for any use would likely encourage use beyond the capacity of the resource. Therefore, this trail will remain as an unmarked path. As an unmarked path horse use may continue. However, trail conditions will be monitored closely to ensure the path does not exceed LAC standards. (For a more detailed discussion of LAC and the standards to be set in this UMP, see page 115.)

Projected Use

Development of a horse trail network that provides looped trails is not feasible in this unit given the guidelines of the APSLMP. However, the opportunity for limited riding experience and improved access in the SPW does exist. It is anticipated that the few trails that are designated for horse use will not be heavily used.

There is likely to be resistance from hikers and other users to the designation of horse trails on any of the existing foot trails. However, given the need to develop opportunities for mobility impaired individuals to access Wildernesses, and the APSLMP provision allowing horse trails in Wildernesses, horse use is an appropriate mode of travel. The designated horse trails will be signed to inform users of the trail designation and to reduce the potential for conflict.

The Department will identify an organization willing to assist with the maintenance of these newly designated horse trails through the Adopt A Natural Resource Stewardship Program

authorized by ECL §9-0103. Any such agreements will contain conditions ensuring strict compliance with applicable APSLMP and Department standards for horse trail construction, rehabilitation, and maintenance.

4. Indian Lake Islands Administrative Camping Area - Special Area Plan

To deal specifically with recreation impact management, the Siamese Ponds Wilderness UMP has been divided beyond its APSLMP classification into a smaller subdivision called a special area compartment - the Indian Lake Islands Administrative Camping Area. This is an area of major concern which requires special attention. Factors considered in defining the compartment boundaries included: existing and historic recreational use patterns and the desired resource, social, and managerial setting to prevent unacceptable change as prescribed by the APSLMP. *A map of the Camping Area is located in Appendix 12.*

INDIAN LAKE ISLANDS ADMINISTRATIVE CAMPING AREA

Management Area: Designated Wilderness; moderate to high use.

Special Features:

This area consists of 20 developed campsites along the eastern shoreline of Indian Lake. They are part of the 55 site Indian Lake Islands Administrative Camping Area in the Town of Indian Lake, Hamilton County which opened for public use in 1960. These campsites can only be reached from the lake and have no road or trail access because of severe terrain constraints. All are large, well vegetated and out of sight and sound of each other. Every site currently offers a masonry fireplace, picnic table and pit privy. Each campsite can be reserved through an “800" number or over the Internet up to 9 months in advance. The natural features of Indian Lake, the wild and scenic setting of these campsites, and the ability to make a reservation, makes them among the most popular in the Adirondack Park. Over 4,700 camper days were enjoyed in 2004 from Memorial Day through Labor Day on these 20 campsites. Few campgrounds in the Adirondack Park had higher rates of occupancy on a per site basis.

Current Situation:

In 1979 the Indian Lake Islands Campground Intensive Use Area was eliminated by a revision of the State Land Master Plan, making 20 campsites along the eastern shore of Indian Lake part of the Siamese Ponds Wilderness. Wilderness guidelines do not permit structures such as picnic tables and fireplaces. The APSLMP also provides that in a Wilderness, campsites should generally be at least one-quarter mile apart and out of site and sound from each other. Where severe terrain constraints prevent the attainment of the one-quarter mile separation, such as where water and shoreline restrict the discretion of locating campsites, individual UMP’s may provide for lesser separation distances, provided such sites remain out of site and sound from each other and are generally not less than 500' from any other campsite site. Although most campsites currently meet the separation distance guideline, several do not.

The reclassification also meant that regulations (6NYRCC § 190.7(a)), which apply to campgrounds in Intensive Use Areas, were no longer enforceable on Indian Lake Island campsites. Currently there is no legal basis for enforcement of camping regulations covered

under 190.7 which previously applied since DEC never amended the regulation following reclassification of the area.

Management Actions:

Stabilization of Shoreline Entrances and Access Points (Year 1-5)

The fluctuating level of Indian Lake, high levels of use and wave action necessitates the stabilization of shoreline entrances to seven (7) campsites (#14, #26, #29, #31, #42, #47, and #50) for public safety and erosion control. The Stabilization of Shoreline Entrances and Access Points referenced in Management Actions, will be tailored specifically for each site listed and will follow a general planning scheme of utilizing vegetative controls where conditions warrant, with utilization of local stone rip rap and/or log cribbing in areas prone to more severe degradation. In all cases, the designs will be performed by a DEC Landscape Architect or Park Engineer, under the direction of a Licensed Professional Engineer. Final design details will be submitted to the APA for review prior to construction. Estimated cost $25,000.

Evaluate Site Conditions and Implement Corrective Measures (Years 1-5)

High use of the 20 campsites on Indian Lake during the camping season has the potential to adversely impact soil, vegetation and shoreline stability. The proposed Management Actions include establishment of a procedure to monitor campsite conditions and annual camper surveys which are both recognized as indicators in the Limits of Acceptable Change (LAC) process. Based on this information, work plans will be developed, and after consultation with the APA, will be implemented to address the noted deficiencies and will include site stabilization and erosion control, re-vegetation, re-location and closure, if necessary.
Estimated cost $5,000/year.

Evaluate Pit Privies and Implement Corrective Measures (Years 1-3)

Locations and conditions of pit privies will be evaluated to insure compliance with ASLMP guidelines and SPDES requirements. Corrective measures will be tailored specifically for each site and could include moving privies to new locations which are at least 150 feet from the mean high water mark. Estimated cost $20,000.

Replace Fireplaces and Remove Picnic Tables (Years 1-3)

This project aims to remove non-conforming improvements. As existing fireplaces deteriorate, they will be replaced with fire rings that consist of a concrete slab and loose stones. Picnic tables will be removed. Project will be accomplished by force account at a cost of $10,000.

Relocate (4) Campsites (Years 1-3)

Four of the existing campsites (#13, #27, #44 and #46) have been proposed to be relocated in order to increase the separation distance between sites. This will provide for additional solitude

appropriate to a Wilderness setting. The closures of sites and construction of relocated sites will be done after consultation with APA at approved locations in the Indian Lakes Islands Administrative Camping Area Compartment of the Jessup River Wild Forest. Project will be accomplished by force account at a cost of $10,000.

Conduct Camper Survey (Years 1-4)

Survey campers on an annual basis to determine preferences, suggestions or concerns. Estimated Cost - none

Construct Lean-tos (Years 1-5)

Adirondack style lean-tos will be constructed at some if not all of the remaining campsites. These lean-tos will benefit the resource in that they will reduce the size of the hardened surface necessary for camping and will benefit the campers by providing them a site off the ground to camp on. The number of lean-tos constructed will be determined based on information received from camper surveys.

All lean-to construction and relocation projects will incorporate the use of Best Management Practices, including but not limited to such considerations as:

- Locating lean-tos to minimize necessary cut and fill;
- 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;
- Locating lean-tos a minimum of 100 feet from the mean high water mark;
- Locating lean-tos such that they are screened from view;
- Limiting construction to periods of low or normal rainfall.

Force Account construction. Estimated cost - $100,000.

Amend Campground Regulations (Year 1)

To provide DEC the legal authority to enforce campground rules which include requiring all campers to register, limit the number of people per site and the length of stay, establish quiet hours, and prohibit the discharge of firearms, amend 6NYCRR Section **190.0(10)** by adding "Indian Lake Islands administrative camping area" to the list of facilities covered by the regulations. We will also add a new Section 190.7(21)(g) which generally provides the following:

Indian Lake Islands Administrative Camping Area. The state-owned islands and shoreline, to a point 500 feet landward from the water's edge of the eastern shore of Indian Lake beginning north of campsite #1 at the state Wild Forest boundary south to UTM gridline 4833, west on that gridline across John Mack

Bay then continuing north at Gates Hill Point, then south to 500 feet south of campsite #51, then across the Jessup Bay continuing at the state Wild Forest boundary with privately owned Backlog Camp, running north around the Point, then south to the Intensive Use classified Lewey Lake Campground boundary, and including a 500 foot radius around campsite #11 on the western shore of Indian Lake at Griffin Falls, shall be designated the Indian Lake Islands Campground for administrative purposes.

While a legal boundary of the administrative camping area is needed to enforce campground rules, these regulations will not unreasonably limit the use of this area by campers and day users. The proposed regulations would permit use of lake and shoreline for picnicking, swimming, hiking, boating, and all other legal activities within the forest preserve. Overnight camping would be restricted to designated campsites for those having registered and paid appropriate fees. The proposal includes a provision which allows days users to enter the area without the need to register or pay a day use fee.

Estimated cost - none

Proposed terms for New Regulation Section 190.7(21)

(g) **Indian Lake Islands Administrative Camping Area**
The state-owned islands and shoreline, to a point 500 feet landward from the water's edge of the eastern shore of Indian Lake beginning north of campsite #1 at the state Wild Forest boundary south to UTM gridline 4833, west on that gridline across John Mack Bay then continuing north at Gates Hill Point, then south to 500 feet south of campsite #51, then across the Jessup Bay continuing at the state Wild Forest boundary with privately owned Backlog Camp, running north around the Point, then south to the Intensive Use classified Lewey Lake Campground boundary, and including a 500 foot radius around campsite #11 on the western shore of Indian Lake at Griffin Falls, shall be designated the Indian Lake Islands Administrative Camping Area.

(1) Notwithstanding subdivision (a)(1) of this section, day users are not required to register with the facility supervisor when entering the Indian Lake Islands Administrative Camping Area.

(2) Notwithstanding subdivision (a)(20) of this section, boats may be landed or beached at any point within the Indian Lake Islands Administrative Camping Area except at developed campsites unless having registered and paid appropriate fees.

Site separation distances for campsites located in Siamese Ponds Wilderness Area

	Present Condition			Proposed Condition			
Site #	Nearest Site	Unit *	Distance Between	Action	Nearest Site	Distance Between	Location
13	14	SPWA	303'	Relocate to JRWF **		NA	Eastern Shore
14	13	SPWA	303'	Retain	12	303'	Eastern Shore
19	20	JRWF	953'	Retain	20	953'	Eastern Shore
26	27	SPWA	190'	Retain	28	473'	Eastern Shore
27	26	SPWA	190'	Relocate to JRWF **		NA	Eastern Shore
29	28	JRWF	529'	Retain	28	529'	Eastern Shore
30	31	SPWA	1,256'	Retain	31	1,256'	Eastern Shore
31	30	SPWA	1,256'	Retain	30	1,256'	Eastern Shore
33	40	JRWF	541'	Retain	40	541'	Eastern Shore
41	40	JRWF	1,815'	Retain	40	1,815'	East Shore Jessup Bay
42	45	SPWA	746'	Retain	45	746'	East Shore Jessup Bay
43	44	SPWA	683'	Retain	42	755'	East Shore Jessup Bay
44	45	SPWA	273'	Relocate to JRWF **	NA	NA	East Shore Jessup Bay
45	44	SPWA	273'	Retain	42	746'	East Shore Jessup Bay
46	47	SPWA	173'	Relocate to JRWF **	NA	NA	East Shore Jessup Bay
47	46	SPWA	173'	Retain	48	1,204'	East Shore Jessup Bay
48	47	SPWA	1,204'	Retain	47	1,204'	East Shore Jessup Bay
49	50	SPWA	2,737'	Retain	50	2,737'	East Shore Jessup Bay
50	51	SPWA	2,374'	Retain	51	2,374'	East Shore Jessup Bay
51	50	SPWA	2,374'	Retain	50	2,374'	East Shore Jessup Bay

Site locations and separation distances were calculated using GPS and satellite imagery.

* Unit: SPWA - Siamese Pond Wilderness Area
JRWF- Jessup River Wild Forest These are island sites off shore from SPWA sites

** These are proposed site closures within SPWA to be relocated to JRWF

A map of the Camping Area is located in Appendix 12.

PROPOSED CAMPSITE RELOCATIONS TO WILD FOREST

SITE NUMBER	RELOCATION SITE	COORDINATES	TREES NEEDING TO BE REMOVED
46	Lewey Bay Grouping	18 550187E, 4833550N	2-3" red spruce 2-4" red spruce
44	West shore of Jessup Bay	18 552031E, 4833824N	Brush cutting only
27	Crotched Pond Island	18 554989E, 4837892N	Brush cutting only
13	Crotched Pond Island	18 555025E, 4837968N	Brush cutting only

5. Foot and Ski Trails

Foot and ski trails are conforming facilities in Wilderness designated areas (See APSLMP, June 2001, page 21). The APSLMP, on page 20, provides that construction of new conforming structures "will be restrained to comply with Wilderness standards for primitive and unconfined types of recreation and to permit better maintenance and rehabilitation of existing structures and improvements," and on page 21 provides that conforming structures and improvements must "be designed and located so as to blend with the surrounding environment and to require only minimal maintenance."

Although existing trail register information is incomplete, recognizable impacts and the partial trail register data indicate that the majority of the high use areas are near the perimeter of the SPW. (For a more detailed discussion of trail register data and their indications, see section F. Public Use on page 63.) This may indicate a need for additional day trip opportunities in the unit. Therefore, where trails lead to an attraction, loop trails will be created to disperse use and reduce the impact on the resource and the visitor experience.

The majority of the trails in this area are not over used but require additional maintenance to accommodate use. Without proper maintenance water may flow down a trail and cause significant erosion regardless of the level of use. Where necessary to protect the resource, bridges, stepping stones, water bars and other erosion control devices will be installed. Any construction involving wetlands will require consultation with the Adirondack Park Agency to determine the need for wetland permits.

All trail construction and relocation projects will incorporate the use of Best Management Practices, including but not limited to such considerations as:

- Locating trails to minimize necessary cut and fill and to avoid tree cutting;
- 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;
- Limiting stream crossing construction to periods of low or normal flow.
- Locating trails on existing disturbed areas such as old roads, herd paths and informal trails.

The following is a list of new trails to be constructed during the term of this UMP. Additional information regarding trail location can be gained from the location map.

Kunjamuk Trail

A marked foot path extends from International Paper Company, Inc.'s Crotched Pond lands near Round Pond, south along the old Kunjamuk Road to a point on the Long Pond trail which is about one mile north of the State boundary. Most of this "Kunjamuk Trail" is open and passable by foot except for a section near Pete's Hill, part of which is inundated as a result of a

beaver dam. In order to more adequately protect the resource and to provide better access to this area, the following proposals are made:

- Construct a new trail between the north end of Long Pond, northeasterly to a point where this trail would intersect the "Kunjamuk Trail" just west of Pine Peak, a distance of about 1.0 mile.

- The original trail will be re-routed around an existing beaver flow at the southern end of Pete's Hill.

- In conjunction with the above trail improvements, parking and access for the Cisco Brook Trailhead will be improved.

- A current agreement with International Paper Company, Inc. allows for a parking lot on their Crotched Pond property, just west of where the access road crosses Round Pond Brook.

John Pond to Clear Pond Loop

Currently a trail exists to both John Pond and Clear Pond, but only a herd path connects the two ponds. In an effort to disperse users and provide a short loop trip, a new foot trail (1.2 miles) will be marked along the existing herd path from John Pond to Clear Pond. The trail will travel along the eastern shore of John Pond and continue in a northerly direction around the eastern shore of Clear Pond until it meets with the existing Clear Pond trail.

Thirteenth Lake to Hour Pond Trail

The trail up Peaked Mountain receives a considerable amount of use. In an effort to disperse users, a foot trail (1.5 miles) will be marked along the existing herd path from the Peaked Mountain Trail near the shore of Thirteenth Lake to the Hour Pond Trail. This herd path leaves the Peaked Mountain Trail and continues south along the shore of Thirteenth Lake for approximately 0.25 miles. The herd path then continues in a westerly direction until it intersects with the Hour Pond Trail.

Peaked Mountain Pond to Peaked Mountain Trail

The foot trail from Peaked Mountain Pond to the summit of Peaked Mountain is poorly located and severely eroded. The trail will be relocated to follow the northern shore of Peaked Mountain Pond and than continue up the western shoulder of Peaked Mountain. The new trail will be approximately 1.0 miles long and designated as a foot trail.

Old Farm Clearing to Botheration Pond Trail

Currently there is an unmarked trail from Old Farm Clearing to Botheration Pond (approximately 2.0 miles). This trail will be marked and maintained as a foot and ski trail. The trail will require the installation of a foot bridge at its intersection with the Sacandaga River and a second bridge near the outlet of Botheration Pond. The trail continues around the western

shore of Botheration Pond. At the north end of Botheration Pond a new section of trail (approximately 1.2 miles) will travel in a northeasterly directly until it meets with the trail from William Blake Pond.

Barton Mines Road to William Blake Pond to Old Farm Trail

As recommended in the 1987 SPW UMP a trail was marked and brushed out in Fall 2004. This trail will complement the other existing trails and in conjunction with the Botheration Pond Trail it will provide a 7.0 mile loop trail. This trail will also provide a link to the Vanderwhacker Mountain Wild Forest and the Gore Mountain Ski Center, near its intersection with the Barton Mines Road. A portion of the "Old Barton Ski Trail" is located on private property. A new trail is feasible from the east side of the Barton Mine Road that would travel north of Pete Gay Mountain and connect with the Raymond Brook trail. These connecting trails will be addressed in the Vanderwhacker Mountain Wild Forest UMP.

The William Blake Pond trail requires foot bridges at its intersection with:

1) Halfway Brook (UTM 05749/48379) - 16 foot long
2) Unnamed tributary at the west end of the Vly (UTM 05744/48379) - 16 foot long
3) Unnamed tributary to the west end of the Vly (UTM 05738/48379) - 16 foot long
4) Outlet of William Blake Pond (UTM 05719/48395) - 20 foot long
5) Unnamed tributary off Balm of Gilead Mountain (UTM 05713/48391) - 12 foot long

Where possible bridges will be composed of logs obtained from the surrounding area and consist of 2-4 log stringers laid side by side with no decking.

William Blake Pond Trail to Balm of Gilead Mountain

Currently an unmarked path exists from the William Blake Pond Trail to the top of Balm of Gilead Mountain. There are spectacular views of Thirteenth Lake and portions of the SPW from the top of Balm of Gilead Mountain. However, the existing path is poorly located. A new trail (approximately 1.5 miles) will be located, marked and maintained to provide for hiking and skiing from William Blake Pond to the top of Balm of Gilead Mountain and back down to its intersection with the trail to the Old Farm Clearing parking area.

Second Pond Trail

The Second Pond trail will be marked and maintained as a hiking and skiing trail. The marking of the trail is necessary to prevent trespass on the adjacent private property.

North Country National Scenic Trail

"The North Country National Scenic Trail links scenic, natural, historic and cultural areas in seven northern states. The approximately four thousand mile long trail includes a variety of hikes from easy walking to challenging treks.

When completed, through the efforts of many people, the trail will become the longest continuous hiking trail in the United States. From the Missouri River in North Dakota to the shores of Lake Champlain in New York, the trail allows hikers to experience a variety of features, from clear-flowing streams, to thick Northern woods, from vast prairies to clean lakes." (www.nps.gov/noco/)

The route for this trail through the Adirondack Park has not been finalized. However, it is likely that the route will pass through the SPW. It is possible to pass east to west through the SPW on the Kunjamuk Trail. It is also possible to pass north to south through the unit on the East Branch Trail. These two trails should be considered as a route is developed for the NCNST. Any inclusion of trails in the SPW to the NCNST will require an amendment of this UMP.

6. Lean-tos

Hour Pond Lean-to

A lean-to will be constructed in the vicinity of the designated primitive tent site on the east shore of Hour Pond. The designated primitive tent site will be removed upon completion of the lean-to. All lean-to construction and relocation projects will incorporate the use of Best Management Practices, including but not limited to such considerations as:

- Locating lean-tos to minimize necessary cut and fill;
- 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;
- Locating lean-tos a minimum of 100 feet from the mean high water mark;
- Locating lean-tos such that they are screened from view;
- Limiting construction to periods of low or normal rainfall.

7. Public Parking Areas

All parking lot construction will incorporate the use of Best Management Practices, including but not limited to such considerations as:

- 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 and surfacing with gravel or other natural materials to avoid stormwater runoff and erosion;
- Locating parking lots in areas that require a minimum amount of tree cutting;
- Limiting construction to periods of low or normal rainfall.

Cisco Brook Trailhead and Big Brook Road Trailhead Parking Areas

Parking facilities will be constructed to accommodate users of the Kunjamuk Trail (see discussion under Trails). There is a current agreement between International Paper Company, Inc. and the Department allowing for the construction of a parking area at the northern end of the Kunjamuk Trail on International Paper Company, Inc.'s Crotched Pond property. Access to this parking area will be from Big Brook Road. A parking lot that accommodates vehicles and several horse trailers will be developed. Access to this parking lot will require traversing over in the Jessup River Wild Forest. Therefore, this parking area and its access is addressed in the Jessup River Wild Forest UMP.

A parking area at the southern end of the Kunjamuk Trail currently exists on public lands at the end of the Elm Lake Road. This access point is know as the Cisco Brook Trailhead. There is currently room for approximately 5 cars; which is adequate for the current use. The parking area will be surfaced with gravel.

Second Pond Trailhead Parking Area

This trailhead is most popular during the fall for hiking and hunting, and during the winter for snowshoeing and cross country skiing. Presently, cars park along both shoulders of the town road interfering with the normal public use of the road. There are seldom more than 2 or 3 three cars at this trail head. However, additional room is needed to allow for snow removal during the winter. A small parking area will be constructed to enable 5 cars to park at the trailhead of the marked trail which leads to Second Pond. The surface will be hardened with gravel.

William Blake Pond Trailhead Parking Area

This trail is popular during the winter for snowshoeing and cross country skiing. Presently cars park on the shoulder of the town road interfering with the public use and plowing of this road. A 5 car parking area will be developed near the intersection of the William Blake Pond Trail and Barton Mines Road.

8. Fish Barrier Dams

Fish barrier dams will be constructed as necessary on the outlets of ponded waters scheduled for reclamation (see section on proposed fisheries management for a listing of such waters). Fish barrier dams which must be constructed in conjunction with the reclamation projects will be sited at unobtrusive locations to minimize visual impact and will be constructed of natural materials. On-site surveys will be conducted to determine the location of existing sites suitable for barrier construction. In addition, inspections may be required to determine if the extent of wetlands makes reclamations impractical.

9. Fishing Access Sites and Boat Launch Sites

There are no DEC maintained fishing access sites or boat launch sites in the SPW.

10. Carrying Capacity (See also section G. Capacity of the Resource to Withstand Use on page 64.)

The APSLMP requires "an assessment of physical, biological and social carrying capacity of the area with particular attention to portions of the area threatened by overuse in light of its resource limitations and its classification under the master plan." (APSLMP, June 2001, page 10)

The term "carrying capacity" originates in biology and the management of range lands. Carrying capacity is defined by Robinson as "the maximum population an environment can sustain without causing damage such as over browsing. Measured in terms of biomass or number of animals per unit of area." This definition only considers the biological carrying capacity, not the social and physical carrying capacity related to recreation.

In the past recreational planners focused primarily on the number of users per unit as a measure of carrying capacity. However, it is not solely the absolute number of users that results in impacts to an area, but also the actions of the users while present. Setting limits for carrying capacity by itself will not always protect Wilderness resources. The lack of accurate use figures makes it difficult to determine past, current and future use levels to determine carrying capacity for recreational use.

Recreational planners require a broader definition of carrying capacity to include the impacts of recreationists on the physical and social resources of the areas they managed. Therefore, Hendee defines carrying capacity in the text *Wilderness Management* as "the maximum level of use an area can sustain with out exceeding the LAC (limits of acceptable change) in social and environmental conditions. When carrying capacity is applied to recreational use of Wilderness, it often includes the effects of such use on experience quality due to crowding and conflict." This definition includes all three components that must be addressed under the APSLMP.

While carrying capacity is helpful in measuring use, it does not adequately address impacts. The Limits of Acceptable Change (LAC) model and the Visitor Experience and Resource Protection (VERP) model both employ carrying capacity concepts. However, these models rely on descriptions of the desired resource and social conditions that should be maintained to minimum standards regardless of use level.

Establishing and maintaining acceptable conditions depends on well-designed management objectives which are explicit and which draw on managerial experience, research, inventory data, assessments and projections, and public input. When devised in this manner, objectives founded in the LAC and VERP models essentially dictate how much change will be allowed (or encouraged) to occur and where, as well as how management will respond to changes. Indicators (measurable variables that reflect conditions) are chosen, and standards (representing the bounds of acceptable conditions) are set, so that management efforts can be effective in addressing unacceptable changes. In VERP a particular standard may be chosen to act as a simple trigger for management action. In LAC, a standard may be chosen to act as a kind of boundary which - given certain assessments -allows for management action before conditions deteriorate to the point of no longer meeting the standard.

Monitoring and evaluating the biological, physical and social resource conditions is critical for the successful implementation of both models. Both the LAC and VERP models rely on monitoring to provide systematic and periodic feed back to managers concerning the current conditions of the resource. Therefore, employing either of these models will require some changes to current management of the area.

In order to evaluate the carrying capacity of the SPW, coordinated data collection of trail register sheets must be resumed. There are insufficient use figures for the most of the 1990s. A renewed emphasis will be placed on collecting trail register sheets on a monthly basis.

The collection of trail register sheets is the responsibility of the local Forest Ranger. Trail register sheets are an important resource for search and rescue efforts. Trail registers may often indicate the last know position of a missing person. Therefore, it is important that the local Forest Ranger retain responsibility for the maintenance of trail registers. Trail register sheets will be forwarded to the SPW area manager monthly. Monthly submission will allow DEC staff to recognize and correct problems such a missing trail registers and full register sheets to allow for the collection of valid use information.

The large size of the SPW makes it impossible to perform a complete inventory of all resources on an annual basis. Monitoring and evaluation of resources will require efficiency and priority setting. Priority will be given to the annual inventory of man made facilities. Man made facilities were developed both in response to use and to facilitate use. Therefore, use tends to be highest at the man made facilities which exist within the SPW. The inventory will include an evaluation of existing trail conditions, campsites, bridges, parking areas, trail heads and other man made facilities.

Criteria will be developed for each type of facility to set limits of acceptable change. The following section will discuss the criteria to be used to monitor and evaluate each type of facility. The criteria will serve as a beginning point for the management of the SPW. It is expected that the criteria will need to be amended as DEC staff become more familiar with LAC concepts. The criteria may become more or less stringent depending on the effect that the standards have in protecting the resource. Furthermore, the criteria are not to be interpreted as desired impacts, but limits of acceptable change. Ideally there would be no negative impact. Therefore, a management action is *desired* before a standard is reached, and *required* once it has been exceeded.

Designated Primitive Tent Sites

Each designated primitive tent site will be inventoried and assessed in Year 1 of this UMP to indicate loss of vegetative cover, damage to surrounding trees, soil compaction, the presence of litter and fecal matter and separation distance from the nearest primitive tent site (designated or not designated). The following standards will be used to dictate the need for management action.

Impact	**Standard**
Loss of vegetative cover	Not to exceed 20 % within 25 feet (392.5 sq. ft.) of the fire ring
Tree cutting	Not to exceed 10 % of trees within 100 feet of the fire ring
Separation distance from nearest primitive tent site not met (this includes both designated and non-designated tent sites)	Not less than 1/4 mile, except where specifically identified as otherwise appropriate in an approved UMP

Upon any one of the above listed standards being exceeded one or more of the following actions will be taken:

- Closure and/or relocation of the primitive tent site.

- Hardening of the site through the use of natural materials to reduce impacts to soil compaction and vegetative loss. This action is especially useful for those tent sites on the periphery of the unit (within 500 feet of the boundary).

- Education of users to reduce impacts.

Trails

An annual inventory will be performed of all designated trails. The inventory will identify those areas where impacts exist. The following standards will be used to determine when management action is necessary:

Impact	Standard
Trail widened	Foot trail will not exceed 6 feet in width, except where trail is located on a road, abandoned road or snowmobile trail.
Trail erosion	Soil loss is evident (rill, gully or sheet erosion).
Water on trail	Trail retains water for more than 5 days following heavy rains.

Upon any one of the above listed standards being exceeded one or more of the following actions will be taken:

- Closure of the trail.

- Relocation of the trail. This action will require consultation with the APA and possibly an amendment to the UMP.

- Stabilization of the trail through the installation of erosion control devices, such as water bars, foot bridges, stepping stones, ditching and other structures.

- Education of users in low impact use activities, such as avoiding wet trails, staying on the trails, and not using trails during mud season when trails are most susceptible to impacts.

- Seasonal closure of trails during spring and fall mud seasons.

Standards will also be developed for parking areas, bridges and trailheads. However, the standards have not yet been set as additional research is necessary to develop appropriate standards for the SPW. This UMP will be amended to incorporate such standards when they are developed.

B. Facilities Removal

1. Non-Conforming Uses

Picnic Tables and Fireplaces

As discussed previously, picnic tables and fireplaces are not specifically listed in the APSLMP as conforming structures in a Wilderness. However, these facilities may be allowable within 500 feet of the Wilderness boundary and a public road or waterway to control public use on the periphery. If any such facilities on the periphery are determined by the APA to be non-conforming then they will be removed. All picnic tables or fireplaces located beyond 500 feet from the Wilderness boundary will be removed in year 1 of the adoption of this UMP.

2. Conforming Uses

Lean-tos

The lean-to at the eastern end of Puffer Pond is poorly located and, as a result, misuse and degradation of the immediate site is occurring. Its continued existence cannot be justified for safety purposes or environmental protection. As a result, the lean-to will be allowed to deteriorate and, when it becomes unusable or unsafe, it will be removed and not replaced.

The Sacandaga lean-to is located within 50 feet of the East Branch of the Sacandaga River and adjacent to the bridge that provides access to Siamese Ponds. The lean-to is currently in poor condition. Originally, it was anticipated that the lean-to would be rebuilt at a location at

least 100 feet from the river. However, this section of the Sacandaga River is classified as a Wild River by ECL § 15-2713(1)(f). In Wild River corridors existing lean-tos are permitted to remain for their useful life. See APSLMP, June 2001, Basic Guideline 1 for Wild Rivers, page 45, and 6 NYCRR §§666.13(A)(1) and 666.13(D)(3). However, lean-tos may not be rebuilt within the river area. The river area is defined to be 0.5 mile from the either bank of the river under 6NYCRR § 666.6(f). Therefore, the lean-to will be removed in year 5 of this plan. A suitable site outside the river area will be identified to build a lean-to to replace this popular destination.

Fish Barrier Dams

The Kunjamuk River barrier dam failed in the late 1990s. It currently is not functioning as a barrier dam and serves no useful purpose for fisheries management. Therefore, the dam will be allowed to deteriorate and the river will be allowed to return to its natural state.

C. Maintenance and Rehabilitation of Facilities

1. Trails

The existing marked trails will be maintained on an annual basis. The marked trails require additional attention to protect against additional degradation. The rehabilitation and improvement of trails is a continuous need. Budgets allow only completion of a few trails each year. Therefore, the Area Manager will work with the local Forest Ranger and Operations staff to prioritize trail maintenance needs annually in the form of a work plan and work order. To prioritize trails for rehabilitation and improvement, three factors will be considered: the designated use, the amount of use, and the amount of trail work needed. Additionally, DEC staff will seek out organizations willing to adopt trails and assist with the maintenance needs in accordance with applicable standards. The use of volunteer work through Adopt-A-Natural-Resource-Agreements (AANR) will be pursued. An AANR will be developed for any organization interested in assisting with the maintenance needs in the SPW.

Currently the following trails are in need of immediate maintenance:

- The foot trail from Peaked Mountain Pond to the top of Peaked Mountain
- The foot trail from the north end of Thirteenth Lake that travels along the western shore of the lake.
- The foot trail from Kings Flow to Chimney Mountain.
- The foot trail from Route 8 over Eleventh Mountain to its intersection with Diamond Brook. The section that crosses Diamond Brook may require wetlands permits.
- The foot and ski trail to John Pond.
- The foot trail to Siamese Ponds, beginning at the Sacandaga lean-to and continuing to Siamese Ponds.
- The foot trail from Old Farm Clearing to its intersection with Second Pond Brook.

2. Bridges

Siamese Crossing Foot Bridge

The foot bridge crossing the East Branch of the Sacandaga River on the Siamese Ponds Trail does not meet APSLMP guidelines since materials used in its construction include steel cables and steel support beams. See APSLMP, June 2001, Structures and Improvement Guidelines, 1, (ii), page 21. These materials were utilized as a result of failures with wooden structures further up stream and the bridge was constructed prior to the classification of this area as Wilderness.

The bridge has a positive impact on both the physical resource, by reducing erosion along the banks of the river, and safety, by providing a means of crossing the Sacandaga River at times when the water is high. The negative impact occurs in relation to the Wilderness resources and the users of this resource. The bridge will remain in place for it useful life or until funds are available for its removal and replacement with a bridge that meets the guidelines of the APSLMP. At the time of replacement DEC will investigate available technology to develop a bridge design.

Other Bridges

The following foot bridges will be maintained and/or rehabilitated as indicated:

Trail	Location	Action
East Branch	Diamond Brook	Maintain & Monitor
East Branch	Cross Brook	Maintain & Monitor
Puffer Pond	Hour Pond Outlet (first)	Maintain & Monitor
Puffer Pond	Hour Pond Outlet (second)	Rehabilitate & Maintain
Puffer Pond	Buck Meadow Flow	Rehabilitate & Maintain
Puffer Pond	Wilderness Pond Outlet	Rehabilitate & Maintain
East Branch	East Branch and Second Pond Brook	Maintain & Monitor
Long Pond	Cisco Brook	Maintain & Monitor
Forks Mt.	Macomber Creek	Rehabilitate & Maintain

Many small foot bridges or walkways exist and should be maintained or allowed to deteriorate based on the following criteria: 1) necessity for safe foot travel; 2) necessity for safe access across gullies on cross-country ski trails; and, 3) necessity for protection of the resource.

Those bridges that the Department deems appropriate will be maintained in their existing location and using their existing design. Relocation of such bridges, or replacement of such bridges with bridges that are larger or of a different design, will require consultation with the APA and/or amendment of this UMP.

3. Lean-tos

Western Puffer Pond Lean-to

The lean-to located on the western end of Puffer Pond will be maintained. Its location is approximately 100 feet from Puffer Pond, and therefore is in conformance with APSLMP set back requirements. Use of this lean-to has a minimal negative impact on the area, except within a few feet of the structure, and in fact may protect the surrounding area from additional impacts by concentrating use at the lean-to site. It is located on a well-drained, grassy knoll. With removal of the lean-to at the eastern end of Puffer Pond, this will be the only remaining lean-to on the trail from Kings Flow to Old Farm Clearing. As such, it can provide emergency shelter for day users hiking from Big Brook Road or King's Flow. Its continued existence is therefore justified.

John Pond Lean-to

The John Pond lean-to continues to receive regular use throughout the year. This is a popular day hike and an easy overnight camping location. The lean-to is approximately 200 feet from John Pond. This lean-to will be maintained.

4. Fish Barrier Dams

Natural or artificial barriers which block the movement of fish into reclaimed waters are critical to prevent the reintroduction of nonnative fishes. Because they are essential fish management tools, fish barrier dams are included in the APSLMP as one of the few structures which may be constructed, rehabilitated, and maintained in a Wilderness. Ponds will be reclaimed only if there is no outlet, if a natural or man-made fish barrier is present, or if a fish barrier can be constructed prior to reclamation.

The fish barrier dams on Clear Pond and John Pond will be maintained and rehabilitated when necessary. Both dams are currently in need of reconstruction. Work as begun, but not been completed on either structure as of 08/30/2004.

D. Public Use Management and Controls

The goal of public use management is to use techniques of wilderness management to maintain and/or improve the quality and availability of a more desirable type of user experience in the SPW. These techniques, used in a minimal manner, should create the feeling of privacy and isolation typical of Wilderness, while allowing compatible public use of the area. Also, they should minimize the impacts on physical resources by reducing compaction, vegetative loss and erosion.

