BOG RIVER

UNIT MANAGEMENT PLAN
ENVIRONMENTAL IMPACT STATEMENT

HORSESHOE LAKE WILD FOREST
HITCHINS POND PRIMITIVE
AREA LOWS LAKE PRIMITIVE
AREA TUPPER LAKE BOAT
LAUNCH CONIFER EASEMENT
LANDS

in FRANKLIN COUNTY
HAMILTON COUNTY ST.
LAWRENCE COUNTY

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IN MEMORIAM

On December 11, 2000 Dr. William T. Elberty of St. Lawrence University in Canton passed away. Bill became involved in mapping Forest Preserve lands soon after the 1995 Microburst. The maps he produced through satellite image analysis are considered the best we have of the forest disturbance created by the microburst. Since that time he and numerous SLU students spent countless hours mapping Forest Preserve lands, Easements and State Forests. Bill's contributions to our management of State lands are sincerely appreciated. His knowledge, enthusiasm and experience are and will be missed.

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I. INTRODUCTION

A. Planning Area

The Bog River Unit Management Plan covers the following forest preserve and conservation easement lands:

Horseshoe Lake Wild Forest (HLWF)
Hitchins Pond Primitive Area (HPPA)
Lows Lake Primitive Area (LLPA)
Conifer Easement Lands (CE)
Tupper Lake Boat Launch (TLBL)

The unit is contained within the Towns of Colton and Piercefield (St. Lawrence County), Long Lake (Hamilton County), and Altamont (Franklin County).

The lands of the Horseshoe Lake Wild Forest, Hitchins Pond Primitive Area, Lows Lake Primitive Area, and the Tupper Lake Boat Launch Intensive Use Area are classified by the Adirondack Park State Land Master Plan ("Master Plan"). Consequently, the Department is required by Executive Law §816 to develop, in consultation with the Adirondack Park Agency (APA), a Unit Management Plan (UMP) for them.

This UMP also includes management guidelines for the Conifer Easement lands. Although, the Master Plan does not currently include guidelines for easement lands, the Freshwater Wetlands Act and the APA Act for activities on private land do apply for easement lands within this unit.

The Conifer Easement lands have been included within this UMP because the Department has determined as a matter of policy that discharge of its stewardship responsibilities for such lands can be facilitated by unit management planning. Furthermore, the relatively small size of each of the components of this unit, their proximity to one another, and the common issues which must be addressed in each component make a single UMP appropriate.

B. Unit Locations and Descriptions

1. Horseshoe Lake Wild Forest

This Wild Forest lies in the townships of Colton and Piercefield, St. Lawrence county; Altamont and Long Lake, Hamilton county. This is the largest component of the unit and is a mostly contiguous block of forest preserve lands in the central and eastern portion of the planning area. It includes large portions of the western and southern shoreline of Tupper Lake, surrounds Horseshoe Lake, and contains most of the lower Bog River. It is the most accessible portion of the unit.

2. Hitchins Pond Primitive Area*

This Primitive Area lies in the Towns of Piercefield and Colton, St Lawrence County. It includes Lows Upper and Lower Dams and the intervening waters, and adjacent state lands to the southern edge of Otter Brook Road on the north, the western

edge of the extension of SH 421 to the Otter Brook Road on the east, the western edge of the road to Lows Lower Dam on the southeast, and to a distance of 1,000 feet south from the Bog River and the railroad tracks. This area encompasses the eastern access to a wilderness canoe route which leads from the Bog River at Lows Lower Dam through Hitchins Pond, past Lows Upper Dam and across Lows Lake to the western shore in the Five Ponds Wilderness Area (FPWA). The route is then connected by a carry to the upper reaches of the Oswegatchie River. The HPPA contains extensive wetlands adjacent to the Bog River and Hitchins Pond and important wildlife habitat, including loon nesting habitat, and eagle and osprey habitat. Preservation of the wild character of this canoe route through the HPPA, without motorboat or floatplane usage (and with only limited access by motor vehicles as noted below), is the primary management goal for this Primitive Area, as established by the Master Plan.

The area is classified Primitive because of the essentially permanent nature of certain major non-conforming uses that preclude Wilderness classification, including two large dams and the Remsen-Lake Placid Travel Corridor.

The two large dams, referred to as Lows Upper Dam and Lows Lower Dam, are of a scale and character incompatible with Wilderness designation. The dams are essential to preserving the canoe route and important wetland habitat and should be maintained for that purpose indefinitely. Maintenance of the dams will require periodic use of motor vehicles and heavy equipment, such as bulldozers and cranes, which means that the existing road to the Upper Dam must also be maintained for administrative purposes The road to the Upper Dam will be gated at the eastern edge of the Primitive Area. The owners of the large inholding lying between the LLPA and the FPWA will be allowed to exercise their deeded access rights until such time as that inholding may be acquired by the state (see Lows Lake Primitive Area). While such private motor vehicle access continues, administrative motor vehicle access by the state will be permitted as may be necessary for appropriate administration of the state lands in the area. After such private rights of access are extinguished, administrative access by motor vehicles will be limited to dam inspection and repair.

In addition to the dams and the road, the area is bisected by the Remsen-Lake Placid Travel Corridor which is currently used for limited rail car passage and as a winter snowmobile trail. This rail travel corridor, unless permanently abandoned and the rails removed, would also preclude Wilderness classification for this area even if the dams were not there. The area is, therefore, considered to be an essentially permanent Primitive Area unlikely to be reclassified as Wilderness.

**See also Appendix G attached, which includes the current area description of the Hitchins Pond Primitive Area Unit as set forth in the Master Plan.*

3. Lows Lake Primitive Area*

This Primitive Area is located in the Town of Colton, St Lawrence County. It is bounded on the east by the southern edge of the road to Lows Upper Dam and the upstream edge of the dam, on the south by the Bog River Flow, on the west by private land and the FPWA and on the north by the Cranberry Lake Wild Forest (CLWF).

This area is an integral part of the Hitchins Pond-Lows Lake-Oswegatchie River canoe route which begins in the HPPA immediately downstream. Preservation of the wild character of this canoe route without motorboat or airplane usage (and with only limited access by motor vehicles as noted below) is the primary management goal for this Primitive Area, as established by the Master Plan.

The original LLPA included only a small portion of the lands north of the Upper Dam Road. The area was originally classified as Primitive because

of its relatively small size and due to the presence of a large inholding of private land on the north shore which separates the area from the FPWA. The Upper Dam Road provides deeded access to this inholding through the Primitive Area. The Otterbrook tract north of the Upper Dam Road and north of the original LLPA was acquired in the late 1980's and has since been classified as primitive and made part of the LLPA. The APA has indicated that this entire area could be classified Wilderness if the inholding were to be acquired by the State and then become part of the expanded FPWA.

**See Appendix G attached, which includes the current description in the State Land Master Plan for the Lows Lake Primitive Area.*

4. Conifer Easement Lands

The Conifer Easement (CE) lands make-up the northwestern and north central portion of this unit (see location map). The CE is one portion of the original Yorkshire Easement, the other portion being the Emporium Easement lands which will become part of the CLWF planning unit when that unit undergoes its next plan revision. Summaries of the CE conditions are found in Appendix B.

In the Bog River Unit the CE extends east from the Massawepie and Otterbrook Roads abutting private lands around Eagle Crag Lakes, the hamlets of Mt Arab Station and Mt Arab, and the hamlet of Conifer. The southern boundary (running east to west just west of the NW shore of Bridge Brook Pond) abuts private lands otherwise surrounded by lands of HLWF, while the eastern boundary runs between Mt Arab Lake and Mt Arab, abutting HLWF and private lands. The CE lands are bounded on the north by the Grass River Railroad bed.

5. Tupper Lake Boat Launch Intensive Use Area

This 1.35 acre parcel is located along SH 30 about two miles west of the village of Tupper Lake, Franklin County, Town of Altamont. The parcel is bounded by SH 30 on the south and Tupper Lake on the north. It was acquired in 1960 for the purpose of constructing a boat launch. A ramp and parking for 35 cars and trailers was completed in 1966. This facility is listed in the Master Plan. The boat launch provides boaters and anglers waterway access to Wild Forest and easement lands waters listed above.

C. Unit Acreage

1. Horseshoe Lake Wild Forest (21,336.37 Acres)

Date Conveyed	**Description**	**Acreage**	**Grantor**
12/12/18	Paradise Park	11,903.73	We. Barbour Est.
04/11/33	Big Trout Preserve	4,023.30	Atherton Forestry Co.
02/28/78	Horseshoe Station	143.42	Horseshoe Lake Rec. Dev. Co.
09/21/78	Litchfield Park	628.20	Litchfield Park Corp.
04/24/86	Hitchins Park	89.80	Suffolk Co. BSA
12/15/87	Piercefield Paper	542.50	Trust for Public Land
02/22/88	Tupper Lake Marsh	1100.00	International Paper
01/11/88	International Paper	578.00	International Paper
03/14/90	Raquette Pond	328.50	Stonewall Rd. Corp.