1. Primitive Tent Site Designation

6 NYCRR §190.3(b) provides that "camping is prohibited within 150 feet of any road, trail, spring, stream, pond or other body of water except at camping areas designated by the Department." This regulation allows the Department to control camping in heavily used areas where site degradation has occurred or is likely to occur, while giving the Department the flexibility to designate specific sites for continued use even though they are within the 150 foot distance. Therefore, the Department is able to direct use to those areas that can best sustain it.

Camping within the SPW is heavily oriented to water. Overall use of the area is much lighter than some of the other more popular Wildernesses but specific locations near water are fairly heavily impacted by use.

In order to avoid unacceptable impacts within the SPW, site designation will be instituted where historical use is significant enough to demand it. The charts on the following three pages depict the more heavily used camping areas in the SPW. These charts were developed based on staff's impression, following site visits, that suitable locations will be found to re-locate sites that do not meet the separation distance requirement. Should this not be the case, sites that do not meet the separation distance requirement will be closed. The 1987 SPW UMP requires that a project be undertaken to bring the designated sites within APSLMP guidelines regarding separation distance. This project has been partially completed. This required relocation of some existing sites and establishment of new sites in order to strategically disperse camping throughout the area. The local Forest Ranger and Lands and Forest staff will work together to see that the designated sites meet the requirements of the APSLMP. This will require the relocation of several designated sites on Thirteenth Lake, Long Pond, and Siamese Ponds.

Designated Camping Sites Within The
Siamese Ponds Wilderness
(Lakes & Ponds)

Name of Water	Size (Acres)	Campsites 1987	Campsites Present	Campsites Proposed
Thirteenth Lake	326	21	15	15
Indian Lake	--	20	20	20
Kings Flow	200	1	1	1
Siamese Ponds	134	14	7	7
Round Pond	119	1	1	1
Rock Pond	43	1	1	1
Hour Pond	37	4	3	3
Long Pond	35	5	4	4
Puffer Pond	32	3	2	2
Second Pond	25	6	3	3
Peaked Mt. Pond	20	7	2	2
Botheration Pond	19	1	1	1
John Pond	18	1	1	1
Clear Pond	18	6	2	2
Mud Ponds	18	2	2	2
John Mack Pond	17	3	2	2
Center Pond	15	2	2	2
Twin Ponds	26	3	1	1
South Pond	10	2	2	2
Buckhorn Ponds	10	3	2	2
Prier Pond	8	1	1	1
Brown Pond	6	1	1	1
Upper Pine Pond	5	1	1	1
Hayes Flow	10	1	1	1
Duck Meadow Flow	–	1	1	1
Second Pond Flow	--	1	1	1
Bog Meadow	–	2	2	2
TOTAL		**114**	**88**	**88**

Designated Camping Sites Within The
Siamese Ponds Wilderness
Rivers and Streams

Name of Water	Size (Miles)	Campsites 1987	Present	Proposed
River Crossing Branch Sacandaga	20	4	2	2
County Line Brook	19	2	2	2
Wakely Brook	9.5	2	2	2
Shanty Brook	7	1	2	2
Second Pond Brook	8.5	1	1	1
Cross Brook	4.5	1	1	1
Robb Creek	4	2	2	2
Puffer Brook	3.5	2	2	2
Humphrey Brook	--	2	2	2
MaComber Creek	3	2	2	2
Hayes Creek	2	2	1	1
Curtis Brook	1	1	1	1
Round Pond Brook	1	1	0	0
Diamond Brook	--	1	1	1
TOTAL		**24**	**22**	**22**

Designated Camping Sites Within The

Siamese Ponds Wilderness

Other Areas

Name of Area	Size	Campsites		
		1987	Present	Proposed
Chimney Mountain	--	2	1	1
Old Farm Clearing	--	3	1	1
Big Shanty Clearing	--	1	1	1
Kunjamuk Access	--	4	2	2
Burnt Shanty Clearing	--	2	1	1
Curtis Clearing	--	1	1	1
Rte. 8 Trailhead	--	1	1	1
Dipper Dam Meadow	--	1	1	1
Humphrey Mountain	--	1	1	1
John Pond Trail	--	2	2	2
Bullhead Mt.	--	1	1	1
TOTAL		**19**	**14**	**14**

2. Control of User Groups

Generally, large groups tend to have a disproportionate impact on an area. If they attempt to camp close together, large numbers of people may cause damage that would not occur if the group were to spread out or break up among designated campsites.

6NYCRR 190.4(c) requires groups of 10 or more persons who intend to camp together to obtain a permit from the local Forest Ranger. This regulation is inconsistent with the APSLMP, which on page 18 defines a primitive tent site as "a designated tent site of an undeveloped character providing space for not more than three tents, which may have an associated pit privy and fire ring, designed to accommodate a maximum of eight people on a temporary or transient basis, and located so as to accommodate the need for shelter in a manner least intrusive on the surrounding environment." Consistent with APSLMP guidelines, the maximum overnight group size in the SPW will be limited to 8 people.

6NYCRR 190.13(c) places the following restrictions on group size:

1. In the Eastern High Peaks Zone or Western High Peaks Zone, no person shall
   i. be part of a day use group containing sixteen or more people;
   ii. on or after July 1, 2001, camp as part of a group including nine or more people; or
   iii. be a member of an affiliated day use or camping group which exceeds the numerical limitations established in items (i) or (ii) above, unless such group has separated into smaller groups which do not exceed such limitations and such smaller groups maintain a separation distance from each other of at least one mile at all times.

6NYCRR 190.13(c) will be amended so that it also applies to the SPW. Camping permits will not be issued for groups of more than 8 persons in SPW to comply with this regulation. Persons camping in groups of 8 or less will still be allowed to camp without a permit.

3. Trail Registers

Regular monitoring of the existing trail registers within the SPW will supply more complete use data for future management decisions. The registers will provide data on type (day or overnight), location, amount and purpose of use. Lands and Forest, Forest Ranger and Operations staff will work together to insure that the trail register information is collected and tabulated on a regular basis. The local Forest Ranger will continue to be responsible for collecting the register sheets, as the register sheets are often necessary for search and rescue efforts.

4. Rare and Endangered Species

Information regarding rare and endangered species is recorded in the Master Habitat Data Base in the Albany office of the DEC. The location of all known rare and endangered species will be analyzed. Public use of these areas will be diverted to other less sensitive areas.

5. Fisheries Regulations

The special restrictive angling regulations that apply to Hour Pond, Peaked Mountain Pond, and their tributaries indirectly limit public use of these waters. This is particularly true for the small tributary streams as they are incapable of producing legal size trout under existing size restrictions. Once it becomes common knowledge that a particular stream does not produce fish that meet the legal size limit, public use of that stream will decrease dramatically, and may discontinue altogether.

The use and possession of baitfish is prohibited throughout the SPW. This regulation will serve to protect native fish communities and reduce the likelihood and frequency that pond reclamations will be required in the future.

These restrictive regulations will remain in effect. Additional use controls that may be imposed to protect other resources or resource values may further limit public use of the fishery resource.

6. Motor Boats in the Siamese Ponds Wilderness

6 NYCRR 196.4 prohibits the operation of mechanically propelled vessels and aircraft in the SPW. In addition, page 22 of the APSLMP prohibits the public use of motor vehicles, equipment and aircraft in Wilderness Areas. The operation of mechanically propelled vessels and aircraft is prohibited on all of the following bodies of water in the SPW:

Siamese Ponds Wilderness Area
USGS Quadrangle (15' Series) Thirteenth Lake N 43˚ 30', W 74˚ 00'
Towns of Thurman, Johnsburg and Wells, Indian Lake
Counties of Warren and Hamilton

Name	Latitude	Longitude
Mud Pond	43˚ 45' N	74˚ 12' W
Center Pond	43˚ 45' N	74˚ 13' W
Clear Pond	43˚ 44' N	74˚ 12' W
John Pond	43˚ 44' N	74˚ 12' W
Brown Pond	43˚ 45' N	74˚ 07' W
Peaked Mountain Pond	43˚ 43' N	74˚ 09' W
Hour Pond	43˚ 42' N	74˚ 10' W
Unnamed Pond	43˚ 42' N	74˚ 06' W
Botheration Pond	43˚ 41' N	74˚ 06' W
Unnamed Ponds (2)	43˚ 41' N	74˚ 10' W
Puffer Pond	43˚ 41' N	74˚ 12' W
Round Pond	43˚ 41' W	74˚ 15' W
Twin Ponds (2)	43˚ 40' N	74˚ 11' W
Buck Meadow Flow	43˚ 40' N	74˚ 09' W
Second Pond	43˚ 40' N	74˚ 05' W
Mud Pond	43˚ 39' N	74˚ 05' W
Unnamed Pond	43˚ 39' N	74˚ 11' W
North Pond	43˚ 38' N	74˚ 11' W
Unnamed Pond	43˚ 38' N	74˚ 08' W
Unnamed Pond	43˚ 38' N	74˚ 14' W
Siamese Ponds (2)	43˚ 37' N	74˚ 11' W
South Pond	43˚ 36' N	74˚ 13' W
Unnamed Ponds (2)	43˚ 36' N	74˚ 09' W
Unnamed Ponds (3)	43˚ 36' N	74˚ 09' W
Mud Ponds (2)	43˚ 34' N	74˚ 11' W
Hayes Flow	43˚ 32' N	74˚ 14' W
Buckhorn Ponds (4)	43˚ 31' N	74˚ 13' W
Unnamed Pond	43˚ 31' N	74˚ 12' W

Siamese Ponds Wilderness Area
USGS Quadrangle (15' Series) Indian Lake N 43˚ 30', W 74˚ 15'
Towns of Indian Lake, Lake Pleasant, Wells
County of Hamilton

Name	Latitude	Longitude
John Mack Pond	43˚ 39' N	74˚ 18' W
Unnamed Pond	43˚ 39' N	74˚ 16' W
Long Pond	43˚ 38' N	74˚ 17' W
Unnamed Pond	43˚ 38' N	74˚ 17' W
Rock Pond	43˚ 38' N	74˚ 18' W
Upper Pine Lakes (1)	43˚ 36' N	74˚ 17' W

Siamese Ponds Wilderness Area
USGS Quadrangle (15' Series) Newcomb N 43˚ 45', W 74˚ 00'
Town of Indian Lake
County of Hamilton

Name	Latitude	Longitude
Grassy Ponds (2)	43˚ 46' N	74˚ 07' W
Gardner	43˚ 45' N	74˚ 07' W

These restrictive regulations will remain in effect. Additional use controls may be imposed to protect other resources or resource values.

7. Invasive Plants Proposed Management

Prior to implementing targeted containment and/or eradication controls, terrestrial invasive plant infestations occurring within the Siamese Ponds Wilderness Area 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 (BMP's) 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 exacting infestation and 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.

The Department will enter into cooperative partnerships through AANR agreements and TRPs to facilitate containment and eradication of the invasive plant occurrences on the unit. Any eradication work involving the use of herbicides will be carried out under an Inter-Agency

Work Plan For Management of Terrestrial Invasive Plant Species On State Land in the Adirondack Park (Invasive Plant Work Plan), developed by DEC and APA. This Invasive Plant Work Plan will provide a template for the process through which comprehensive active terrestrial invasive plant management will take place on State lands in the Adirondack Park. The Work Plan will provide protocols for implementing BMP's on State land. The protocols will describe what management practices are acceptable and when they can be implemented, who can be authorized to implement the management practices, and which terrestrial invasive plant species are targeted. The Work Plan also describes a process by which the Department may enter into AANR Agreements with and facilitate individuals or groups seeking to manage terrestrial invasive plant species on State ands using the listed best management practices, including herbicide use, in the appropriate circumstances. The Invasive Plant Work Plan will be subject to SEQRA and serve as the mechanism for assessing the impacts, and suitability of eradication BMPs and actions.

Terrestrial Plants

Target "easy to contain – low abundance" terrestrial infestations within the Siamese Ponds Wilderness Area as immediate targets for containment and/or eradication controls. Minimizing the spread of newly documented and immature infestations before they have the chance to become well-established should be considered a priority management action.

Fortunately, the majority of documented Priority terrestrial invasive species in proximity to Siamese Ponds Wilderness Area are confined to State, County and Town ROWs. APIPP, NYS DOT and Hamilton County SWCD have assessed specific infestations that have expanded beyond these ROWs. ED/RR control efforts will be implemented at these assessed infestations.

While **yellow iris** is not currently designated a priority terrestrial invasive plant species by APIPP, these documented infestations affecting the unit are the largest known occurrences of this invasive species within the Adirondack Park. The species' historical record of difficulty to control, and potential domination of stream corridors and wetlands, makes it a species of critical concern for all land managers within the Adirondack Park. Existing infestations of yellow iris directly affecting the SPWA should be considered a **High Priority** management action. NYS DEC will work with APIPP on an Early Detection/Rapid Response inventory and GPS referencing of these infestations where they occur below the Vly Pond and within the headwaters of the East Branch Sacandaga River. APIPP is working collaboratively with Barton Mines in order to implement yellow iris containment/ eradication controls at their tailings pond in 2005. Adirondack Nature Conservancy staff and Barton Mines, have secured APA Individual Permit issued under General Permit 2003G-1 in order to begin controls at the tailings pond through September 2005.

The Vly, upper Sacandaga River and Barton Mines tailings pond may also require a Title 6 NYCRR 327/328 Permit. NYS DEC will physically inspect these multiple sites with APIPP staff to determine sites' conditions, needs and applicability, and foster collaboration with APIPP and other experts in order to research and determine the appropriate BMPs for yellow iris infestations on State Lands.

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 NYS DEC, 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** (*Potamogeton 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 invasibility 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 **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) and management efforts.

Siamese Ponds Wilderness Area has remote lakes and ponds with limited public access. Thirteenth Lake permits car top or hand launches, and Indian Lake permits a hard surface ramp launch. Aquatic invasive plants are primarily spread via human activities, therefore Thirteenth Lake and Indian Lake are at higher risk of invasion. APIPP volunteers monitored Thirteenth Lake and Indian Lake in 2002-2004, and no aquatic invasive plant infestations are documented to-date. The APIPP Park-wide volunteer monitoring program aims to maintain its monitoring program on these and other lakes. The DEC Citizens Statewide Lakes Assessment Program (CSLAP) identified occurrences of Eurasian watermilfoil (*Myriophyllum spicatum*) in the adjacent Jessup River Wild Forest. The DEC CSLAP and Darrin Fresh Water Institute identified occurrences of Eurasian watermilfoil (*Myriophyllum spicatum*) and Fanwort (*Cabomba caroliniana*) in the adjacent Wilcox Wild Forest. All aquatic invasive species pose a risk of spreading via transport mechanisms.

For species specific information regarding natural history, ecology, and reproduction, please refer to the Invasive Plant Atlas of New England program website http://webapps.lib.uconn.edu/ipane/search.cfm

Aquatic Actions

No aquatic plant occurrences are reported within the Siamese Ponds Wilderness Area, therefore there are no management recommendations prescribed at this time. However, ongoing inventory is required to detect new invasive plant occurrences. Thirteenth Lake and Indian Lake as well as other lakes with public access should be inventoried for the presence of aquatic invasive plants. If aquatic invasive plant infestations occur, rapid response should be implemented by hand-pulling plants via the guidelines set forth by the Adirondack Park Agency's "Advice on the Handharvesting of Nuisance and Invasive Aquatic Plants." Additional methods may be required to manage an infestation to contain, reduce, or eradicate the population. Management will require assessing a set of criteria to evaluate site conditions to determine appropriate and permitted actions.

Additional research and collaboration with conservation partners such as NY Natural Heritage Program, Invasive Plant Atlas of New England (IPANE), APA and the Adirondack Nature Conservancy should occur prior to implementing best management practices for the *Iris pseudacorus* infestations within the SPWA.

All management recommendations are based on knowledge of nonnative invasive species present in a 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, location, and condition.

Facilities and designated and passive activities within the Unit may influence invasive plant species introduction, establishment, and distribution throughout and beyond the Unit boundaries.

Areas of ingress/egress, whether motorized or non-motorized traffic, of frequently utilized facilities warrants an elevated response to ED/RR inventory for invasive species.
These facilities and activities are likely to serve as "hosts" for invasive plant establishment. Perpetual ED/RR protocols should be implemented for probable hosts of invasive plant introduction. These probable hosts include the following:

- Public Day Use Areas
- Campgrounds
- Boat Launches
- Horse Trails and other trails

Protocols to minimize the introduction and transfer of invasive plant species should be incorporated during routine operations and historic 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 UMP should be certified as weed-free.

Administrative Camping Area

- The Camping Area should be inventoried for invasive plant establishment on a yearly basis.
- Staging areas of spring clean-up debris and soils within the Campground should be closely monitored for invasive plant establishment.

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 UMP should be certified as weed-free.

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 DEC 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.

E. Fisheries Proposed Management

Unit inventory data for the SPW indicates that the number of ponds with brook trout present has not changed significantly between the early and the latter survey periods, but many of the brook trout populations in the unit now are marginal in nature and face severe competition from nonnatives. Brook trout fisheries in 16 of the 26 historic brook trout ponds in the unit are maintained through stocking; 8 historic brook trout ponds are not presently stocked with brook

trout. Hour Pond, and Peaked Mt. Pond currently have adequate natural reproduction; Kings Flow and Rock Pond have been abandoned as trout waters due to competition from introduced species; Thirteenth Lake and Round Pond (UH-P 590) are now managed for other salmonids which are better adapted to compete with introduced fishes; and Upper and Lower Buckhorn Pond are no longer stocked, except by migration from Middle Buckhorn Pond.

Competing fishes limit the number of self-sustaining brook trout populations. If species introductions continue in the unit, brook trout populations will be impacted further. The two remaining self-sustaining brook trout populations in the unit could be eliminated if nonnative or widely-introduced competing species become established. For example, in the late 1970's a premier fishery for wild, Little Tupper Lake strain brook trout disappeared from Thirteenth Lake as competing species became established.

Little Tupper Lake strain brook trout were introduced to Hour and Peaked Mountain Ponds in the early 1970's following reclamations and wild, self-sustaining populations were established. Little Tupper Lake strain brook trout ponds in the SPW play a significant role in the management of Wilderness ponds throughout the Adirondacks by acting as refugia and by providing a source of fish and eggs to meet requirements for initial stocking of other ponds following reclamation or liming.

Lake trout were endemic to two or three waters in the unit. Lake trout were eliminated from Thirteenth Lake by reclamation, but were not reintroduced in favor of a fishery for other salmonids.

The occurrence of brown bullhead and creek chub (native species) has increased since the early period (Appendix 7). Common shiner occurrence has not changed between the early and latter periods.

The number of ponds with native redbreast sunfish declined from three ponds to one pond from the early period to the latter period. Native redbreast sunfish were found in John Mack Pond, Thirteenth Lake, and in Kings Flow during the early survey period but were eliminated from John Mack Pond and Thirteenth Lake by reclamation. Redbreast sunfish were collected in Kings Flow in 1932 and 1957, but not during subsequent surveys. They may still be present in Kings Flow in low numbers, although a recent fisheries survey (1999)failed to detect them. Redbreast sunfish and fish communities that include redbreast sunfish are uncommon in the Adirondack ecological zone. ALSC data indicates redbreast sunfish occurred in about 3% of the waters surveyed in the Adirondack ecological zone.

Abundance of pumpkinseed, blacknose dace, white sucker and northern redbelly dace declined slightly between the early and late survey periods (Appendix 7), yet they are secure in the unit. These species occur in numerous waters that were not studied during the 1932 Biological Survey (i.e. unavailable for the historical comparison shown in Table 3) as follows: pumpkinseed - Botheration Pond, Center Pond, Kings Flow, Lake Snow, Long Pond, and Round Pond; white sucker - Botheration Pond, Center Pond, Crotched Pond, John Mack Pond, John Pond, Kings Flow, Lake Snow, Lower Siamese Pond, Round Pond, and Thirteenth Lake; blacknose dace - Clear Pond, Kings Flow, Long Pond, Prier Pond, Rock Pond, Lower Siamese Pond, Upper Siamese Pond, and Thirteenth Lake; northern redbelly dace - Botheration Pond, John Pond and, although not identified in recent surveys, they probably still occur in Kings Flow after being collected there in 1953.

Pumpkinseeds and fish communities that include pumpkinseeds as well as white sucker, northern redbelly dace and blacknose dace are extremely abundant in the Adirondack ecological zone. ALSC data indicates pumpkinseeds are the fifth most widespread fish, and the fourth most widespread of the native fishes, in the Adirondack ecological zone. Brown bullhead are the most widespread fish in the Adirondack ecological zone. White sucker are the third most widespread fish in the Adirondack ecological zone. Creek chub are the sixth most widespread fish, and the fifth most widespread of the native fishes, in the Adirondack ecological zone. Northern redbelly dace are the eighth most widespread fish, and the sixth most widespread of the native fishes, in the Adirondack ecological zone. Common shiner are the ninth most widespread fish, and the seventh most widespread of the native fishes, in the Adirondack ecological zone. Blacknose dace are the nineteenth most widespread fish, and the ninth most widespread of the native fishes, in the Adirondack ecological zone.

Communities with native fishes are abundant in the SPW. Eleven ponds contain natives only and 19 ponds contain communities of natives and nonnatives (see Appendix 7). Indeed, as discussed above and indicated in Appendix 7, two native species (brown bullhead and creek chub) presently occur in more ponds than they historically have.

Based on an analysis of twenty waters with data from the early survey period to the late survey period, a number of nonnatives have been introduced to and/or spread within the unit. (Appendix 7). The number of ponds with nonnative golden shiner have increased more than 35 percent in the unit from the early to late survey periods. Landlocked salmon and alewife were established in Thirteenth Lake during the later survey period. Largemouth bass appeared in Kings Flow in 1979 and nonnative spotfin shiner appeared in Clear Pond following its reclamation in 1950.

As discussed in the Fisheries section of the “Resource Inventory Overview,” brook trout were clearly a significant component of the historic fish community. Based on the paucity of self-sustaining brook trout populations, combined with the increased distribution of native-but-widely-introduced and nonnative fishes, efforts to restore and maintain natural fish communities in the unit must reduce the distribution and establishment of nonnatives (especially the golden shiner which has more than doubled its abundance since the early period) and native-but-widely-introduced species. Apparently, the redbreast sunfish was not historically abundant in the unit, but its limited distribution today suggests that efforts to maintain its occurrence would be prudent.

Reclamations are the only practical technique available to reduce the distributions of nonnatives and native-but-widely-introduced fishes. Therefore, two reclamations are planned for the unit and another eight reclamations (seven ponds) will take place if nonnatives or other fishes become established. As noted under "Facilities Development" and "Maintenance and Rehabilitation of Facilities," pre-reclamation surveys include assessment of physical and chemical characteristics, need and feasibility of constructing a fish barrier and configuration of wetlands.

The following reclamations are proposed:

- Only two reclamations are planned during the 5 year planning period, unless new fisheries surveys reveal that non-native or other serious trout competitors have become established in trout waters with the potential to be reclaimed. These two reclamations will be on waters which contain nonnatives (Clear Pond and John Pond). The distribution of native-but-widely-introduced brown bullhead will be somewhat reduced to more closely resemble the early survey period. The distribution of native-but-widely-introduced blacknose dace will be reduced but they are abundant throughout the park and probably common to most streams in the unit.

- Reclamations are possible on Hour Pond, McComb Pond, Peaked Mt. Pond and Puffer Pond upon the establishment of nonnatives or other fishes that jeopardize brook trout populations. It is likely that only some or none of these waters will require treatment during the five year planning period. Before any of these waters are reclaimed, the unit management plan will be amended to include the project in the Schedule for Implementation and the pond narrative will be revised to reflect the new survey information.

Brown bullhead will be eliminated from Clear Pond and John Pond but they presently occur in more ponds in the unit than they did during the earlier survey period and they are widely distributed throughout the Adirondacks.

Creek chub will be eliminated from John Pond but they presently occur in more ponds in the unit than they did during the earlier period and are widely distributed throughout the Adirondacks.

White sucker would be eliminated from John Pond but they are widely distributed throughout the Adirondacks.

The number of ponds containing redbreast sunfish will be unaffected by planned brook trout restorations. Kings Flow was recently surveyed to determine if redbreast sunfish are present. Because redbreast sunfish are apparently no longer present they will be restored. They will also be introduced into Prier Pond.

Waters listed by fish community groups before implementation of planned activities are shown in Appendix 7. Waters listed by fish community groups after implementation of fish management activities are also shown in Appendix 7. The planned activities are expected to result in a 16 percent reduction in the number of ponds containing nonnatives.

Projected results of fish management activities proposed in this 5-year unit management plan are:

- Two newly reclaimed ponds; Clear Pond and John Pond. If both reclamations are completely successful, two new natives only ponds would result.

- Up to four reclamations would take place upon the establishment of nonnatives or other fishes that jeopardize brook trout populations Hour Pond, McComb Pond, Peaked Mt. Pond, and Puffer Pond. Five additional brook trout monocultures would result.

- Redbreast sunfish will be restored to Kings Flow and introduced into Prier Pond.

The above activities will restore natural (historic) fish resources to several waters in the SPW, and thus are consistent with the first goal for management activities (Section III.B.3.). In addition, they provide angling opportunity as per the second goal. The nature of access, the emphasis on native fishes, and the outstanding aesthetic setting add to the Wilderness aspect to angling in the SPW. Quality of the angling experience, as opposed to quantity, is emphasized by excluding the following fish management activities:

- Intensive management by way of incremental stocking through the fishing season to maximize the quantity of trout caught;

- Stocking of large-sized yearling trout for put-and-take fisheries;

- Regulations which maximize use such as year-round seasons;

- Reclamation for the benefit of nonnative species.

No fish management activities are proposed on waters naturally barren of fishes that have not been previously stocked, as per the third goal. Stocking will only include native or historically associated fishes.

Retreatments of reclaimed ponds will not be automatically scheduled or planned. Retreatment needs will be based on biological surveys and incorporated in five-year revisions of the unit plan. Proposed treatments will be justified in accordance with unit plan goals and objectives based on the Wilderness management guidelines as outlined in this UMP. Remote waters such as those in Wilderness designated areas typically remain free of competing fish much longer than roadside waters. This may be because of the difficulty of transporting live bait

fish to remote Wilderness ponds. There are numerous examples of remote waters that have remained free of competing species in excess of 15 to 20 years.

The following is a brief description of pond management classifications and each pond in the SPW and its assigned fisheries management classification.

Pond Management Classifications

Adirondack Brook Trout Ponds - Adirondack Zone ponds which support and are managed for populations of brook trout, sometimes in company with other salmonid fish species. These waters generally lack warmwater fishes but frequently support bullheads. Management may include stocking.

Coldwater Ponds and Lakes - Lakes and ponds which support and are managed for populations of several salmonids. These waters generally lack warmwater fishes but frequently support bullheads. Management may include stocking.

Other Ponds and Lakes - Fishless waters and waters containing fish communities consisting of native and nonnative fishes which will be managed for their intrinsic ecological value.

Two-Story Ponds and Lakes - Waters which simultaneously support and are managed for populations of coldwater and warmwater game fishes. The bulk of the lake trout and rainbow trout resource fall within this class of waters. Management may include stocking.

Unknown Ponds and Lakes - Waters which could not be assigned to the subprogram categories specifically addressed in this document due to a lack of or paucity of survey information.

Warmwater Ponds and Lakes - Waters which support and are managed for populations of warmwater game fishes and lack significant populations of salmonid fishes. Management may include stocking.

Siamese Pond Wilderness Unit Management Plan Pond Descriptions

1. **Ackerman Pond (UH-P311)**

Ackerman Pond is a 2 acre, shallow pond. A 1970 DEC survey indicated that it contained only the native-but-widely-introduced brown bullhead. The pond was not studied during the 1932 Biological Survey. A 1957 survey collected brown bullhead. The pond was reclaimed in 1967 and brook trout stocking commenced in 1968. A 1970 follow-up survey collected only brown bullhead and it was concluded that the pond had only a limited ability to support brook trout on a year-round basis. Stocking was discontinued, based upon this conclusion.

Ackerman Pond will be managed to preserve its native fish community for its intrinsic value.

Management Class: Other

2. **Botheration Pond (UH-P300)**

Botheration Pond is a 20 acre pond. While not surveyed during the original New York Biological Survey, it was reported to be a good brook trout pond. It was first surveyed by DEC in 1983 and had a fish community consisting of brook trout, white sucker, and northern redbelly dace; native-but-widely-introduced creek chub, pumpkinseed, and brown bullhead; and, nonnative golden shiner. Botheration Pond is not a candidate for reclamation with rotenone because of extensive non-treatable wetlands on its outlet and for lack of a suitable site to construct a fish barrier dam. Because of the number of competitive species found in the pond, management for native brook trout is probably futile. A brown trout stocking policy was initiated in 1996. A follow-up survey in 1999 showed that the brown trout were surviving. Due to inclement weather, the survey did not include gear normally set to assess minnow species. Angler reports have suggested that the brown trout are providing a successful fishery.

Botheration Pond will be managed as a coldwater pond to preserve its native fishes in the presence of historically associated and nonnative species.

Management Class: Coldwater

3. **Brown Pond (UH-P539)**

Brown Pond is a 7 acre pond that was not surveyed during the original New York Biological Survey. A survey attempt was made in 1957, but the nets were stolen and thus no results are available. Brook trout, brown bullhead (native-but-widely-introduced) and shiners (spp.) were reported at that time. File data is sparse, but Brown Pond may have been reclaimed during the reclamation of Thirteenth Lake in 1970. Stocking has been sporadic, and a 1997 survey showed the pond to be fishless. The survey also showed that Brown Pond has favorable oxygen and pH for brook trout. Brown Pond is being experimentally stocked with brook trout. The fact that the fish species present in Thirteenth Lake (downstream of Brown Pond) have not migrated into Brown Pond indicates that a natural fish barrier exists between the two waters.

Brown Pond will be managed as an Adirondack brook trout pond to restore a native fish community.

Management Class: Adirondack brook trout

Buckhorn Ponds

The Buckhorn Ponds (Lower, Middle and Upper) are three small ponds adjacent to each other on the side of Buckhorn Mountain. Their names are somewhat confusing, as their names do not correspond with their relative position in the watershed. Lower Buckhorn Pond and Middle Buckhorn Pond both are tributary to Upper Buckhorn Pond. Both Lower and Upper Buckhorn are small and shallow, with limited fisheries potential. Middle Buckhorn Pond has a maximum depth of approximately 25 feet and is the only one of the three to have a verified history of providing significant fish and fishing. None of the three ponds was studied during the original New York State Biological Survey, but as was customary for remote, "unseen" ponds, data sheets with notes pertinent to stocking and reported species were made out for each of the three ponds. Unfortunately, the data sheets are conflicting, and thus cloud the historical perspective. One sheet reports that early stocking attempts of the Buckhorn Ponds were successful and many large trout were present. Another sheet states that a Mr. Nichols reported that stocking attempts had met "no success whatever". It does appear that the note about large trout being present was added at a slightly later date, and probably supersedes Mr. Nichols' report.

Because the three ponds are interconnected by low gradient streams, they cannot be managed separately. Any management strategy must consider all three waters. Any fish species stocked will have access to the other two waters. One pond cannot be reclaimed without treating the other two, as fish might seek refuge, even temporary refuge in untreated water.

Hatchery journals cite that stocking occurred in the Buckhorn Ponds in 1918,1920, 1921, 1927, 1928 and in1930. It is likely that the Buckhorn Ponds are historic brook trout ponds because brook trout were often stocked in waters where they were known to be present.

4. **Buckhorn Pond (Lower) (UH-P285)**

See discussion above regarding historical information. Lower Buckhorn Pond is approximately 3 acres in size, and has a maximum depth of 5 feet. As mentioned above, Lower Buckhorn flows to Upper Buckhorn, a point of confusion when examining the history of these waters.

The only netting survey ever undertaken of Lower Buckhorn Pond was by DEC in October of 1995. No fish were captured. The air equilibrium pH was 4.43, a value below what is considered desirable for fish production. Bureau of Fisheries staff conducting the 1995 survey determined that a reclamation of the three Buckhorn Ponds is feasible.

Lower Buckhorn Pond will be managed in concert with Upper Buckhorn Pond and Middle Buckhorn Pond as an Adirondack brook trout pond. If in the future, it is decided to reclaim Middle Buckhorn Pond then Lower Buckhorn Pond and Upper Buckhorn Pond will be reclaimed to prevent fish from seeking refuge in untreated waters. The Siamese Ponds Unit Management

Plan will be amended as necessary to reflect new information and this decision. The schedule of implementation will also be revised.

Management Class: Adirondack brook trout

5. **Buckhorn Pond (Middle) (UH-P 284)**

See discussion above regarding historical information. Middle Buckhorn Pond is a 7 acre pond. Middle Buckhorn Pond was first surveyed in June of 1963 by DEC. This survey captured brook trout and golden shiners. The fisheries staff concluded that a reclamation of Middle Buckhorn Pond, including the two interconnected ponds, Lower Buckhorn Pond and Upper Buckhorn Pond, was feasible but not necessary at that time. The survey recommended a continuation of the brook trout stocking program.

The most recent survey, conducted by DEC in 1995 found a similar fish community consisting of brook trout - maintained by stocking and nonnative golden shiner. The same species were collected in a 1963 DEC survey. Good catches of brook trout were reported at Middle Buckhorn Pond by anglers in 1976. The Bureau of Fisheries staff conducting the 1995 survey reaffirmed the feasability of treating the Buckhorn Ponds should a reclamation be determined to be desirable.

Middle Buckhorn Pond is presently providing an adequate brook trout fishery in the presence of nonnative golden shiners. This fishery is sustained by annual stocking. Golden shiner is a species that often severely competes with brook trout and can be very detrimental to establishing self-sustaining populations of brook trout. If the decision were made to attempt to establish a brook trout fishery that was maintained by natural reproduction, a fish reclamation with rotenone would be necessary. Similarly, if Middle Buckhorn Pond was chosen as a refuge water for an Adirondack heritage strain of brook trout, a reclamation would be necessary to remove the existing brook trout of hatchery origin. Lastly, a reclamation may become necessary if additional fish species become established and cause the brook trout population to decline.

Middle Buckhorn Pond will be managed as an Adirondack brook trout pond in concert with Upper Buckhorn Pond and Lower Buckhorn Pond. If in the future, it is decided to reclaim Middle Buckhorn Pond then Lower Buckhorn Pond and Upper Buckhorn Pond will be reclaimed to prevent fish from seeking refuge in untreated waters. The Siamese Ponds Unit Management Plan will be amended as necessary to reflect new information and this decision. The schedule of implementation will also be revised.

Management Class: Adirondack brook trout

6. **Buckhorn Pond (Upper) (UH-P 283)**

See discussion above regarding historical information. Upper Buckhorn Pond is a small shallow pond. Its reported size varies, likely as beaver activity on its outlet waxes and wanes. Upper Buckhorn Pond was first survey in June of 1963 by DEC. That survey captured one brook trout.

Upper Buckhorn Pond was surveyed again by DEC in October of 1995. No fish were captured and the air equilibrium pH was measured at 4.75, a value below what is considered desirable for fish production. Bureau of Fisheries staff conducting the 1995 survey determined that a reclamation of the three Buckhorn Ponds is feasible. The beaver dam on the outlet was inactive at the time of the survey, and Upper Buckhorn Pond contained little water. There is an excellent natural barrier on the outlet of Upper Buckhorn Pond, which prevents unwanted fish species from gaining access to the Buckhorn Ponds via the outlet.

Upper Buckhorn Pond will be managed in concert with Lower Buckhorn Pond and Middle Buckhorn Pond as an Adirondack brook trout pond. If in the future, it is decided to reclaim Middle Buckhorn Pond then Lower Buckhorn Pond and Upper Buckhorn Pond will be reclaimed to prevent fish from seeking refuge in untreated waters. The Siamese Ponds Unit Management Plan will be amended as necessary to reflect new information and this decision. The schedule of implementation will also be revised.

Management Class: Adirondack brook trout

7. **Center Pond (UH-P 593)**

Center Pond is a 16 acre pond surrounded by floating bog. It was first surveyed during the original Biological Survey of New York during September of 1932. The 1932 netting effort documented brook trout and white suckers, as well as native-but-widely-introduced creek chubs, brown bullheads and pumpkinseeds. The pond was reported to contain chain pickerel and smallmouth bass, two non-native species, at that time as well. A 1953 survey confirmed the presence of non-native northern pike and golden shiners. The pond was reclaimed with rotenone in September of 1953. A 1965 netting check indicated that many competitive species had reestablished during the intervening years and the pond was reclaimed again in 1969. A 1983 survey revealed that again many species had become established in the pond. The survey showed that Center Pond had a fish community consisting of brook trout, common shiner, northern redbelly dace, and white sucker; native-but-widely-introduced brown bullhead, creek chub, and pumpkinseed; and nonnative golden shiner. Center Pond does not have the physical attributes to be considered as a reclamation candidate by today's standards whereby we strive for long term success. It should be noted that Center Pond was treated during and era when the goals of the fish reclamation program were different.

Center Pond will be managed as a coldwater pond to preserve its native fishes in the presence of historically associated and nonnative species.

Management Class: Coldwater.

8. **Clear Pond (UH-P 594)**

Clear Pond is a 19 acre pond which is tributary to Center Pond. It was not surveyed during the original New York State Biological Survey, but non-native pickerel and smallmouth bass were reported at that time (1932). A net check in July of 1950 captured northern pike (probably the species reported as pickerel in 1932) and pumkinseeds. The pond was reclaimed with rotenone

in October of 1950. This early reclamation was successful in eliminating trout competitors and the pond only contained brook trout in 1961, 1965 and 1979, a period extending nearly 30 years. Ultimately fish species considered to be trout competitors did become established in the pond and a 1991 DEC survey documented a fish community consisting of brook trout and blacknose dace; native-but-widely-introduced brown bullhead; and nonnative golden shiner and spotfin shiner. The pond is an excellent reclamation candidate and has a barrier dam 0.25 miles downstream of the pond that requires renovation.

Clear Pond will be reclaimed and managed as an Adirondack brook trout pond to enhance and restore a native fish community.

Management Class: Adirondack brook trout

9. **Crotched Pond (UH-P 598)**

Crotched Pond is a 62 acre pond bordering private property. Based on a 1987 Adirondack Lake Survey Corporation (ALSC) survey it has a fish community consisting of brook trout and white sucker; native-but-widely-introduced creek chub; and nonnative golden shiner. The pond was not netted during the 1932 Biological Survey but yellow perch were reported. Old hatchery records show that Crotched Pond was first stocked with brook trout in 1900. It is likely that Crotched Pond is a historic brook trout pond because brook trout were often stocked in waters where they were known to be present. Although whitefish fry were stocked in 1904 they were not collected in later surveys. A 1956 survey collected northern pike, white sucker, golden shiner, brown bullhead, yellow perch, and rock bass. The 1956 survey noted the presence of a fish barrier on the outlet, so the accrual of species suggests unauthorized introductions by man. The pond was reclaimed in 1958. Brook trout, white sucker, and golden shiner were collected in 1965 and 1978. Creek chub were added to the species list in 1978. Crotched Pond should be surveyed again in order to make sound management decisions. No reclamation is anticipated at this time. It is noteworthy that the reclamation of 1958 eliminated yellow perch, rock bass and northern pike; all serious non-native competitors to brook trout. A pond reclamation would be considered if these species or other serious non-native competitors are found to be established. A natural barrier exists on the outlet just below the pond.

Crotched Pond will be managed as an Adirondack brook trout pond to preserve and protect its native fishes in the presence of nonnative species.

Management Class: Adirondack brook trout

10. **Gardner Pond (UH-P 546)**

Gardner Pond is a 3 acre pond that has never been surveyed and therefore has an unknown fish community. Brook trout were reported by Warrensburg Hatchery staff in 1932.

Management Class: Unknown

11. **Grassy Pond (UH-P 545)**

Grassy Pond is a 2 acre pond that has never been surveyed and therefore has an unknown fish community. Downstream of Gardner Pond, brook trout were reported in Grassy Pond by Warrensburg Hatchery staff in 1932.

Management Class: Unknown

12. **Hayes Flow (UH-P 302)**

Hayes Flow is a 19 acre pond that received its first biological survey in 1995. This survey showed Hayes Flow to contain a native fish community of brook trout, white suckers and creek chubs. The water chemistry is very favorable with a pH of 7.06 and an acid neutralizing capacity of 104. The pond's shallow nature (maximum depth of 4 feet) limits its ability to provide suitable habitat for brook trout, although they persist. White suckers are very abundant.

Hayes flow will be managed as an Adirondack brook trout pond to preserve and protect its native fishes.

Management Class: Adirondack brook trout.

13. **Hour Pond (UH-P 541)**

Hour Pond is a 35 acre pond. Based on a 1987 DEC survey it has a fish community consisting of brook trout and native-but-widely-introduced creek chub. Hour Pond was not netted during the 1932 Biological Survey, but handwritten hatchery journals cite that brook trout were stocked in 1906. Brook trout stocking probably commenced because they were already present. Its location at high elevation in the SPW prevents the movement of fishes into the pond from the lowlands. A 1957 survey collected brook trout and brown bullhead. Brook trout and creek chub were collected in 1968. The pond was reclaimed in 1970 as part of the Thirteenth Lake - Hour Pond - Peaked Mt. Pond complex. Heritage Little Tupper Lake strain brook trout were stocked following the reclamation and established a wild, self-sustaining population. A brook trout monoculture was present from 1970 to 1979. A 1979 survey collected brook trout and creek chub. A 1995 survey captured the same species.

Hour Pond will be managed as an Adirondack brook trout pond and will be reclaimed upon establishment of additional fish(es) to enhance and restore a native fish community. When a reclamation is determined to be necessary, the UMP will be amended to include it in the Schedule for Implementation and the pond narrative will be revised to reflect the new survey.

Management Class: Adirondack brook trout

14. **John Mack Pond (UH-P 599)**

John Mack Pond is a 27 acre pond. Not studied during the Original New York Biological Survey, it was first studied in 1955 when netting collected brook trout, white sucker, creek chub, brown bullhead, redbreast sunfish, and pumpkinseed. Hatchery journals cite that brook trout were stocked in 1900 and in 1914. It is very likely that John Mack Pond is a historic brook trout pond because brook trout were often stocked in waters where they were known to be present. Although whitefish fry were stocked in 1904 they were not collected in later surveys. A 1965 survey collected brook trout, redbreast sunfish, common shiner, pumpkinseed, creek chub, white sucker, and brown bullhead. John Mack Pond was reclaimed in 1968. Brook trout and landlocked salmon were collected during a 1970 survey along with brown bullheads, white suckers and creek chubs. Only the redbreast sunfish, pumpkinseed and common shiners were eliminated by the reclamation. John Mack Pond was most recently surveyed in 1995, when its fish community consisted of brook trout, brown bullhead, white sucker, creek chub and golden shiner. A rock barrier occurs 1 mile downstream from the pond.

John Mack Pond will be managed as an Adirondack brook trout pond to preserve and protect its native fishes in the presence of nonnative species. Its extensive wetlands preclude a second reclamation attempt.

Management Class: Adirondack brook trout

15. **John Pond (UH-P 596)**

John Pond is a 24 acre pond. When surveyed during the original New York State Biological Survey in 1932, John Pond had only brook trout, white sucker and brown bullhead. There is no record of stocking prior to the 1932 survey. The same species were collected in a 1956 survey. Brook trout and white sucker were collected in 1962 and again in 1965. Golden shiner were added to the list of species present in 1965. The pond was reclaimed in 1961 and again in 1968. Only brook trout were collected during a 1970 survey. A 1979 survey collected brook trout, white sucker, brown bullhead, creek chub, and northern redbelly dace. John Pond was most recently surveyed by DEC in July of 2000. The species complex now consists of brook trout, northern redbelly dace and white sucker, native-but-widely-introduced creek chub and brown bullhead and non-native golden shiner. John Pond is easy to reach by foot and a crib-style fish barrier dam protects it from upstream fish migrants. This barrier dam is in need of replacement. The accrual of species suggests bait-pail introductions.

John Pond will be reclaimed and managed as an Adirondack brook trout pond to enhance and restore a native fish community. Reconstruction of the fish barrier dam will precede the reclamation.

Management Class: Adirondack brook trout

16. **Kings Flow (UH-P 588a)**

Kings Flow is a 198 acre pond which owes much of its existence to a man-made concrete dam. Much of Kings Flow is in private ownership and public access to the Kings Flow is across

private land. Based upon an August 1999 DEC survey it has a fish community dominated by non-native fish species including yellow perch, rock bass, golden shiner and largemouth bass. White suckers (native) and native-but-widely-introduced brown bullheads are also present. The survey showed that pH and ANC are relatively high and favorable for diverse fish communities. Kings Flow was sampled during the original New York State in 1932. This survey documented native white sucker, northern redbelly dace, common shiner and redbreast sunfish, native-but-widely-introduced creek chub, pumpkinseed and brown bullhead and non-native golden shiner. Hatchery journals cite that brook trout were stocked in 1916, 1921 and in 1925. It is very likely that Kings Flow is a historic brook trout pond because brook trout were often stocked in waters where they were known to be present. A 1953 survey documented the establishment of yellow perch - a species known to devastate native brook trout populations. Brook trout stocking was discontinued in 1954. Largemouth bass were first documented by DEC in 1979. Redbreast sunfish were collected in 1932 and 1953, but not during subsequent surveys. An ecological analysis of the fish communities in the Siamese Ponds Wilderness indicates that redbreast sunfish occur in fewer waters now than they did historically. Redbreast sunfish will be reintroduced to Kings Flow.

Kings Flow will be managed as a warmwater pond to preserve its native fishes in the presence of nonnative species and historically associated species.

Management Class: Warmwater

17. **Lake Snow (UH-P 591a)**

Lake Snow is a 74 acre pond which is created by a manmade dam on Beaver Meadow Brook. With a maximum depth of eleven feet, the pond is best suited to warm water fish species. Based on a 1987 ALSC survey it has a fish community consisting of white sucker; native-but-widely-introduced brown bullhead and pumpkinseed; and nonnative largemouth bass, yellow perch, rock bass and golden shiner. Lake Snow was not studied during the 1932 Biological Survey. Lake Snow is in mixed ownership with many private camps along the shoreline. Public access is limited to bushwacking from Route 28.

Lake Snow will be managed as a warmwater pond to preserve its native fish in the presence of nonnative species.

Management Class: Warmwater

18. **Long Pond (UH-P 310)**

Long Pond is a 37 acre pond which is located entirely on state land. First surveyed during the original Biological Survey in 1932, gillnetting and seining collected brook trout, white sucker, blacknose dace and redbelly dace, native-but-widely-introduced pumpkinseed and creek chub and non-native golden shiner. Hatchery journals cite that brook trout were stocked in 1909 and the 1932 Biological Survey report cites stocking between 1922 and 1931. It is very likely that Long Pond is a historic brook trout pond because brook trout were often stocked in waters known to already contain them. Further, Wallace's Guide to the Adirondacks (1894) describes

Long Pond as good ".....for large specked trout." Long Pond is an excellent example of a water containing a nonnative fish species even by the time of the original biological survey. Some of the native and native-but-widely-introduced species may also be attributed to unauthorized introductions. Long Pond was reclaimed in 1967 as part of a large project to reclaim the headwaters of the Kunjamuk River. A 1968 survey collected only brook trout, but undesirable fish species did become reestablished soon after. The most recent survey of Long Pond was undertaken in September of 1987 by ALSC. This survey revealed a fish community dominated by non-native chain pickerel and golden shiners with native-but-widely-introduced pumpkinseed and brown bullhead. Two brook trout and two white suckers were also captured. All trout stocking was suspended based upon the 1987 survey. The outlet of Long Pond will be investigated to see if a natural barrier exists on the outlet or if there is a suitable site to build a manmade barrier. No reclamation is planned during the five year planning interval.

Long Pond will be managed as an Adirondack brook trout pond to preserve and protect the native fish in the presence of nonnatives.

Management Class: Adirondack brook trout

19. **McComb Pond (UH-P 282a)**

McComb Pond is a 6 acre pond with a native fish community consisting of brook trout and brown bullhead based on a 1995 DEC survey. McComb Pond was not studied during the original New York State Biological Survey. Anglers reported brook trout up to 2 pounds in 1975. Brook trout stocking commenced in 1975 based on these reports. Available information indicates that McComb Pond historically supported a wild, self-sustaining trout population. A natural fish barrier dam is located 0.25 mile downstream from the pond.

McComb Pond will be managed as an Adirondack brook trout pond and will be reclaimed upon establishment of additional fish(es) to enhance and restore a native fish community. When a reclamation is determined to be necessary, the UMP will be amended to include it in the Schedule for Implementation and the pond narrative will be revised to reflect the new survey data.

Management Class: Adirondack brook trout

20. **Mud Pond (UH-P 297)**

Mud Pond is a 5 acre pond located 2.5 miles southwest of Gore Mountain. Mud Pond received its first biological survey in September of 1996. Although the pond has favorable pH and ANC for fish survival, it contains no fish. Quite possibly it is fishless due to its remote nature and steep outlet. Consistent with the Guidelines for Fisheries Management in Wilderness, Primitive and Canoe Areas, the pond will not be stocked. Its aquatic resources will be managed for their intrinsic ecological value.

Management Class: Other

21. **Mud Pond (UH-P 595)**

Mud Pond is a small pond that has never been surveyed and therefore has an unknown fish community. It was formerly larger and is likely a beaver pond.

Management Class: Unknown

22. **Mud Pond (Lower) (UH-P 289)**

Upper and Lower Mud Ponds lie in a valley between Blue Hills and Long Pond Mountain.

Lower Mud Pond is a 9 acre pond. Based on a 1960 DEC survey it has a fish community consisting of brook trout and native-but-widely-introduced creek chub. Lower Mud Pond was not studied during the original New York State Biological Survey. Brook trout were first stocked in 1942. Based on the high gradient there may be a natural fish barrier on its outlet.

Lower Mud Pond will be managed as an Adirondack brook trout pond to preserve and protect its native fishes in the presence of native-but-widely-introduced species.
Management Class: Adirondack brook trout

23. **Mud Pond (Upper) (UH-P 290)**

Upper Mud Pond is an 8 acre pond connected to Lower Mud Pond. Based on a 1960 DEC survey it has a fish community consisting of brook trout and native-but-widely-introduced creek chub. Upper Mud Pond was not studied during the original New York State Biological Survey. See Lower Mud Pond for discussion.

Upper Mud Pond will be managed in conjunction with Lower Mud Pond and will be managed as an Adirondack brook trout pond to preserve and protect its native fishes in the presence of a native-but-widely-introduced species.

Management Class: Adirondack brook trout

24. **North Upper Pine Pond (UH-P 306)**

North Upper and South Upper Pine Ponds lie in a valley along the west side of Pine Mountain, Hamilton County, in the Town of Wells.

North Upper Pine Pond is a 6 acre pond. Based on a 1995 DEC survey it has a fish community consisting of brook trout and nonnative golden shiner. North Upper Pine Pond was not studied during the 1932 Biological Survey, but stocking was reported.

North Upper Pine Pond will be managed as an Adirondack brook trout pond to preserve and protect its native fish in the presence of nonnative species.

Management Class: Adirondack brook trout

25. **South Upper Pine Pond (UH-P 307)**

South Upper Pine Pond is a 4 acre pond. Based on a 1995 survey it has a fish community consisting of native-but-widely-introduced brown bullheads and nonnative golden shiner. South Upper Pine Pond was not netted during the 1932 Biological Survey but a stocking policy was implemented in that year. A 1957 survey collected only brook trout. A 1961 survey did not capture any fish, but minnows were observed.

South Upper Pine Pond will be managed as an Adirondack brook trout pond to preserve its native fish in the presence of a nonnative species.

Management Class: Adirondack brook trout

26. **Peaked Mt. Pond (UH-P 542)**

Peaked Mt. Pond is a 21 acre pond which is tributary to Thirteenth Lake. Based on 1995 and 1999 DEC surveys it has a fish community consisting of brook trout maintained by natural reproduction and native-but-widely-introduced creek chub. Peaked Mt. Pond was not netted during the 1932 Biological Survey, but early records indicate that it was stocked with brook trout by 1906. It is very likely that Peaked Mt. Pond is a historic brook trout pond because brook trout were often stocked in waters where they were known to be present. A 1957 survey collected brook trout and creek chub. During the succeeding eleven years (from a 1968 DEC survey) the pond accrued two additional species: the native-but-widely-introduced brown bullhead and nonnative golden shiner. Peaked Mt. Pond was reclaimed in 1970 as part of the Hour Pond - Thirteenth Lake complex and was restocked with heritage Little Tupper Lake strain brook trout. Little Tupper Lake strain brook trout were stocked in 1971 and 1972. Surveys in 1972, 1973, and 1974 collected only brook trout. Creek chubs reappeared in the1995 survey. Peaked Mt. Pond is one of a very few remaining heritage strain brook trout ponds on state land. It has been utilized as a donor water to replenish brood stocks for hatchery propagation of the strain. A series of small waterfalls on the outlet of Peaked Mt. Pond prevents the reentry of fishes from downstream.

Peaked Mt. Pond will be managed as an Adirondack brook trout pond and will be reclaimed upon establishment of additional fish(es) to enhance and restore a native fish community. When a reclamation is determined to be necessary, the UMP will be amended to include it in the Schedule for Implementation and the pond narrative will be revised to reflect the new survey information.

Management Class: Adirondack brook trout

27. **Prier Pond (UH-P 544)**

Prier Pond is a 14 acre pond which is accessed by a half mile carry from NY Route 28. The pond was first surveyed in 1963 by DEC and had a fish community consisting of native-but-widely-introduced brown bullhead and nonnative golden shiner. Blacknose dace were reported to possibly occur in 1963. Prier Pond was not netted during the 1932 Biological

Survey, but brook trout were reported. Prier Pond was likely a historic brook trout pond based on the presence of brook trout at the time of the Biological Survey. Brook trout stocking was initiated following the 1963 survey. Prier Pond was again surveyed by DEC in 1980. This survey documented the establishment of native-but-widely-introduced creek chubs and native redbelly dace. Reclamation of the pond is not feasible because large wetlands on the inlet to the pond precludes effective treatment.

Prier Pond will be managed as an Adirondack brook trout pond to preserve its native fishes in the presence of a nonnative species. It will be stocked with redbreast sunfish, a native fish species known to have declined in the Siamese Ponds Wilderness.

Management Class: Adirondack brook trout

28. **Puffer Pond (UH-P 589)**

Puffer Pond is a 42 acre pond which is accessed by means of a two mile trail from Kings Flow. The 1932 Biological Survey collected brook trout and golden shiner. Golden shiner were reported to be a recent introduction in the 1932 Biological Survey report. Hatchery journals cite that brook trout were stocked in 1910 and in 1930. Puffer Pond is believed to be a historic brook trout pond. The 1910 brook trout stocking probably took place because they were already present. Puffer Pond is known contain suitable habitat for brook trout reproduction; a 1987 ALSC survey captured brook trout shown to be naturally produced fish.

A survey in 1959 collected brook trout and brown bullhead; golden shiner were observed. A 1969 survey collected brook trout and brown bullhead. A 1995 survey collected brook trout, golden shiner and brown bullhead. The pond was reclaimed with rotenone in 1998. The Siamese Ponds Wilderness Unit Management Plan was amended to facilitate this project. Puffer Pond was stocked with Horn Lake Strain brook trout following the reclamation. It is scheduled to receive a survey to check the progress of the fisheries restoration. Anglers report good fishing for this heritage strain.

The outlet passes through a 2-mile-long valley to the southwest of Puffer Mountain and has a slide type natural fish barrier about 1 mile downstream from the pond.

Puffer Pond will be managed as an Adirondack brook trout pond and will be reclaimed upon establishment of additional fish(es) to enhance and restore a native fish community. When a reclamation is determined to be necessary, the UMP will be amended to include it in the Schedule for Implementation and the pond narrative will be revised to reflect the new survey information.

Management Class: Adirondack brook trout

29. **Rock Pond (UH-P 309)**

Rock Pond is a 35 acre pond which can be reached by a 5 mile trail from Indian Lake or a 2 mile trail from the Kaunjamuk River from International Paper lands. Based on 1978 and 1995 DEC

surveys it has a fish community consisting of white sucker; native-but-widely-introduced brown bullhead and pumpkinseed; and nonnative chain pickerel and golden shiner. The 1932 Biological Survey collected brook trout, white sucker, pumpkinseed, brown bullhead, creek chub, blacknose dace and northern redbelly dace. Hatchery journals cite that brook trout were stocked in 1930. Brook trout were stocked in 1910 probably because they already were present. Wallace's Guide to the Adirondacks (1894) describes Rock Pond as offering ".....fine trouting". Northern pike and brown bullhead were collected in 1957. The pond was reclaimed in 1967. Brook trout and rainbow trout stocking began in 1968. A 1970 DEC survey collected brook trout, rainbow trout, and brown bullhead, but rainbow trout stocking was discontinued following the survey. Chain pickerel and pumpkinseed were observed in 1977 and their presence was confirmed by the 1978 DEC survey. The accrual of species at Rock Pond, in conjunction with poor treatment feasibility for reclamation (no natural or potential barrier site), is another example of how introduced fishes have eliminated a brook trout population which can not be restored. It is likely that largemouth bass may now be in the pond as they are known to be established in the Kunjamuk River system.

Rock Pond will be managed as a warmwater pond to preserve its native fishes in the presence of nonnative species.

Management Class: Warmwater

30. **Round Pond (UH-P 590)**

Round Pond is a 135 acre pond which is most easily accessed by a 1.5 mile trail from Kings Flow. First surveyed during the original New York State Biological Survey in 1932, Round Pond had a fish community consisting of brook trout, white sucker and northern redbelly dace, native-but-widely-introduced brown bullhead, creek chub and pumpkinseed. Hatchery records show that Round Pond was stocked with brook trout in 1916 and 1921. These early stockings of brook trout suggest that the pond naturally contained the species as brook trout were generally stocked in waters where they were known to exist.

Round Pond was surveyed by ALSC in 1987, a survey which documented white sucker, brown bullhead, pumpkinseed, creek chub and nonnative golden shiner. Following the 1987 survey, Round Pond was experimentally stocked with brown trout, a piscivorus species, better suited to waters with abundant trout competitors. Two follow up DEC surveys, undertaken in 1995 and 2002, revealed that brown trout were not a satisfactory management option for Round Pond.

Round Pond will be experimentally stocked with largemouth bass, a species known to thrive in the presence of many competitive fish species. Round Pond will be managed as a warmwater pond to preserve its native fishes in the presence of nonnative and historically associated species.

Management Class: Warmwater

31. **Round Pond (UH-P 296)**

Round Pond is a 6 acre pond. Round Pond was not studied during the 1932 Biological Survey. A 1987 ALSC survey collected brown bullhead. The pH of round Pond was 5.4 in August 1987 but fell to 4.9 in September of the same year. Only about 3 acres of the pond are in excess of 5 feet deep; therefore, the pond may not support trout during some years due to excessive temperatures or low dissolved oxygen for salmonids. The most recent survey, an August 1998 effort, confirmed a native fish community consisting of only brown bullheads.

Round Pond will be managed to preserve its native fish community for its intrinsic value.

Management Class: Other

32. **Second Pond (UH-P 298)**

Second Pond is a 46 acre pond which may be accessed by a 2 mile trail from the Chatiemac Lake Road. Second Pond was not netted during the original New York State Biological Survey, but was reported to be a good brook trout pond. Hatchery journals cite that brook trout were stocked in 1906 and in 1909. These early stockings of brook trout suggest that the pond naturally contained the species as brook trout were generally stocked in waters where they were known to exist. An annual brook trout stocking policy was initiated pursuant to the 1932 Biological Survey report. A 1957 survey collected brook trout, native-but-widely-introduced creek chubs and brown bullheads and nonnative golden shiners. Second Pond was most recently surveyed by DEC in July of 2000, when only brook trout and golden shiners were captured. The brook trout catch was relatively high. Because of extensive wetlands, Second Pond is not a likely reclamation candidate should the brook trout population fail due to competitive pressure from introduced fish species. Hopefully, the pond will not acquire additional species and the brook trout will continue to succeed in the presence of nonnative golden shiners. Golden shiners are a species shown to inhibit brook trout production and reproduction. The outlet of Second Pond flows downstream to Second Pond Brook which then flows into the East Branch of the Sacandaga River.

Second Pond will be managed as an Adirondack brook trout pond to preserve its native fish in the presence of a nonnative species.

Management Class: Adirondack brook trout

33. **Siamese Pond (Lower) (UH-P 292)**

Siamese Ponds lie between Hayden Mountain and Long Pine Mountain. They are best accessed via a Six mile trail which leaves NY State Route 8 southwest of Bakers Mills. There is no natural fish barrier between Upper and Lower Siamese Ponds.

Lower Siamese Pond is a 96-acre pond and has a maximum depth in excess of 75 feet. A1997 DEC survey revealed that Lower Siamese Pond has a fish community consisting of lake trout, brook trout and white sucker; native-but-widely-introduced creek chub and brown bullhead;

nonnative golden shiner and lake whitefish. Studied during the original New York State Biological Survey in 1932, shore seining captured creek chub and blacknose dace and described the lake as well suited for lake trout. The survey reported that both Upper and Lower Siamese Ponds were stocked with lake trout by Bert Robins of Bakers Mills. A 1970 survey collected lake trout, lake whitefish, and brown bullhead. A 1987 ALSC survey found the same species as those collected in 1997 except golden shiner. Golden shiner are believed to be a recent introduction because they were collected for the first time in 1997. Although natural reproduction has maintained the lake trout population in modern times, the uniqueness of any native lake trout may have been compromised by the early stocking of lake trout of unknown lineage. Based upon the 1997 survey, Lower Siamese Pond is being experimentally stocked with rainbow trout.

Lower Siamese Pond will be managed as a coldwater pond to preserve its native fishes in the presence of nonnative and historically associated fish species.

Management Class: Coldwater

34. **Siamese Pond (Upper) (UH-P 293)**

Upper Siamese Pond is a 27 acre pond with a maximum depth of 44 feet. A 1997 DEC survey revealed that Upper Siamese Pond has a fish community consisting of lake trout, brook trout, blacknose dace and white sucker; native-but-widely-introduced creek chub; and nonnative golden shiner. Lake trout and brook trout and native-but-widely-introduced brown bullhead were collected in 1970. Nonnative golden shiner are believed to be a recent introduction. Upper Siamese Pond was studied during the 1932 Biological Survey, but a 4 hour gillnet set did not catch any fish. Based upon the 1997 survey, Upper Siamese Pond is being experimentally stocked with rainbow trout.

Upper Siamese Pond will be managed as a coldwater pond to preserve its native fishes in the presence of nonnative and historically associated fish species.

Management Class: Coldwater

35. **South Pond (UH-P 312)**

South Pond is a remote 8 acre pond. Based on a 1995 DEC survey it has a fish community consisting of brook trout only. South Pond was not studied during the 1932 Biological Survey. Hatchery journals cite that brook trout were stocked in 1906 and in 1909. South Pond is believed to be a natural brook trout pond. The historic presence of brook trout probably led to the first stocking in 1906. South Pond was reclaimed in 1967 as part of a large project to reclaim the upper portion of the Kunjamuk River and brook trout stocking was initiated in 1968. Surveys in 1970 and 1995 collected only brook trout.

South Pond is the source of the Kunjamuk River and lies between South Pond Mountain and Horseshoe Mountain. A natural fish barrier dam exists approximately 200 yards downstream from the pond.

South Pond will be managed as an Adirondack brook trout pond and will be reclaimed upon establishment of additional fish(es) to enhance and restore a native fish community. When a reclamation is determined to be necessary, the UMP will be amended to include it in the Schedule for Implementation and the pond narrative will be revised to reflect the new survey information.

Management Class: Adirondack brook trout

36. **Thirteenth Lake (UH-P 540)**

Thirteenth Lake is a 336 acre pond with a long history of fisheries management. Based on a compilation of survey data it has a fish community consisting of brook trout, white sucker, and common shiner; native-but-widely- introduced brown bullhead and creek chub; historically associated landlocked salmon, brown trout and rainbow trout and nonnative golden shiner. The original New York State Biological Survey, conducted in 1932, collected brook trout, common shiner, white sucker, cutlips minnow, redbreast sunfish, creek chub, and blacknose dace. Lake trout were reported but not collected.

Hatchery journals cite that brook trout were stocked in 1895 and 1909 and frostfish (round whitefish) in 1895. These early stockings of brook trout suggest that the pond naturally contained the species as brook trout were generally stocked in waters where they were known to exist. A 1952 survey revealed a fish community that was increasingly becoming dominated by nonnative fish species, including yellow perch and golden shiners. Over the ensuing years many species and varieties of fish were stocked in an effort to establish a productive fishery.

Thirteenth Lake was reclaimed in 1970 along with Hour Pond and Peaked Mountain Pond in order to establish a native heritage brook trout brood stock. Heritage Little Tupper Lake strain brook trout were stocked in 1973. Landlocked salmon were introduced in 1973. A 1974 survey collected brook trout and landlocked salmon. Brook trout attained NSA status in 1976, but reproduction failed some time in the early 1980's due to resurgence of competing species. Although the outlet of Thirteenth Lake has a high gradient there is no fish barrier which is effective in keeping out all species. It is important to note that the outlet is an effective barrier to yellow perch, a fish species known to be a relatively weak swimmer. Yellow perch, a very serious competitor to salmonid species; particularly brook trout, have not reestablished in the system since the reclamation 34 years ago. A 1982 survey collected brook trout, landlocked salmon, white sucker, brown bullhead, and creek chub. Brook trout stocking resumed in 1982 following the survey. Brown trout were introduced in 1985 along with alewife. Landlocked salmon grew slowly and stocking was discontinued in 1985, although a remnant wild population persists. A 1987 ALSC survey collected brook trout, landlocked salmon, brown trout, white sucker, brown bullhead, alewife, golden shiner, common shiner, and creek chub. A 1991 survey collected brook trout, landlocked salmon, brown trout, rainbow trout, creek chub, white sucker, blacknose dace, brown bullhead, and golden shiner.

Although the outlet is steep with numerous small waterfalls, a site upon which to build a more effective fish barrier does not occur on state land A fisheries reclamation of Thirteenth Lake and its tributary waters is not planned at this time. However, if a suitable site should be acquired in

the future, or if fish species that is both a serious trout competitor and a poor swimmer (like yellow perch) should become established, the advisability of a reclamation will be reevaluated. The Unit Management Plan will be amended as necessary to reflect this information and decision.

Thirteenth Lake will be managed as an coldwater pond to protect its native fishes in the presence of nonnative and historically associated fish species.

Management Class: Coldwater

37. **Twin Pond (Lower) (UH-P 294)**

Upper and Lower Twin Ponds are connected by a short stream. The outlet of Twin Ponds flows down the side of Buck Meadow Mountain. After the outlet flows down Buck Meadow Mountain it reaches a large wetland complex called Buck Meadow Flow. The accrual of species at Twin Ponds, in conjunction with poor treatment feasibility (no natural or potential barrier site), is another example of a location where introduced fishes have eliminated a brook trout populations which can not be restored.

Lower Twin Pond is a 16-acre pond. Based on a 1987 ALSC survey it has a fish community consisting of brook trout; native-but-widely-introduced brown bullhead; and, nonnative golden shiner. Lower Twin Pond was not netted during the 1932 Biological Survey. The historic presence of brook trout probably led to the first stocking of the Twin Ponds in 1920. Annual brook trout stocking commenced in the 1950's. A 1978 DEC and a 1987 ALSC survey collected brook trout, brown bullhead, and golden shiner.

Lower Twin Pond will be managed as an Adirondack brook trout pond to preserve its native fish in the presence of a nonnative species.

Management Class: Adirondack brook trout

38. **Twin Pond (Upper) (UH-P 295)**

Upper Twin Pond is a 17 acre pond connected to Lower Twin Pond. Based on a 1978 DEC survey it has a fish community consisting of brook trout; native-but-widely-introduced brown bullhead; and nonnative golden shiner. Upper Twin Pond was not netted during the 1932 Biological Survey. The historic presence of brook trout probably led to the first stocking of the Twin Ponds in 1920. A 1957 survey collected brook trout, golden shiner, and brown bullhead. A 1969 survey collected brook trout and brown bullhead.

Upper Twin Pond will be managed as an Adirondack brook trout pond to preserve its native fish in the presence of a nonnative species.

Management Class: Adirondack brook trout

39- 80. **Unnamed Ponds**

Forty unnamed ponds located within the unit range in size from 0.5 acres to 14.1 acres and comprise a total of 127 acres. Although these ponds have never been surveyed, they probably contain native and nonnative fish communities.

Management Class: Unknown

F. Wildlife Proposed Management

Hunters and non-hunters have mutual interests in the wildlife resources. Both groups desire species abundance in order to observe wildlife in their natural environment. Use of the resources by both groups are, and continue to be compatible. Management of wildlife resources must be responsible to the public as well as the wildlife resource.

Management of wildlife resources in the SPW can only occur through the application of harvest regulation and managing public use by controlling access and/or directing the public away from sensitive areas. The wildlife management recommendations for SPW are listed below.

1. Deer Management

Deer management in the SPW, or the Adirondacks in general, has been a controversial issue. The Strategic Plan for Whitetailed Deer in Northern New York calls for encouraging both consumptive and non-consumptive recreational use of deer. Since, a) only 30 to 40 percent of the available deer are harvested in the Adirondacks, b) the antlerless deer are being lost primarily from starvation, c) the starvation losses of some fawns and adults cannot be completely controlled, and d) habitat cannot be manipulated in units classified as Wilderness to benefit deer, the DEC's Bureau of Wildlife's philosophy is to continue to encourage the maximum use of the deer resource. The outcome will be better utilization of a renewable resource, deer population levels closer to range carrying capacity, and minimizing losses due to other sources of mortality, especially starvation.

2. Deer Hunting

Evaluate methods to encourage deer hunting in the interior of SPW in conjunction with above.

3. Black Bear Hunting

Expand recreational opportunities for hunting black bear. Harvest and age composition data demonstrates that a higher removal rate is possible. The Regional Strategic Plan for black bear should identify the options available and the techniques to be employed.

4. Ruffed Grouse

Encourage ruffed grouse and varying hare hunting among sportsmen seeking solitude and the aesthetic qualities of the SPW.

5. Beaver

Maintain beaver occupancy levels of 30-40%. Maintain an annual harvest of 3000-5000 animals in Wildlife Management Unit 5H. Furthermore, annually document nuisance beaver complaints and impacts to the fisheries and existing facilities to determine if remedial action will be required.

6. American Marten

Verify the presence or absence of a marten population in the SPW. If still absent, the area will be considered for suitability of a future transfer of live, trapped, wild marten into the SPW. Develop a contempary harvest management plan for American marten within its range in the Adirondacks (including SPW).

7. Birds

Continue to update the Breeding Bird Atlas of New York. Document the presence or absence of the boreal chickadee, gray jay, northern three-toed woodpecker, the black-backed three-toed woodpecker, and spruce grouse in the SPW.

In September of 1997, §11-2001 of the Environmental Conservation Law of New York was established creating the New York State Bird Conservation Area Program. The program is designed to safeguard and enhance bird populations and their habitats on selected state lands and waters.