03/19/91	Tupper Lake Lots	43.88	The Nature Conservancy
04/29/91	Otterbrook	1320.00	Otterbrook Timber Co.
11/12/93	Mountain Camp	621.04	Adirondack Mtn. Properties
02/22/95	Grass River Railroad	14.00	The Nature Conservancy

The legal description of these lands, taken from the Adirondack Land Map, is as follows:

Franklin County		
Altamont	GT 2 T3 Lots 1, 14 GT 2 T3 Lots 15,28,29 GT 1 T22 Lots 114,116,117,130,135,136-141	3,271.58 acres
Hamilton County		
Long Lake T&C Pur.	T23 Lot 226 T37 Lot 34,45,46	476.20 acres
St. Lawrence County		
Colton	SE Oakham GT 2 T2 SE 1/4 of N ½ & N ½ of S ½	1,337.00 acres
Piercefield	GT 2 T3 Lots 2-13,16-27, 30-36,54,55, 61-63	16,251.59 acres
	St. Lawrence County Total	17,588.59 acres
	Total	21,336.37 acres

2. Hitchins Pond Primitive Area (2,166.93 Acres)

Date Conveyed	**Description**	**Acreage**	**Grantor**
12/12/18	Paradise Park	260.60	We. Barbour Est.
02/28/78	Horseshoe Station	81.60	Horseshoe Lake Rec. Dev. Co.

06/08/81	Powerhouse Lot	0.09	Nicholas Place
10/02/85	Hayrack Lot	545.47	Otterbrook Timber Co.
04/24/86	Hitchins Park	1,278.97	Suffolk Co. BSA
05/11/89	Ryan & Gray Lot	0.20	St. Lawrence County

The legal description of these lands, taken from the Adirondack Land Map, is as follows:

St. Lawrence County

Colton	SE Oakham	1,283.00 acres
Piercefield	GT 2 T3 Lots 8,9,20,21,22	883.93 acres
	St. Lawrence County Total	2,166.93 acres

3. Lows Lake Primitive Area (6155 Acres)

Date Conveyed	**Description**	**Acres**	**Grantor**
4/24/86	Hitchins Park	1,042.00	Suffolk Co. BSA
4/29/91	Otterbrook	5,113.00	Otterbrook Timber

The legal description of these lands, taken from the Adirondack Land Map, is as follows:

St. Lawrence County

Colton	SE Oakham	6,155 acres
	St. Lawrence County Total	6,155 acres

4. Conifer Easement Lands (6,103.20 Acres)

Date Conveyed	**Description**	**Acres**	**Grantor**
12/19/90	Emporium Forestry	6,103.20	Yorkshire Timber Co.

The legal description of these lands, taken from the Adirondack Land Map, is as follows:

St. Lawrence County

Colton	GT 2 T2 SE 1/4 of NE 1/4	16.40 acres
Piercefield	GT 2 T3 Lots 36-39,47-53, 60-63	6,086.80 acres
	St. Lawrence County Total	6,103.20 acres

5. Tupper Lake Boat Launch (1.35 Acres)

Date Conveyed	Description	Acres	Grantor
04/06/1960	LaGraves lot	1.34	Rose Haile LaGraves

The legal description of these lands, taken from the Adirondack Land Map, is as follows:

Franklin County

Altamont	Macomb Purchase T25	1.34 acres
	Franklin County Total	1.34 acres

Total Acreage (Unit Management Plan)	Forest Preserve	Conservation Easement
Franklin County	3272.92 acres	
Hamilton County	476.20 acres	
St. Lawrence County	25,910.52 acres	6,103.20 acres
Total	29,663.64 acres	6,103.20 acres

D. Access

Public access to these lands is primarily via SH 421 from SH 30 and eventually to the Otterbrook Road. Along this road system are a picnic area, 17 designated campsites, and canoe access to the Bog River. The addition of the CE lands has created public access from SH 3 in the north via the Conifer and Mt. Arab Roads from Piercefield and via the Massawepie Road from Gale, to the No Miss Club gate. The town of Piercefield is claiming responsibility for this section of the Massawepie Rd. from SH 3 to the No Miss Club gate.

All roads in the planning area are available for administrative access in compliance with relevant Master Plan guidelines and Department policy. All

gates are locked in such a way that Department personnel can open them.

The following roads are administrative access roads only and have locked gates to prevent public motor vehicle access:

Upper Dam Road. (2.0 miles),
Lake Marian Road. (1.3 miles),
Pine Pond Road. (1.0 miles),
Concrete Bridge Road.(from SH 421 to bridge-.1 miles),
Cut off Road (1.0 mile)
Massawepie Road south of the No Miss Club gate (3.0 miles),
Otterbrook Road. (South Branch gate to the western end-3.5 miles).

Roads that are designated public use roads are:
Otterbrook Road (from Horseshoe Lake to the gate at South Branch Grass River-4.2 miles),
Lower Dam Road (0.7 miles),

In 1972, the Lower Dam Road was open for public motorized use to Trout Pond. It is presently open only to the Lower Dam and gated at that point to prevent illegal use.

Legal covenants allow private use of the Otterbrook, Upper Dam, Pine Pond and Lake Marian Roads.

-the Otterbrook Timber Company has a permanent road right-of-way to access their parcel on the northeast corner of the original Otterbrook Timber Co. tract. This includes retained rights on the Otterbrook and Pine Pond Roads. It has also retained exclusive hunting rights on two parcels of land west of the South Branch of the Grass until December 31, 2005 and the deeded right to remove gravel from a gravel pit north of Pine Pond.
-the Lake Marian estate has retained rights-of-way on the Otterbrook Road and the Lake Marian Road.
-the Hiawatha Council of Boy Scouts of America have reserved rights-of-way on the Upper Dam Road and a portion of the Otterbrook Rd.

E. History

Human occupation of the Adirondacks took place immediately following the Wisconsin glaciation period (10,000-8,000 BC). Artifacts representing all periods of New York prehistory have been found throughout the region, most sites being located along water bodies and wetlands. The introduction of farming in the more hospitable surrounding lowlands (Lake Champlain, Mohawk, and St. Lawrence River valleys) beginning around 1,000 AD probably resulted in reduced human occupation of the Adirondacks.

Pre-1770's Occupied by Native American Indians

1772 Archibald Campbell surveyed the north line of the Totten and Crossfield Purchase from the northwesterly corner easterly to the top of Coney Mountain. (Donaldson 1977)

1795 Benjamin Tupper, a surveyor, traversed the area while running lines for the Macomb's Purchase and named the lake after himself. (Bryan 1964)

1796 Medad Mitchell surveyed the south line of Macomb's Purchase, Great Tract 2 which is roughly from Coney Mountain to Pine Ridge. (Donaldson 1977)

1798 The patent (original deed) for Macomb's Purchase, Great Tract 2 was issued. (Donaldson 1977)

1807 The NYS Legislature authorized a road from Chester to Russell. It entered this forest north of Coney Mountain and went

west along the southwest shore of Tupper Lake. After crossing the outlet of Bridge Brook Pond, it went northwest to Pleasant Lake (Mt. Arab Lake). Although the road reached Russell in 1813, Alfred Street reported in 1857 that it was barely discernable in the vicinity of Bog River Falls. That same year Edwin Merritt drew a map of the Township of Atherton and labeled the road "Old Lake George Road." This is the same name used by Blankman on his 1896 map of St. Lawrence County. Portions of the road are shown on the 1907 edition of the USGS Tupper Lake Quadrangle. (Donaldson 1977, Simmons 1976)

1845c In the late 1840's Michael Cole became the first settler in the Tupper Lake region. (Simmons 1976)

1848 The patent (original deed) for township 23, Totten and Crossfield Purchase, was issued. This township lies south of the Horseshoe Lake Wild Forest and includes 143.3 acres of this forest in the vicinity of High Pond(Donaldson 1977)

1850c The Pomeroy Lumber Company from Maine began operations in the vicinity of the present Village of Tupper Lake. (Simmons 1976)

1850 The State Legislature appropriated $10,000 for the improvement of the Raquette River for the benefit of Potsdam lumbermen. A small dam was built at Setting Pole Rapids. (Simmons 1976)

1855 William J. Stillman, artist and journalist, having gotten lost in the region above Bog River Falls the year before, returned to the area and spent several days at the "choppin" of Sid Jenkins near the site of the former American Legion Mountain Camp. He estimated it to be a clearing of 20 acres with blackened stumps between which crops were planted and which contained six buildings. This "resort" underwent several owners and many changes to develop into the Tupper Lake House which was a resort capable of accommodating about 100 guests. It was destroyed by fire in 1894. (Simmons 1976, Graham 1978, Stillman 1901)

1855 The patent (original deed) for township 37, Totten and Crossfield Purchase, was issued to the Sackett's Harbor and Saratoga Railroad. In the HLWF there are 332.8 acres in the vicinity of Sabattis that are within this township. (Donaldson 1977)

1858 Joel Headley describes a canoe trip up the Bog River, from Tupper Lake, to Mud Lake (Lows Lake) which consisted of nine carries. (Headley 1982)

1858 The southern half of the present Town of Piercefield was purchased by a company for its timber and, allegedly, for agricultural development. One of the partners was Charles Atherton and Merritt's 1857 map of these lands is entitled "Atherton." The map was based on a survey commenced in 1853 by J.F. Potter. (Simmons 1976)

1873 Verplank Colvin surveyed this area. In his second annual report, he describes his trip from Tupper Lake to Horseshoe Lake, down Horseshoe Lake outlet to the Bog River to Mud Lake and beyond. (Colvin 1874)

1887 Wallace's guide describes a canoe route from Tupper Lake across a "good path" to Bridge Brook Pond, "carry 1-1/2 miles northwest to Pleasant Lake (Mt. Arab Lake) and five rods southwest to Long Pond (Eagle Crag Lake)" both of which are described as headwaters of Dead River. A canoe route to Mud Lake (Lows Lake) began at the Tupper Lake House (American

Legion Camp) where boats and baggage were carried by wagon to Horseshoe Pond for $3/ load. This route then followed the "shallow" outlet to the Bog River. (Wallace 1887)

1889 John Hurd's Northern New York Railroad reached Tupper Lake. Begun around 1882, it linked the community with the Northern Railroad at Moira. (Donaldson 1977, Simmons 1976)

1892 On October 12th the final spike on the Adirondack and St. Lawrence Railway was set, linking existing lines at Remsen and Malone. On October 24, the first train ran through Tupper on schedule, from New York to Montreal. (Simmons 1968, Harter 1979, Donaldson 1977)

1894 The Forest Preserve is given protection by the New York State Constitution.

1896 A.A. Low established a railroad depot on the Adirondack and St. Lawrence Railway (Mohawk and Malone Railroad) at Horseshoe Lake. (Clark 1974)

1896 Blankman's map of St. Lawrence County shows a road connecting the present SH 421 with the Childwold Park Road crossing this forest north of Horseshoe Lake. It is labeled the "Colton and Long Lake Road." The segment west of the NY Central Railroad bed is shown on the 1907 edition of the USGS Tupper Lake Quadrangle.

1897 A.A. Low established the Horse Shoe Forestry Company Railway in the vicinity of Horseshoe Lake (Harter 1979). Eventually, this logging railroad consisted of 15 miles of trackage. (Clark 1974) It was completely abandoned by 1922. (Kudish 1985)

1897 The Raquette River was bridged at Piercefield and road connections went through linking the community with Tupper Lake. (Simmons 1976)

1898 International Paper Company was formed with the Piercefield Paper and Manufacturing Company being one of the original 20 mills which constituted it. (Simmons 1976)

1899-1904c Spring water was bottled and sold by A.A. Low from springs in the vicinity of Hitchins Pond. (Clark 1974)

1903 Lows lower dam was built to produce electricity for the Horseshoe Forestry Company. (Clark 1974)

1907 This was the peak year for maple syrup production by the Horse Shoe Forestry Company. Three evaporators produced 20,000 gallons. (Clark 1974)

1907 Lows Upper Dam built above Hitchins Pond. The resulting impoundment of the Bog River created Lows Lake from Bog River Flow, Mud Lake, Grass Pond and Tomar Pond. (Clark 1974)

1908 On September 26, a forest fire burned over most of these lands, destroying the community of Sabattis (Long Lake West). (Harter 1979, Clark 1974, Simmons 1976)

1910 Emporium Lumber Company purchased the site for the hamlet of Conifer from the firm of George A. McCoy and Son. The A.A. Low sawmill at Hitchins Pond was purchased and the machinery moved to Conifer. (Gove 1970)

1913 Construction of the predecessor to the Grass River Railroad was begun by Emporium Forestry Company with a section from Conifer to Childwold Station. The section to

the west of Conifer was also started. The Grass River Railroad was incorporated in 1915 to carry mail and passengers to Cranberry Lake. (Gove 1970)

1913 A strip of land one mile wide and five miles long was transferred by the NYS Legislature from the southeastern corner of St. Lawrence County to Franklin County "to permit construction of a north-south connecting road link between Tupper and Long Lake." (Simmons 1976)

1915 A 2nd large forest fire burned the area between Sabattis (Long Lake West) and Cranberry Lake. (Clark 1974)

1918 A new 35' steel fire observation tower was installed on Arab Mountain. (New York State 1919)

1922c The American Legion established its Veterans Mountain Camp on Tupper Lake on property formerly belonging to the Barbour Estate. The only access to this camp at that time was by water from Tupper Lake Village or by a five-mile dirt road from Horseshoe Station. (Harter, 1979)

1922 Robert Marshall's account of Bog River Trip. One of four trips in the Cranberry Lake Region. See Appendix A.

1923 On June 26, the New York Central started using the name Sabattis instead of Long Lake West. (Harter 1979)

1923 Students at the forestry summer camp at Barber Point on Cranberry Lake would detrain at either Horseshoe Lake or Sabattis and walk the existing logging roads to their destination. An account of one of these trips is contained in Appendix A. (Marshall 1923)

1933 International Paper Company closed its Piercefield operation. (Simmons 1976)

1940 The U.S. Mail route from Sabattis to Little Tupper Lake was replaced with an upgraded road with federal aid under the Farm to Market Road program. (A.A. Low Correspondence, October 2, 1951)

1948 Grass River Railroad tracks taken up except for two miles between Childwold Station and Conifer. (Harter 1979)

1957 The Conifer sawmill burned down and was not rebuilt. (Allen, etal. 1973, Simmons 1976)

1967 The last passenger service was provided on the Adirondack Division of the NYCRR (Adirondack and St. Lawrence/Mohawk and Malone railroad) and the stations at Beaver River, Nehasane, Sabattis and Horseshoe were closed. (Harter 1979)

1995 Microburst(derecho)storm passed through the Adirondack region. Overall, did not affect the lands in this unit substantially.

II. INVENTORY, USE, AND CAPACITY TO WITHSTAND USE

A. Natural Resources

1. Physical

a. Geology

The broad geological features of the planning area are described by Buddington (1962) as being within the Adirondack Mountain section, which is an area of generally great relief caused by domal uplift. This section includes a number of major longitudinal

topographic features that trend northeast.

The Lyon Mountain range bisects the planning area, extending from Mount Matumbla to Arab Mountain to Wolf Mountain. Lying to the east of this range is the Saranac trough which had previously been named the "lake belt" by Cushing (1900) who also reported extensively on the bedrock geology of the area. He described the lake belt as being depressed below the general level of the topography to the east or west and containing an abundance of lakes or ponds. He speculated that it was the path of a considerable pre-glacial drainage system. The lake belt is further discussed by Clarke (1904) and Buddington (1953).

Also bisecting the area is an 85-mile esker which Buddington (1953) calls the Adirondack esker.

b. Soils

The hills and mountains of the area are typified by rock outcrops, boulders, and otherwise very thin soil layers. The Bog River unit is mainly composed of three soil types: Naumberg, Potsdam and Adams (see soils map Appendix K). Naumberg loamy fine sands are very deep level, somewhat poor to poorly drained, low lime, sandy soils formed in lake laid deposits. Adams soils are very deep, gently sloping, well to excessively drained, low lime, sandy soils formed in outwash, while Potsdam soils represent deep, gently sloping, well drained, very bouldery silt loam soils formed in glacial till. The glacial till soils on the upland slopes between the hills, mountains, and valley floors are typically deep and well drained, with some having boulders. The soils associated with the valley floors vary, depending in large part on the underlying materials from which they developed. The soils along the lower Bog River formed from compacted glacial till and are deep but somewhat poorly drained. Around Hitchins Pond, the soils are formed in organic materials over an underlying mineral layer and are very deep and very poorly drained. In contrast, the soils on the upper Bog River and the South Branch of the Grass River formed from outwash materials and are very deep and very well drained.

c. Terrain

Within the unit there are six named elevations:

2695' Long Tom Mountain
2500' Arab Mountain
2309' Buck Mountain
2280' Coney Mountain
2168' Haystack Mountain
2152' Wheeler Mountain

The lowest point is water level at Piercefield Flow - 1542 feet. This is the elevation of the spillway at the Piercefield dam.

d. Water

Waters in the planning area comprise portions of the Raquette River, Grass River and Oswegatchie watersheds - all part of the St. Lawrence River Drainage Basin. Tupper Lake, Raquette Pond, Piercefield Flow, and Lows Lake (a.k.a. Bog River Flow), adjoining impoundments of the Raquette River itself, are dominant water bodies associated with the unit. Ten other named lakes and ponds ranging in size from eight to 399 acres are also located within the planning area. (see Appendix C).

In addition to lakes and ponds, the planning area also contains more than 30 miles of rivers and streams. These include: Dead Creek, Bear Brook, Bog River, Sucker Brook, Cold Brook, Bridge Brook, the South Branch Grass River and Round Lake Outlet.

Water quality is generally satisfactory with low productivity and fertility typical to the area. In comparison to the Five Ponds Wilderness Area located directly to the west of this unit, where a

substantial number of lakes and ponds have lost their fish populations due to the impacts of acid deposition (Simonin 1990), acidification is not considered a major limiting factor in Bog River Unit waters. Based on resource inventory data the majority of the area's lakes and ponds have pH levels > 6.0, and are therefore considered satisfactory relative to fish survival. The pH of High and Black Ponds, two of the areas five brook trout ponds, however, have depressed pH levels (<5.5) and show signs of acidification impact.

e. Wetlands

A wetland is identified as any land that is annually subject to periodic or continual inundation by water and commonly referred to as a bog, swamp, or marsh. They are inventoried, mapped, and protected under the New York State Freshwater Wetlands Act of 1975 by the Department of Environmental Conservation and the APA.

Approximately 15% of the Bog River Unit is regulated wetland. A digitized wetland map and cover type chart are included in Appendix L.