In November of 2001, New York State designated the Adirondack mountain summits above 2,800 feet in Essex, Franklin, and Hamilton counties as the Adirondack Subalpine Forest Bird Conservation Area (BCA). Included in the designation were lands over 2,800 feet in elevation in the SPW, which comprise over 4,500 acres on the summits of Bullhead, County Line, Eleventh, Gore, Height of Land, Macomber and South Pond Mountains, and portions of The Big Range. The site was nominated because of its diverse species concentration, individual species concentration and its importance to species at risk, in particular the Bicknell's Thrush (special concern).

The vision for the Adirondack Subalpine Forest BCA is to “continue to maintain the wilderness quality of the area, while facilitating recreational opportunities in a manner consistent with conservation of the unique bird species present” (NYSDEC, 2001). The Department has developed Management Guidance Summary to identify education and research needs, and to outline operational management considerations. Considerations specific to the Unit include:

Operation and Management Considerations:

The BCA is comprised of lands that are within the High Peaks Wilderness Area and other lands within the broader Adirondack Forest Preserve. The HPWA portion is subject to relatively stringent regulations and use limitations. Portions of the BCA that are not within the HPWA may have less stringent use limitations.

To ensure disturbances are kept to a minimum, trail maintenance and construction activities should be accomplished outside of the breeding season, when possible. If, in accordance with Department policy, motorized equipment use is necessary, such use shall be minimized during the breeding or nesting periods.

Education, Outreach and Research Considerations:

There is a need to educate the public on the distinctive bird community present in subalpine forests over 2,800 feet. The potential impacts of human intrusion need to be portrayed to the public, and a "please stay on the trails" approach may be beneficial. The Department should continue partnerships with the National Audubon Society, High Peaks Audubon Society, Adirondack Mountain Club and other groups involved in education and conservation of birds of the Adirondack High Peaks.

Acid rain deposition may be having an impact on nesting success of songbirds at high elevations by causing die-offs of high altitude conifer forests, and killing snails and other sources of calcium needed for egg production. More research is needed on this. The curtailment of sulphur dioxide emissions and the reduction of acid rain is currently a significant New York State initiative.

A detailed inventory and standardized monitoring of special concern species is needed for the area. In particular, all peaks above 2,800 feet in the SPW will be surveyed for Bicknell's Thrush.

The impact of the current levels of human use on nesting success needs to be assessed.

8. Unique Habitats

Identify interesting communities of flora and fauna for recognition that will enhance the public's awareness of Wilderness wildlife values.

9. Reintroduction of Species

No species re-introductions were scheduled for the SPW at the time this UMP was written. The UMP does propose to study the feasibility of re-introducing spruce grouse (see page 90). If a plan for the re-introduction of a species is developed this UMP will be amended to include the plan and the schedule.

10. Hunting and Trapping

Annually recommend hunting and trapping seasons.

G. Wild, Scenic and Recreational Rivers

The Kunjamuk River and East Branch of the Sacandaga River, within the boundaries of the SPW, are classified as wild rivers (ECL §§ 15-2714(1)(b) and 15-2713(1)(f), respectively) and the East and Main Branches of the Sacandaga River, where they form a part of the boundary of the Wilderness, are classified as recreational (ECL §§ 15-2714(3)(u) and (v), respectively) under the Wild, Scenic and Recreational Rivers Act. These rivers will be managed consistent with the guidelines of their classification as set forth in the ECL, the guidelines set forth on pages 44 through 46 of the APSLMP, June 2001, and 6 NYCRR Part 666.

H. Administration

1. Staffing

The SPW will be administered under the direction of an "Area Manager" appointed by the Regional Director. An area manager will be appointed from the DEC's Division of Lands and Forests staff at the Warrensburg office.

All activities which are proposed or occur in the area will be coordinated with the Area Manager. These include not only activities contemplated by Lands and Forests personnel, but also those being undertaken by the Division of Operations, Division of Fish and Wildlife, Division of Public Protection or any other unit of the Department. It is crucial to the administration of the area that it be managed as a coordinated unit and not be segregated by county, district or divisional lines.

Forest Rangers whose districts encompass part of the SPW will have direct on-the-ground administrative responsibilities within that portion of the SPW, but those activities will be coordinated through the Area Manager.

The Assistant Forest Ranger Program will be utilized to increase patrol of the area during the busy season. This program has proven to be very effective in communicating with and educating users. The assistant rangers will work with and be responsible to the Forest Ranger whose ranger district covers the largest portion of the SPW. Their primary duty will be Level 1 trail maintenance additional duties may include monitoring trailheads, interior patrol, public safety, minor law enforcement, facility security, public education, fire, search and rescue.

Assistant Forest Rangers are important to the management of the unit and will continue to be utilized on a seasonal basis from the early spring fishing season until at least mid-November. This will provide greater patrol coverage, employee safety and work accomplishment in Level 1 trail maintenance.

Winter use, presently increasing at a rapid rate, should be monitored over the next few years through the use of trail registers and existing Forest Ranger staff to determine whether future seasonal staffing should be adjusted.

Operations staff are responsible for the maintenance and construction of facilities in the SPW. The DEC trail crews from Indian Lake, Northville and Warrensburg are all responsible for portions of the SPW. Operations supervisors will meet periodically with the Area Manager to discuss maintenance needs and assist with the development of annual work plans and site specific work projects.

2. Budgeting

The "Area Manager" will be responsible for coordinating all budgeting for the SPW. Administrative budgeting will be done by the Division of Lands and Forests in consultation with the Division of Fish and Wildlife, Regional Operations staff and the local Forest Ranger. Construction and maintenance budgets will be developed by the Division of Operations and the Division of Lands and Forests in consultation with Fish and Wildlife.

3. Education

Maps and brochures describing the trails and related facilities in the area will be developed for public distribution. The Assistant Forest Ranger Program will be utilized to educate the public regarding Wilderness ethics and Department rules and regulations.

I. Other Issues

1. Trespass

On September 24, 1996, in the vicinity of Cross Mountain, Department staff from Real Property confirmed a timber trespass on a 2,615 acre tract known as the Big Range (Q-AFP Hamilton 236, lying between Robbs Creek and Upper Pine Lakes). This tract was acquired from International Paper Company, Inc. on December 12, 1984. The existing westerly line of Township 31 between IP and NYS was blazed on August 1, 1988 by DEC staff. However, there was no evidence of the line being painted prior to the September 24, 1996 inspection. On September 30, 1996 the blazed line was painted by Department Real Property staff.

On October 4, 1996 Lands and Forests staff investigated the trespass. The trespass encompassed approximately 56 acres, 122 trees with an estimated stumpage value of $4,407.93. Value was based on the most common price for each species reported in the NYS DEC Stumpage Price Report dated Summer 1996. An additional 206 trees (204 hardwoods and 3 softwoods) were knocked over or cut during harvest operations and/or skid trail development. These trees ranged from 3" - 8" DBH and were not considered to be of commercial value. There was significant bark damage on an additional 75 trees, mostly adjacent to the main haul roads.

A civil penalty was imposed and received from International Paper Company, Inc. and remedial work was performed to level and fill disturbed ground to prevent erosion and siltation.

Trees were top lopped to a maximum height of 36" and a rock barrier was installed to prevent future vehicle access to Forest Preserve lands. Additionally, road maintenance was performed on the Sled Harbor to Pillsbury Mountain Road.

2. Acid Rain

None of the ponded waters located in the SPW are considered acid endangered (ie., having a current pH range of 5.0 to 6.0). If acidity problems develop in the future, consideration for liming mitigation will be on a case-by-case basis incorporating the liming criteria and any new data as it becomes available. For a more detailed discussion of acid deposition in the Adirondack Park and the SPW, see page 22.

3. Land Acquisition

The Department's Land Acquisition Program is funded by the Environmental Quality Bond Acts of 1972 (ECL Article 51, Title 7), the Environmental Quality Bond Act of 1986 (ECL Article 52, Title 7), the Environmental Protection Act (ECL Article 54, Title 3), and the Clean Water, Clean Air Act of 1996 (ECL Article 56, §56-0307). The Department's open space protection policy, including acquisition, is governed by the State Open Space Plan, adopted pursuant to ECL Article 49, Title 2.

Land protection projects are to be coordinated through the Region 5 Real Property Supervisor. Additional DEC staff may assist with the evaluation and rating of a project upon request of the Real Property Supervisor.

All acquisitions will be from willing sellers in conformance with the Open Space Plan and Article 49, Title 2 of the Environmental Conservation Law. Periodic reviews of the program will be made to insure the regional acquisition list, as it pertains to this Wilderness, is kept current and reflects the goals and objectives of the area.

Current acquisition needs include:

- securing permanent public access to the Kings Flow area from Big Brook Road

- securing permanent public access to the Big Range from the western side of SPW

4. Relationship of SPW to Adjacent Areas

State facilities which affect this area are Indian Lake Islands Campground, Gore Mountain Ski Area, Wilcox Lake Wild Forest and Jessup River Wild Forest. Access to the SPW can be gained from the trails present at these adjacent state facilities.

Many of the campers at Indian Lake Islands Campground utilize the trails and ponds along the western section of the SPW for hiking and fishing. However, this does not present a substantial use pressure. Also, the presence of Gore Mountain Ski Area probably results in a slight increase in the use of the SPW for cross-country and telemark skiing.

The fact that Wilderness can be found nearby probably has a positive impact on adjacent resort facilities such as Garnet Hill Lodge; however, the degree of this impact is unknown. Additionally, many of the private camps and leased camps benefit by their proximity to the SPW.

V. Schedule for Implementation and Estimated Budget

The following tables outline a schedule for implementation of the proposed management actions and their estimated costs. Accomplishments are contingent upon sufficient staffing levels and available funding. The estimated costs 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.

The following assumptions and estimations were made in developing the attached budget:

- Cost estimates based on Job Order Contracts from Summer 1999.
- Assume 2.9 % annual inflation from 1999 to present and for years 1-5.
- Assume trail is brushed to 8' wide.
- Assume year 1 begins the first April after the Final SPW UMP has been adopted.

Hiking Trail Development

1) Clear and Grub Light Stumps (<6" DBH)

   $867.23/acre x 0.9697 acre/mile of 8 foot wide trail = $840.95/mile
   5,280 feet/mile x 8 feet = 42,240 $feet^2$/mile
   (42,240 $feet^2$/mile)/(43,560 $feet^2$/acre) = 0.9697 acre/mile
   $840.95 x (2.9% annual inflation x 5 years) = $962.89/mile for year 1

2) Mark and Sign Trails

   Assume: 3 staff hours per mile of trail for marking and signing x $17.44 = $52.32/mile in year 1

3) Waterbar Construction, Ditching, Hardening, etc. & Annual Maintenance

   Assume: 10% of trail length will need trail work
   therefore, 528 feet of trail work/mile of trail.
   30 feet per site = 528 feet/mile/30 feet = 18 sites/mile
   2 Man hours/site x 18 sites/mile = 36 Man hours/mile of trail
   36 Man hours/mile x $17.44/Man hour = $627.84/mile of trail in year 1 for maintenance

4) Total Trail Construction Cost = $962.89/mile + $52.32/mile + $627.84/mile = $1,643.05/mile
   Year 1 Construction Cost = $1,643.05/mile

Year 2 Construction Cost = $1,643.05/mile + 2.9% inflation = $1,690.70/mile
Year 3 Construction Cost = $1,690.70/mile + 2.9% inflation = $1,739.73/mile
Year 4 Construction Cost = $1,739.73/mile + 2.9% inflation = $1,790.18/mile
Year 5 Construction Cost = $1,790.18/mile + 2.9% inflation = $1,842.10/mile
Year 6 Construction Cost = $1,842.10/mile + 2.9% inflation = $1,895.52/mile

5) Annual Trail Maintenance Cost
Year 1 Annual Maintenance Cost = $627.84/mile
Year 2 Annual Maintenance Cost = $627.84/mile + 2.9% inflation = $646.05/mile
Year 3 Annual Maintenance Cost = $646.05/mile + 2.9% inflation = $664.78/mile
Year 4 Annual Maintenance Cost = $664.78/mile + 2.9% inflation = $684.06/mile
Year 5 Annual Maintenance Cost = $684.06/mile + 2.9% inflation = $703.90/mile
Year 6 Annual Maintenance Cost = $703.90/mile + 2.9% inflation = $724.31/mile

6) Labor Rate
Year 1 Labor Rate = $15.23/hour + (2.9% inflation/year x 5 years) = $17.44/hour
Year 2 Labor Rate = $17.44/hour + 2.9% inflation = $17.95/hour
Year 3 Labor Rate = $17.95/hour + 2.9% inflation = $18.47/hour
Year 4 Labor Rate = $18.47/hour + 2.9% inflation = $19.00/hour
Year 5 Labor Rate = $19.00/hour + 2.9% inflation = $19.55/hour
Year 6 Labor Rate = $19.55/hour + 2.9% inflation = $20.12/hour

Horse Trail Construction

1) Assume same cost of hiking trail ($1,643.05/mile) plus:

2) Prune to 8 feet at 40 hours/mile x $17.44/hour = $697.60/mile

3) Additional Trail Hardening

Additional 10% of trail hardening required for horse trail = $627.84/mile

4) Total Horse Trail Construction Cost = $1,643.05/mile + $697.60/mile + $627.84/mile
Year 1 Construction Cost = $2,968.49/mile
Year 2 Construction Cost = $2,968.49/mile + 2.9% inflation = $3,054.58/mile
Year 3 Construction Cost = $3,054.58/mile + 2.9% inflation = $3,143.16/mile
Year 4 Construction Cost = $3,143.16/mile + 2.9% inflation = $3,234.31/mile
Year 5 Construction Cost = $3,234.31/mile + 2.9% inflation = $3,328.11/mile
Year 6 Construction Cost = $3,328.11/mile + 2.9% inflation = $3,424.62/mile

5) Annual Maintenance
Year 1 Annual Maintenance Cost = $1,255.68/mile
Year 2 Annual Maintenance Cost = $1,255.68/mile + 2.9% inflation = $1,292.09/mile
Year 3 Annual Maintenance Cost = $1,292.09/mile + 2.9% inflation = $1,329.57/mile
Year 4 Annual Maintenance Cost = $1,329.57/mile + 2.9% inflation = $1,368.12/mile

Year 5 Annual Maintenance Cost = $1,368.12/mile + 2.9% inflation = $1,407.80/mile
Year 6 Annual Maintenance Cost = $1,407.80/mile + 2.9% inflation = $1,448.63/mile

Horse and Wagon Trail Construction

1) Assume same cost as that for horse trail plus additional 10% trail hardening
   Year 1 Construction Cost = $2,968.49/mile + $627.84/mile = $3,596.33/mile
   Year 2 Construction Cost = $3,596.33/mile + 2.9% inflation = $3,700.62/mile
   Year 3 Construction Cost = $3,700.62/mile + 2.9% inflation = $3,807.94/mile
   Year 4 Construction Cost = $3,807.94/mile + 2.9% inflation = $3,918.37/mile
   Year 5 Construction Cost = $3,918.37/mile + 2.9% inflation = $4,032.00/mile
   Year 6 Construction Cost = $4,032.00/mile + 2.9% inflation = $4,148.93/mile

2) Year 1 Annual Maintenance Cost = $1,255.68/mile
   Year 2 Annual Maintenance Cost = $1,255.68/mile + 2.9% inflation = $1,292.09/mile
   Year 3 Annual Maintenance Cost = $1,292.09/mile + 2.9% inflation = $1,329.57/mile
   Year 4 Annual Maintenance Cost = $1,329.57/mile + 2.9% inflation = $1,368.12/mile
   Year 5 Annual Maintenance Cost = $1,368.12/mile + 2.9% inflation = $1,407.80/mile
   Year 6 Annual Maintenance Cost = $1,407.80/mile + 2.9% inflation = $1,448.62/mile

YEAR 1 PROJECTS

Description	Cost
1) Develop 4 accessible primitive tent sites and a picnic area at the north end of Thirteenth Lake.	$10,000.00
2) Adopt regulations to limit Thirteenth Lake to electric motors only. **No new funds requested.**	$0.00
3) Develop 2.0 miles of horse trail from Fox Lair to Curtis Clearing	$5,937.00
4) Install 5 foot bridges on William Blake Pond Trail.	$15,000.00
5) Annual maintenance of trails. (52.1 miles of foot and ski trails)	$32,710.00
6) Annual snow removal at trailhead parking areas.	$4,000.00
7) Purchase search and rescue equipment for crossing rivers in the unit at times at times of high water. AIRE 143R self bailing raft, boot foot waders and .22 caliber line gun.	$5,000.00
8) Boundary line maintenance. (114 miles, 1/7 of boundary annually, 16.3 miles /year @ $250 /mile)	$4,075.00
9) Stabilization of shoreline entrances on Indian Lake.	$5,000.00
10) Replace fireplaces with firerings and remove picnic tables on Indian Lake.	$3,333.00
11) Close four campsites (#13, #27, #44, and #46) on Indian Lake. The closure of these sites will be initiated in year 1 and finished in year 3. **No new funds requested.**	$0.00
12) Conduct camper survey on Indian Lake. **No new funds requested.**	$0.00
13) Construct lean-tos on Indian Lake.	$20,000.00
14) Evaluate camp site conditions on Indian Lake. **No new funds requested.**	$0.00
15) Amend campground regulations. **No new funds requested.**	$0.00
16) Reclaim Clear Pond.	$8,000.00
17) Conduct assessment of facilities (designated campsites, trails parking areas, etc.) in the unit as part of LAC.	$30,000.00

18) Stock fish in unit waters 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). **No new funds requested.**	$0.00
19) Conduct biological and chemical surveys of selected unit waters to assess management needs and to determine progress towards the objectives stated in this plan. **No new funds requested.**	$0.00
20) Construct and install pumpable accessible privy at Thirteenth Lake parking area.	$2,500.00
Total	**$145,555.00**

YEAR 2 PROJECTS

Description	Cost
1) Monitor facilities (trails, campsites, parking areas, etc.) for LAC.	$10,000.00
2) Develop 6.0 miles of trail for use by horse and wagon from Old Farm Clearing to Cross Brook.	$22,203.72
3) Conduct assessment of facilities for compliance with ADAAG accessibility standards.	$30,000.00
4) Develop 2.0 miles of foot trail from Old Farm Clearing to Botheration Pond; to include a foot bridge over the Sacandaga River and the outlet of Botheration Pond	$9,479.00
5) Mark and maintain 2.7 miles of trail to Second Pond as a foot trail.	$1,836.00
6) Improve parking area at the Second Pond trailhead to accommodate 5 cars.	$1,000.00
7) Annual trail maintenance. (52.1 miles of foot and ski trails and 2.0 miles of horse trails)	$36,243.00
8) Annual snow removal.	$4,000.00
9) Boundary line maintenance. (16.3 miles)	$4,075.00
10) Stabilization of shoreline entrances on Indian Lake.	$5,000.00
11) Replace fireplaces with firerings and remove picnic tables on Indian Lake.	$3,333.00
12) Close four campsites (#13, #27, #44, and #46) on Indian Lake. The closure of these sites will be initiated in year 1 and finished in year 3. **No new funds requested.**	$0.00
13) Conduct camper survey on Indian Lake. **No new funds requested.**	$0.00
14) Construct lean-tos on Indian Lake.	$20,000.00
15) Evaluate camp site conditions on Indian Lake. **No new funds requested.**	$0.00
16) Stock fish in unit waters 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). **No new funds requested.**	$0.00

17) Conduct biological and chemical surveys of selected unit waters to assess management needs and to determine progress towards the objectives stated in this plan. **No new funds requested.**	$0.00
18) Conduct survey for Bicknell's thrush in the SPW UMP.	$10,000.00
19) Develop 1.5 miles of foot trail from Peaked Mountain Trail to Hour Pond Trail.	$2,610.00
Total	**$159,779.72**

YEAR 3 PROJECTS

Description	Cost
1) Monitor facilities (trails, campsites, parking areas, etc.) for LAC.	$10,000.00
2) Develop 2.5 miles of trail for use by horse and wagon from Big Brook Road to Round Pond.	$7,858.00
3) Develop 1.2 miles of foot trail from John Pond to Clear Pond.	$2,088.00
4) Conduct biological and chemical surveys of selected unit waters to assess management needs and to determine progress towards the objectives stated in this plan. **No new funds requested.**	$0.00
5) Annual trail maintenance. (58.3 miles of foot and ski trails and 8.0 miles of horse trails)	$49,394.00
6) Annual snow removal at trailhead parking areas.	$4,000.00
7) Boundary line maintenance. (16.3 miles/year)	$4,075.00
8) Stabilization of shoreline entrances on Indian Lake.	$5,000.00
9) Stock fish in unit waters 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). **No new funds requested.**	$0.00
10) Replace fireplaces with firerings and remove picnic tables on Indian Lake.	$3,333.00
11) Close four campsites (#13, #27, #44, and #46) on Indian Lake. The closure of these sites will be initiated in year 1 and finished in year 3. **No new funds requested.**	$0.00
12) Conduct camper survey on Indian Lake. **No new funds requested.**	$0.00
13) Construct lean-tos on Indian Lake.	$20,000.00
14) Evaluate camp site conditions on Indian Lake. **No new funds requested.**	$0.00
Total	**$105,748.00**

YEAR 4 PROJECTS

Description	Cost
1) Construct a lean-to at Hour Pond.	$6,700.00
2) Develop 1.0 mile of foot trail from the Kunjamuk Trail to Long Pond.	$1,790.00
3) Monitor facilities (trails, campsites, parking areas, etc.) for LAC.	$10,000.00
4) Conduct biological and chemical surveys of selected unit waters to assess management needs and to determine progress towards the objectives stated in this plan. **No new funds requested.**	$0.00
5) Develop 0.5 miles of foot trail from Botheration Pond to William Blake Pond Trail.	$895.00
6) Annual trail maintenance. (59.5 miles of hiking and ski trails, 10.5 miles of horse trails)	$55,067.00
7) Annual snow removal.	$4,000.00
8) Boundary line maintenance. (16.3 miles /year)	$4,075.00
9) Fisheries reclamation of John Pond. (Cost estimate for supplies and materials only)	$9,000.00
10) Stabilization of shoreline entrances on Indian Lake.	$5,000.00
11) Conduct camper survey on Indian Lake. **No new funds requested.**	$0.00
12) Construct lean-tos on Indian Lake.	$20,000.00
13) Evaluate camp site conditions on Indian Lake. **No new funds requested.**	$0.00
14) Stock fish in unit waters 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). **No new funds requested.**	$0.00
Total	**$116,527.00**

YEAR 5 PROJECTS

Description	Cost
1) Conduct biological and chemical surveys of selected unit waters to assess management needs and to determine progress towards the objectives stated in this plan. **No new funds requested.**	$0.00
2) Develop 1.5 mile of foot trail from William Blake Pond to Balm of Gilead Mountain.	$2,763.00
3) Reroute approximately 1.0 mile of foot trail from Peaked Mountain Pond to Peaked Mountain and brush in old trail.	$1,842.00
4) Annual trail maintenance. (61.0 miles of foot and ski trails, 10.5 miles of horse trails)	$57,720.00
5) Annual snow removal.	$4,000.00
6) Rebuild Sacandaga lean-to in a location outside the wild river corridor and dispose of old lean-to.	$8,000.00
7) Boundary line maintenance. (16.3 miles /year)	$4,075.00
8) Monitor facilities (trails, campsites, parking areas, etc.) for LAC.	
9) Stabilization of shoreline entrances on Indian Lake.	$5,000.00
10) Construct lean-tos on Indian Lake.	$20,000.00
11) Evaluate camp site conditions on Indian Lake. **No new funds requested.**	$0.00
12) Stock fish in unit waters 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). **No new funds requested.**	$0.00
13) Construct a 5 car parking area near the intersection of the William Blake Pond Trail and Barton Mines Road.	$3,000.00
Total	**$106,400.00**

ANNUAL PROJECTS FOR YEAR 6 AND BEYOND[1]

Description	Cost
1) Annual trail maintenance. (63.5 miles of foot and ski trails, 10.5 miles of horse trails)	$61,205.00
2) Annual snow removal.	$4,000.00
3) Boundary line maintenance. (114 miles, 1/7 of boundary annually, 16.3 miles /year @ $250 /mile)	$4,075.00
4) Stock fish in unit waters 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). **No new funds requested.**	$0.00
5) Conduct biological and chemical surveys of selected unit waters to assess management needs and to determine progress towards the objectives stated in this plan. **No new funds requested.**	$0.00
6) Monitor facilities (trails, campsites, parking areas, etc.) for LAC.	$10,000.00
Total	**$79,280.00**

[1] This schedule represents annual maintenance needs in years 6 and beyond of this plan as a result of the development of the facilities that currently exist and those that are proposed in this plan. This schedule may be changed through an amendment of the UMP if necessary or updated when the UMP is revised.

APPENDICES

Appendix 1 - Response to Public Comments

Appendix 2 - Tree Species of the SPW

Appendix 3 - Habitats of Birds in SPW

Appendix 4 - Mammals in SPW

Appendix 5 - Habitats of amphibians and reptiles observed in SPW

Appendix 6 - References For Wildlife Observed in SPW

Appendix 7 - Fisheries Tables for SPW

Appendix 8 - Trail Register Data of SPW

Appendix 9 - Definitions

Appendix 10 - Unit Management Planning Process

Appendix 11 - Unique Habitats of SPW

Appendix 12 - Maps

Appendix 1 - Response to Public Comments
HORSE TRAILS (Refer to pages 97-103 of the Draft SPW UMP.)

1. **Not satisfied with limited horse trails that are proposed.**
   The proposals for horse trails in the SPW UMP take into consideration the APSLMP, the ability of the resources to accommodate horse use, existing policies and regulations and the limited staff available to maintain facilities. Given these constraints the UMP proposes several horse trails.

2. **For prohibiting horses on 11th Mountain. For allowing horses on 11th Mountain.**
   Same as #1 above.

3. **The UMP encourages hunting in the interior. However, the proposed horse trails will limit this opportunity. The opportunity to pack hunting gear into a Wilderness with horses is already very limited in the Adirondacks.**
   One of the reasons for proposing horse trails in the SPW is to allow the continued use of horses as a means of facilitating hunting in the SPW. The designation of horse trails allow for future use of horses on these trails.

4. **Against development of horse trail from Old Farm Clearing to Cross Brook. The development and maintenance of this trail for horse and wagon will result in a road. Furthermore, a substantial number of trees will be cut.**
   This trail meets the requirements of the APSLMP and as an old road originally built for horse and wagon use can accommodate such use. The opportunities for designated horse trails in the SPW are very limited given the requirements of the APSLMP and the wetlands associated with many of the old roads. There is sufficient parking already at the proposed equestrian trail head. An immaterial number of trees need to be cut, in accordance of constitutional concepts, to accommodate horse and wagon. The primary worked needed is in stabilizing the tread by directing the water off the trail.

   The plan has been revised to require a permit for the use of horse and wagon. This will allow the Department to prevent use during the wettest time of the year. Furthermore, the gate at Old Farm Road will be left in place to prevent motor vehicle traffic. Equestrians on horse back, as opposed to a wagon, will be able to use the designated horse trails without a permit. However, the trails may be temporarily closed if necessary.

5. **Concerned over development of horse trail from Big Brook Road to Kunjamuk Road.**
   The UMP proposes that a portion of the Old Kunjamuk Road be designated as a horse trail. The remainder of the Old Kunjamuk Road will be reevaluated for possible designation as a horse trail in the next revision of the UMP. The majority of the trail to be opened in this UMP will be on a public right-of-way across International Paper lands. The parking area for this trail will be located in the adjacent Jessup River Wild Forest and will be discussed in the JRWF UMP.

6. **Concerned about illegal use by equestrians of undesignated trails.**
   Trails will be well signed to indicate appropriate use. Problems will be dealt with as they arise.

7. **Concerned that the designation of horse trails will increase use.**
   The existing laws require that trails that are designated as foot trails must also be designated as horse trails to allow for use by equestrians. It is likely that use by equestrians on designated trails will increase. The UMP recognizes the increased maintenance that will be required to allow for this use.

8. **Need analysis of impacts from horses in SPW.**
   See #1 above and pages 97-103 of SPW UMP.

9. **Concerned that there is not enough parking at the trail heads designated for horse use.**
   This was considered while evaluating potential trails to designate as horse trails. There is sufficient room at the Old Farm Trail head. There is sufficient room at Oregon for the development of a parking area. As Oregon is located in the Wilcox Lake Wild Forest, the development of a parking area and access to the trail will be addressed in the WLWF UMP. There is sufficient room off the Big Brook Road to provide trailhead parking for the Old Kunjamuk Road. This trailhead is within the Jessup River Wild Forest and will be discussed in the JRWF UMP.

10. **Concern over width of horse trails.**
    As required by APSLMP these trails will be located on old roads. Existing DEC policy allows for 8' cleared width on foot trails. The use of horses will not require additional widening beyond the existing road width or DEC policy. It will be necessary to provide overhead clearance for equestrians, but the canopy will not be altered and the wilderness character will be kept. This will require pruning at some locations. The use of horse and wagon requires a wider clearance than horseback riding. However, the two locations where wagon use is proposed, Old Kunjamuk Road and Old Farm Clearing Trail, are sufficiently wide to allow this use.

11. **Why not continue to allow horse use as outlined in 1987 UMP.**
    The 1987 UMP designated many of the old roads as foot trails, but not horse trails. ECL requires that foot trails also be designated as horse trails to allow equestrian use. Many of these foot trails cannot withstand the level of equestrian use that designation will likely create. The UMP proposes horse trails at those locations that can best accommodate this use.

12. **The SPW UMP does not propose loop trails for horses as it has for foot trails. Therefore, traffic will be doubled on the existing horse trails.**
    APSLMP limits the development of horse trails to "abandoned roads, snowmobile trails or State truck trails." (p22, APSLMP) This does not allow for looped trails as most roads old farm roads are not laid out in this manner. Additionally, the lack of loop trails will likely assist in limiting the number of equestrians that use these trails. This too will help minimize degradation. The intent of the SPW UMP is not to build an extensive horse trail network.

The intent of the UMP is to allow the continued use of horses in a few areas that can best accommodate this use and at the same time improve access to the SPW for mobility impaired users.

13. **How will the use of other pack animals be addressed?**
The existing regulations apply to horses. To date the use of other pack animals has not been a problem on the SPW . However, most pack animals (mules, lamas, etc.) will likely have similar impacts and benefits, if impacts occur from use of other pack animals they will addressed through revision of this plan or development of new regulations.

14. **Was John Pond considered for designation as a horse trail?**
Yes, however, there are numerous wetlands associated with this trail, especially in the first mile. It was determined that the John Pond Trail could not accommodate the level of use that may result from designation as a horse trail.

15. **There is nothing in any law or policy in New York State which prevents the continued use of horse in the SPW.**
This is not an accurate statement. See #11 above and pages 97-103 of the Draft SPW UMP.

16. **The use of horses is necessary to facilitate hunting during cold weather in a wilderness setting for extended periods of time.**
This may be true for mobility impaired users. Therefore, the plan proposes several designated horse trails to improve access. However, for the non-impaired users the use of horses makes this type of hunting easier, but is not a necessity. Back packing gear is much lighter and compact that it was 20 years ago. It is quite possible to camp for 2-4 weeks or more with only the equipment carried in a back pack.

17. **Trail erosion in the SPW is a result of foot traffic and not horses.**
Erosion is a natural process that can be accelerated by use. Water and gravity are the primary causes of trail erosion. The SPW UMP recognizes the need for increased maintenance on all the trails in the SPW. However, horses apply much more pressure (pounds per square inch) on the tread due to the small size of their hooves relative to their body weight. Therefore, the requirements for a sustainable horse trail are much higher than for the same number of hikers.

18. **There is nothing in any document before the Department which justifies changing this use (horses).**
See discussion on pages 97-103 of the SPW UMP and #11 above.

19. **The APSLMP specifically allows for the maintenance of existing horse trails.**
Yes, this should have been adequately addressed in the 1987 UMP. Therefore, the revised UMP has a lot of detail regarding where horse use can best be accommodated.

20. **The SPW UMP proposes closing the 11th Mountain Trail to horses due to steep grade. However, there are trails in the Lake George Wild Forest (LGWF) that are just as steep.**

The steep grades pose problems for the control of erosion and create unsafe conditions for novice riders. Furthermore, the trail crosses a classified wetland at Diamond Brook. This area is particularly susceptible to impacts from horses. However, the APSLMP allows more flexibility in the location of horse trails in Wild Forest as they are not limited to old roads. Several of the horse trails in the Shelving Rock Area will be addressed in the LGWF UMP and may be closed or relocated to avoid steep grades and provide a better trail network.

21. **For separate trails for horses and hiking.**
As mentioned previously the APSLMP limits where horse trails may be located. The use levels and limited staff dedicated to trail maintenance make it difficult to propose separate trails. It is not desirable to have trails throughout the Wilderness. It is the lack of trails that makes this area unique.

22. **Why not limit horse use to Fall hunting season by permit only.**
It is more desirable to improve access to the Wilderness for all users, not just hunters. However, the UMP has been revised to require a permit for the use of horse and wagon.

23. **The funds allocated for horse trail development and maintenance in the SPW UMP would be better spent in improving the existing trails.**
It is necessary to provide additional funding to maintain all the trails regardless of use. Several of the proposed horse trails are existing foot trails.

24. **The potential impact of new trail construction through wetlands is obvious. However, the implication that continued use of an existing horse trail through a wetland will result in ongoing degradation of the wetlands is false.**
This statement might be true if use did not increase as a result of designation as a horse trail. However, this is a designated foot trail; according to existing law it must be specifically designated as a horse trail to allow for the use of horses. This designation would likely result in additional use that would negatively impact the wetlands and the sections of trail on the steep slopes of Eleventh Mountain.

25. **The concept that existing roads proposed for conversion to horse trails must avoid wetlands places an unfair, unnecessary and overly restrictive burden on the development of new horse trails.**
The intent is to protect the natural resource. Although avoidance of wetlands is not an absolute when developing new trails, it is a means of avoiding areas that can least withstand use.

26. **The plan proposes to designate Cook Brook Path and Curtis Clearing Path as horse trails. However, the map shows these trails as both foot trails and horse trails.**
The map and text of the UMP will indicate that this a designated horse trail. Hiking is permitted on horse trails. However, the primary purpose of the trail will be for horse use.

27. **Page 84 of the 1987 SPW UMP states that "The only designated uses of the trails are hiking, skiing and horse." In addition, page 95 of the 1987 SPW UMP contains a discussion regarding the use of the area by horse and wagon. This discussion is**

concluded with the following statement, "The above discussion relates to horse and wagon use of the area only. It does not intend to place restrictions on the use of the area by horseback riders. Although the 1987 SPW UMP neglects to specifically name any designated horse trails, this statement clearly indicates that the use of the trails in this area by horse and horseback riders should not be restricted.
The 1987 SPW UMP did not adequately address the use of horses in this Wilderness. There was no discussion of alternatives or impacts from horse use. This Draft SPW UMP is attempting to make clear the DEC's intention for management of this area. Existing regulations are clear that horse use is not allowed on foot trails that are not also designated for the use of horses.

28. **The previous editions of the NYS DEC publication "Horse Trails in New York State" lists the following as horse trails "Siamese Pond, 11th Mt., John Pond, Baldwin Spring Fullers." This clearly demonstrates the DEC's intention that these trails should be open for use by equestrians.**
The documents with the cited reference were printed in late 1960s or early 1970s. The most recent revision of this brochure, reprinted in 1992, does not show any horse trails in the SPW. It is the UMP that outlines the management for an area, not an outdated DEC brochure.