The largest of the wetlands in the management complex are found in the vicinity of Hitchins Pond and the Raquette Pond complex. Approximately 250 acres in size, the Hitchins Pond wetlands are characterized by open bog habitat with small stands of black spruce, red spruce, and balsam fir. The Tupper Lake Marsh wetlands consist of approximately 1000 acres of freshwater wetlands, most of which is underwater. This extensive wetland is one of the two largest in the central Adirondack region.

2. Biological

a. Vegetation

All of the forested lands within this unit have been modified, in various degrees, by the harvest of forest products and now provide a diverse pattern of plant succession within the unit. The CE lands will continue to be harvested on a regular basis and, consequently, will provide a significant amount of acreage in the younger age classes. A variety of forest stands exist on the easement lands.

Some of the most severely abused forest within the planning area may be found on the HLWF where severe high-grading prior to state acquisition in 1918 is still very evident today. Conversely, a northern portion of the LLPA contains 260 acres of vigorous hardwoods which were thinned between 1966 and 1971 to produce a healthy forest.

The Beech-maple mesic forest is the most widespread forest type in the management complex. Sugar maple, beech, yellow birch, and white ash are usually co-dominant. There are relatively few shrubs and herbs on the forest floor. Typically, there is an abundance of seedlings, especially sugar maple and beech. New York fern and Haircap moss are typically found on the forest floor. Mixed forest stands are also prevalent and consist of a mixture of hemlock, white pine, and hardwoods. Wetlands in the lowlands are primarily coniferous swamps.

The New York Natural Heritage Program (NYNHP) has records concerning the location of bog aster (*Aster nemoralis*) within the HPPA This species is secure globally, though it may be quite rare in parts of its range, especially at the periphery. Also there is a historical record from 1933 for the state endangered plant mare's tail (*Huppuris vulgaris*) at Rock Island Bay in Tupper Lake. There are no other rare or endangered plant species known to be within the planning area.

The communities identified and described below are based on limited survey data by the Natural Heritage staff, rather than a full detailed survey and analysis of the entire unit.

Winter-stratified monomictic lake: the aquatic community of a large, shallow lake that has only

one period of mixing each year because it is very shallow in relation to its size (e.g., Oneida Lake, with a mean depth less than 6 m (20 ft), and surface area of approx. 200 k 2 (80 square miles), and is completely exposed to winds. These lakes continue to circulate throughout the summer; stratification becomes disrupted at some point during an average summer. These lakes typically never become thermally stratified in the summer, and are only stratified in the winter when they freeze over, and become inversely stratified (coldest water at the surface). They are eutrophic to mesotrophic.

Littoral, and epilimnion species assemblages predominate. Pelagic species assemblages are well developed. Characteristic fishes are walleye *(Stizostedion vitreu*m), largemouth bass *(Micropterus salmoide*s), yellow perch *(Perca flavescen*s), bullhead *(Ictalurus* sp.), white sucker (Catostomus commersoni), muskellunge *(Esox masquinong*y), and trout perch *(Percopsis omiscomaycu*s).

Characteristic macroinvertebrates may include isopods (*Isopoda*), amphipods (*Amphipoda*), and ramshorn snails (*Planorbidae*). Characteristic phytoplankton may include *Dinobryon* sp., and *Ceratium* sp. Vascular plants are typically diverse. Characteristic aquatic macrophytes include water stargrass *(Heteranthera dubi*a), coontail *(Ceratophyllum demersu*m), waterweed *(Elodea* spp.), naiad *(Najas flexili*s), tapegrass *(Vallisneria americana*), and pondweeds *(Potamogeton perfoliatus, P. pectinatus, P. pusillus, P. richardsonii, P. nodosus, P. zosteriformi*s). The macroalgae Chara may be abundant.

Only two to three ecoregional variants are suspected (Great Lakes , Northern Appalachian, and possibly Lower New England types), potentially differing in dominant, and characteristic vascular plants, fishes, mollusks, and insects.

Distribution: uncommon in upstate New York, north of the Coastal Lowlands ecozone, and probably restricted to the Great Lakes Plains ecozone, and the St. Lawrence River valley of the Adirondacks ecozone.
Rank: G3G4 S2 *Revised:* 2001

Winter-stratified monomictic lake at Horseshoe Pond

A broad, shallow, exposed winter-stratified monomictic lake with diverse aquatic macrophytes and invertebrates. The limnetic zone is entirely epilimnion with animals such as loons, yellow perch, white sucker, *Cladocera* and *Dinobryon* sp.

A broad shallow lake surrounded by conifer-forested low hills in the Adirondack lakes region. Small inlets drain into the lake through wetlands. A small outlet stream flows through a wetland southwest of the lake. The landscape is intact.

A moderate-sized, moderately protected but somewhat intensively managed occurrence with diverse aquatic macrophytes, fish and invertebrates. In a large, little disturbed, moderately well protected landscape.

Medium fen: a moderately minerotrophic peatland (intermediate between rich fens and poor fens) in which the substrate is a mixed peat composed of graminoids, mosses, and woody species. Medium fens are fed by waters that are moderately mineralized, with pH values generally ranging from 4.5 to 6.5. Medium fens often occur as a narrow transition zone between an aquatic community and either a swamp or an upland community along the edges of streams and lakes.

In medium fens, the herbaceous layer, dominated by the sedge *Carex lasiocarpa* typically forms a canopy that overtops the shrub layer. The physiognomy of medium fens may range from a dwarf shrubland to a perennial dominanted or have roughly equal amounts of shrubs and herbs.

The dominant species in medium fens are usually the sedge *Carex lasiocarpa* and sweet-gale *(Myrica gal*e). Other characteristic shrubs include leatherleaf *(Chamaedaphne calyculat*a), bog rosemary *(Andromeda glaucophyll*a), speckled alder *(Alnus incana* ssp. *rugos*a), cranberry *(Vaccinium macrocarpo*n), and red maple *(Acer rubru*m). Other shrubs found in medium fens include black chokeberry *(Aronia melanocarp*a), bog willow *(Salix pedicellari*s), meadow-sweet *(Spiraea alb*a), hardhack *(Spiraea tomentos*a), and swamp rose *(Rosa palustri*s).
Other characteristic herbs include marsh St. John's wort *(Triadenum virginicu*m), pitcher-plant *(Sarracenia purpure*a), milfoil bladderwort *(Utricularia intermedi*a), sundew *(Drosera rotundifoli*a), white beakrush *(Rhynchospora alb*a), marsh fern *(Thelypteris palustri*s), arrowleaf *(Peltandra virginic*a), rose pogonia *(Pogonia ophioglossoide*s), swamp goldenrod *(Solidago uliginos*a), royal fern *(Osmunda regali*s), three-way sedge *(Dulichium arundinaceu*m), buckbean *(Menyanthes trifoliat*a), common cat-tail *(Typha latifoli*a), and sundew *(Drosera intermedi*a). Other herbs found in medium fens include blue flag *(Iris versicolo*r), marsh cinquefoil *(Potentilla palustri*s), twig-rush *(Cladium mariscoide*s), the sedges *Carex rostrat*a, *Carex leptale*a, *Carex strict*a, *Carex limos*a, and *Carex interior,* tufted loosestrife *(Lysimachia thyrsiflor*a), and narrow-leaf cat-tail *(Typha angustifoli*a).

Characteristic non-vascular plants include the moss *Calliergonella cuspidat*a. Other non-vascular plants found in medium fens include the mosses *Campylium stellatum, Calliergon giganteum, Aulacomnium palustre, Sphagnum magellanicum, S.contortum,* and *S. warnstorfii,* and the liverwort *Aneura pinguis.*

A rare moth of some medium fens is bog buckmoth *(Hemileuca* sp.), which feeds on buckbean. Data on characteristic animals are needed.

Distribution: sparsely scattered throughout upstate New York north of the Coastal Lowlands ecozone, mostly in the Great Lakes Plain, Tug Hill and St. Lawrence, and Adirondacks ecozones. *Rank:* G3G4 S2S3 *Revised:* 2001

Medium fen at Tupper Lake Marshes:

A moderately minerotrophic peatland in which the substrate is a mixed peat composed of graminoids, mosses, and woody species. Medium fens are fed by waters that are moderately mineralized.

The fen is an extensive fen dominated by the sedge *Carex lasiocarpa*, and forming peat islands in (and lining) a shallow reservoir in the Adirondack northwest flow. The fen occurs as a mosaic with a very large deep emergent marsh, shrub swamp and submergent aquatic bed.

A very large fen with no exotic plants. There are a few landscape disturbances including a bisecting causeway and a historical impoundment apparently greatly expanding the size of the fen.

Deep emergent mars h: a marsh community that occurs on mineral soils or fine-grained organic soils (muck or well-decomposed peat); the substrate is flooded by waters that are not subject to violent wave action. Water depths can range from 6 in to 6.6 ft (15cm to 2 m); water levels may fluctuate seasonally, but the substrate is rarely dry, and there is usually standing water in the fall.

The most abundant emergent aquatic plants are cattails *(Typha angustifolia, T. latifoli*a), wild rice *(Zizania aquatic*a), bur-weeds *(Sparganium eurycarpum, S. androcladu*m), pickerel weed *(Pontederia cordat*a), bulrushes *(Scirpus tabernaemontani, S. fluviatilis, S. heterochaetus., S. acutus, S. pungens, S. americanu*s), arrowhead *(Sagittaria latifoli*a), arrowleaf *(Peltandra virginic*a), rice cutgrass

(Leersia oryzoides), bayonet rush *(Juncus militaris)*, water horsetail *(Equisetum fluviatile)* and bluejoint grass *(Calamagrostis canadensis)*.

The most abundant floating-leaved aquatic plants are fragrant water lily *(Nymphaea odorata)*, duckweeds *(Lemna minor, L. trisulca)*, pondweeds *(Potamogeton natans, P. epihydrus, P. friesii, P. oakesianus, P. crispus, P. pusillus, P. zosteriformis, P. strictifolius)*, spatterdock *(Nuphar variegata)*, frog's-bit *(Hydrocharis morus-ranae)*, watermeal *(Wolffia* spp.), water-shield *(Brasenia schreberi)*, and water-chestnut *(Trapa natans)*.

The most abundant submerged aquatic plants are pondweeds *(Potamogeton richardsonii, P. amplifolius, P. spirillus, P. crispus, P. zosteriformis)*, coontail *(Ceratophyllum demersum)*, chara *(Chara globularis)*, water milfoils *(Myriophyllum spicatum, M. sibiricum)*, pipewort *(Eriocaulon aquaticum)*, tapegrass *(Vallisneria americana)*, liverwort *(Riccia fluitans)*, naiad *(Najas flexilis)*, water lobelia *(Lobelia dortmanna)*, waterweed *(Elodea canadensis)*, water stargrass *(Heteranthera dubia)*, and bladderworts *(Utricularia vulgaris, U. intermedia)*.

Animals that may be found in deep emergent marshes include red-winged blackbird *(Agelaius phoeniceus)*, marsh wren *(Cistothorus palustris)*, bullfrog *(Rana catesbeiana)*, and painted turtle *(Chrysemys picta)*. Rare species in some deep emergent marshes include American bittern *(Botaurus lentiginosus)*, Virginia rail *(Rallus limicola)*, and pied-billed grebe *(Podilymbus podiceps)*.

Marshes that have been disturbed are frequently dominated by aggressive weedy species such as purple loosestrife *(Lythrum salicaria)* and reedgrass *(Phragmites australis)*. Deep emergent marshes also occur in excavations that contain standing water (e.g., roadside ditches, gravel pits).

Distribution: throughout New York State.
Rank: G5 S5 *Revised:* 2001

Deep emergent marsh at Tupper Lake Marshes

Extensive, diverse, productive deepwater marsh dominated by bayonet rush (*Juncus militaris*) and pickerelweed (*Pontederia cordata*). Trees and shrubs are absent. Emergent aquatic layer has 40% cover including *Pontederia cordata* (30%).

Extensive marshes at a delta of Raquette River, a main channel stream, where it empties into a shallow reservoir formed from the complex of Raquette Pond, Tupper lake, and Simon Pond in the Adirondack northwest flow. Marshes form the dominant part of a mosaic with medium fen, shrub swamp and submergent aquatic bed.

A very large marsh essentially lacking exotic species, with minor recreational impacts and several landscape disturbances including a slight impoundment.

b. Wildlife

Wildlife species that favor mature forests are likely to be more plentiful over time in this unit due to the limitations on tree removal on forest preserve. Easement lands will continue to have trees harvested providing more "open canopy" habitat types and early successional stages, so will provide some habitat diversity throughout the planning unit.

Field inventories for some wildlife species in this unit have been done. The Breeding Bird Atlas Survey (a statewide effort), completed during the years 1980-1985, documented the presence of 118 bird species (Appendix D). A new Atlas project, initiated in the year 2000 will provide additional breeding bird information. The statewide Amphibian and Reptile Atlas Project (1990-1998 data) confirmed the presence of 15 species (Appendix D). An analysis of habitats within the unit documents that the unit contains suitable habitat for 40 species of mammals (Appendix D). Big

game, both deer and bear exist in the unit, and hunting seasons are set according to management unit 6J in the NYS hunting guide published annually. Appendix D contains calculated deer, bear, and furbearer harvest figures. Harvest information is calculated from the overall take figures of a wildlife management unit in consideration of the total area within the unit planning area. Trapping regulations are also identified and set by the same 6J management unit. Significant habitats, deer concentration areas, and National Heritage Rankings are also listed in Appendix D.

Road and trail access to lands within the unit plan are available to hunters and wildlife observers. A variety of habitats exist for the bird watchers and naturalists along public access roads. Wetlands, including bogs, provide some especially unique habitats often harboring less common species. Likewise, recreationists have remote and roadless tracts to view or hunt wildlife if desired.

Within this area the following species should be particularly noted:

(1) Endangered Species
- Golden Eagle - use the area during migration
- Spruce Grouse - confirmed nesting

(2) Threatened Species
- Northern Harrier - possible nesting
- Osprey - nesting in adjacent units
- Bald Eagle - confirmed nesting

(3) Special Concern Species
- Common Loon - confirmed nesting
- Cooper's Hawk- confirmed nesting
- Common Nighthawk- probable nesting
- Common Raven - probable nesting
- Eastern Bluebird - confirmed nesting
- Vesper Sparrow - probable nesting

Recovery programs for the two endangered species listed above have not been formalized to date.

Spruce Grouse

Spruce grouse (*Facipennis canadensis*), are classified Endangered in New York State. Their presence has been documented in the unit. From studies performed in the Adirondack Park, main populations of spruce grouse are concentrated in the border region of Franklin and St. Lawrence counties. Research to date, has indicated spruce grouse prefer early to mid-successional stage coniferous forests, of primary spruce and fir especially with an understory of blueberries and other ericaceous plants, with scattered openings of a few hundred feet. Low wetlands are preferred as well. The NYNHP has not documented an extensive cover type of habitat that spruce grouse prefer. Habitat requirements of spruce grouse will be considered in siting of any proposed facilities.

Golden Eagle

Golden eagles (*Aquila chrysaetos*), the other endangered species, are not known to breed in the unit. But, a historical nest site occurs in an adjacent unit. Golden eagles once nested at no more than a dozen sites in the Adirondacks. Preferred habitats include generally open areas: Tundra, grasslands and open wetland areas. Open wetland areas do exist in the unit. If a golden eagle nest is discovered in the unit, all facilities will be closed in the immediate area.

Bald Eagle

The bald eagle is classified Threatened in New York. The Bog River Flow/Lows Lake area features excellent bald eagle (*Haliaeetus leucocephalus*) habitat. It is a primarily undeveloped watercourse, which supports a good fishery. With fish making up the majority of the bald eagle diet, there is no shortage of prey for the eagles in this location. The shoreline and surrounding area is wooded. White pine (*Pinus strobus*) trees are abundant, including numerous super canopy pines. They are a commonly chosen

nest tree species in the northeast, with eagles typically choosing one of the tallest in the area and locating the nest several feet down into the tree's branches, but with an excellent vantage from the nest.

Bald eagle activity, (including both adult and immature eagles), has been observed in the area for a number of years. Several trips into the area by boat, on foot and in aircraft have been made in an effort to locate an eagle nest on the flow. In the spring of 2001 during an aerial survey to monitor known nests and locate new ones, a nest was found west of Bog River Flow.

In May of 2002, a bald eagle nest was discovered in the unit. When nests are discovered, a 100-300 meter buffer may be established around the nest. This buffer zone may or may not be posted. A determination is based on attracting the least amount of attention to the nest while providing protection to the eagles. A designated campsite is in the immediate area of the nest. This campsite will be closed. Bureau of Wildlife staff typically observe bald eagle nests by the means most appropriate for monitoring activity while causing the least amount of disturbance, at least once early in the nesting season. In this location it can be done by helicopter, or by boat. Following a determination that the nest is active, a trip is made into the nest during the summer months to band the young eaglets and collect any unhatched eggs or prey remains for contaminate studies. Although this area may not be used by the eagles in the winter months, due to a shortage of available prey species, it is an important habitat for them during the spring and summer months.

Northern Harrier

Northern harriers (*Circus cyaneus*) are classified Threatened in New York. This species has been observed in the unit, but not confirmed as nesting. Habitat requirements of the harrier are similar to the golden eagle. Open wetland types are present in the unit. If a northern harrier nest is discovered in the unit, all facilities will be closed in the immediate area.

Osprey

Ospreys (*Pandion haliaetus*) are a Species of Special Concern in New York State. Ospreys have been observed in the unit but no known nests have been found to date. Several nesting osprey pairs are found in adjacent units. If an osprey nest is discovered in the unit, all facilities will be closed in the immediate area.

Common Loon

The common loon (*Gavia immer*) is a Species of Special Concern in New York State. The characteristics of being a predator at the top of the food chain and a long-lived species make loons susceptible to accumulation of environmental toxins. Thus, this species is often used by scientists as an ecological indicator of the health of the environment and water quality. In addition, the common loon has great public appeal, signifying remote, wild areas to people. Adirondack residents and visitors enjoy visiting waterbodies that have resident loons, particularly breeding loons, to experience the beauty and unique vocalizations of these charismatic birds.