29. **Page 3 of the draft UMP states that "This plan proposes the creation of several horse trails in the SPW..." This statement is misleading in that several of the "proposed" horse trails are trails that equestrians already have legal access to according to 6 NYCRR 190.8(n).**
This statement is not meant to be misleading. It is true that according to 6 NYCRR 190.8 and as stated in the UMP, equestrians may use existing paths that are not designated foot trails. The intent of the plan is to allow access to areas that have historically been used by equestrians while also protecting the natural resources. The UMP will formalize these horse trails to make certain that the intended use is clear.

30. **Would it be possible to designate horse trails but not promote them so as to limit use and potential impacts?**
The DEC cannot control the content of private trail guides. Most of the promotion of the Forest Preserve stems from guide books and maps put out by private organizations. Furthermore, the DEC has a responsibility to inform the public where they are permitted to recreate, regardless of the type. There are several unmarked trails that will not be shown/promoted in DEC publication where horse use nonetheless can occur. The existing law limits horse use on designated foot trails, not undesignated trails.

31. **The proposed horse trails should be closed to all horses during the spring mud season.**
The trails will be temporarily closed when necessary to protect the trail and surrounding area from degradation.

BIKES

1. **Why are there no bike trails proposed in the SPW UMP?**
   APSLMP prohibits the use of bikes in Wilderness. "Public use of all-terrain bicycles will be prohibited", page 24-APSLMP.

SEPTIC

1. **Need better septic system for north end of 13th Lake.**
   The Draft SPW UMP has been amended to recommend the installation of self-contained privy that is made of natural materials with the exception of the holding tank.

2. **Why not use "bog boxes" instead of privies?**
   Depending on the design a bog box may not conform to the APSLMP. A bog box would freeze in most areas during the winter. A large hole is necessary to have enough capacity for winter use when decomposition is almost non-existent.

POTABLE WATER

1. **Provide potable water at 13th Lake.**
   This is a wilderness area. The user is supposed to be self-sufficient. Furthermore, there are numerous water quality standards that must be met to provide drinking water. The cost and liability associated with providing drinking water are prohibitive in this area.

SKI TRAILS

1. **Interested in a new ski loop along the base of Balm of Gilead and connecting the Botheration Trail and the Old Farm Trail to the parking area at the end of Old Farm Road.**
   This is a nice loop for cross country skiing, it is open to skiing and doesn't require designation as a cross country ski trail in order for the public to use it.

HIKING TRAILS

1. **For Peaked Mt. to Hour Pond Trail. Against Peaked Mountain Trail.**
   This trail proposal has been removed from the SPW UMP. This is an area that is not currently developed.

2. **Why not build a bridge over the East Branch of the Sacandaga River as proposed in the 1987 UMP?**
   None of the herd paths in this portion of the SPW are marked trails. This area was designated as a trail-less area in the 1987 UMP. In this instance it is not logical to build a bridge in an area that is designated as trail-less. Building a bridge would concentrate use and result in degradation of the trail-less area. When the water is too high to cross by foot, the surrounding paths are also saturated with water and least able to withstand use. Without a bridge, the use of this area is naturally limited to those times that it can most accommodate use.

   The lack of a bridge also makes access difficult for administrative access and search and rescue. Therefore, the UMP proposes the purchase of a raft and other safety equipment for emergency access to the area.

3. **No new trails in SPW. Bushwhack only. Once a trail is established it is there forever. The development of new trails will degrade the remote, wild character of the SPW.**
   Yes, trails can degrade the remote character of the SPW. This is the primary reason for designating a trailless area. However, the DEC also is trying to allow for appropriate use of the Wilderness.

4. **The existing trails are not adequately maintained. Why is the DEC proposing new trails?**
   Appropriate maintenance is a function of funding. The UMP cannot control the funding, but can make recommendations on how the area might be best managed.

5. **Do improved trails result in more use?**
   Trails are maintained and improved to protect the resource. It is likely that improved trails will encourage additional use. However, improved trails will be able to accommodate more use.

6. **The Bog Meadow Trail and other herd paths are not shown as existing facilities on the map.**
   These are unmarked paths, not trails. Showing these paths on maps and in brochures will likely increase use beyond the capacity of the resource. They are intentionally not shown on the map in an attempt to encourage use on maintained trails.

INDIAN LAKE

1. **The proposed management for Indian Lake Campsites may prevent free use. Furthermore, charging for Wilderness sites is a bad precedent.**
   There has been a camping fee on Indian Lake since the facility opened in 1960. Camping fees are used to offset costs associated with seasonal staffing and maintenance of the facility and are authorized by ECL 9-0903(2).

2. **Why are picnic tables and fire places on Indian Lake proposed for removal and lean-tos are proposed to be built?**
   The master plan does not allow picnic tables or fireplaces in a wilderness area. However, lean-tos and fire rings are permitted. The campsites on Indian Lake are used by thousands of people every summer. Lean-tos and fire rings will ameliorate the impact of users by reducing the threat of fire and keeping the footprint of the overnight camping within the lean-to.

3. **Will not the chance of forest fires be greater without a fireplace?**
   The availability of a fire ring at each campsite will significantly reduce the threat of wildfire and will essentially be comparable to a fireplace. The use of a concrete pad under the fire ring will further reduce the potential threat.

4. **Why are lean-tos proposed on Indian Lake? If lean-tos are constructed they will be visible year round.**
   Lean-tos are proposed in order to minimize the impact of camping along this section of the Indian Lake shoreline. The availability of a lean-to will reduce soil compaction and trampling of vegetation at former tent sites. The lean-tos will be located at least 100' from the shoreline and well screened from the lake. They will be constructed of logs and roofed with "earth tone" colored shingles. This will minimize their year-round visibility and eliminate the need for tents which may be visible from the lake if they are large and colorful.

5. **Against creation of an administrative campground as it is not appropriate to charge at wilderness sites.**
   Camping fees have been charged at the 55 campsites on Indian Lake since 1960 when the campground opened. These fees are used to offset the cost of staffing and maintaining the facility. Camping will remain "free" throughout the rest of the Siamese Ponds Wilderness.

6. **Why was the Indian Lake Islands Campground reclassified to Wilderness and Wild Forest? Why not reclassify the campsites back to Intensive Use?**
   The original reclassification from Intensive Use to Wilderness in 1979 was intended to prevent over-development of the campground. However, Indian Lake Islands remains one of the most popular campgrounds in the Adirondack Park. Reclassification back to Intensive Use would not enhance the Department's ability to manage the facility or the public's camping experience.

7. **Develop special regulations for Indian Lake rather than create an administrative campground.**
   The 55 campsites on Indian Lake, including the 20 located within the Siamese Ponds Wilderness, have been popularly known as a "campground" for over 40 years. We propose to continue calling the facility a campground to avoid public confusion. Special regulations have been developed and are proposed in this plan. Since a "campground" is not permitted in wilderness, the term "administrative campground" is used in this plan to show the area where the special regulations will apply.

8. **Why not just designate foot print of campsites as Indian Lake Campground?**
   A geographically limited application would complicate DEC's ability to enforce rules and regulations necessary to prevent overuse and abuse of the area. The Indian Lake Islands campground was originally developed, in part, to control use of the area. The attractiveness of the lake and good access from many locations made overuse and abuse of the area a problem before the campground was developed. The potential for overuse still exists. Therefore, it is important that the special regulations proposed in this plan apply to a larger geographic area than just the campsites.

9. **Need enforcement during transition.**
   Forest Rangers, campground staff and Conservation Officers will continue to control and monitor use.

10. **Transition lean-tos in as picnic tables and fireplaces are removed.**
    This is our intent.

11. **Why invest over $100,000 in lean-tos when the existing picnic tables, fire places and campsites have worked?**
    The APSLMP does not permit picnic tables and fireplaces within a Wilderness area. Consequently, these structures must be removed in compliance with the Wilderness classification. We believe that lean-tos, which are permissible structures in wilderness areas, will help protect these heavily used campsites from compaction and damage to vegetation.

12. **Why are the distance between site numbers 50 and 51 shown as 2,374' and 2,460'?**
    This is a typographical error which will be corrected in the final plan.

13. **Why does the SPW UMP indicate that facilities are allowable within 500 feet of the Wilderness boundary and a public road or waterway to control public use on the periphery, but picnic tables and fireplaces are not permitted within 500 feet of the shore of Indian Lake?**
    The ASLMP Guidelines for Management and Use of Wilderness permits certain structures such as picnic tables and fireplaces when located within 500' from a public highway right of way. None of the 16 sites located within the Wilderness Area meet this criteria.

14. **Why are 5 campsites being set aside for mobility impaired users when it is already difficult to reserve a site. Will not most of these sites go unused?**
    The plan does not propose to designate any campsites on Indian Lake specifically for use by mobility impaired campers. Where terrain and other criteria permit, universal sites can be developed that provide accessibility and use by all campers.

15. **Why is site 13 recommend for relocation. Sites 13 and 14 share a nice beach.**
    The master plan requires that campsites in wilderness areas be out of sight and sound from one another. Site #13 was recommended for relocation because it is within site and sound of site #14.

16. **The 1987 SPW UMP called for the creation of canoe access only campsites on the Wilderness shoreline with Indian Lake. Why was this never done? Why is this not included in this UMP?**
This proposal requires the development of special regulations which would be difficult to justify and enforce since motorized vessels are currently allowed on Indian Lake.

17. **The wording for the proposed regulation (pages 101-102 of Draft SPW UMP) only addresses the landing of boats to access wilderness. The regulation does not address other uses such as swimming, reading, picnicking or access from the Wilderness to the shore.**
It is not necessary to list every conceivable allowable use in the regulation. There are no current or proposed regulations which prevent swimming, reading, picnicking, or access. These and similar uses are allowed unless specifically prohibited.

MISCELLANEOUS

1. **Puffer Pond lean-to needs repairs.**
There are two lean-tos on Puffer Pond. The western most lean-to will be maintained as needed. The eastern most lean-to is poorly located and will be removed.

2. **There is a potential for impacts from ATVs and snowmobiles in the Forks Mountain Primitive Area.**
The primitive area is gated and signed to prevent illegal motorized access. If illegal ATV use becomes a problem the DEC will respond accordingly. Snowmobiles can certainly have an impact on solitude. However, snowmobiles generally have less of a physical impact on the trail. The ground is frozen during use by snowmobiles and snowmobiles require a groomed surface to function optimally. Therefore, snowmobiles are not likely to leave the trail or Primitive Area.

3. **Recommend moving wilderness principles to the front of the document for emphasis on importance.**
The format of the UMP is based on a template that was designed to bring uniformity amongst all UMPs. Placement of the wilderness principles in the Management Policy section is not intended to minimize their importance in any way. In future UMPs restructuring of the UMP template may be considered.

4. **For "free use" of roads in Forest Preserve per State Constitution. This is based on a 1919 NYS Attorney General opinion.**
Attorney General Opinion 266 of 1919 primarily addressed the issue of whether the Conservation Commission, in 1919, had the legal authority to allow the improvement, at private expense, of a wagon track or trail across certain Forest Preserve land situated within the hamlet of Raquette Lake, Hamilton County. The Opinion also discussed the generic issue of the Department's authority or lack of authority to then close roads in the Forest Preserve. The supposed statutory authority on which such Opinion was based has long since

been repealed by the State legislature. Furthermore, subsequent court decisions on Article XIV, Section 1 of the New York State Constitution and subsequent constitutional amendments authorizing the improvements of existing roads and the construction of the Northway call into question the reasoning and conclusions of the 1919 Attorney General Opinion.

The Department of Environmental Conservation is currently vested with exclusive care, custody and control of the Forest Preserve under Environmental Conservation Law sections 3-0301(1)(d) and 9-0105(1), and is mandated to manage all such lands situated within the Adirondack Park in a manner which is consistent with the guidelines set forth in the Adirondack Park State Land Master Plan. See Executive Law section 816(1). The Master Plan has been held to have the force and effect of legislative enactment. See Helms v. Reid, 90 Misc.2d 583, 604 (Supreme Court, Hamilton Co., 1977). It should also be noted that Highway Law section 212 currently authorizes the Department to close roads which traverse Forest Preserve lands, and this authority was upheld in the case of Kelly v. Jorling, 196 A.D.2d 181, 183 (3d Dep't 1990), leave denied, __ N.Y.2d __ (1991).

5. **Concern that there is no money in UMP for enforcement and management.**
   The UMP contains a budget for implementation. However, the UMP does not include DEC staff salaries nor make recommendations for staffing.

6. **For hiking license fee if money goes to enforcement and management.**
   This UMP is not the appropriate place to discuss this issue. This issue could involve all public lands.

7. **Do not change SPW.**
   The UMP is needed to protect the resources while providing opportunities for various types of recreation.

8. **Why is a lean-to proposed for Hour Pond? This will increase use and impacts.**
   The UMP is an attempt to protect the resources while providing opportunities for various types of recreation.

9. **Indian Lake should be motorless.**
   This is a very large lake with both public and private owners. It would be difficult to access much of the lake, both private and public, without the use of motors.

10. **There needs to be a complete natural resource inventory for the SPW including vegetative mapping, stand cover, rare and endangered plants. There is nothing in the implementation schedule to indicate how and when this will be accomplished.**
    The UMP indicates the priority projects for the next 5 years. While a complete natural resources inventory is needed it would be extremely expensive and not a high enough priority given limited staffing and funding.

11. **There is an infestation of Yellow Iris at the Vly, the headwaters of the Sacandaga River. This infestation should be inventoried, documented and a management strategy developed within the UMP.**
The DEC has an Adopt A Natural Resource agreement to allow for the removal of Yellow Iris at the Vly. The infestation and AANR will be referenced in the UMP.

12. **Winter use is restricted by the lack of safe parking. The parking areas should be plowed in the winter.**
The SPW UMP does include a cost for the plowing of trail heads. The DEC will also attempt to obtain additional assistance from local and state municipalities in plowing the parking areas.

13. **Positive signage indicating permitted uses are necessary.**
Positive signage is often a good tool to use. However, it is not always the most appropriate means on conveying a message. An effort will be made to increase positive signage.

14. **There are several locations that are used each year as hunting camps during the fall. Why are these sites not cleaned up at the end of each hunting season? There are several locations where 50 gallon drums, tarps, garbage and tent frames have been left. Why is this not dealt with in the UMP?**
There are over 120,000 acres within the SPW. It can be difficult to find these sites. As the DEC becomes aware of these sites appropriate action will be taken to find the persons responsible and have the sites cleaned up.

15. **The draft SPW UMP seems to represent the environmentalists with little concern for the local people.**
The draft SPW UMP is a reflection of the existing laws, policy and guidance in the APSLMP that are required to protect the natural resources and insure that SPW is a Wilderness in the future.

<u>Adirondack State Land Master Plan Issues</u>

1. **APA needs to define and explain "other facilities for peripheral control of public use." Can fireplaces and picnic tables be considered facilities for control of public use bordering water bodies and roads accessible from the public?**
Through the review of this UMP the APA will review, on a site specific basis, the proposed use of facilities for peripheral control of public use as proposed in this plan.

2. **APA needs to define and explain inconsistencies of "unconfined recreation" in context with Wilderness camping at the Indian Lake Islands Campground versus Intensive Use classified camping at the Lake George Islands, Forked Lake, Alger Island, and Tioga Point.**
Through the review of this UMP the APA will review the special area management plan for the Indian Lake Islands.

3. **The criteria for Wilderness classification needs to be reviewed as applicable to the traditional ILIPC. Explain how the construction of 18 lean-tos along the shoreline of Indian Lake together with tree cutting, is substantially unnoticeable as man's influence.**
   Through the review of this UMP the APA will review the special area management plan for the Indian Lake Islands.

PARKING

1. **Need parking along the Barton Mine Road to access the William Blake Pond Trail.**
   The Old Farm Road parking can accommodate this use.

13TH LAKE

1. **Need for special regulations to protect 13th Lake.**
   The existing regulations limit camping to designated sites only within 150 feet of a trail, road or water. The UMP proposes to relocate several designated tentsites to attain a 1/4 mile separation distance. The UMP also proposes to limit overnight group size to 8 or less and to limit day use group size to 15 or less. If these measurements are unable to control use than the DEC will re-evaluate the need for special regulations to control the use of 13th Lake and other heavily uses areas within the SPW.

2. **Against eliminating motor boats on 13th Lake.**
   The public access to 13th Lake is from Wilderness. The development of a boat launch to allow motorized access is not compatible with Wilderness classified lands. However, a car top launch designed for small boats and canoes, as opposed to a trailered launch is compatible with Wilderness. The use of electric motors is a compromise meant to address concerns about limited access for mobility impaired users and to protect the resources in the surrounding Wilderness. See pages 95 of the SPW UMP for additional information.

3. **Four stroke engines should be discussed as an option on 13th Lake. The are much quieter and far less polluting. Furthermore, if the current 2 stroke engines used on 13th Lake are replaced with 4 stroke engines; these same boaters will use there 4 stroke engines in other areas through out the Adirondack Park.**
   See #2 above.

4. **For electric motors.**
   See #2 above.

5. **Limit 13th Lake to 5 hp motors.**
   See #2 above.

6. **No motor boat use at all of 13th Lake as they harass loons.**
   See #2 above. The management proposal to limit motorized use of 13th Lake to electric motors, will limit potential harassment of loons on the lake. Furthermore, the use of electric

motors would reduce the size of the wake created by boats thus minimizing the potential impact on nesting loons.

7. **Why are 2 sites proposed for closure at north end of 13th Lake when there is such a large demand?**
   It is because these sites are severely degraded from over use that they are recommended for closure. The intent of the UMP is not to adjust the Wilderness to meet recreational demand, but to adjust recreational demand to protect the resources of the Wilderness. The DEC manages numerous campgrounds that can meet the demands of large groups and other recreationists who do not desire/require a wilderness experience.

8. **Restrict camping to maximum of 2 weeks.**
   Current regulations require a camping permit for stays of more than 3 nights at one location and allow a maximum of 2 weeks in an area.

9. **Provide more law enforcement. This camping area is a prime location for those wishing to ignore/disregard state regulations (quiet hours, behavior, firearms, alcoholic beverages).**
   The DEC encourages users of the Forest Preserve to report any illegal activity to the local Forest Ranger or Environmental Conservation Officer. Complaints may also be filed with the Ray Brook dispatcher.

10. **Why are snowmobiles permitted in the primitive corridor through the SPW, yet motorboats are being eliminated from Thirteenth Lake? Is not this a double standard?**
    The primitive corridor was created at the time SPW was first established in recognition of the existing snowmobile trail and the difficulty in finding another route due to steep terrain. However, the APSLMP recommends the removal of this primitive corridor once an alternate route from the south to Speculator is established.

11. **Suggest charging a fee for tents that are not occupied. Often people will leave their tent up during the week to ensure that they have a site on the weekend. There should be a limit on the length of stay at desirable sites.**
    It is difficult to know if someone is hiking during the day and staying in the tent in the evening. Anyone staying 3 or more nights at one location is required to have a camping permit. Please report any abuses of this regulation to the local Forest Ranger or Ray Brook dispatcher.

12. **Existing barricade limits launching of boats to those that can be carried 500 feet. There is no problem with the limited use of motor boats on 13th Lake. The biggest source of noise pollution on 13th Lake is from the Lake Association Beach**.
    See #2 above.

FISHERIES

1. **Why are Buckhorn Ponds scheduled for reclamation if they are identified as having self-sustaining brook trout population?**
   The description of the fisheries status for the Buckhorn Ponds in the Draft UMP was confusing and had errors. The pond narratives for the Buckhorn Ponds have been clarified and the UMP discussion on related issues has been corrected to reflect the fisheries status of these waters. The Buckhorn Ponds are not proposed for reclamation during the five year planning period. They will be monitored for changes in the fish community status.

2. **Need a discussion of the role of all fish species, not just brook trout. Native fish are proposed for reclamation. Need a discussion on methods other than reclamation (catch and release) to manage fish.**
   The draft plan does include a discussion on the status of other fish species in the unit. For example, the plan proposes to restore redbreast sunfish to two waters, based upon their status in the unit.

3. **Need to review and update the Fisheries Management Policy/APA MOU.**
   The Wilderness Guidelines for Fisheries Management in Wilderness, Primitive and Canoe were drawn up with input from several organizations, including DEC, APA, the Adirondack Mountain Club, Trout Unlimited, the Adirondack Mountain Club, the Adirondack Council and the Association to Protect the Adirondacks. Since their inception only two Wilderness Plans have been implemented: The Pharaoh Lakes Wilderness Area UMP and the High Peaks Wilderness UMP. It would seem premature to update these guidelines before we have actually had an occasion to allow them to be implemented and observe the results.

4. **Gas motors are necessary to for fishing on 13th Lake.**
   The issue of motors is wider than just for fishing. Electric motors may be satisfactory of angling purposes.

5. **Follow up studies are needed for previously reclaimed ponds.**
   Follow up studies have been completed on all recently reclaimed ponds. DEC is required to conduct post treatment netting and to make non-target mortality and recovery observations on all reclaimed waters. This information is provided to the Adirondack Park Agency via compliance reports. In addition, wetlands permit conditions have required more detailed studies to be undertaken on all reclamations conducted in Wilderness areas during the past decade. These studies have included water chemistry measurements and invertebrate sampling, as well as standard netting to sample fish populations. These studies required by the permit condition have been carried out and reports have promptly been forwarded to the Adirondack Park Agency. This survey information has also been provided to other interested parties. Detailed reports have been submitted for Nellie Pond, Bessie Pond and Lydia Pond in the Saint Regis Canoe Area, and Burge Pond, Oxshoe Pond, Crab Pond (Warren County), Horseshoe Pond and Crab Pond (Essex County) in the Pharaoh Lake Wilderness. Specific to the Siamese Pond Wilderness, follow up studies will be conducted on any newly reclaimed waters. As is detailed in the various fish management sections of this plan, periodic

sampling will continue on many waters in the unit, including those historically reclaimed waters.

6. **There is not a sufficient emphasis on education related to reclamations. The UMP needs to discuss the need for education regarding the introduction of bait fish to complement the proposed reclamations.**
   The use of bait fish is discussed in the unit management plan. Moreover, the use and possession of fish for use as bait is prohibited throughout the entire Siamese Ponds Wilderness in an effort to prevent the introduction of unwanted fish species. Signs to this effect are posted and Bureau of Fisheries staff do periodic checks to make sure the signs are maintained. However, education about this issue is a desirable goal. Including a discussion about sporting ethics in hunter training courses would be a possible way to reach more young people who will be the sports persons of the future. This opportunity will be explored.

7. **Thirteenth Lake is over 300 acres and in close proximity to a public road. The amount of rotenone required for this reclamation will cost over $120,000. Given the high cost and high probability of reintroduction of non-native fishes; why is this lake proposed for reclamation?**
   The Bureau of Fisheries does believe that 13th Lake has many of the attributes of an excellent reclamation candidate including treatable wetlands and a relatively small watershed. It does not have a natural barrier to the reinfestation of undesirable fish species on the outlet and there is no suitable location to build a man-made barrier on state land. For this reason 13th Lake is not currently a viable reclamation candidate. If a site to build a man-made barrier dam is discovered on private land, 13th Lake could become a candidate for reclamation. However, 13th Lake is not proposed for reclamation during the 5 year planning period. The UMP will be clarified in this regard. It is important to note that yellow perch, a nonnative fish species that is particularly harmful to native trout, has been successfully excluded from Thirteenth Lake for over 30 years.

8. **The 13th Lake ecosystem has never recovered from the previous reclamation. Since the reclamation the water quality is not so clear and there is a problem with leeches.**
   The Bureau of Fisheries has no data to refute or support the claim that water clarity or leeches are a problem in 13th Lake. It is generally held that water clarity is often improved after pond reclamation, especially when a fish species that forages heavily on zooplankton is eliminated. After the planktivorous fish species is removed, zooplankton (which feed on algae) abundance increases, and algae is reduced. Water clarity improves due to lessened algae.

   One would not expect that leech abundance would be altered many years after a reclamation. The literature reports that leeches are rather sensitive to rotenone, although the Department has not observed this to be the case. Leech mortality during pond reclamation would be described as incidental. Leeches are a common food item in the diets of many fish, so their abundance in 13th Lake should not be unchecked.

9. **APA guidelines clearly state that the purpose of aquatic resource management in Wilderness is to perpetuate natural aquatic ecosystems. Yet, the Draft SPW UMP proposes to use rotenone to eliminate native as well as non-native fish and restock the waters with only brook trout. Any ponds requiring reclamation should be re-stocked with a diversity of native species, including non-game fish.**
   A discussion of species diversity and how it is impacted by reclamation is included in the plan.

WILDLIFE

1. **Why not allow antlerless deer hunting when deer populations in specific regions indicate the need?**
   Antlerless deer hunting is permitted during the archery and muzzleloading deer seasons in Wildlife Management Unit 5H (location of SPW).

2. **Close the SPW to the hunting of marten until populations are documented to be sufficient.**
   Marten cannot be legally hunted in New York State, but can be trapped in Wildlife Management Units 5H (location of SPW), 5F, and 6J. Trapping in NY is highly regulated and NYSDEC closely monitors the harvesting of marten and other furbearers. Due to the inaccessibility of the Adirondacks, much of the region remains untrapped, which insures sustainable harvests over time and that animals are available to fill unoccupied habitats. This fact is one of the reasons why historically many furbearers (including marten, fisher, and otter) were able to persist in the Adirondacks while in other regions of the northeast they were at one time extirpated (or remain so today, for example marten in Vermont and much of New Hampshire).

3. **You might consider adding the southern flying squirrel to your list of mammals.**
   Yes, the southern flying squirrel will be added to the list of small mammals.

GROUP SIZE LIMIT

1. **Concern that group size limit will be difficult to enforce**.
   It may be difficult to enforce the 8 person group size limit. However, the DEC will communicate the change in regulations through press releases and signage at trailheads. It may be necessary to follow up with enforcement action as problems arise. The UMP includes a recommendation for the promulgation of supporting regulations.

2. **Concern that FR will lose control of groups without the issuance of group camping permits.**
   It is true that groups larger than 8 may attempt to continue to camp within the SPW and that they will likely avoid the Forest Ranger rather than seeking assistance in gaining a camping permit. The success of the program will rely on DEC staff and other users to communicate the change in group size to visitors of the SPW. It may be necessary to follow up with

enforcement action as problems arise. The group size limit will provide the Forest Ranger with another means of dispersing large gatherings of people. Anyone staying at one location for more than 3 nights will still need to obtain a camping permit.

Appendix 2 - Tree Species of the SPW

Common Name	Scientific Name
White pine	Pinus strobus
Red spruce	Picea rubens
Balsam fir	Abies balsamea
Eastern hemlock	Tsuga canadensis
Norway spruce	Picea abies
Tamarack	Larix larcina
Scotch pine	Pinus sylvestris
White cedar	Thuja occidentalis
White spruce	Picea glauca
Red pine	Pinus resinosa
Black Spruce	Picea mariana
Yellow birch	Betula lutea
White birch	Betula papyrifera
Sugar maple	Acer saccharum
American beech	Fagus grandifolia
Quaking aspen	Populus tremuloides
Red maple	Acer rubrum
Ironwood	Ostrya virginiana
Black cherry	Prunus serotina
Pin cherry	Prunus pennsylvanica
Willow	Salix
Basswood	Tilia americana
American elm	Ulmus americana
Butternut	Juglans cinerea
Striped maple	Acer pennsylvanicum
White ash	Fraxinus americana
American hornbeam	Carpinus caroliniana
Choke cherry	Prunus virginiana
Crabapple	Malus coronaria
Apple	Malus
Big-tooth aspen	Populus grandidentata

Appendix 3 - Habitats of Birds in SPW

1.Common Loon (*Gavia immer*) - Prefers bog and undisturbed lakes for breeding and open water for feeding. Private estates, remote state land away from human disturbance account for a stable population of approximately 100 breeding loon pairs within the Adirondack region. They are frequently observed on the Thirteenth Lake, Round Pond, Long Pond and Puffer Pond. A breeding pair with nine fledglings was observed by Senior Forester Tad Norton in the spring of 2002. The Common Loon is protected under the Migratory Bird Treaty Act (MBTA) and is listed as a species of concern by New York State.

2.Great Blue Heron (*Ardea herodias*)- Usually breeds in the tops of the tallest deciduous trees close to water. Uncommon nester in the SPW. Recently observed nesting along the Kunjamuk River by Barbara McMartin. It is protected under the MBTA and NYCRR.

3.American Bittern (*Botaurus lentiginosus*) - Prefers marsh habitats, especially where cattails occur. Rarely seen in the SPW. It is protected under the MBTA and NYCRR

4.Ring-necked Duck (*Aythya collaris*) - Woodland ponds and marshes are its favorite breeding sites; in migration it is commonly observed on the larger bodies of water in the Adirondack Park. This species was first recorded as breeding in New York in 1946 at Jones Pond, Franklin County (Severinghaus and Benson). The Ring-necked Duck is now known to breed in at least nineteen different localities in New York, chiefly in the Adirondack Park. It still hasn't been confirmed as a breeder in SPW but it has been observed on various ponds within the area. The Ring-necked Duck is known to breed on Dewey Lake which is located just outside the SPW. It is protected by the MBTA and NYCRR, and listed as a game species by New York State.

5.Common Goldeneye (*Bucephala clangula*) - During migration it is found in small flocks on rivers, the larger lakes and especially on the bays of Lake Champlain. In the SPW this species is not known to breed but it is sometimes observed passing through the area during the spring and fall migration. The nearest confirmed breeding location is about 30 miles due north on the Racquette River in Harrietstown. The Common Goldeneye is listed as "rare" within the Adirondack Park by the Adirondack Park Agency. It is protected by the MBTA and NYCRR, and listed as a game species by New York State.

6.Hooded Merganser (*Lophodytes cucullatus*, PB-GS & MBTA) - Frequent wooded swamps, beaver ponds, and quiet stretches of water in forested regions, especially where dead trees are plentiful. They are known to breed in the SPW where they nest in cavities of dead trees. It is protected by the MBTA and NYCRR, and listed as a game species by New York State.

7.Common Merganser (*Mergus merganser*) - This species is one of the characteristic breeding birds of the Adirondack forest lakes. It is undoubtedly the most common breeding duck in the Adirondack Park. It is protected by the MBTA and NYCRR, and listed as a game species by New York State.

8.Turkey Vulture (*Cathartes aura*) - Can be found in almost any habitat. Outside the Adirondack Park, it is found nesting in logs, snags, cliffs and caves. Within the Park, it is a probable, but not confirmed, breeder. It is protected by the MBTA and NYCRR.

9.Sharp-shinned Hawk (*Accipiter striatus*) - Prefers the younger second growth mixed hardwood conifer woodlands. It is protected by the MBTA and NYCRR, and listed as a game species by New York State.

10.Red-shouldered Hawk (*Buteo lineatus*) - This species prefers swampy woodlands and forested areas near rivers. The Red-shouldered Hawk was never common in the Adirondacks and in recent years its population has further declined. This hawk is probably not breeding in the SPW but it could be found there as a migrant. It is protected by the MBTA and NYCRR, and listed as a species of special concern by New York State.

11.Coopers Hawk (*Accipiter cooperii*) - Found chiefly in low, alluvial forest and wooded swamps. The Coopers Hawk was formerly a common nester throughout the Adirondacks but it is virtually absent now. Although it is very rare, this species may be observed migrating through the SPW. It is protected by the MBTA and NYCRR, and listed as a species of concern by New York State.

12.Broad-winged Hawk (*Buteo platypterus*) - The most important habitat requirement for this species is extensive woodland. It is the most characteristic breeding hawk in the Adirondacks. It is protected by the MBTA and NYCRR.

13.Bald Eagle (*Haliaeetus leucocephalus*) - Restricted mostly to lake and river shores although they are found along mountain ridges during migration. This species hasn't nested in the Adirondack Park since the early 1950's. It does summer in the Park and it is likely it will nest here again. The Bald Eagle is listed as "threatened" by the Federal Government and New York State, and protected by the MBTA and NYCRR.

14.Northern Harrier (*Circus cyaneus*)- This hawk is most prevalent in the open country, hunting over fields in farming areas, as well as marshes. Unlike other raptors, Northern Harriers nest on the ground in tall grass or cattails. It has been observed in the SPW during the summer and it is probably breeding along the Kunjamuk River. It is listed as threatened by the Federal Government and New York State, and protected by the MBTA and NYCRR.

15.Osprey (*Pandion haliaetus*) - This raptor feeds exclusively on fish and is generally found near a lake or stream where the fishing is good. The Osprey population in the United States was to the point of extirpation due to the lack of breeding success. In the Adirondack Park, the Osprey's breeding success has been improving in recent years. The DEC Adirondack Osprey Survey documented a high of 15 successful nests in 1978 of which one was located in the SPW. It is protected by the MBTA and NYCRR.

16.American Woodcock (*Scolopax minor*) - Feeds and breeds in bottomland including alder thickets. It is protected by the MBTA and NYCRR, and listed as a game species by New York State.

17.Spotted Sandpiper (*Actitis macularia*) - Preferred habitat is lake shores and river banks. It is protected by the MBTA and NYCRR, and listed as a game species with no designated season by New York State.

18.Herring Gull (*Larus argentatus*) - It feeds along lakes and ponds and also feeds in dumps. It is protected by the MBTA and NYCRR.

19.Whip-Poor-Will (*Caprimulgus vociferus*) - Rare to absent at higher elevations in the Adirondacks, especially where heavily forested. Considered a rare breeder in the SPW. It is protected by the MBTA and listed as a species of special concern by New York State.

20.Three-toed Woodpecker (*Picoides tridactylus*, MBTA & PB) - Found in spruce, tamarack swamps and the forested slopes of spruce and fir. This permanent resident of the Adirondack Park has been hampered by lumbering and other human activities; they are declining in population. It is protected by the MBTA and NYCRR.

21.Eastern Kingbird (*Tyrannus tyrannus*) - Usually found in open country conspicuously perched atop the highest limbs of dead trees. They are occasionally found along streams or marshes if there is sufficient open territory to hunt. In the SPW, they are very common along the Kunjamuck River. It is protected by the MBTA and *NYCRR*.

22.Yellow-bellied Flycatcher (*Empidonax flaviventris*) - Found in second growth woods of spruce, balsam and birch at elevations between 2,000 and 4,000 feet. Considered an uncommon to rare breeder in the SPW (Richard Cuthrie - Coordinator Bird Breeding Atlas Project). It is protected by the MBTA and NYCRR.

23.Gray Jay (*Perisoreus canadensis*) - Confined to the Adirondack Park in New York where it is found in dense spruce and tamarack swamps and the balsam belt on mountain slopes. There is no confirmed breeding records for this species in the SPW but it is known to breed in Moose River Plains and several other nearby areas. It is protected by the MBTA and NYCRR, and listed as a game species with no designated season by New York State.

24.Common Raven (*Corvus corax*) - Today the Common Raven is strictly confined to the more remote areas of the Adirondack Park. It is a mountain bird, favoring areas where there are cliffs and crags suitable for nesting. Although the population of Ravens is increasing within the Park it still hasn't been confirmed as a breeder in the SPW. It is protected by the MBTA and NYCRR, and listed as a game species with no designated season by New York State.

25.Winter Wren (*Troglodytes troglodytes*)- Frequently found in lumber clearings. It is protected by the MBTA and NYCRR.

26.Wood Thrush (*Hylocichla musteling*) - Besides the deciduous forest, they are also found in flood plains and stream valleys. It is protected by the MBTA and NYCRR.

27.Gray-cheeked Thrush (*Catharus minimus*)- Prefers dense spruce and balsam stands; mountaintop environments. In New York State the Gray-cheeked Thrush's breeding range is confined to the higher elevations of the Adirondacks. The SPW is at the southern limits of this species range and here it is considered an uncommon to rare breeder. It is protected by the MBTA and NYCRR.

28.Veery (*Catharus fuscescens*) - Prefers moist to wet woodlands. It is protected by the MBTA and NYCRR.