A population survey in the 1980's conducted by the NYS Dept. of Environmental Conservation found 5 breeding pairs in 1984 and 6 pairs in 1985 on Lows Lake, and 1 breeding pair on Hitchins Pond in 1984 (Parker et al., 1986). By comparison, 10 non-breeding adults and 4 breeding pairs with a total of 5 chicks were observed on Lows Lake, and 3 non-breeding adults were observed on Hitchins Pond during a census conducted in 2001 by the Adirondack Cooperative Loon Program (Schoch/ACLP, personal communication.).

Numerous natural and anthropogenic factors impact the breeding population of common loons in the Adirondack Park, including the birds on Bog River Flow. Natural predation of loon eggs or

chick has been observed and documented in several instances on the Bog River Flow in recent years. Airborne contaminants, including mercury and "acid rain", can cause the bioaccumulation of mercury, a neurotoxin, and a decreased food supply, which can potentially lead to decreased reproductive success. In addition, human disturbance (including motorboat, personal watercraft, seaplane, and padler activity) can result in nest abandonment or direct injury to adult or juvenile birds. Shoreline use by campers, particularly on islands, has the potential to lead to the loss of nest site availability. Death of adult loons due to lead toxicity from the ingestion of lead fishing tackle accidentally lost by anglers has also been documented in New York State (Stone and Okoniewski, 2001). The effects of direct anthropogenic impacts, such as disturbance or shoreline use, on the breeding loons in the Bog River Flow has not yet been determined, and is unknown.

The impact of mercury toxicity of the loons breeding on Hitchins Pond and Lows Lake is currently under study. Blood and feather samples were collected from 3 adult loons and 1 juvenile loon on Lows Lake and 2 adult loons on Hitchins Pond in 1999 as part of contaminant research conducted by the Northeast Loon Study Workgroup (NELSWG) evaluating the levels of mercury in common loons throughout North America. The loons were uniquely color-banded for future monitoring to determine the long-term reproductive success of the sampled birds. The loons were classified into the moderate risk category, indicating recent accumulation in their bodies of mercury from their diet but at levels too low to result in behavioral or reproductive impacts. The juvenile loon from Lows Lake was classified into the low risk category, indicating minimal or no exposure to dietary intake of mercury. (Schoch and Evers, 2002). This work has been continued through the ACLP, and 1 recaptured adult loon and 2 juvenile loons were sampled and banded on Lows Lake in 2001. The results of the mercury analysis for the 2001 samples are pending.

The return rate and the reproductive success of the banded birds have been determined in subsequent years through regular monitoring by the ACLP. All adult loons that were captured and banded as part of the contaminant work have been observed in subsequent years with mates and have nested. Of 12 confirmed eggs, 5 chicks (42%) survived to fledging (11 weeks of age). Predation of loon chicks by a bald eagle was observed in one instance, and strongly suspected in the case of 2 other chick that hatched but did not survive more than a few days. Egg predation by other wildlife species - gulls, otters, or ravens - was strongly suspected in the cases of the nests whose eggs were destroyed prior to hatching (Schoch/ACLP, personal communication).

Description of a deer yard

A deer yard or deer wintering area is any piece of landscape where deer tend to concentrate during winter. Deer yards typically have features that provide thermal benefits and/or mobility advantages during periods of cold and deep snow. In the Adirondacks, deer yards are often associated with dense conifer cover which helps to reduce rapid snow accumulation, provides shelter from winds, and limits radiational cooling during the evening. South-facing slopes are also used by wintering deer, where lower snow accumulation and favorable sun exposure provide similar benefits. Better quality deer yards also have adjacent regenerating hardwood components that provide available woody browse during milder conditions.

In the Adirondacks, deer use the same yarding areas annually, although the precise boundaries change over time with succession. Deer use within yarding areas will also change annually in response to winter severity. The maintenance and protection of winter deer yards remains a concern of wildlife managers, particularly in the Adirondacks, as they fulfill a critical component of the seasonal habitat requirements of white-tailed deer.

Guidelines for protection of deer-wintering areas

The maintenance and protection of deer-wintering areas are important in maintaining deer in the northern portions of their range. Activities which substantially diminish the quality or characteristics of the site should be avoided, but this does not mean human use is always detrimental. Forest stewardship activities (including softwood harvest), pass through trails, and other uses can be compatible with a deer yard if carefully considered. The most important characteristic of an Adirondack deer yard is the habitat configuration making up a "core" and travel corridors to and from the core. The core is typically an area (or areas) of dense conifer cover used by deer in severe conditions. Travel corridors are dense but narrow components which allow access to food resources in milder conditions. Forest management practices which afford protection of core sections and avoid fragmenting travel corridors are acceptable in many situations. Through trails used by snowmobiles can also be acceptable, particularly if the traffic is not prone to stopping or leaving the trail footprint. Various research conducted in the 1970s indicated that snowmobile use in deer wintering areas could be both detrimental and beneficial to deer depending on the circumstances. High levels of snowmobile use can increase the energy demands of deer within the yard due to increased movement, but the packed surface of a snowmobile trail is often also used by deer to access other portions of the yarding area. Snowmobile trails can create access for free-roaming dogs. Coyote can also use the hardpacked trail. Today's snowmobiles are less capable of off trail use than the smaller lighter machines of 20 years ago, and trail networks allowing through traffic are far better developed than in the past. It should also be noted that a study in Wisconsin showed cross-county skiers frightened deer more than snowmobiles. (Marchinton R.L. and Hirth DH, Chapter 6 Behavior in Halls LK 1984) Some general guidelines follow.

GUIDELINES FOR DEER YARD PROTECTION IN THE ADIRONDACKS

- On easement lands maintain a minimum 100-foot forested buffer on either side of streams to protect winter habitat and travel corridors between core yard components.
- On easement lands plan timber harvests (selective or clear cuts) blocks with a rotation long enough to ensure inter-connected portions of mature softwood cover remain in tact.
- Avoid placement of trails intended for winter use through core segments of deer yards to reduce disturbance associated with winter recreationists stopping to observe deer.
- Snowmobile trails traversing deer yards should be designed for through traffic.
- Snowmobile trails should be designed to sustain moderate speeds to avoid vehicle/deer collisions and should be of sufficient width to allow two-way traffic to proceed unimpeded.
- Trail should not traverse core segments of deer yards in densely populated areas such as hamlets, villages, or along roadsides developed with human habitation because they provide access to free roaming dogs.
- In areas with nearby human habitation, avoid land uses which result in remnant trails, roadways or other access lanes which facilitate accessibly-free-roaming dogs.
- The Master Plan states on page 36, "deer wintering yards and other important wildlife and resource areas should be avoided by such (snowmobile) trails."

The Departments' Northern Zone deer biologist do

not presently feel snowmobile activity has a significant adverse impact on deer populations. Care should be used in the planning of snowmobile trails in or adjacent to deer wintering areas. Increased human activity within the core of a yarding area can result in an increased energy demand to deer present in the immediate vicinity of the trail. During portions of the day when use is limited however, the same trail may also provide a firm, packed surface readily used by deer for travel between yard components during periods of deep snow.

c. Fisheries

The area's waters support populations of both native Adirondack and non-native fish species (Appendix C). In general, the area's rivers and streams, and the smaller lakes (<200 acres) are characterized by fish communities where brook trout are the dominant predator. Brown bullhead, white sucker and pumpkinseed sunfish, all native Adirondack species, are commonly associated with brook trout in these waters.

The larger waters, while still supporting remnant and stocking maintained populations of salmonids (e.g. brook and lake trout), are inhabited by self-sustaining populations of a variety of warmwater species. The Raquette River impoundments (i.e. Tupper Lake, Raquette Pond, and Piercefield Flow) contain fish communities dominated by northern pike and walleye.

In other area waters, such as Lows Lake and Hitchins Pond, largemouth bass are the most abundant predator. Historically, brook trout were the dominant sport fish in these waters, but sometime prior to 1990, a self-sustaining largemouth bass population became established (see Appendix C-Chronology of Bog River Flow) from Bog Lake where fish introductions reportedly had been common. As early as 1991, high densities of nesting bass were confirmed in both Hitchins Pond and Lows Lake. More recent reports, however confirm that the quality of this bass fishery may be deteriorating. Observations suggest both the abundance of larger bass(>12 in) and their condition (weight relative to length) have declined in recent years. Prior to the establishment of largemouth bass (late 1980's survey data), populations of other fish species such as pumpkinseed, common shiner, creek chub, brown bullhead and white sucker were very abundant. These species provided a very good forage base which was readily used by the new bass population. In June, 2001, largemouth bass were sampled (via electrofishing) at a high rate of 46 per hour, while non-bass were hardly collected at all. This disparity suggests the forage base has collapsed. If this is true, the quality of the Low's Lake bass fishery is likely to decline even further.

A unique population of hybrid tiger muskellunge has been introduced into Horseshoe Lake. Since tiger muskellunge are sterile, this fishery is being perpetuated by annual stocking. The lake also supports a population of smallmouth bass, yellow perch, white sucker and brown bullhead.

The non-native yellow perch is the most common prey fish species inhabiting area waters, followed by rock bass and white sucker. Fortunately, yellow perch, a known competitor with brook trout, have not been detected in Lows Lake or the area's smaller lakes and ponds. Man-made barriers below Lows Lake and Bridge Brook Pond, as well as a natural barrier below the Little Trout-Trout Ponds system, appear to be keeping perch out of these systems. It is imperative that these barriers be maintained to perpetuate this benefit.

Brook trout populations in five of the areas smaller lakes and ponds are maintained by annual stocking because natural spawning by brook trout, if occurring at all, has not been adequate to maintain populations at satisfactory densities. Other fish species in these waters, such as white sucker and brown bullhead, naturally maintain their resident "wild" populations.

In contrast to brook trout in small lakes and ponds,

fish in the area rivers and streams originate almost entirely from natural spawning (except for the lower Bog River which is stocked annually with brook trout). Specific data regarding fish species presence and abundance in most of the area's streams is lacking. It is presumed that brook trout, white sucker and associated minnow species such as creek chub and blacknosed dace inhabit most of these waters. Natural spawning brook trout populations have been confirmed in both the South Branch of the Grass River and Sucker Brook.

3. Visual

Much of the aesthetic appeal of this area is water related, with the Bog River and Tupper Lake providing many scenic opportunities. Generally, the mountains are too wooded to provide scenic vistas but Mt. Arab provides a very popular exception, as does a rocky ridge adjacent to the Upper Dam on the Bog River that provides open views of Lows Lake and Hitchins Pond. Another impressive view can be seen from Coney Mountain.

Along SH 421, at the mouth of the Bog River, Bog River Falls Day Use Area offers an exceptional opportunity to view a splendid waterfalls Winding Falls, currently not accessible by trails, is also a spectacular waterfall. Beautiful scenery can be experienced canoeing along the Bog River and associated waters and is enjoyed by thousands of people every year. The Bog River Falls and the summit of Arab Mountain are designated as Scenic Special Management Areas in the Master Plan.

4. Critical Habitats

See Appendix D for significant habitats and a map portraying historic deer wintering areas from 1970-1975 data.

5. Wild, Scenic, and Recreational Rivers

Within the unit the following rivers are designated "Scenic" by the Wild, Scenic, and Recreational Rivers Act:

- Bog River from Lows Lower Dam to its outlet at Tupper Lake - 7.3 mi. (ECL §15-2714(2)(b));
- Round Lake Outlet from the outlet of Round Lake to the confluence with the Bog River - 2.7 mi. (ECL §15-2714(2)(y)); and
- South branch of the Grass River - 4.5 mi. (ECL §15-2714(2)(l)).

Pursuant to 6 NYCRR §666.6(f), upon the designation of a river in this system and until final boundaries are established, the provisions of 6 NYCRR Part 666 (the regulations implementing the Wild, Scenic and Recreational Rivers program) are applicable within one-half mile of each bank of the river.

None of these rivers is known to have a current use which is in conflict with either the Wild, Scenic and Recreational Rivers Act (ECL Article 15, Title 27) or the implementing regulations. A permit under 6 NYCRR Part 666 would be required for any new snowmobile trail crossing the above mentioned rivers.

B. Existing Facilities

1. Horseshoe Lake Wild Forest

<u>Bridges</u> (2)

Goodman - Concrete and steel structure approximately 70 feet long.

Winding Falls - Steel and wood structure approximately 40 feet long.

<u>Dams</u> (3)

Mountain Camp Property (1) - Concrete structure approximately 180 feet long

Horseshoe Lake (1)

Bridge Brook Pond (1)

Designated (Primitive) Campsites (28)
- w/pit privy
  - Adjacent to Bog River Falls DUA (1)
  - Mt. Arab (1)
  - Horseshoe Station (3)
- w/o pit privy
  - Bridge Brook Pond (4)
  - Tupper Lake (6)
  - Horseshoe Lake (13)

Fire Tower (1)
- Mt. Arab (with observers cabin)

Foot Trails (1)
- Mt. Arab (.3 mi Wild Forest)

Gates (6)
- Massawepie Rd. (2)
- Goodman Parcel (1)
- Pine Pond Rd. (2)
- Mountain Camp Rd. (1)

Lean-tos (1)
- Tupper Lake

Parking Area (2)
- Bog River Day Use Area (now paved)
- Horseshoe Lake (unpaved)

Picnic Sites (7)
- Bog River Falls DUA (6)
- Bridge Brook Pond Island (1)

Roads (5) Unpaved

Open for public motorized use
1. Otterbrook Rd.(from the end of SH 421 to gate at south branch GR near Conifer Easement line gate-3.2 mi.)
2. Lower Dam Rd.(from the Otterbrook Rd. to Lower Dam-0.7 mi.)

Administrative access only
1. Pine Pond Rd. (1.0 mi.)
2. Concrete Bridge Rd. (0.1 mi.)
3. Cut off Rd. (1.0 mi.)

Signs (6)

Snowmobile Trails (5)
1. Otterbrook Rd. from SH 421 to Five Ponds Wilderness Boundary (8.5 mi.)
2. Trout Pond (3.7 mi.)
3. Cut off Rd. (1.0 mi.)
4. Massawepie Rd. (2.2 mi.)
5. Lower Dam Rd. (0.7 mi.)

2. Hitchins Pond Primitive Area

Dams (2)
- Lows Lower Dam (concrete)
- Lows Upper Dam (concrete)

Designated (Primitive) Campsites (10)
- Lower Dam (1)
- Sabattis Road (3)
- Bog River (3)
- Hitchins Pond (3)

Gates (4)
- Lower Dam Road (2)
- Upper Dam Road (1)
- Hitchins Pond (1)

Gravel Mine (1)
- Hitchins Pond Road

Kiosk/Register (1)
- Upper Dam

Parking Area (1) Unpaved
- Lower Dam

Picnic Sites (1)
- Hitchins Pond

Register (2)
- Upper Dam
- Lower Dam

Roads (1) Unpaved

Administrative Access Only
Upper Dam Road (3.5 mi)

Signs (9)
Barrier ahead (4) (2 at each gate)
Regular standard (3)
Sabattis, Hitchins Pond (Dog cemetery)

3. Lows Lake Primitive Area

Designated (Primitive) Campsites (5)
Bog River Flow
w/pit privy (2)

Gravel Mine (1)
Lows Lake Boy Scouts

Picnic Site (1)
Bog River Flow

Pit Privies (2)
Upper Dam (2)

Private Camp (6)
Reserved use expires January 1, 2006

Roads (1) Unpaved
Administrative access only
Lake Marian Rd. (1.3 mi)

Signs (2)

4. Conifer Easement

Foot Trail
Mt. Arab (.7 mi. Easement)

Gates (1)

Parking Area (1)
Mt. Arab (10 cars)

Private Camps (6)
Reserved use expires 12/19/05

Roads (3)Unpaved
1. Conifer Rd. (2.0 mi.)
2. Massawepie Rd. (3.0 mi.)
3. Cut off Rd. (0.2 mi.)

Signs (7)

Snowmobile Trails
Confier Rd. (2.0 mi.)

Trail Registers (1)
Mt. Arab (0.7 mi.)

5. Tupper Lake Boat Launch

Bathroom building (privy) (1)

Boat Ramp (1)

Paved Parking Area (35 cars and trailers)

Signs
Boat Launch

C. Cultural

There are no archeological site records in either the State Museum or OPRHP's archeological inventory within the unit. This does not include the Augustus Low ruins and archaeological sites that we know are in the unit. Under the State Historic Preservation Act we have an affirmative obligation to help build the inventory by including this data. The cultural value of this forest lies in its history; its easy access for recreation, and its use as a resource to understanding the natural world. The 12 buildings at the former Hitchins Park, which were part of the famous turn-of-the-century Augustus Low complex, have been removed. The Augustus Low sites as well as associated railroad and rail station sites, the Mt. Arab fire tower and current forestry practice all lend themselves to being a starting point and focus of events which contributed to the conditions which exist in the area today. Recreational opportunities are available for a wide spectrum of public uses and can accommodate a diverse group of users. Particularly

unique are the scenic picnic area at Bog River Falls, the roadside campsites at Horseshoe Lake, and the canoeing opportunities on the Bog River.

D. Economic Impact

Besides its many recreational values, the Bog River Unit is an important economic asset for the Adirondack region. This popular recreational attraction represents a positive influence on private land values locally. State government makes substantial tax payments to local governments relative to the Bog River Unit land holdings.

Many recreational opportunities exist here at Bog River Unit. Canoeing, hiking, fishing, bicycling, camping, and snowmobiling are popular pastimes. Some spend considerable effort and time enjoying these state and easement lands. Many will combine an extended camping trip with visits to local shops and restaurants. The contribution they make to the local economy is partly due to the Bog River Unit.

While it is clear that the indirect effects on tourism and private land values in the Adirondack region that result from the existence and use of the Forest Preserve are substantial, they are understood only in general terms. On the other hand, the economic benefits directly conferred on the region by the payment of property taxes can be quantified.

Section 532-a of the Real Property Tax Law provides that "all wild or forest lands owned by the state within the forest preserve" are subject to taxation for all purposes. The New York State Office of Real Property Services (formerly Equalization and Assessment) has provided a projection of taxes paid on state land within the towns of Piercefield, Colton, Altamont, and Long Lake. Total taxes paid on state lands in the Bog River Unit , based on the 1998 Assessment Roll, amounted to over $262 thousand dollars. This equates to approximately $12.64/acre.

State government pays the same taxes on unimproved forest lands as private landowners. State government land holdings are assessed by local government assessors. The tax rate that is established by each local government jurisdiction is applied to the assessment and determines the taxes on the parcel. The procedure is the same as for private landowners and the property tax must be comparable to rates on similar private land holdings.