29.Ruby-crowned Kinglet (*Regulus calendula*) - This species is most often found in bogs and open woodlands. In New York State it is considered a very rare breeder. It can be observed migrating through the SPW. It is protected by the MBTA and NYCRR.

30.Solitary Vireo (*Vireo solitarius)* - Found in the mixed hardwood conifer forest at considerable elevation in New York State. Considered a common breeder in the Adirondacks.

31.Nashville Warbler (*Vermivora ruficapilla*) - Often found near water. It is protected by the MBTA and NYCRR.

32.Northern Parula (*Parula americana*) - It is practically confined to the localities where usnea moss is fairly abundant (spruce sphagnum bogs). It is protected by the MBTA and *NYCRR*.

33.Black-throated Blue Warbler (*Dendroica careulescens*) - Prefers a mixed hardwood/conifer forest with a dense undergrowth. It is protected by the MBTA and NYCRR.

34.Bay-breasted Warbler (*Dendroica costanea*) - An inhabitant of spruce woodlands at the higher elevations in the Adirondack Park. There are at least 11 known localities in the Adirondacks where the Bay-breasted Warbler breeds. None of these locations are in the SPW but there is an abundance of suitable habitat here and certain with more intensive field work, definite breeding will be observed. It is protected by the MBTA and NYCRR.

35.Blackpoll Warbler (*Dendroica striata*) - The preference for stunted conifers leads the Black-poll Warbler higher on the mountain sides than other warblers. In the Adirondack Park it is a common breeder at altitudes above 3,500 feet, but is rare or lacking in the lower forests. Although there are no confirmed records of the Black-poll Warbler breeding in the SPW it is possible it might be a very rare breeder here. It is protected by the MBTA and NYCRR.

36.Northern Waterthrush (*Seiurus noveboracensis*) - Nests on banks along streams and lakes. It is protected by the MBTA and NYCRR.

37.Canada Warbler (*Wilsonia canadensis*) - Found breeding along streams in thickets of willow, alder and elderberry. It is protected by the MBTA and NYCRR.

38.American Redstart (*Setophaga ruticilla*) - Commonly breeds in deciduous second growth woodland and in stream side willow thickets. It is protected by the MBTA and NYCRR.

39.Rusty Blackbird (*Euphagus carolinus*)- Preferred habitat is openings in wet woodlands, swamps, and alder thickets. In New York State this species is found breeding only in the Adirondack Park which is its southern most known breeding range. The Rusty Blackbird is known to breed in the vicinity of Indian Lake and is often observed in the SPW. This species is listed as "rare" within the Adirondack Park by the Adirondack Park Agency. It is protected by the MBTA and NYCRR.

40.Common Grackle (*Quiscalus quiscula*) - Breeds near water (marshes, streams, lakes), often nests in a black spruce tree or a tree stump. It is protected by the MBTA and NYCRR.

41.Brown-headed Cowbird (*Molothrus ater*) - Parasitizes the nest of other birds, most frequently laying its eggs in the nest of the yellow warbler and red-eyed vireo. The cowbird usually leave the area after laying their eggs. It is protected by the MBTA and NYCRR.

42.Scarlet Tanager (*Piranga olivacea*)- This species is found in the crowns of mature hardwood forests. It is protected by the MBTA and NYCRR.

43.Evening Grosbeak (*Coccothraustes vespertinus*) - Rare breeder in coniferous forests of the Central Adirondacks. The first probable breeding record in New York State was at Cranberry Lake in June, 1945. Since then, it has been known to breed in about 35 different localities in the Adirondack Park including the SPW where large numbers have been observed at Auger Flats. It is protected by the MBTA and NYCRR.

44.White-winged Crossbill (*Loxia leucoptera*) - Prefers the coniferous forest where it feeds on the seeds of hemlock, spruce, and larch cones. There are no breeding records for the White-winged Crossbill in the Adirondack Park. It is protected by the MBTA and NYCRR.

45.Lincoln's Sparrow (*Melospiza lincolnii*) - This shy and usually secretive species prefers open swamps and bogs with small spruces and tamaracks scattered about. In New York State the Lincoln's Sparrow breeds only in the Adirondacks, and here it is considered to be rare. There haven't been any records of this species breeding in the SPW but undoubtedly they pass through during migration. It is protected by the MBTA and NYCRR.

46.Song Sparrow (*Melospiza melodia*) - Breeds at the edge of streams and lakes. It is protected by the MBTA and NYCRR.

Bird species recorded during the 1980-1985 Breeding Bird Atlas (BBA) Project in 30 atlas blocks located within or partially within the Siamese Ponds Wilderness.

Wood Duck	*Aix sponsa*
Mallard	*Anas platyrhynchos*
Ring-necked Duck	*Aythya collaris*
Common Merganser	*Mergus merganser*
Hooded Merganser	*Lophodytes cucullatus*
American Black Duck	*Anas rubripes*
Ruffed Grouse	*Bonasa umbellus*
Wild Turkey	*Meleagris gallopavo*
Common Loon	*Gavia immer*
American Bittern	*Botaurus lentiginosus*
Great Blue Heron	*Ardea herodias*
Green Heron	*Butorides virescens*
Turkey Vulture	*Cathartes aura*
Osprey	*Pandion haliaetus*
Bald Eagle	*Haliaeetus leucocephalus*
Sharp-shinned Hawk	*Accipiter striatus*
Coopers Hawk	*Accipiter cooperii*
Northern Goshawk	*Accipiter gentilis*
Red-shouldered Hawk	*Buteo lineatus*
Broad-winged Hawk	*Buteo platypterus*
Red-tailed Hawk	*Buteo jamaicensis*
American Kestrel	*Falco sparverius*
Killdeer	*Charadrius vociferus*
Spotted Sandpiper	*Actitis macularia*
Common Snipe	*Gallinago gallinago*
American Woodcock	*Scolopax minor*
Herring Gull	*Larus argentatus*
Rock Dove	*Columba livia*
Mourning Dove	*Zenaida macroura*
Great Horned Owl	*Bubo virginianus*
Barred Owl	*Strix varia*
Eastern Screech Owl	*Otus asio*
Northern Saw-whet	*Aegolius acadicus*
Whip-poor-will	*Caprimulgus vociferus*
Chimney Swift	*Chaetura pelagica*
Ruby-throated Hummingbird	*Archilochus colubris*
Belted Kingfisher	*Ceryle alcyon*
Yellow-bellied Sapsucker	*Sphyrapicus varius*
Downy Woodpecker	*Picoides pubescens*
Hairy Woodpecker	*Picoides villosus*
Black-backed Woodpecker	*Picoides arcticus*
Northern Flicker	*Colaptes auratus*

Pileated Woodpecker	*Dryocopus pileatus*
Olive-sided Flycatcher	*Nuttallornis borealis*
Eastern Wood Pewee	*Contopus virens*
Alder Flycatcher	*Empidonax alnorum*
Least Flycatcher	*Empidonax minimus*
Eastern Phoebe	*Sayornis phoebe*
Great-crested Flycatcher	*Myiarchus crinitus*
Eastern Kingbird	*Tyrannus tyrannus*
Yellow-throated Vireo	*Vireo flavifrons*
Blue-headed Vireo	*Vireo solitarius*
Warbling Vireo	*Vireo gilvus*
Red-eyed Vireo	*Vireo olivaceus*
Blue Jay	*Cyanocitta cristata*
American Crow	*Corvus brachyrhynchos*
Common Raven	*Corvus corax*
Tree Swallow	*Iridoprocne bicolor*
Bank Swallow	*Riparia riparia*
Cliff Swallow	*Petrochelidon pyrrhonota*
Northern Rough-winged Swallow	*Stelgidopteryx serripennis*
Barn swallow	*Hirundo rustica*
Black-capped Chickadee	*Parus atricapillus*
Boreal Chickadee	*Parus hudsonicus*
Red-breasted Nuthatch	*Sitta canadensis*
White-breasted Nuthatch	*Sitta carolinensis*
Brown Creeper	*Certhia familiaris*
House Wren	*Troglodytes aedon*
Winter Wren	*Troglodytes troglodytes*
Golden-crowned Kinglet	*Regulus satrapa*
Ruby-crowned Kinglet	*Regulus calendula*
Eastern Bluebird	*Sialia sialis*
Veery	*Catharus fuscescens*
Swainson's Thrush	*Catharus ustulatus*
Hermit Thrush	*Catharus guttatus*
Wood Thrush	*Hylocichla mustelina*
American Robin	*Turdus migratorius*
Gray Catbird	*Dumetella carolinensis*
Northern Mockingbird	*Mimus polyglottos*
Brown Thrasher	*Toxostoma rufum*
European Starling	*Sturnus vulgaris*
Cedar Waxwing	*Bombycilla cedrorum*
Nashville Warbler	*Vermivora ruficapilla*
Northern Parula Warbler	*Parula americana*
Yellow Warbler	*Dendroica petechia*
Chestnut-sided Warbler	*Dendroica pensylvanica*
Magnolia Warbler	*Dendroica magnolia*
Black-throated Blue Warbler	*Dendroica caerulescens*

Yellow-rumped Warbler	*Dendroica coronata*
Black-throated Green Warbler	*Dendroica virens*
Blackburnian Warbler	*Dendroica fusca*
Bay-breasted Warbler	*Dendroica castanea*
Blackpoll Warbler	*Dendroica striata*
Black and White Warbler	*Mniotilta varia*
American Redstart	*Setophaga ruticilla*
Ovenbird	*Seiurus aurocapilllus*
Northern Waterthrush	*Seiurus noveboracensis*
Mourning Warbler	*Oporornis philadelphia*
Common Yellowthroat	*Geothlypis trichas*
Canada Warbler	*Wilsonia canadensis*
Scarlet Tanager	*Piranga olivacea*
Eastern Towhee	*Pipilo erythrophthalmus*
Field Sparrow	*Spizella pusilla*
Chipping Sparrow	*Spizella passerina*
Savannah Sparrow	*Passerculus sandwichensis*
Song Sparrow	*Melospiza melodia*
Lincoln's Sparrow	*Melospiza lincolnii*
Swamp Sparrow	*Melospiza georgiana*
White-throated sparrow	*Zonotrichia albicollis*
Dark-eyed Junco	*Junco hyemalis*
Northern Cardinal	*Cardinalis cardinalis*
Rose-breasted Grosbeak	*Pheucticus ludovicianus*
Indigo Bunting	*Passerina cyanea*
Bobolink	*Dolichonyx oryzivorus*
Eastern Meadowlark	*Sturnella magna*
Red-winged Blackbird	*Agelaius phoeniceus*
Rusty Blackbird	*Euphagus carolinus*
Common Grackle	*Quiscalus quiscula*
Brown-headed Cowbird	*Molothrus ater*
Baltimore Oriole	*Icterus galbula*
Purple Finch	*Carpodacus purpureus*
Red-winged Crossbill	*Loxia curvirostra*
White-winged Crossbill	*Loxia leucoptera*
Pine Siskin	*Carduelis pinus*
American Goldfinch	*Carduelis tristas*
Evening Grosbeak	*Hesperiphona vespertina*

Bird species recorded during the 2000-2004 Breeding Bird Atlas (BBA) Project in 30 atlas blocks located within or partially within the Siamese Ponds Wilderness. These data represent birds observed between 2000 and 2003.

Canada Goose	*Branta Canadensis*
Wood Duck	*Aix sponsa*
Mallard	*Anas platyrhynchos*
Ring-necked Duck	*Aythya collaris*
Common Merganser	*Mergus merganser*
Hooded Merganser	*Lophodytes cucullatus*
American Black Duck	*Anas rubripes*
Gadwall	*Anas strepera*
Ruffed Grouse	*Bonasa umbellus*
Wild Turkey	*Meleagris gallopavo*
Common Loon	*Gavia immer*
Double-crested Cormorant	*Phalacrocorax auritus*
American Bittern	*Botaurus lentiginosus*
Great Blue Heron	*Ardea herodias*
Turkey Vulture	*Cathartes aura*
Osprey	*Pandion haliaetus*
Bald Eagle	*Haliaeetus leucocephalus*
Sharp-shinned Hawk	*Accipiter striatus*
Coopers Hawk	*Accipiter cooperii*
Northern Goshawk	*Accipiter gentilis*
Red-shouldered Hawk	*Buteo lineatus*
Broad-winged Hawk	*Buteo platypterus*
Red-tailed Hawk	*Buteo jamaicensis*
American Kestrel	*Falco sparverius*
Merlin	*Falco columbarius*
Killdeer	*Charadrius vociferus*
Spotted Sandpiper	*Actitis macularia*
Common Snipe	*Gallinago gallinago*
American Woodcock	*Scolopax minor*
Herring Gull	*Larus argentatus*
Rock Dove	*Columba livia*
Mourning Dove	*Zenaida macroura*
Great Horned Owl	*Bubo virginianus*
Barred Owl	*Strix varia*
Chimney Swift	*Chaetura pelagica*
Ruby-throated Hummingbird	*Archilochus colubris*
Belted Kingfisher	*Ceryle alcyon*
Yellow-bellied Sapsucker	*Sphyrapicus varius*
Downy Woodpecker	*Picoides pubescens*
Hairy Woodpecker	*Picoides villosus*
Black-backed Woodpecker	*Picoides arcticus*

Northern Flicker	*Colaptes auratus*
Pileated Woodpecker	*Dryocopus pileatus*
Olive-sided Flycatcher	*Nuttallornis borealis*
Eastern Wood Pewee	*Contopus virens*
Alder Flycatcher	*Empidonax alnorum*
Least Flycatcher	*Empidonax minimus*
Eastern Phoebe	*Sayornis phoebe*
Great-crested Flycatcher	*Myiarchus crinitus*
Eastern Kingbird	*Tyrannus tyrannus*
Blue-headed Vireo	*Vireo solitarius*
Warbling Vireo	*Vireo gilvus*
Red-eyed Vireo	*Vireo olivaceus*
Blue Jay	*Cyanocitta cristata*
American Crow	*Corvus brachyrhynchos*
Common Raven	*Corvus corax*
Tree Swallow	*Iridoprocne bicolor*
Cliff Swallow	*Petrochelidon pyrrhonota*
Barn swallow	*Hirundo rustica*
Black-capped Chickadee	*Parus atricapillus*
Boreal Chickadee	*Parus hudsonicus*
Red-breasted Nuthatch	*Sitta canadensis*
White-breasted Nuthatch	*Sitta carolinensis*
Brown Creeper	*Certhia familiaris*
House Wren	*Troglodytes aedon*
Winter Wren	*Troglodytes troglodytes*
Golden-crowned Kinglet	*Regulus satrapa*
Ruby-crowned Kinglet	*Regulus calendula*
Eastern Bluebird	*Sialia sialis*
Veery	*Catharus fuscescens*
Bicknell's Thrush	*Catharus bicknelli*
Swainson's Thrush	*Catharus ustulatus*
Hermit Thrush	*Catharus guttatus*
Wood Thrush	*Hylocichla mustelina*
American Robin	*Turdus migratorius*
Gray Catbird	*Dumetella carolinensis*
Northern Mockingbird	*Mimus polyglottos*
European Starling	*Sturnus vulgaris*
Cedar Waxwing	*Bombycilla cedrorum*
Nashville Warbler	*Vermivora ruficapilla*
Northern Parula Warbler	*Parula americana*
Yellow Warbler	*Dendroica petechia*
Chestnut-sided Warbler	*Dendroica pensylvanica*
Magnolia Warbler	*Dendroica magnolia*
Black-throated Blue Warbler	*Dendroica caerulescens*
Yellow-rumped Warbler	*Dendroica coronata*
Black-throated Green Warbler	*Dendroica virens*

Blackburnian Warbler	*Dendroica fusca*
Pine Warbler	*Dendroica pinus*
Blackpoll Warbler	*Dendroica striata*
Black and White Warbler	*Mniotilta varia*
American Redstart	*Setophaga ruticilla*
Ovenbird	*Seiurus aurocapilllus*
Northern Waterthrush	*Seiurus noveboracensis*
Mourning Warbler	*Oporornis philadelphia*
Common Yellowthroat	*Geothlypis trichas*
Canada Warbler	*Wilsonia canadensis*
Scarlet Tanager	*Piranga olivacea*
Eastern Towhee	*Pipilo erythrophthalmus*
Chipping Sparrow	*Spizella passerina*
Savannah Sparrow	*Passerculus sandwichensis*
Song Sparrow	*Melospiza melodia*
Lincoln's Sparrow	*Melospiza lincolnii*
Swamp Sparrow	*Melospiza georgiana*
White-throated sparrow	*Zonotrichia albicollis*
Dark-eyed Junco	*Junco hyemalis*
Northern Cardinal	*Cardinalis cardinalis*
Rose-breasted Grosbeak	*Pheucticus ludovicianus*
Indigo Bunting	*Passerina cyanea*
Bobolink	*Dolichonyx oryzivorus*
Red-winged Blackbird	*Agelaius phoeniceus*
Rusty Blackbird	*Euphagus carolinus*
Common Grackle	*Quiscalus quiscula*
Brown-headed Cowbird	*Molothrus ater*
Baltimore Oriole	*Icterus galbula*
Purple Finch	*Carpodacus purpureus*
White-winged Crossbill	*Loxia leucoptera*
Pine Siskin	*Carduelis pinus*
American Goldfinch	*Carduelis tristas*
Evening Grosbeak	*Hesperiphona vespertina*

Appendix 4 - Mammals in SPW

1.Masked shrews (*Sorex cinereus*) are found in forest, open country and brush land at any altitude. Populations are probably highest in the fir zone.

2.Long-tail shrews (*Sorex dispar*) favor moist rocks and crevices between boulders in a fern covered habitat.

3.Northern water shrews (*Sorex palustris*) frequent wet places, often occurring along the shoreline of rushing mountain streams or the sphagnous swamps bordering beaver meadows.

4.Smoky shrews (*Sorex fumeus*) are creatures of the cooler mountains and heavy forests.

5.Short-tailed shrews (*Blarina brevicauda*) show a preference for hardwood type forest.

6.Starnose moles (*Condylura cristata*) prefer the moist rich loamy soil near lakes and streams.

7.Silver-haired bats (*Lasionycteris noctivagans*) are usually observed near streams. They are considered the most common bat of the Adirondacks.

8.Red bats (*Lasiurus borealis*) prefer wooded areas, where they usually fly in pairs, working same route of about 100 yards over and over.

9.Snowshoe hare (*Lepus americanus*) can be found in all habitats at any elevation.

10.Southern flying squirrels (*Glaucomys volans*) prefer large deciduous trees with holes in them, usually near water.

11.There have been only a few recorded sightings of the Northern Flying Squirrel (*Glaucomys sabrinus*) in the Adirondacks and very little is known about this species. It is believed to prefer coniferous forests over other forest types.

12.Woodchucks (*Marmota monax*) prefers to den in or on the edge of fields during the summer but usually move to a woodland den site in the winter.

13.Boreal redback voles (*Clethrionomys gapperi*) are found in greatest numbers in the moist fir forests.

14.Pine voles (*Pitymy pinetorum*) are rarely found in the pines, as the name would imply, but is more characteristic of the eastern deciduous forest.

15.Muskrats (*Ondatra zibethica*) are typically found in aquatic environments except for in late February and early March when a large percent of them travel over land to find mates. It is considered a game species with a season in New York state. It is considered a game species in New York State.

16.The Southern Bog Lemming (*Synaptomys cooperi*) prefers low damp bogs and meadows with heavy growth of vegetation.

17.The Woodland Jumping Mouse (*Napaeozapus insignis*) is commonly found at the edge of a hardwood forest and water.

18.During most of the year the Porcupine (*Erethizon dorsatum*) is found in numerous forest habitats where it feeds on buds, small twigs, and inner bark of most trees. In the winter it prefers conifer forests where it feeds on evergreen tree foliage and bark.

19.The Marten's (*Martes americana*) preferred habitat is the mixed hardwood forest above 2,000 feet. During the last two decades the marten's range has expanded outside the High Peaks of the Central Adirondacks and individuals have been trapped as far south as the SPW. It is considered a game species in New York State.

20.The Fisher (*Martes pennanti*) was once thought to favor remote areas in large forests of mixed softwood and hardwoods but New York Fishers have adapted well to modern times. They are found outside such habitats in the Adirondack Mountains, and are occasionally seen near villages. It is considered a game species in New York State.

21.Striped skunks (*Mephitis mephitis*) are most at home on semi-open country; normally within two miles of water. It is considered a game species with a season in New York state.

22.Canada lynx (*Lynx canadensis*) are so rare and seldom encountered in New York that little is known about their preferred habitat. Undoubtedly there are a few lynx that have migrated down from Canada. These individuals probably feed on snowshoe hares and therefore found in habitats normally associated with them. The last species trapped in New York was in the Town of Altona, Clinton County in 1974. One animal was trapped in or very near to the SPW in the Town of Wells, Hamilton County in 1966. The State University of New York, College of Environmental Science and Forestry directed a lynx re-introduction program during the mid and late 1980s. However, the program was not successful and the lynx has not been re-established in the Adirondacks. The lynx is listed as threatened by the U.S. Department of Interior and New York State. It is considered a game species with no designated season in New York State.

Furbearer Harvest in the Siamese Ponds Wilderness

SPECIES/ COUNTY	'81-'82	'82-'83	'83-'84	'84-'85	'85-'86	'86-'87	'87-'88	'88-'89	'89-'90	'90-'91	'91-'92	'92-'93	'93-'94	'94-'95	'95-'96	'96-'97	'97-'98	'98-'99	'99-'00
BEAVER																			
Wells, Hamilton Co.	22	104	57	69	66				92	58	58	41	92	58	22	47	53	61	68
Indian Lake, Hamilton Co.	55	79	60	97	131				118	42	105	29	143	82	27	115	76	76	64
Johnsburg, Warren Co.	76	74	127	139	62				95	134	43	31	53	96	30	91	90	41	58
BOBCAT																			
Wells, Hamilton Co.	1	0	1	0	0				0	1	2	0	1	1	2	1	1	0	1
Indian Lake, Hamilton Co.	1	2	0	2	4				2	0	2	0	0	9	1	1	1	2	0
Johnsburg, Warren Co.	1	0	1	0	2				0	0	0	0	0	1	1	5	0	1	2
COYOTE																			
Wells, Hamilton Co.	6	11	10	8	1				1	1	11	2	10	13	3	1	16	0	3
Indian Lake, Hamilton Co.	7	18	6	20	11				4	5	12	13	10	18	5	4	7	2	6
Johnsburg, Warren Co.	8	13	4	8	12				3	7	3	7	2	4	0	2	7	2	16
FISHER																			
Wells, Hamilton Co.	8	23			25				4	5	6	5	11	12	33	6	32	13	26
Indian Lake, Hamilton Co.	13	17			29				7	6	4	17	2	6	12	13	40	12	30
Johnsburg, Warren Co.	7	23			34				9	2	4	5	5	2	9	17	35	5	28
OTTER																			
Wells, Hamilton Co.	3	5	7	5	1				11	2	4	4	7	14	1	3	32	2	4
Indian Lake, Hamilton Co.	6	9	4	20	5				20	3	7	11	11	17	3	24	9	10	6
Johnsburg, Warren Co.	7	4	10	3	5				15	7	0	0	6	13	7	4	7	3	3

Appendix 4 - Mammals in SPW

Reported Bear Take in the Towns of Wells, Indian Lake and Johnsburg

Town	Season	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Wells	Early*	3	7	9	2	0	5		3	3	5	2	0	3	6	2	6	1	0	0	10	3
	Dog								4	0	0	0	-	-	-	-	-	-	-	-	-	-
	Archery								0	0	0	0	0	0	0	0	0	0	0	0	1	0
	Muzzle								0	2	2	0	0	1	0	0	0	0	1	0	0	2
	Regular	8	12	3	18	7	2		8	19	14	8	14	8	6	26	0	8	5	5	13	14
	Total	11	19	12	20	7	7	17	15	24	21	10	14	12	12	28	6	9	6	5	24	19
Indian Lake	Early*	13	7	7	2	8	4		3	3	4	6	6	9	14	1	13	2	7	2	5	2
	Dog								0	0	0	0	-	-	-	-	-	-	-	-	-	-
	Archery								0	0	0	0	2	0	0	0	0	0	0	0	0	0
	Muzzle								0	0	0	0	3	0	1	0	0	0	0	2	1	1
	Regular	10	19	4	20	11	4		6	26	27	11	19	5	11	18	4	3	3	11	2	11
	Total	23	26	11	22	19	8	34	9	29	31	17	30	14	26	19	17	5	10	15	8	14
Johnsburg	Early*	3	7	1	2	0	3		8	3	3	0	3	3	0	0	9	0	1	1	8	0
	Dog								2	0	0	0	-	-	-	-	-	-	-	-	-	-
	Archery								0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Muzzle								0	0	0	0	0	1	0	0	0	0	0	0	0	0
	Regular	14	6	7	10	9	4		0	16	13	10	19	15	6	10	4	7	2	2	3	8
	Total	17	13	8	12	9	7	24	10	19	16	10	22	19	6	10	13	7	3	3	11	8

* The early bear season includes bear taken by fireare, archery or muzzleloader before the regular firearm season.

Appendix 5 - Habitats of amphibians and reptiles observed in SPW during the 1990 NYS Herp Atlas Project

Frogs and Toads

Eastern American Toad (*Bufo americanus*).-- Although Eastern American Toads can be found in almost every habitat from cultivated gardens to woodlands, they are typically found in moist upland forest. Special habitat requirements include shallow water for breeding (DeGraaf and Rudis, 1983).

Gray Treefrog (*Hyla versicolor*).-- Gray Treefrogs are found in forested areas where they hibernate near the soil surface, tolerating temperatures as cold as - 6 degrees C for as long as 5 consecutive days. Due to the production of glycerol which serves as an antifreeze, gray treefrogs can freeze up to 41.5% of their total body fluids. The frogs breed in both permanent or temporary ponds or wetlands (Hunter, et al., 1999).

Northern Spring Peeper (*Pseudacris crucifer*).-- Northern Spring Peepers inhabit coniferous, deciduous and mixed forested habitat where they typically breed in ponds, emergent marshes or shrub swamps. However, their spring chorus is commonly heard from just about any body of water, especially in areas where trees or shrubs stand in and near water (Hunter, et al., 1999).

Bullfrog (*Rana catesbeiana*).-- Bullfrogs require permanent bodies of water with adequate emergent and edge cover. Their aquatic habitats include shallow lake coves, slow-moving rivers and streams, and ponds (Hunter, et al., 1999).

Green Frog (*Rana clamitans*).-- Green frogs are rarely found more than several meters from some form of water, including lakes and ponds, streams, quarry pools, springs, and vernal pools (DeGraaf and Rudis, 1983).

Pickerel Frog (*Rana palustris*).-- Whether the habitat selected is a bog, fen, pond, stream, spring, slough, or cove, Pickerel Frogs prefer cool, clear waters, avoiding polluted or stagnant habitats. Grassy streambanks and inlets to springs, bogs, marshes, or weedy ponds are favorite habitat choices (Harding, 1999).

Northern Leopard Frog (*Rana pipiens*).-- Although sometimes found in wet woodlands, Northern Leopard Frogs are the frog of wet meadows and open fields, breeding in ponds, marshes, and slow, shallow, vegetated streams (DeGraaf and Rudis, 1983).

Mink Frog (*Rana septentrionalis*).-- Mink frogs prefer cool, permanent water with adequate emergent and floating-leaved vegetation where they feed on aquatic insects and other invertebrates. Here they also hibernate on the bottom in the mud (Harding, 1997).

Wood Frog (*Rana sylvatica*).-- Wood frogs prefer cool, moist, woodlands where they select temporary pools for breeding. However, where vernal pools are absent, wood frogs will breed in a variety of habitats including everything from cattail swamps to roadside ditches (Hunter, et al., 1999).

Salamanders:

Spotted Salamander (*Ambystoma maculatum*).-- The spotted salamander prefers vernal pools for breeding, but its jelly-like globular egg masses are found in a variety of wetland habitats. Because of its fossorial habits, the spotted salamander is rarely encountered except during the breeding season. At that time they can be found under rocks, logs, and debris near the edges of the breeding pools.

Northern Dusky Salamander (*Desmognathus fuscus*) The Northern Dusky Salamander inhabits rocky stream ecotones, hillside seeps and springs, and other seepage areas in forested or partially forested habitat. They are typically found under rocks and other cover objects such as logs adjacent to, or in the water (Harding, 1997).

Allegheny Dusky Salamander (*Desmognathus ochrophaeus*).-- The Allegheny Dusky Salamander is more terrestrial than its congener, the Northern Dusky Salamander, being found under rocks and woodland debris in moist forests usually near a seep or stream.

Northern Two-lined Salamander (*Eurycea bislineata*).-- Northern Two-lined Salamanders inhabit springs and seeps in forested wetlands, edges of brooks and streams, and terrestrial areas many meters from water. They are usually found under rocks, logs, and debris (Pfingsten and Downs, 1989).

Northern Spring Salamander (*Gyrinophilus porphyriticus*).-- Although Northern Spring Salamanders inhabit cool, well-oxygenated streams in forested areas where they can be found under rocks and logs, they sometimes can be found foraging in the open on rainy nights. This species also uses underground springs that are a considerable distance away from their natal habitat (Harding, 1997).

Red-spotted Newt (*Notophthalmus viridescens)* One of the most fascinating life histories of any salamander is that of the Red-spotted Newt, with four stages in its life cycle (egg, aquatic larva, terrestrial immature red eft, and aquatic adult). Interestingly, the red eft remains on land from two (Bishop, 1941) to seven years (Healy, 1974) before they transform into their final life stage, the aquatic adult.

Northern Redback Salamander (*Plethodon cinereus*) The Northern Redback Salamander is found in deciduous, coniferous or mixed forest where it nests in moist, rotten logs. It favors pine logs in advanced stages of decay rather than deciduous tree logs that appear to be more susceptible to molds, thus attributing to possible fungal infections in the eggs (Pfingsten and Downs 1989).

Snakes:

Common Garter Snake (*Thamnophis sirtalis*).-- Garter Snakes are found in a wide variety of habitats including, but not limited to, woodlands, meadows, wetlands, streams, drainage ditches, and even city parks and cemeteries (Conant and collins, 1998). But large populations of Common Garter Snakes are usually found in moist, grassy areas near the edges of water (Harding, 1997).

Northern Red-bellied Snake (*Storeria occipitomaculata*).-- Although the Northern Redbelly Snake prefers wetland-upland ecotones, it is found in a variety of terrestrial habitats. This extremely secretive nocturnal species may be found under rocks, logs, bark, and leaves; but if conditions are dry, they are apt to go underground in unused rodent borrows (Mitchell, 1994).

Northern Brown Snake (*Storeria decayi*).-- Northern Brown Snakes are found in the soil-humus layer of hardwood forests, mixed hardwood-pine forests, pine woods, grasslands, early successional agricultural land, and urban areas where they are frequently found in gardens (Mitchell, 1994).

Eastern Milk Snake (*Lampropeltis triangulum*).-- The Milk Snake is the snake of farm outbuildings and barns, taking cover under rocks, logs, firewood, or building materials. Natural habitat includes open woodlands, wetlands, old fields and pastures (Harding, 1997).

Northern Ringneck Snake (*Diadophus punctatus*).-- The Ringneck Snake is typically found in hardwood or mixed hardwood-pine forests where they live in the leaf litter and upper soil horizon (Mitchell, 1994). They also inhabit urban and agricultural areas.

Turtles:

Common Snapping Turtle (*Chelydra serpentina*).-- Snapping Turtles are found in most permanent and semipermanent bodies of fresh and brackish water. Areas that have dense aquatic vegetation with deep, soft, organic substrates and plenty of cover are favored (Mitchell, 1994).

Painted Turtle (*Chrysemys picta*).-- Painted Turtles most often inhabit ponds, lakes, and other slow-moving bodies of water with soft substrates and abundant aquatic vegetation. A critical habitat parameter is adequate basking sites such as logs, rocks, and mats of aquatic vegetation.

Wood Turtle (*Glyptemys insculpta*).-- The Wood Turtle is a semiaquatic turtle that inhabits both the terrestrial and aquatic environment. It favors streams with sandy-pebbly substrates that are deep enough so that they do not freeze during hibernation, are well-oxygenated, and have good water quality. Terrestrial habitat includes a variety of wetlands, upland successional fields, and deciduous woodlands with open areas for basking (Tuttle, 1996).

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Fisheries Tables and References

ORGANIZATIONAL AND DELEGATION MEMORANDUM # 93-35 POLICY: FISHERY MANAGEMENT IN WILDERNESS, PRIMITIVE AND CANOE AREAS-Amended 11/02/93

MEMORANDUM FROM
THOMAS C. JORLING, *Commissioner*
New York State Department of Environmental Conservation

TO: Executive Staff, Division and Regional Directors

FROM: Thomas C. Jorling

RE: ORGANIZATIONAL AND DELEGATION MEMORANDUM # 93-35 POLICY: FISHERY MANAGEMENT IN WILDERNESS, PRIMITIVE AND CANOE AREAS-Amended 11/02/93

BACKGROUND

Fisheries management in wilderness, primitive and canoe areas of the Adirondack and Catskill Parks has a strong foundation in law, policy, tradition and resource planning. The New York State Legislature has directed DEC to efficiently manage, maintain and improve the fish resources of the State and make them accessible to the people of New York. This includes a mandate to develop and carry out programs and procedures which prompt both natural propagation and maintenance of desirable species in ecological balance and lead to the observance of sound management practices to achieve those goals (ECL Section 11-0303).

Similarly, the State Land Master Plans for the Adirondack and Catskill Parks adopt the principle of resource management and provide strong guidance for fish management (APA 1987, DEC 1985). The primary management guideline for wilderness, primitive and canoe areas is to "achieve and perpetuate a natural plant and animal community where man's influence is not apparent." While these plans recognize these areas as places "where the earth and its community of life are untrammeled by man, where man is a visitor who does not remain," they are also defined as areas which are protected and managed so as to "preserve, enhance and restore, where necessary, its natural conditions . . .". Thus, opportunities to manage ecosystems have been preserved in these Master Plans and are conducted in a manner to meet plan guidelines. Fish management practices, such as fish stocking, pond reclamation, pond liming, barrier dam construction and maintenance, and resource survey and inventory, are permitted when conducted within guidelines for wilderness, primitive and canoe area management and use.

For more than a decade, the Division of Fish and Wildlife has managed ecosystems consistent with legal mandates and professional concerns, with sensitivity for wilderness values and with the intent of providing unique recreational experiences. The Master Plans set no numerical standards on use intensity but indicate that fishing is "compatible with wilderness and should be encouraged as long as the degree and intensity of use does not endanger the wilderness resource itself".

Important precepts contained in a Division of Fish and Wildlife position paper on wilderness area management have guided the Department's fish management programs in such areas since 1977 (Doig 1977). The position paper recognizes fishing as: a legitimate activity in wilderness, primitive and canoe areas which should be considered as part of a larger experience not just a quest for fish; where quality includes the expectation of encounter with unique fish and wildlife in natural setting,

aesthetic surroundings, and limited contact with other persons. It directs management activities at species which are indigenous to or historically associated with the Adirondacks and Catskills. It provides that fish populations will be managed on a self-sustaining basis, but permits maintenance stocking to be used where unique, high quality recreational fishing experiences can be provided without impairing other objectives. It further directs that fish management activities should be compatible with area characteristics, conducted in an unobtrusive manner and restricted to the minimum means necessary to accomplish management objectives.

The formal traditions of fisheries management in New York State are rooted 120 years in the past, dating back to 1868 when the New York Commission of Fisheries was created (Shepherd et al. 1980). The elements of New York's fisheries program have evolved both in emphasis and priority with shifts being dictated by need, experience and availability of funding as well as the evolution of fishery science. Formal goals for the Fish and Wildlife program have been in existence for more than a decade and remain the foundation for DEC's modern fish and wildlife program activities. They are:

- perpetuate fish and wildlife as a part of various ecosystems of the state;
- provide maximum beneficial utilization and opportunity for enjoyment of fish and wildlife resources; and
- manage these resources so that their numbers and occurrences are compatible with the public interest.

Goals for each program of the Division of Fish and Wildlife have been described in DEC's 1977 Division of Fish and Wildlife Program Plan. Environmental impacts of the Division of Fish Wildlife's fish species and habitat management activities are discussed in programmatic environmental impact statements prepared by Shepherd et al. (1980) and Odell
et al. (1979), respectively.

The evolution of fisheries management in New York State and the Adirondack zone has been discussed in Shepherd et al. (1980) and Pfeiffer (1979). Program goals, objectives, policies and management strategies for lake trout including guidelines for stocking were developed by Plosila (1977). The strategic plan recognizes the importance of native Adirondack lake trout stocks and the considerable importance of these lake trout resources to the entire State. In 1979, a strategic plan for the management of wild and hybrid strains of brook trout was completed (Keller 1979). Preservation of native strains in the Adirondack and Catskill Mountains was a major component of that plan. Pfeiffer (1979) established goals, objectives and strategies for the management of broad classes of Adirondack fishery resources and significantly enunciated the importance of angling in wilderness, primitive and canoe areas and guidelines for fisheries management within these areas. The latter were consistent with those formulated earlier by Doig (1977). The philosophical and scientific underpinnings for trout stream management in New York with application to management of wilderness, primitive and canoe area trout streams, was completed in 1979 (Engstrom-Heg 1979 a). A recent draft plan for intensification of management of brook trout in 47 Adirondack ponds has been developed by DEC Regions 5 and 6 (Miller, 1986).

Salmonid stocking by the Division of Fish and Wildlife is guided by policies and criteria presented in Engstrom-Heg (1979 b). The evolution of DEC's criteria for establishing salmonid stocking policies in New York has been reviewed by Pfeiffer (1979), while the general objectives of fish stocking are discussed in Shepherd et al. (1980) and Engstrom-Heg (1979).

Liming of acidified waters by the Division of Fish and Wildlife is presently guided by the draft policy and criteria established by Wich (1987). A final generic environmental impact statement for DEC's liming program is being prepared following extensive public review of the draft statement. It will include a revision of the Division of Fish and Wildlife's liming policy and criteria (Simonin 1990). Findings and the Commissioner's decision for the liming program are being completed.

The history of pond reclamation in New York has been discussed by Pfeiffer (1979). Reclamation goals are discussed in Shepherd et al. (1980), while general policy guidance and rules and regulations covering the use of piscicides including rotenone, are provided in Part 328 of 6NYCRR. Fish barrier dams, which are frequently associated with pond reclamation, are permitted when constructed or maintained in accordance with SLMP guidelines.

PURPOSE

The purpose of this memorandum is to state the Department's policies on fisheries management in wilderness, primitive and canoe areas within the Adirondack and Catskill Parks.

POLICY GUIDELINES

Legally established goals for the Forest Preserve recognize that fish and wildlife are integral to the values society places on the Preserve. Charges include management to "foster the wild Adirondack environment and all the flora and fauna historically associated there with" and, "encouragement of indigenous species presently restricted in numbers." Fisheries management activities are essential to achieve these goals and to perpetuate unique opportunities for high quality wilderness, primitive and canoe area fishing experience provided within the Adirondack and Catskill Parks. Specific guidelines for fisheries management activities are as follows:

1. The primary purpose of aquatic resource management in wilderness primitive and canoe areas is to perpetuate natural aquatic ecosystems, including perpetuation of indigenous fish species on a self-sustaining basis.

2. Angling is recognized as a compatible recreational pursuit in wilderness, primitive and canoe areas. Aquatic resource management will emphasize the quality of the angling experience over quantity of use.

3. Aquatic resources in wilderness, primitive and canoe areas will be protected and managed so as to preserve, enhance and restore, where necessary, their natural conditions. Aquatic resource management, including stocking of game and nongame fishes and pond reclamation, may be necessary to achieve and perpetuate natural aquatic ecosystems.

4. Brown trout, rainbow trout, splake and landlocked Atlantic salmon are coldwater fish species historically associated with the Adirondack Park. Smallmouth bass, largemouth bass, northern pike and walleye are warmwater species historically associated with the entire Adirondack and Catskill Parks and indigenous to some lowland areas. These species may be included in the management and stocking regime of specific waters in wilderness, primitive, and canoe areas in instances when indigenous fish communities cannot be protected, maintained, or restored in those waters. Fish species, other than indigenous species and species historically associated with the Adirondack and Catskill Parks, will not be stocked in the waters of wilderness, primitive and canoe areas.

5. Waters found to be naturally barren of fish species will not be stocked. Waters which are self-sustaining or which otherwise would be self-sustaining except that they have been compromised by human-caused disturbances may be stocked consistent with these guidelines.

6. Pond reclamation will be practiced as appropriate to prepare or maintain waters in wilderness, primitive and canoe areas but only for the restoration or perpetuation of indigenous fish communities.

7. The Unit Management Plan for each wilderness, primitive, or canoe area shall identify aquatic resource management actions on a water-body-specific basis through analysis of unit inventory data adequate to support the actions.

8. In those instances where a Unit Management Plan has not yet been approved for a given wilderness, primitive, or canoe area, aquatic resource management actions to stock waters may be continued in waters so managed before December 31, 1989, consistent with these guidelines, pending approval of the Plan. Waters reclaimed prior to December 31, 1989 may be reclaimed subject to case-by-case review by the Adirondack Park Agency for consistency with these guidelines, pending approval of the Plan. New waters may be stocked or reclaimed only to prevent significant resource degradation subject to case-by-case review by the Adirondack Park Agency for consistency with these guidelines, pending approval of the Plan.

9. Liming to protect and maintain indigenous fish species may be continued as a mitigation measure for acid rain in Horn Lake (P04854) and Tamarack Pond (P06171). As UMP's are completed, new waters may be limed in accordance with the provisions of the Division of Fish and Wildlife Liming Policy presented on pages 2-7 of the Final GEIS on the NYS Department of Environmental Conservation Program of Liming Selected Acidified Waters. As provided in the Liming Policy, no naturally acidic waters or bog waters will be limed. All limed waters will be relimed in accordance with the provisions of the Liming Policy. Any water that must be relimed more than three times in ten years, except for original sources of heritage strains, will be allowed to reacidify.

10. All aquatic resource management activities in wilderness, primitive, and canoe areas will be consistent with guidelines for use of motor vehicles, motorized equipment, and aircraft as stated in the State Land Master Plan.

Table 1. Siamese Ponds Wilderness Unit Management Plan Ponded Water Inventory Data

Name	P#	W'shed	File #	County	USGS Quad (7 ½')	Management Class	Area (acres) *	Maximum Depth (meters)	Mean Depth (meters)
Ackerman Pond	311	UH	559	Hamilton	Indian Lake	Other	2.0		
Botheration Pond	300	UH	542	Warren	North River	Coldwater	19.8		
Brown Pond	539	UH	923	Warren	North River	Adirondack brook trout	7.2		
Buckhorn Pond (Lower)	285	UH	514	Hamilton	South Pd. Mtn.	Adirondack brook trout	3.0		
Buckhorn Pond (Middle)	284	UH	514	Hamilton	South Pd. Mtn.	Adirondack brook trout	6.7	6.3	
Buckhorn Pond (Upper)	283	UH	514	Hamilton	South Pd. Mtn.	Adirondack brook trout	2.0		
Center Pond	593	UH	1021	Hamilton	Bullhead Mtn.	Coldwater	16.3		
Clear Pond	594	UH	1022	Hamilton	Bullhead Mtn.	Adirondack brook trout	18.5	14.3	
Crotched Pond	598	UH	1030	Hamilton	Indian Lake	Adirondack brook trout	62.0	9.1	3.0
Gardner Pond	546	UH		Hamilton	Dutton Mtn.	Unknown	3.2		
Grassy Pond	545	UH		Warren	Dutton Mtn.	Unknown	2.0		
Hayes Flow	302	UH		Hamilton	South Pd. Mtn.	Adirondack brook trout	18.5		
Hour Pond	541	UH	926	Warren	Bullhead Mtn.	Adirondack brook trout	34.8	4.3	1.3
John Mack Pond	599	UH	1031	Hamilton	Indian Lake	Adirondack brook trout	27.4		
John Pond	596	UH	1024	Hamilton	Bullhead Mtn.	Adirondack brook trout	24.2		
Kings Flow	588a	UH	1010a	Hamilton	Bullhead Mtn.	Warmwater	198.2	3.4	0.6
Lake Snow	591a	UH		Hamilton	Bad Luck Mtn.	Warmwater	74.0	3.4	2.3
Long Pond	310	UH	558	Hamilton	Indian Lake	Adirondack brook trout	37.3	13.1	4.4
McComb Pond	282a	UH	512c	Hamilton	South Pd. Mtn.	Adirondack brook trout	6.2	7.0	
Mud Pond	297	UH	539	Warren	North River	Other	4.9	3.0	
Mud Pond	595	UH		Warren		Unknown	0.0		
Mud Pond (Lower)	289	UH	524	Warren	South Pd. Mtn.	Adirondack brook trout	8.9		
Mud Pond (Upper)	290	UH	525	Warren	South Pd. Mtn.	Adirondack brook trout	7.9		
Peaked Mt. Pond	542	UH	928	Warren	Bullhead Mtn.	Adirondack brook trout	20.5		
Prier Pond	544	UH	931	Hamilton	Btn.M./BadLuckM.	Adirondack brook trout	13.8		
Puffer Pond	589	UH	589	Warren	Bullhead Mtn.	Adirondack brook trout	41.8		
Rock Pond	309	UH	557	Hamilton	Indian Lake	Warmwater	35.3		
Round Pond	590	UH	1012	Hamilton	Indian Lk/Bullhead M.	Warmwater	134.4	3.4	2.1
Round Pond	296	UH	538	Warren	North River	Other	6.4	2.4	1.1
Second Pond	298	UH	541	Warren	North River	Adirondack brook trout	46.2	4.0	1.2
Siamese Pond (Lower)	292	UH	530	Warren	South Pd. Mtn.	Coldwater	96.1	24.1	8.5
Siamese Pond (Upper)	293	UH	531	Warren	South Pd. Mtn.	Coldwater	27.2		

Name	P#	W'shed	File #	County	USGS Quad (7 ½')	Management Class	Area (acres) *	Maximum Depth (meters)	Mean Depth (meters)
South Pond	312	UH	560	Hamilton	South Pond M.	Adirondack brook trout	8.2		
Thirteenth Lake	540	UH	924	Warren	Bullhead M./North R.	Adirondack brook trout	335.6	14.9	6
Twin Pond (Lower)	294	UH	535	Warren	Bullhead Mtn.	Adirondack brook trout	15.6	1.2	0.8
Twin Pond (Upper)	295	UH	536	Warren	Bullhead Mtn.	Adirondack brook trout	17.3		
Unnamed Pond	285A	UH		Warren	South Pd. Mtn.	Unknown	2.5		
Unnamed Pond	285B	UH		Hamilton	South Pd. Mtn.	Unknown	2.0		
Unnamed Pond	291A	UH		Warren	South Pd. Mtn.	Unknown	4.0		
Unnamed Pond	293A	UH		Warren	Bullhead Mtn.	Unknown	12.1		
Unnamed Pond	296A	UH		Warren	North River	Unknown	1.2		
Unnamed Pond	311A	UH		Hamilton	Kunjamuk Ck.	Unknown	5.4		
Unnamed Pond	311B	UH		Hamilton	Indian Lake	Unknown	1.2		
Unnamed Pond	311C	UH		Hamilton	Indian Lake	Unknown	2.2		
Unnamed Pond	311D	UH		Hamilton	Indian Lake	Unknown	1.2		
Unnamed Pond	5295	UH		Warren	Bakers Mills	Unknown	2.7		
Unnamed Pond	5315	UH		Hamilton	South Pd. Mtn.	Unknown	4.0		
Unnamed Pond	5316	UH		Warren	South Pd. Mtn.	Unknown	2.0		
Unnamed Pond	5317	UH		Warren	South Pd. Mtn.	Unknown	1.5		
Unnamed Pond	5318	UH		Warren	South Pd. Mtn.	Unknown	1.5		
Unnamed Pond	5322	UH		Warren	North River	Unknown	1.2		
Unnamed Pond	5323	UH		Warren	North River	Unknown	2.7		
Unnamed Pond	5324	UH		Warren	North River	Unknown	3.5		
Unnamed Pond	5326	UH		Hamilton	Kunjamuk Ck.	Unknown	2.0		
Unnamed Pond	5327	UH		Hamilton	Kunjamuk Ck.	Unknown	14.1		
Unnamed Pond	5369	UH		Warren	Bullhead Mtn.	Unknown	3.0		
Unnamed Pond	5371	UH		Warren	Bullhead Mtn.	Unknown	6.7		
Unnamed Pond	540A	UH		Warren	North River	Unknown	7.4		
Unnamed Pond	5419	UH		Hamilton	Bullhead M./Bad Luck M.	Unknown	2.2		
Unnamed Pond	5464	UH		Hamilton	Indian Lake	Unknown	2.4		
Unnamed Pond	5491	UH		Warren	South Pd. Mtn.	Unknown	0.9		
Unnamed Pond	5492	UH		Warren	South Pd. Mtn.	Unknown	0.9		
Unnamed Pond	5493	UH		Hamilton	Bullhead Mtn.	Unknown	1.9		
Unnamed Pond	5494	UH		Hamilton	Bullhead Mtn.	Unknown	1.7		
Unnamed Pond	5495	UH		Hamilton	Indian Lake	Unknown	1.2		

Name	P#	W'shed	File #	County	USGS Quad (7 ½')	Management Class	Area (acres) *	Maximum Depth (meters)	Mean Depth (meters)
Unnamed Pond	5496	UH		Hamilton	Indian Lake	Unknown	1.9		
Unnamed Pond	5548	UH		Warren	South Pd. Mtn.	Unknown	1.4		
Unnamed Pond	588B	UH		Hamilton	Bullhead Mtn.	Unknown	3.7		
Unnamed Pond	590A	UH		Hamilton	Indian Lake	Unknown	0.7		
Unnamed Pond	590B	UH		Hamilton	Indian Lake	Unknown	4.4		
Unnamed Pond	590C	UH		Hamilton	Indian Lake	Unknown	1.7		
Unnamed Pond	590D	UH		Hamilton	Bullhead Mtn.	Unknown	6.1		
Unnamed Pond	590E	UH		Warren	Bullhead Mtn.	Unknown	2.4		
Unnamed Pond	591	UH		Warren	Bullhead Mtn.	Unknown	2.7		
Unnamed Pond	591B	UH		Hamilton	Bullhead Mtn.	Unknown	3.9		
Unnamed Pond	598A	UH		Hamilton	Indian Lake	Unknown	0.5		
Unnamed Pond	599A	UH		Hamilton	Indian Lake	Unknown	1.2		
Unnamed Pond	5497	UH		Hamilton	Indian Lake	Unknown	1.2		
Upper Pine Pond (North)	306	UH	553	Hamilton	Kunjamuk Ck.	Adirondack brook trout	6.2		
Upper Pine Pond (South)	307	UH		Hamilton	Kunjamuk Ck.	Adirondack brook trout	4.2		

Table 2. Siamese Ponds Wilderness Unit Management Plan Ponded Water Survey Data

			Most Recent Chemical Survey					Most Recent Biological Survey		
Name	W'shed	P#	Year	Source	ANC (ueq/l)	pH	Conductivity (ppm)	Year	Source	Fish Species Present and Number Caught *
Ackerman Pond	UH	311	1957	DEC		6.00		1970	DEC	BB (2)
Botheration Pond	UH	300	1999	DEC	279	7.64	49.4	1999	DEC	BT (2), WS (19), BB (2)
Brown Pond	UH	539	1997	DEC	51	6.88	20.2	1997	DEC	No fish present
Buckhorn Pond (Lower)	UH	285	1995	DEC	-30.7	4.43	32.6	1995	DEC	No fish present
Buckhorn Pond (Middle)	UH	284	1995	DEC	8.5	5.89	19.3	1995	DEC	ST (18), GS(22)
Buckhorn Pond (Upper)	UH	283	1995	DEC	-10.9	4.75	30.5	1995	DEC	No fish present
Center Pond	UH	593	1991	ALSC	103	6.90	25.9	1983	DEC	ST (1), WS (25), BB (6), GS (6), CS (385), CC (9), NRD (19), PKS (4)
Clear Pond	UH	594	1991	DEC	102	6.85	25.1	1991	DEC	ST (8), GS (15), BB (7), SFS (44), BND (2)
Crotched Pond	UH	598	1987	ALSC	59.9	6.58	20.5	1987	ALSC	ST (3), WS (39), GS (41), CC (63)
Gardner Pond	UH	546						1932	DEC	ST reported
Grassy Pond	UH	545						1932	DEC	ST reported
Hayes Flow	UH	302	1995	DEC	104.2	7.06	31.6	1995	DEC	ST (4), CC (16), WS (63)
Hour Pond	UH	541	1987	ALSC	144.1	7.22	34.6	1995	DEC	ST (2), CC (2)
John Mack Pond	UH	599	1995	DEC	48.8	6.75	30.9	1995	DEC	ST (15), GS (1), CC (10), WS (77), BB (38)
John Pond	UH	596	2000	DEC	137.4	7.41	25.9	2000	DEC	ST (12), GS (111), NRD (113), WS (12), BB (13)
Kings Flow	UH	588a	1999	DEC	139.3	7.3	29.6	1999	DEC	LMB (46), GS (43), WS (3), YP (63), BB (1), RB (6), PKS (60)
Lake Snow	UH	591a	1987	ALSC	359.7	7.53	50.9	1987	ALSC	LMB (17), YP (44), WS (87), BB (5), RB (25), GS (33), PKS (11)
Long Pond	UH	310	1987	ALSC	31.4	6.43	18.5	1987	ALSC	ST (2), BB (40), PKL (9), PKS (1), WS (2)
McComb Pond	UH	282a	1995	DEC	60	6.61	28.4	1995	DEC	ST (6), BB (10)
Mud Pond	UH	297	1996	DEC	26.9	6.37	16.1	1996	DEC	No fish present
Mud Pond	UH	595								Never surveyed
Mud Pond (Lower)	UH	289	1960	DEC		6.4		1960	DEC	ST (7), CC
Mud Pond (Upper)	UH	290	1960	DEC		6.0		1960	DEC	ST (2), CC (observed)
Peaked Mt. Pond	UH	542	1999	DEC	107.2	7.04	23.4	1995	DEC	ST (79), CC (85)
Prier Pond	UH	544	1980	DEC	346	7.39	56.7	1980	DEC	ST (4), BB (44), GS (48), CC (24), NRD (20)
Puffer Pond	UH	589	1995	DEC	46.4	6.77	23.7	1999	DEC	No fish caught (post reclamation) ST now reported
Rock Pond	UH	309	1995	DEC	16.6	5.96	19.9	1995	DEC	PKL (4), GS (55), WS (2), BB (7), PKS (2)
Round Pond	UH	590	2002	DEC	28.7	6.40	17.5	2002	DEC	WS (46), BB (139), PKS (3), GS (3)

			Most Recent Chemical Survey					Most Recent Biological Survey		
Name	W'shed	P#	Year	Source	ANC (ueq/l)	pH	Conductivity (ppm)	Year	Source	Fish Species Present and Number Caught *
Round Pond	UH	296	1998	DEC	10.9	5.66	15.3	1998	DEC	BB (97)
Second Pond	UH	298	2000	DEC	28.0	6.48	18.5	2002	DEC	ST (30), GS (4)
South Pond	UH	312	1995	DEC	2.6	5.12	23.4	1995	DEC	ST (3)
Siamese Pond (Lower)	UH	292	1997	DEC	65.8	6.86	21.7	1997	DEC	LT (2), ST (2), WF (18), GS (38), WS (10), CC (33), BB (18)
Siamese Pond (Upper)	UH	293	1997	DEC	93.9	7.0	24.8	1997	DEC	ST (1), LT (5),GS (97), BND (3), CC (56), WS (6)
Thirteenth Lake	UH	540	1991	DEC	126.8	7.17	33.7	1991	DEC	ST (4), LLS (4), BT (6), RT (3), CC (42), WS (165), BND (1), BB (35), GS (10), A (1)
Twin Pond (Lower)	UH	294	1987	ALSC	142.7	7.24	29.5	1987	ALSC	ST (25), GS (141), BB (22)
Twin Pond (Upper)	UH	295	1978	DEC		7.0	22	1978	DEC	ST (2), GS (1), BB (68)
Unnamed Pond	UH	285A								Unknown
Unnamed Pond	UH	285B								Unknown
Unnamed Pond	UH	291A								Unknown
Unnamed Pond	UH	293A								Unknown
Unnamed Pond	UH	296A								Unknown
Unnamed Pond	UH	311A								Unknown
Unnamed Pond	UH	311B								Unknown
Unnamed Pond	UH	311C								Unknown
Unnamed Pond	UH	311D								Unknown
Unnamed Pond	UH	5295								Unknown
Unnamed Pond	UH	5315								Unknown
Unnamed Pond	UH	5316								Unknown
Unnamed Pond	UH	5317								Unknown
Unnamed Pond	UH	5318								Unknown
Unnamed Pond	UH	5322								Unknown
Unnamed Pond	UH	5323								Unknown
Unnamed Pond	UH	5324								Unknown
Unnamed Pond	UH	5326								Unknown
Unnamed Pond	UH	5327						1972	DEC	PKL (4), WS (49), BB (26), PKS (4) Former ST water in Course of Kunjamuk River
Unnamed Pond	UH	5369								Unknown
Unnamed Pond	UH	5371								Unknown
Unnamed Pond	UH	540A	1996	DEC	68.3	6.75	19.0	1996	DEC	GS (4), BB (118) - drains to Thirteenth Lake
Unnamed Pond	UH	5419								Unknown

			Most Recent Chemical Survey					Most Recent Biological Survey		
Name	W'shed	P#	Year	Source	ANC (ueq/l)	pH	Conductivity (ppm)	Year	Source	Fish Species Present and Number Caught *
Unnamed Pond	UH	5464								Unknown
Unnamed Pond	UH	5491								Unknown
Unnamed Pond	UH	5492								Unknown
Unnamed Pond	UH	5493								Unknown
Unnamed Pond	UH	5494								Unknown
Unnamed Pond	UH	5495								Unknown
Unnamed Pond	UH	5496								Unknown
Unnamed Pond	UH	5548								Unknown
Unnamed Pond	UH	588B								Unknown
Unnamed Pond	UH	590A								Unknown
Unnamed Pond	UH	590B								Unknown
Unnamed Pond	UH	590C								Unknown
Unnamed Pond	UH	590D								Unknown
Unnamed Pond	UH	590E								Unknown
Unnamed Pond	UH	591								Unknown
Unnamed Pond	UH	591B								Unknown
Unnamed Pond	UH	598A								Unknown
Unnamed Pond	UH	599A								Unknown
Unnamed Pond	UH	5497								Unknown
Upper Pine Pond (North)	UH	306	1995	DEC	57	5.77	27.0	1995	DEC	ST (1), GS (42)
Upper Pine Pond (South)	UH	307	1995	DEC	29.6	6.07	22.7	1995	DEC	BB (6), GS (3)
The Vly Pond	UH	299	1987	ALSC	57.8	6.48	24.6	1987	ALSC	GS (58), WS (153), BB (1), CC (19), PKS (5)

* Fish species caught by various gear. Entries without numbers indicate fish species thought to be present or reported during earlier surveys.

** 150-foot Swedish gillnets

Species Abbreviations

A	Alewife	C	Cisco	GS	Golden shiner	LLS	Landlocked Salmon	RbS	Redbreast sunfish
ST	Brook trout	BND	Blacknose dace	CC	Creek chub	KOK	Kokanee Salmon	NOP	Northern pike
RT	Rainbow trout	WS	White Sucker	BB	Brown Bullhead	CCS	Creek chubsucker	LND	Longnose dace
PD	Pearl dace	S	Smelt	YP	Yellow perch	BK	Banded killifish	CS	Common shiner
LmB	Largemouth bass	PKL	Chain Pickerel	SFS	Spotfin shiner	WF	Whitefish	BnM	Bluntnose minnow
FhM	Fathead minnow	LT	Lake trout	PKS	Pumpkinseed	SmB	Smallmouth bass	Spl	Splake
BT	Brown trout	FF	Fallfish	NRD	Northern redbelly dace	RB	Rock bass	Unknown - No biological survey	

Table 3. Early vs. Recent Fish Distributions in the Siamese Ponds Wilderness Unit

Lake Category	Pre-1980 # Lakes	Pre-1980 % Fish Communities	Post-1980 # Lakes	Post-1980 % Fish Communities	Net Change # Lakes	%Net Change For Species	Comments
GENERAL							
Total Lakes	81						
Unsurveyed Lakes	47		41		-6		
Surveyed Lakes	34		40		6		
Fishless Lakes	0	0%	3	8%	3		
Lakes with Fish Present	34	100%	37	92%	3		
BROOK TROUT							
(Reported or Caught)	31	91%	25	68%	-6	-19%	
NATIVE BUT WIDELY INTRODUCED							
Lake Trout	3	9%	2	5%	-1	-33%	
Brown Bullhead	20	59%	19	51%	-1	-5%	
Pumpkinseed	8	24%	7	19%	-1	-13%	
Creek Chub	14	41%	16	43%	2	14%	
NATIVE							
White Sucker	9	26%	16	43%	7	78%	
Lake Chub	0	0%	0	0%	0	0%	
Blacknose Dace	5	15%	3	8%	-2	-40%	Primarily a stream resident.
Northern Redbelly Dace	5	15%	4	11%	-1	-20%	
Common Shiner	3	9%	3	8%	0	0%	
Redbreast Sunfish	3	9%	0	0%	-3	-100%	
Round Whitefish	0	0%	0	0%	0	0%	Stocked in Thirteenth but no recaptures
Cutlips minnow	1	3%	0	0%	-1	-100%	Primarily a stream resident.
NONNATIVE							
Yellow Perch	3	9%	2	5%	-1	-33%	
Golden Shiner	16	47%	21	57%	5	31%	
Smallmouth Bass	1	3%	0	0%	-1	-100%	
Largemouth Bass	1	3%	3	8%	2	200%	
Chain Pickerel	4	12%	3	8%	-1	-25%	
Rock Bass	1	3%	2	5%	1	100%	

Table 3 (cont'd.)	-1980		t-1980		Net	%Net	
Lake Category	Pre # Lakes	% Fish Communities	Pos # Lakes	% Fish Communities	Change # Lakes	Change For Species	Comments
NONNATIVE (cont'd.)							
Northern Pike	2	6%	0	0%	-2	-100%	
Rainbow Trout	2	6%	2	5%	0	0%	
Brown Trout	2	6%	3	8%	1	50%	
Splake	1	3%	0	0%	-1	-100%	
Landlocked Salmon	0	0%	1	3%	1	100%	
Lake Whitefish	1	3%	1	3%	0	0%	
Alewife	0	0%	1	3%	1	100%	
Spotfin Shiner	0	0%	1	3%	1	100%	

Table 8 - Classification of Common Adirondack Upland Fish Fauna Into Native, Nonnative, and Native But Widely Introduced
Adapted from George (1980)

Native To Adirondack Upland

Blacknose dace	Creek chubsucker
White sucker	Longnose dace
Longnose sucker	Slimy sculpin
Northern redbelly dace	Lake chub
Redbreast sunfish	Common shiner
Finescale dace	Round whitefish

Native Species Widely Introduced within the Adirondack Upland [1]

Brook trout	Cisco
Brown bullhead	Lake trout
Pumpkinseed	Creek chub

Nonnative to Adirondack Upland

Golden shiner	Smallmouth bass
Chain pickerel	Yellow perch
Largemouth bass	Fathead minnow [2]
Brown trout	Rainbow trout
Splake	Atlantic salmon
Lake whitefish	Walleye
Rainbow smelt	Central mudminnow
Bluegill	Redhorse suckers (spp.)
Northern pike	Black crappie
Rock bass	Fallfish [4]
Bluntnose minnow [5]	Banded killifish [3]
Pearl dace	Spottail Shiner [6]

[1]These native fishes are known to have been widely distributed throughout Adirondack uplands by DEC, bait bucket introduction, and unauthorized stocking. This means that their presence does not necessarily indicate endemicity. Other species listed above as native have been moved from water to water in the Adirondack Upland, but the historical record is less distinct.

[2]Not mentioned by Mather (1884) from Adirondack collections, minor element southern Adirondack Uplands (Greeley 1930-1935).

[3] Early collections strongly suggest dispersal as a bait form.

[4]Adventive through stocking.

[5]Not mentioned by Mather (1884) from Adirondack collections, widely used as bait.

[6]Smith, Lavett C.(1985) The Inland Fishes of New York State, 522 pp.

Appendix 8 - Trail Register Data of SPW

Registered Visitors of the SPW 1989-2002 (Total Visitors/Number of Entries = Average Group Size)

Year	Puffer Pond	John Pond	Chimney Mountain	Auger Falls	Old Farm	Eleventh Mountain	Thirteenth Lake	Kunjamuk Trail (Cisco Brook)
1989			3,364	2,302/696				
1990				2,126/725				
1991								
1992				2,413/816				
1993	612	638	4,617	2,325/744				110/321
1994	607/231	969	5,594	2,414/720	1,166/449	1,152*/429	1,677/607	
1995	822/246	980	5,648	2,758/804	991*/405*	1,027*/413	1,647*/596	
1996	600	558	5,229	2,488/797	991*			
1997	895	959	5,598	1,755/792		995*/411*		
1998	441	722	5,515	2,940/896	753*/309*	1,002*/450*	1,528*/559*	
1999	653	791	5,576	2,795/860	988/411		1,929/684	
2000	609	784	9,401	3,638	652*/285*		1,758*/629*	
2001	822			3,023/918	869*/364*	872*/391*	1,351*/498*	
2002			4,854	1,007*/322*	973*/359*	944/380	1,120*/515*	

* Indicates incomplete data

Siamese Ponds Wilderness References for Fisheries

Adirondack Lake Survey Corp. Annual Reports, 1984-1987. Ray Brook, NY. 1988.

Doig, Herbert E. Wilderness Area Management, Division of Fish and Wildlife. DEC General Policy Document. Albany, NY. 1976.

Gallagher, J. and J. Baker. "Current Status of Fish Communities in Adirondack Lakes." Adirondack Lakes Survey: An Interpretive Analysis of Fish Communities and Water Chemistry, 1984-1987. Adirondack Lakes Survey Corporation. Ray Brook, NY. 1990.

George, Carl. The Fishes of the Adirondack Park . Bulletin FW-P171, NYSDEC, Albany, NY. 1980.

Keller, Walter. Management of Wild and Hybrid Trout in New York Lakes, Ponds, and Coastal Streams. NYS DEC, Albany, NY. 1979.

Kretser, W., J. Gallagher, and J. Nicolette. Adirondack Lakes Study 1984-1987, an Evaluation of Fish Communities and Water Chemistry. Adirondack Lakes Survey Corporation, Ray Brook, NY. 1989.

New York State Department of Environmental Conservation. Programmatic Environmental Impact Statement on Fish Species Management Activities of the DEC Division of Fish and Wildlife. Albany, NY. 1980.

State of New York. A Biological Survey of the Upper Hudson Watershed. Supplemental to Twenty-second Annual Report, 1932. J.E. Lyon Co. Albany, NY. 1933.

Wallace, E.R. Descriptive Guide to the Adirondacks. Watson Gill Co. Syracuse, NY. 1894.

Wetland Cover Types

Cover Type Number 1: **Wet Meadow**

The vegetation consists of sedges, rushes, coarse grasses, and sometimes cattails. The soil is usually saturated with water. Vegetation tends to grow in clumps or tussocks. Cattails, if present, tend to grow between these clumps.

In agricultural areas, wet meadow is usually a cleared, uncultivated parcel; often it is pastured. If the land is pastured, the clumps are more visually pronounced due to trampling by livestock. Wet meadows may occur within or at the edges of hayfields and may be mowed, depending upon the degree of wetness. Old beaver meadows and flood plains also contain wet meadow vegetation.

Standing water is often present during wet periods.

Cover Type Number 2: **Flooded Deciduous Trees**

These are live trees that appear to be over 15 feet in height. If not totally flooded, numerous hummocks are visible. The vegetation consists of, but is not limited to: cottonwood, aspen, American elm, red maple, black ash and black willow.

Cover Type Number 3: **Flooded Dead Trees**

No distinction is made in this category, between deciduous and coniferous trees, although dead flooded deciduous trees are much easier to identify than dead flooded coniferous trees.

Cover Type Number 4: **Flooded Shrubs**

This cover type is found in a variety of areas including floodplains, frost pockets, edges of ponds, lakes, and bogs, and on hillsides. Woody vegetation is classified as shrubs if it has an apparent height of less than 15 feet. Species include: alder, willow, leatherleaf, bog rosemary, sweet gale, buttonbush, highbush cranberry, red osier and others. Flooded shrubs is perhaps the most common wetlands category in New York State. Flooded shrubs is probably the most difficult cover type to interpret. Many dry hillside shrub areas have the same tone and texture as shrub areas that are definitely wet.

Cover Type Number 5: **Emergents**

The emergent cover type consists of such plants as cattails, purple loose-strife, bullrushes, reeds, pickerel weed and arrow arum. The non-robust emergents (i.e., pickerel weed, arrow arum) usually do not appear on spring photography. Robust emergents are often confused with wet meadow. Emergents are generally thought of as herbaceous plants encroaching on water areas and flooded with standing water throughout the year.

Cover Type Number 6: **Drained Muckland**

These are areas of intensive agriculture that produce mainly truck crops. Soils are high in organic matter.

Cover Type Number 7: **Reverted Drained Muckland**

Areas of muckland that are no longer farmed and are in the process of reverting back to wetlands vegetation are in this category. This cover type can be mixed with other cover types.

Cover Type Number 8: **Floating Vegetation**

Floating wetlands vegetation may be free floating, such as duckweed, or rooted with floating leaves such as pondweed or water lilies. Floating vegetation is usually not visible on spring photography.

Cover Type Number 9: **Open Water**

If bodies of water and widenings in streams and rivers that are either natural or man-made do not have an area in excess of 2.59 hectares, they are cover typed in this category. Open water bodies with an area equal to or greater than 2.59 hectares are not cover typed but are given a gazetteer number from the New York State Gazetteer of Lakes, Ponds and Reservoirs.

Cover Type Number 10: **Upland Bodies**

Dry areas completely surrounded by wetland cover types are delineated as part of the wetland. Vegetative cover of these areas may vary. Upland bodies (islands) within Gazetteer Lakes are not delineated. Linears and links do not count as wetland cover types surrounding a dry area to form an upland body.

Cover Type Number 11: **Matted Vegetation**

This cover type was eliminated at the start of the Essex County air photo interpretation. Instead the word "mat" is added after a cover type. "Mat" is also checked on the back of the data sheets.

Cover Type Number 12: **Flooded Conifers**

This cover type consists of live coniferous trees (American larch is also included in this category) greater than 15 feet in height. Some of the coniferous trees most commonly found in wetlands are: black spruce, hemlock, white cedar, red spruce, balsam fir, and American larch. Flooded conifers usually grow in areas composed of hummocks. The trees tend to grow out of the drier hummocks with pockets of water forming between the hummocks.

Cover Type Number 13: **Submergents**

These are plants that normally grow beneath the surface of the water such as coontail, water milfoil, and bladderwort. At times completely flooded non-robust emergents (arrow arum, smartweed, pickerel weed) appear to be submergents and may be interpreted as such.

Cover Type Number 14: **Mudflats**

Mudflats is a non-vegetated cover type added in the course of interpreting the Catskill Mountains and the Hudson River. In the Catskills many ponds, lakes and reservoirs had been drained or drawn down, leaving extensive mudflats. Tidal influence below the Troy Dam on the Hudson exposes many mudflats at low tide.

Cover Type Number 15: **Linear**

Wetlands that are less than approximately 100 feet wide, greater than approximately 25 feet wide, bounded on both sides by water or bounded on both sides by upland, and running in a linear fashion are too small to outline but are significant biologically. In order to delineate these wetlands the air photo interpreter follows the course of the vegetative cover type of the wetland with his/her pencil and labels it "L" regardless of the vegetative cover type of the wetlands.

Cover Type F: **Fringe**

Wetlands that are less than approximately 100 feet wide, greater than approximately 25 feet wide, bounded on one side by open water, and on the other by upland, and running in a linear fashion are too small to outline but are biologically significant. Note that fringe differs from linear in that it is bounded on one side by open water and on the other by upland, whereas linear must be bounded on both sides by the same physiographic feature.

Mixed Cover Types:

Wetlands frequently are mixtures of two or more cover types. Where each different cover type occupies enough area to make drawing feasible, it is delineated separately on the overlay and the area of each cover type is measured and recorded separately on the data sheets.

If the different cover types are mixed in units too small to draw, they are given a mixed cover type, according to the following procedures:

1. If one cover type makes up more than 2/3 of the mixture, the cover type is considered pure and is drawn as one of the cover types listed above.

2. Mixed cover types are designated as mixtures of only two separate cover types, the two most common if more than two cover types are present.

3. The more dominant cover type is given first, followed by an M, then by the second cover type. For instance, flooded deciduous trees (2) occupying less than 2/3 but more than ½ of the cover, mixed with flooded shrubs (4) of more than 1/3 but less than ½ of the cover, would be coded "2M4".

Plant Communities of SPW

Wet Meadow - Vegetated areas where soils contain sufficient water during the year to promote the growth of course grasses - usually growing in clumps, sedges, fine stemmed grasses, occasional cattails, spike rush, sensitive fern and/or other plants suited to wet soil conditions. (NYS Wetlands Inventory, Cover Type Definitions, 1973. Bureau of Wildlife, Department of Environmental Conservation and Resource Information, Mimeo).

Dry Meadow - This habitat can be quite variable, growing naturally on shallow soil lacking nutrients or matter, following fire, or established by man through farming or as a lawn. This habitat is rarely found in the mountainous portions of the Forest Preserve while common around intensive use areas where it is often maintained. Common vegetation include a mixture of wild and domestic plants like orchard grass, timothy, wild oats, meadow fescue, foxtail, millet, sedges, field thistle, goldenrod, black raspberry, low bush blueberry, wintergreen, mosses and ground lichens.

Shrub Meadow - On drier uplands, shrubs are scattered or clumped in grassy fields. The open areas within a forest are filled with the seedlings of forest trees and shrubs. (Smith, Robert L. 1966. Ecology and Field Biology. Harper and Row, New York).

Northern Hardwoods - This is a cold climate forest characterized by beech, birch, maple, and hemlock, usually in intimate mixture and of all ages. Yellow birch is the key birch, but sweet, paper and gray birch are also common. Sugar maple is most characteristic but red maple also occurs. Paper and gray birch, aspen, and red maple are more likely to occur as pioneer species in disturbed areas. (Minkler, 1975. Woodland Ecology, Syracuse University Press, Syracuse, New York).

Mixed Conifer - This is essentially a spruce fir forest of the far northeastern United States in New England and high elevations in the Adirondacks. (Hinkler, 1975. Ibid).

Mixed Hardwood/Conifer - Those areas where there is a variety of different hardwood and conifer trees growing together. The relative frequency of either the hardwoods or conifer. trees is quite variable.

Pine Plantation - Solid stands of even age coniferous trees - generally red pine, scotch pine, or white pine.

Alpine - The alpine zone is above 4,000 feet altitude in the Adirondack Mountains. It is a severe environment where vegetation is exposed to strong winds, snow, cold and widely fluctuating temperatures. It is characterized by the

following vegetation: severely stunted and wind shaped spruce, dwarf-shrub-heath-rush community, sedge meadows and lichens.

Edges - The place where plant communities meet or where successional stages of vegetative conditions within plant communities come together (Thomas, Jack Ward. 1979. Wildlife Habitats in Managed Forests, The Blue Mountains of Oregon and Washington. U.S.D.A. Forest Service. Agriculture Handbook No. 553).

Marshy Riparian Habitats of SPW

Open Waters - Open bodies of water (no vegetation), natural or man made and rivers over 200 feet wide from bank to bank. (NYS Wetlands Inventory, Bureau of Wildlife, Division of Fish and Wildlife, Department of Environmental Conservation and Resource Information, Mimeo).

Marsh, Swamps - Lands and submerged lands which are seasonally or permanently flooded or contain sufficiently water-logged soils to support and give a competitive advantage to the aquatic or semi-aquatic vegetation. "Swamp" means a wetland where a significant part of the vegetational community consists of live trees over 15 feet in height. "Marsh" means a wetland where a significant part of the vegetational community consists of free-floating vegetation, rooted vegetation with floating leaves, submerged vegetation and herbaceous plants encroaching on water areas. (Special Provisions Relating to Freshwater Wetlands. The Rules and Regulations of the Adirondack Park Agency. 9 NYCRR Sub—Title Q, Part 578).

Bogs - Typical bog habitats surround "black ponds" **-** bodies of water with little or no regular drainage. These ponds are highly acidic, murky, and filled and surrounded by peat. The herbaceous growth is dominated by sphagnum, bog cranberry, sundew, pitcher plant, bog laurel and grasses and sedges. (Beehier, Bruce. 1978. Adirondack Mountain Club, Glens Falls, N.Y.).

Rivers and Streams - Lotic communities from small mountain brook all the way up to the largest rivers.

Lakes, Ponds - Those lentic communities characterized by generally deeper and more open water than the previously described marsh, swamp, and bog habitats. More specifically, all those bodies of water listed in the NYS Gazetteer of Lakes and Reservoirs.

Appendix 10 - Unit Management Planning Process

The development of unit management plans for classified public lands in the Forest Preserve should follow a stepwise process that will culminate in the preparation of a draft and final unit management plan UMP.

The eight tasks in this process are:

1.Conduct a comprehensive ***Resource and Use Inventory and Analysis***.

2.Develop and implement a comprehensive ***Public Participation Plan***.

3.Prepare a ***Management and Policy Overview***.

4.Propose ***Goals, Objectives, and Management Actions*** for the Area.

5.Prepare a ***Draft Unit Management Plan For Public Review***.

6.Meet appropriate ***State Environmental Quality Review Act (SEQR)*** requirements.

7.Prepare a ***Draft Unit Management Plan for Determination of Master Plan Compliance by the Adirondack Park Agency***.

8.Prepare the ***Final Unit Management Plan***.

The activities associated with these eight tasks are described below.

Task 1 - Conduct a Comprehensive Resource and Use Inventory and Analysis

Conduct an inventory of the natural, scenic, cultural, wildlife (including game and non-game species) and other appropriate resources along with an analysis of the area's ecosystems. (See page 9 of the June 2001 version of the APSLMP for minimum necessary information to be contained in each section of the UMP as they relate to the inventories below).

1.Conduct an inventory of natural resources including an assessment of physical resources (geology, soils, topography, water, wetlands, air and climate), biological resources and ecological communities (plant life, wildlife and fish) and scenic resources (travel corridors, observation points, open space and other natural areas) and information, such as the occurrence of general vegetative community types.

2.Conduct an inventory of all existing man-made facilities for public or administrative use in the unit. Conduct an assessment of existing facilities to determine compliance with ADAAG and proposed ADAAG. For trail assessments the Universal Trails Assessment Program (UTAP) will be used. Utilize the Maintenance Management System (MMS) format for the inventory of all man-made facilities in the unit. All point and line data will be gathered using global positioning system (GPS) technology and organized to be suitable for incorporation into NYSDEC's geographic information system (GIS).

3.Conduct an inventory of past influences and existing cultural and historic resources that are found in the unit.

4.Conduct an inventory of the types and extent of actual and projected public use within the unit. This inventory should involve a review of information gathered at trailhead and waterway access site registers and interviews with NYSDEC staff and the public.

5.Conduct an inventory and evaluation of existing recreational opportunities available to persons with disabilities within the unit.

6.Conduct an assessment of the relationship between public and private land in the vicinity of the unit. This assessment will include an examination of the impacts of public land ownership and use on adjacent private lands and nearby communities, and vice versa.

7.Conduct an assessment of the physical, biological, and social carrying capacity of the resources of the unit, with particular attention to portions of the area threatened by overuse in light of its resource limitations and classification. Identify existing and potential resource concerns related to the impacts of present and projected use on the resources of the area.

8.Identify current activities related to the use of the area for education, interpretation and research.

Task 2 - Public Participation

Develop and implement a comprehensive public participation plan designed to assure participation in the planning process by all stakeholders including , but not limited to, local governments, tourist-oriented businesses, recreation advocates, people with disabilities, environmental groups, and neighboring landowners. At a minimum, the plan must involve:

1.The compilation of a mailing list of all identified stakeholders.

2.The development of a press release and the mailing of an announcement of the beginning of the planning process with a request for comments.

3.The holding of two public meetings at which the public comment will be effectively and efficiently received and recorded. One meeting shall be held early in the planning process to present information about the planning area to the public and to receive preliminary comments. Another meeting shall be held to present the draft UMP and receive public comments on the document. A third public meeting may be required as part of the SEQR process.

4.A description of the methods to be used to analyze oral and written public comments and incorporate them into the UMP. The analysis of public comments should include a review of the existing resources.

5.The preparation of a responsiveness survey which documents a summary of all public comments received.

Task 3 - Prepare a Management and Policy Overview for the Area

Prepare a management and policy overview of the area that identifies the following:

1.Past Management - Assess past management activities in the unit, including NYSDEC management activities, academic research projects and activities undertaken by organizations outside the NYSDEC, such as Americorps.

2.Management Guidelines - Identify existing guidelines for the management, development or other use of the area including provisions of the state constitution, the guidelines and criteria set forth in the APSLMP, the ECL and related rules and regulations, NYSDEC policies and other federal and state laws, rules, regulations, policies and plans that are relevant to the use and management of Forest Preserve lands in the Adirondack Park classified as wild forest. Identify any deed restrictions and deeded private rights that exist for the area.

3.Management Principles - Identify management policies and principles that exist to guide the NYSDEC in managing Forest Preserve units.

4.Issues - Prepare a list of the management issues to be addressed in the UMP that were identified in Task 1.

Task 4 - Propose Management Goals, Objectives, and Actions for the Area

Based on information gathered during the resource inventory, through public input and in consultation with the UMP Team, propose management goals, objectives, and action for the unit.

1.Develop ***Goals and Objectives*** that will guide the management of the area for the next five years. Proposed goals and objectives must reflect existing legal requirements, such as the New York State Constitution, the Adirondack Park State Land

Master Plan, and the Environmental Conservation Law, as well as NYSDEC policies and established management principles. They must be refined through an analysis of the area's natural resource characteristics and an assessment of the recommendations made to the NYSDEC by local governments, organizations, and individuals in the course of the public participation process.

2.Work with the UMP Team to identify the specific ***Management Actions*** needed to meet the goals and objectives of the plan. Each action or group of actions proposed to address major issues will be presented along with a complete analysis of alternatives.

Task 5 - Prepare Draft Unit Management Plan

Prepare a Draft Unit Management Plan after completion of Tasks 1-3 above:

1.Prepare an ***Executive Brief*** . The executive brief will list the major management issues identified during the planning process, describe the level of controversy associated with each issue, and describe the management actions proposed to address the issues, along with the alternatives considered.

2.Prepare a ***Preliminary Draft UMP***. The preliminary draft UMP will present the information gathered in Tasks 1 through 3 above and the management goals, objectives, and actions as described in Task 3. The content and organization of the preliminary draft UMP will correspond to the UMP template.

3.After review of the preliminary draft UMP, incorporate necessary modifications, and prepare a ***Draft UMP for Public Review***.

4.Complete a long environmental assessment form (EAF) if necessary. The long EAF is not required when writing an environmental impact statement (EIS).

5.Prepare a positive or negative declaration.

6.Prepare the draft UMP in the form of a draft environmental impact statement (DEIS) if required.

Task 6 - Public Participation - Implement the final steps of a Department-prescribed comprehensive public participation plan. This portion of the public participation plan will involve:

1.The holding of an open house style public meeting to present the draft UMP and receive public comments on the document. The meeting may also serve to meet SEQR requirements.

2.An analysis of oral and written public comments. The results of the comment analysis will be incorporated in the final draft UMP.

3.The preparation of a comment and response summary to be included as an appendix to the final draft UMP.

Task 7 -Prepare Final Draft UMP for Determination of Master Plan Compliance by the Adirondack Park Agency

After review of the draft UMP by the public, incorporate necessary modifications and prepare a final draft UMP for submission to the Adirondack Park Agency. The final draft UMP will be subject to the requirements of the New York State Environmental Quality Review Act. The potential impacts of various, and presently unknown, proposals within the UMP will determine whether an environmental impact statement will be required. If actions recommended within the UMP are deemed to have a significant potential for negative impacts, then appropriate changes will be made in the UMP format to incorporate the required EIS content in to the UMP. The preparation of an EIS will not involve a separate process resulting in the production of a second document, but rather a single UMP/EIS document. The most significant feature of the EIS format will be an

alternative analysis for key issues deemed to have a significant potential for adverse impacts. The alternative analysis will be placed under the appropriate issue area heading shown in Section IV, "Proposed Management".

Task 8 - Prepare Final Unit Management Plan

After review of the final draft UMP by the Adirondack Park Agency, incorporate necessary modifications and prepare a ***Final UMP*** for the NYSDEC Commissioner approval. The final UMP will meet the requirements of the State Environmental Quality and Review Act. Prepare a findings statement, if required.

Appendix 11 - Unique Habitats of SPW

Logs - Dead and down woody material (logs, stumps, root wads, bark and piles of limbs). (Thomas, 1979. Thid).

Snags - A standing dead tree from which the leaves and most of the limbs have fallen. (Thomas, 1979. Ibid).

Burrows - A hole or tunnel dug in the ground by an animal. (Thomas, 1979. Ibid).

Cliffs - A steep, vertical, or overhanging rock face. (Thomas, 1979. mid).

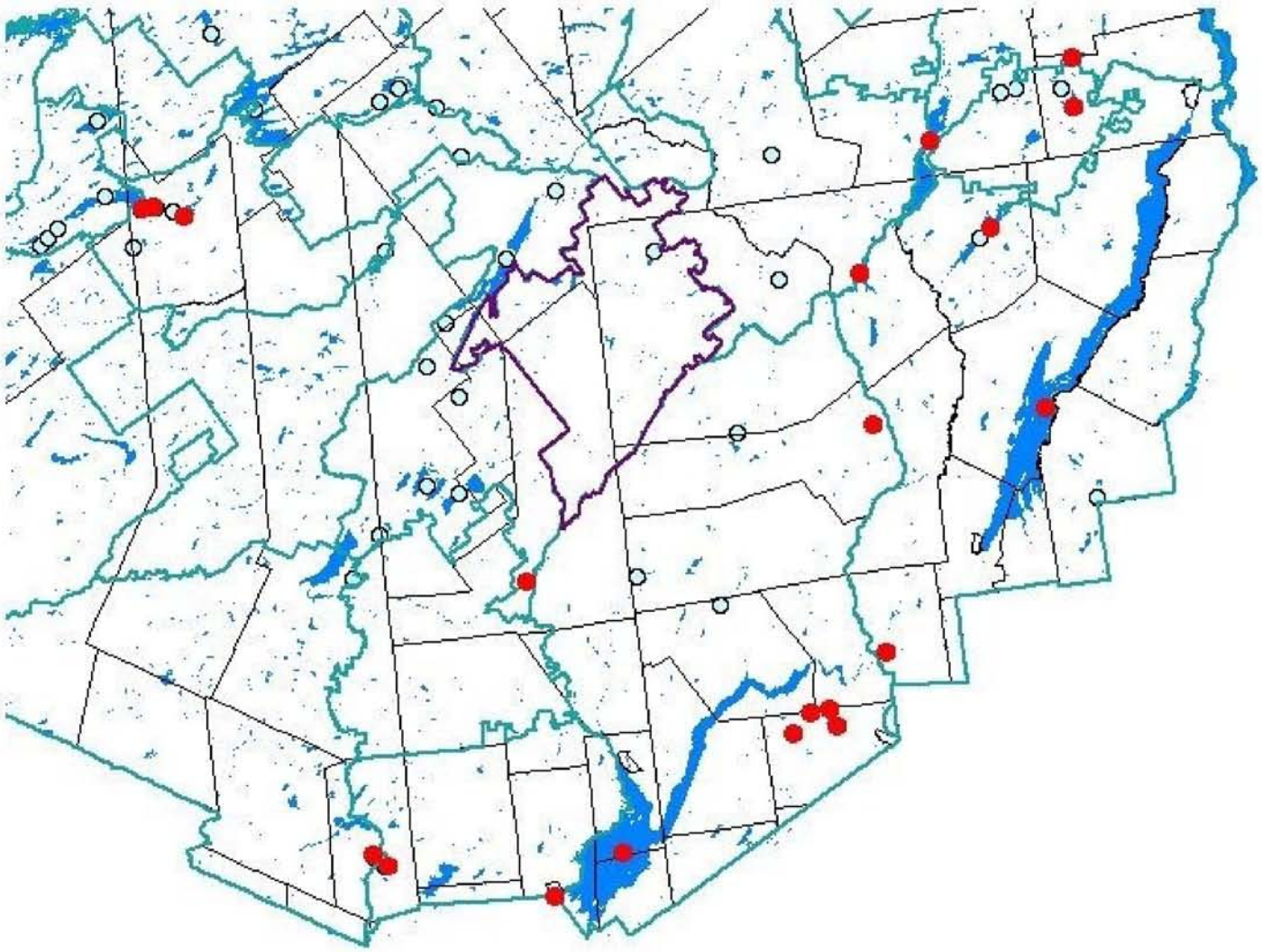
Caves - A natural underground chamber that is open to the surface. They may be shallow or deep and occur in igneous, metamorphic, or sedimentary rock formations. (Thomas, 1979. mid). Abandoned mines and tunnels are important man made habitats and are being included under this definition.

Talus - An accumulation of broken rocks at the base of cliffs, or other steep slopes. (Thomas, 1979. Ibid).

Appendix 12 - Maps

Significant Areas
Soils
Wetlands
Invasive Plants
Indian Lake Islands
Unit Map

Siamese Ponds Wilderness Area
Aquatic Invasive Plant Distribution, 2004



Infested Lakes
Siamese Ponds Boundary
UMP Boundaries
Municipality Boundaries
APIPP Lakes Inventoried

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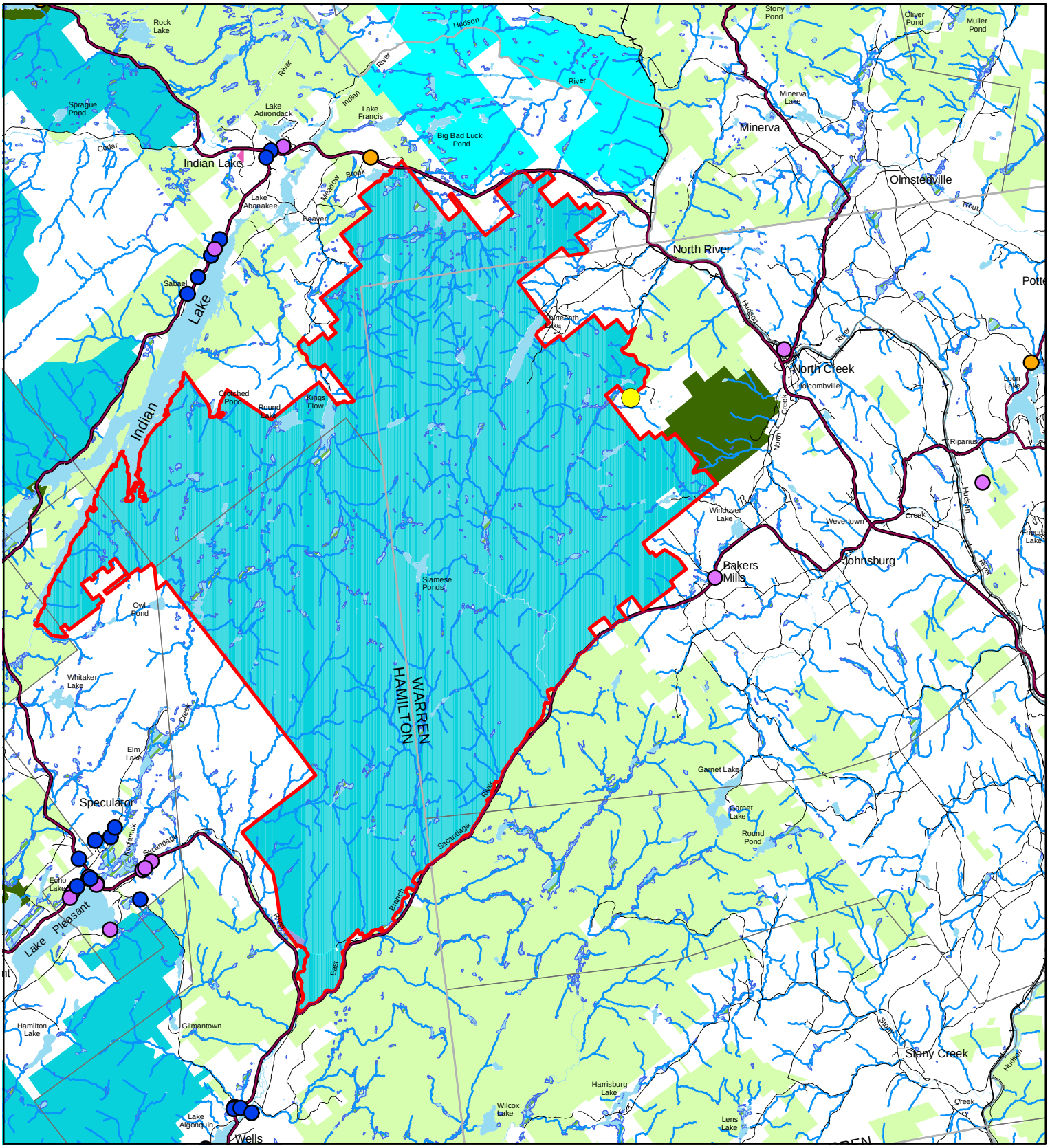


Siamese Ponds Wilderness UMP

Positive Invasive Data
Hamilton/Warren County

The Nature Conservancy
ADIRONDACKS
SAVING THE LAST GREAT PLACES ON EARTH

ADIRONDACK LAND TRUST

Map prepared by
ANC/ALT GIS
2004
Keene Valley, New York

Siamese Ponds Wilderness UMP Boundary

Terrestrial Invasive Plants

- Lythrum salicaria = Purple loosestrife
- Phragmites australis = Common reed
- Polygonum cuspidatum = Japanese knotweed
- Iris Pseudacorus = Yellow Iris

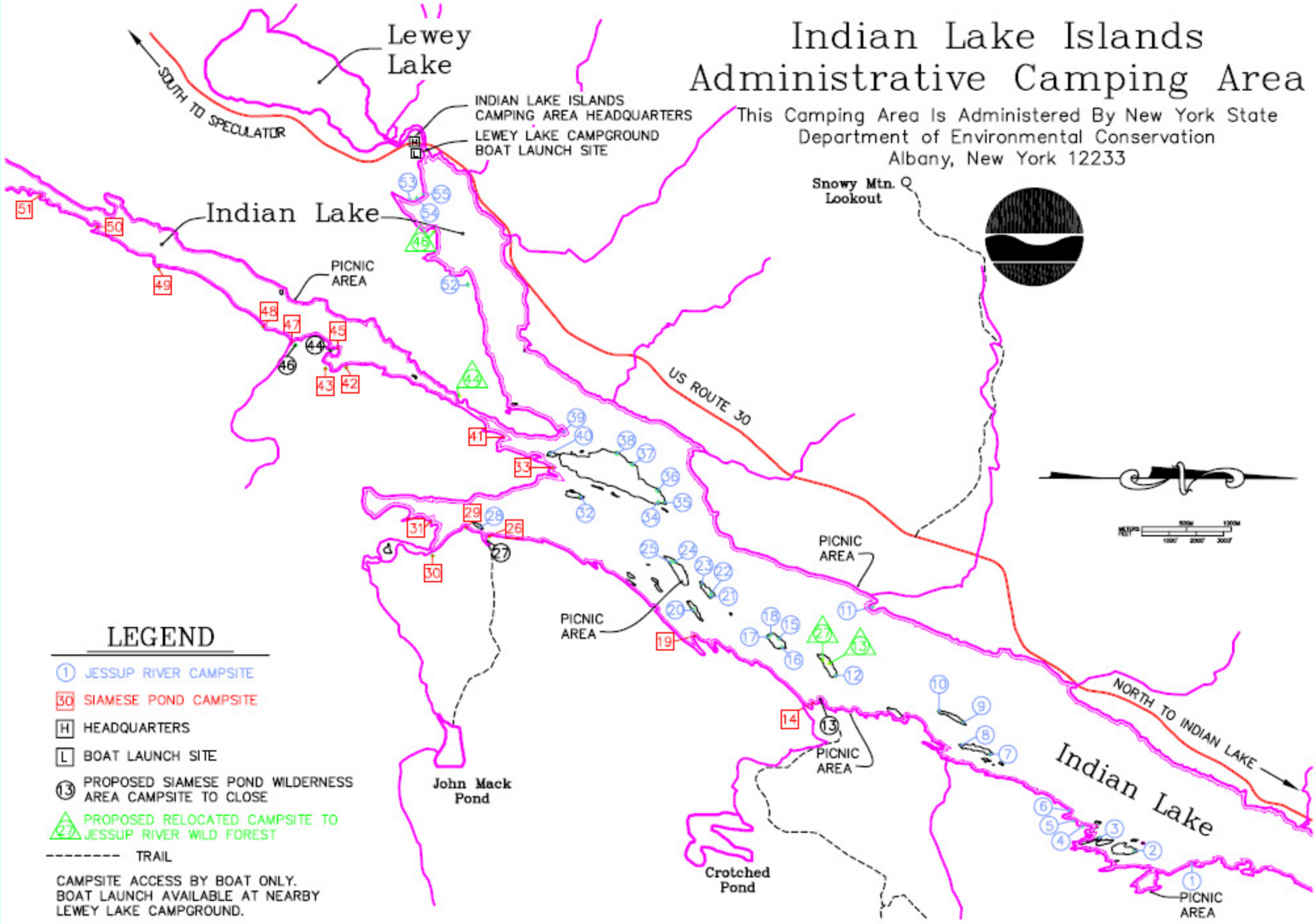
N
W E
S

0 0.5 1 2 3 Miles

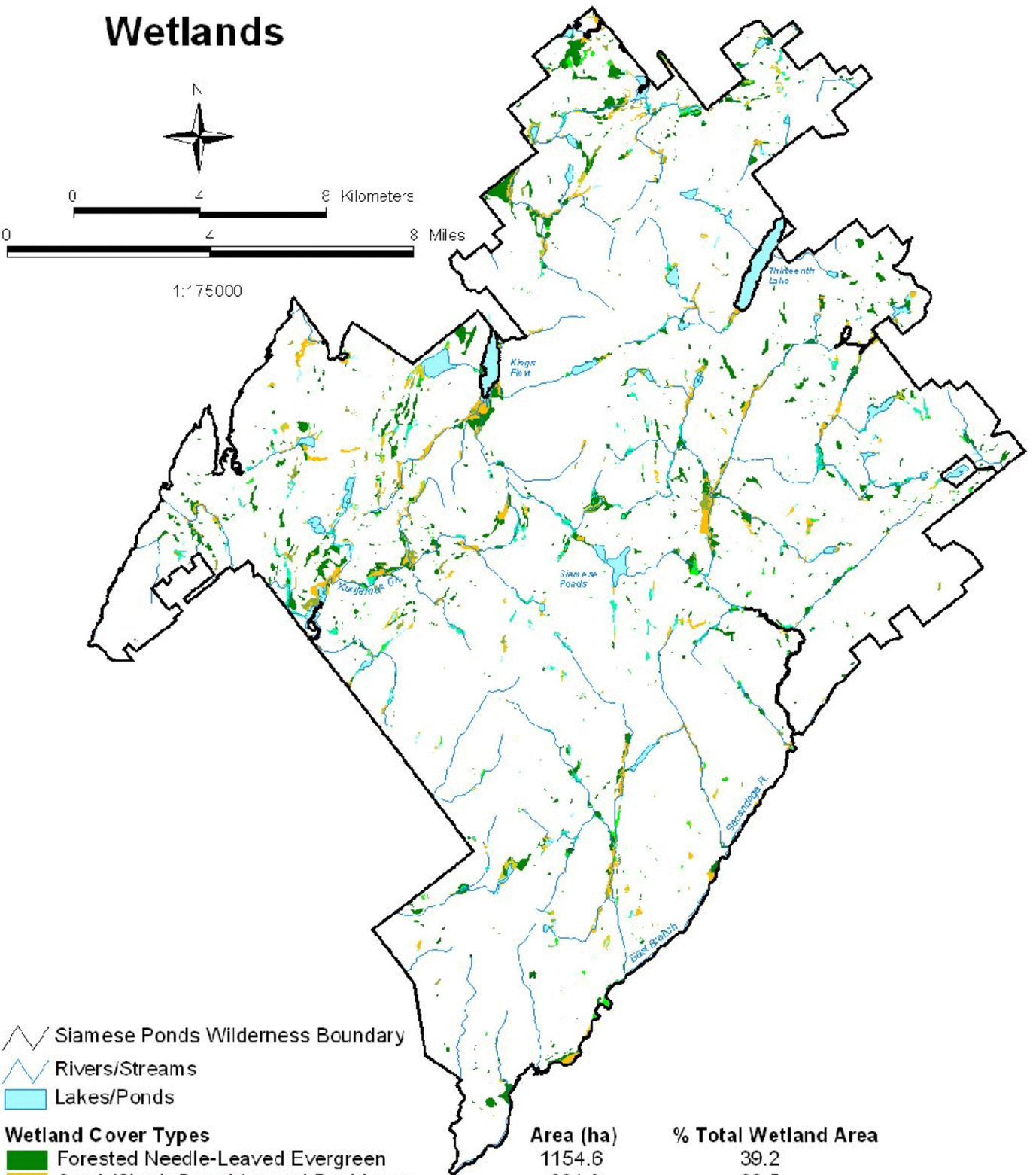
1:225,000

Indian Lake Islands Administrative Camping Area

This Camping Area Is Administered By New York State Department of Environmental Conservation
Albany, New York 12233



Siamese Ponds Wilderness Wetlands

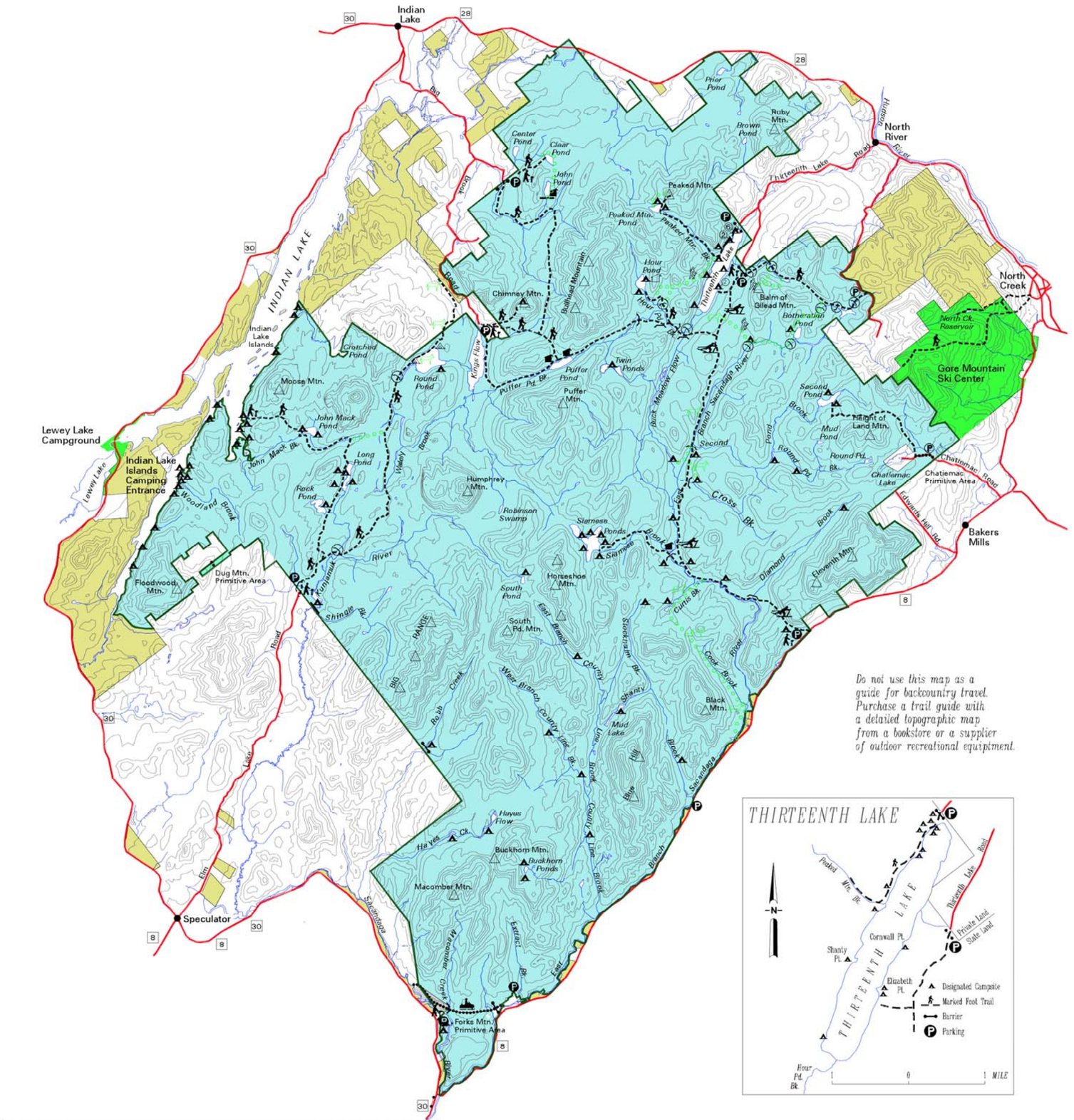


Siamese Ponds Wilderness Boundary
Rivers/Streams
Lakes/Ponds

Wetland Cover Types	Area (ha)	% Total Wetland Area
Forested Needle-Leaved Evergreen	1154.6	39.2
Scrub/Shrub Broad-Leaved Deciduous	661.3	22.5
Emergent Persistent	316.1	10.7
Scrub/Shrub Needle-Leaved Evergreen	220.7	7.5
Open Water	189.1	6.4
Scrub/Shrub Broad-Leaved Evergreen	177.0	6.0
Forested Broad-Leaved Deciduous	146.1	5.0
Forested Dead	66.1	2.3
Forested Needle-Leaved Deciduous	12.6	0.4
Scrub/Shrub Needle-Leaved Deciduous	0.2	<0.1

Adirondack Park Agency Geographic Information Services, April 2001. These data may not be used for legal determinations.

SIAMESE PONDS
WILDERNESS AREA



DRAFT MAP (5/01)
Revised 3/16/05