E. Public Use of the Area

1. Motor Vehicle Use

The aesthetic appeal of Bog River Falls along SH 421, and easy access to Horseshoe Lake, encourages a high level of sustained use during the late spring through early fall seasons. The lack of development along most of the road frontage enables people, including those with disabilities, to enjoy the outdoors. Driving along SH 421 and continuing through on the Otterbrook Road to the South Branch of the Grass River provides access to scenic natural areas relatively remote from civilization. Roads open to the public for motorized use include the Lower Dam Road, which leads to the Lower Dam canoe access area, and the Otterbrook Road, which extends 3.2 miles from Horseshoe Lake to a gate along the South Branch of the Grass River.

No surveys to date have documented the type and extent of use on these public roads. Where feasible, vehicle counters will be placed at locations to ascertain motor vehicle use.

2. Picnicking

A designated picnic area consists of at least one fireplace, picnic table, and pit privy.

The roadside picnic area at Bog River Falls is heavily used by motorists as well as others aware of this attractive site. Unfortunately, it is frequently vandalized due to its accessible yet somewhat isolated location.

The two picnic areas along the Bog River canoe route and one on the island in Bridge Brook Pond were developed to provide canoeists with rest stops.

3. Canoeing

The most popular canoe route begins at Lows Lower Dam and continues up the Bog River to and across Lows Lake and then down the Oswegatchie River to Inlet. It provides a very unique 30-mile Wilderness canoe trip divided at midpoint by a 3 ½ mile carry. While only a small percentage go beyond Lows Lake, the availability of this route provides an opportunity to utilize the canoe over a long distance without having to contend with currents or dangerous rapids. In 1992, an alternate means of access to this route was developed at Horseshoe Lake outlet due to construction activities at Lows Lower Dam (this access location was utilized by Verplank Colvin and many others in the 1800's). This access is still used by some to date.

The Bog River, from below Lows Lower Dam to the confluence with Round Lake Stream, provides a canoe route with several rapids which is only usable in the spring. Ron Canter (1984) has written a very informative account of this trip.

The lower Bog River between the confluence with Round Lake Stream and the Bog River Falls provides about 1.8 miles of flat water canoeing. Canoeists can enter the river on the west bank at the Bog River Falls Picnic Area off SH 421.

Raquette Pond, Tupper Lake, and Piercefield Flow also offer canoeists the opportunity for short trips to picnic or fish.

4. Hunting

HARVEST TRENDS FOR DEER AND BEAR

The Department does not maintain harvest statistics specific to State land holdings. Harvest of selected species can be extrapolated however from harvest records maintained by town. The Bog River Unit Management planning area is located primarily in the towns of Colton and Piercefield covering approximately 33,000 acres of these two towns. This area represents about 25% of the total land area contained within the towns. Take can thus be estimated by the proportion of the take corresponding to proportion of total land area making up the unit.

White-tailed deer

The unit is situated almost entirely within WMU 6J in the Central Adirondack eco-zone. Deer densities within this zone are typically low because of mature forest cover, high annual snowfall, short growing seasons and poor soil fertility. Regulations pertaining to the taking of deer are fairly restrictive with limited opportunities to harvest antlerless deer.

Deer harvests over the past 20 years are relatively stable with drops following mortality after severe winters and modest increases following mild winter. Estimates of the buck harvest (an indicator of overall population size) for the area would indicate a low of 102 in 1982, a high of 180 in 1988, and a 2001 take of 113.

There are no major concerns related to deer management in this area as deer densities are low, and natural factors, most particularly winter severity, regulate deer numbers to a greater degree than hunting. (Hunting regulations are thus formulated to limit the harvest of antlerless deer to avoid over harvest).

Bear

The Bog River Unit is firmly within the Adirondack bear range with healthy populations found in the area. Annually, bear harvests fluctuate markedly in response to weather conditions, and hard and soft mast production. Reported bear takes for the towns of Colton and Piercefield have fluctuated between 4 and 19 over the past decade. There is no trend of increase or decrease evident. The bear population found within the Bog River unit would be

considered stable.

The HLWF is heavily hunted, especially during archery, muzzleloading and the early part of big game season. Easy road access and the availability of roadside campsites are contributing factors. Presently, public motor vehicle access to the Otterbrook lands (the northern part of the LLPA) is restricted due to maintenance concerns. Public hunting is prohibited on part of the Otterbrook tract from September 15 to December 31 each year until December 31, 2005 because of hunting rights retained by two former lessees of this tract. The gate currently restricting access to the parcel will be considered for removal after that date.

Public hunting on the CE lands is prohibited during the period September 1 to December 31 each year until December 31, 2004 because of hunting rights retained by the fee owner. During these years, public hunting is permitted for any established season not within this restricted time frame.

5. Public Use Restrictions

Most lands contained in this unit are Forest Preserve lands open to the public for no charge. Certain other lands have public use restrictions on them:

- Public use of the CE lands is totally prohibited from the opening of the rifle season for deer through December 31, until December 31, 2004. Public hunting is also prohibited from September 1 to the opening of rifle season, although the public may still make use of the property for other recreational uses.

- Public use on a portion of the Otterbrook land lying between the South Branch of the Grass River and the Five Ponds Wilderness Area is prohibited from October 15 through December 31 every year until December 31, 2005. This is Forest Preserve land and deed restrictions will end in 2005. The current owner of the deed reservation is required to post lands when closed to public use.

- Public use of that section of the Mt. Arab trail on the CE is prohibited from the beginning of rifle season for deer through December 31. This deed restriction will end December 31, 2004.

- Public use of Pole Island, Gooseneck Island and Frying Pan Island, all situated on Lows Lake, is prohibited during June, July and August. These islands are part of the Forest Preserve but have special reserved deeded rights. The Hiawatha Boy Scout Council that has exclusive use during those three months. No designated campsites sites exist on these islands, therefore camping is not allowed.

6. Camping

Of the 43 designated campsites within the planning area, 24 are roadside sites, 18 are accessible by water and 1 exists on the summit of Mt. Arab. Otherwise, camping is allowed as limited by regulations (6 NYCRR §190.3). These regulations prohibit camping within 150 feet of any road, trail, spring, stream, pond, or other body of water except at sites designated by the Department. Group permits for ten or more individuals have not been issued for this area.

7. Snowmobiling

The Otterbrook Road, which begins near Horseshoe Lake where SH 421 ends, is a designated snowmobile trail. A snowmobile trail also continues north on the Massawepie Road from where the two intersect. Use of these roads preceded state acquisition of recreational rights on the CE lands and acquisition of the Otterbrook parcel. It provides an important link between the Cranberry Lake and Horseshoe Lake areas.

The Otterbrook Road from its intersection with the Massawepie Road to the FPWA boundary is a designated snowmobile trail. This was an existing road in 1972, but not state owned.

The Trout Pond trail, presently open for snowmobiling, extends from the beginning of the Lower Dam Road at the junction of the Otterbrook Road to Trout Pond and beyond to Sabattis. The trail beyond Trout Pond is not well maintained and is infrequently used.

In 1972, the Trout Pond Trail was on Wild Forest lands and public motorized use was allowed to Trout Pond from the Otterbrook Road. It was also open for snowmobiling use in 1972 and is presently open from the Otterbrook Road to the Sabattis Road. Public motor vehicle use is no longer permitted on this trail.

Passing through the unit is the 119 mile long Remsen-Lake Placid Travel Corridor. It is open for snowmobiling from December 1 through April 30 between the hours of 6:00 am to 12 midnight only when it is covered with snow and ice. Snowmobiles are prohibited between May 1 and November 30 on this corridor. Other restrictions apply which are posted at entry locations along the corridor.

8. Bicycling

An abundance of roads and trails within this unit, as well as in the adjacent CLWF, provide a special opportunity for extensive all terrain mountain bike trail use. The area is currently lacking signs indicating where this use may and may not occur. In Primitive areas, bicycles are permitted on state truck trails specifically designated for their use by DEC in an adopted UMP as well as on roads legally open to the public. Bicycling is also permitted on the following routes: the Otterbrook Road from Horseshoe Lake where SH 421 ends through and including the Massawepie Road, and the Trout Pond trail extending from Lows Lower Dam to Trout Pond. Bicycling on Yorkshire Easement lands has become very popular in recent years due to the numerous logging trails that exist here. These trails are fairly flat so erosion is not a serious threat, however, they will be monitored and problems addressed if they arise.

9. Fishing

The area's most popular sport fishery is the Tupper Lake - Raquette Pond complex. It is very accessible and provides year-round angling opportunity targeting northern pike, walleye, small and largemouth bass, panfish, and lake trout. Based on two-story (warmwater, coldwater) lakes angler effort estimates reported by Pfeifer (1979), use of this large two-lake complex has been estimated to approach 50,000 angler trips/year.

The area’s five brook trout ponds - Big Trout, Little Trout, Black, High, and Bridge Brook Ponds, support an estimated 2,500 to 5,500 angler trips per year based on Adirondack Brook Trout Pond angler use rates reported by Gordon (1994), and Pfeiffer (1979), and Connelly, Brown and Knuth (1996). Survival and growth of stocked brook trout in these waters is good. Most have reputations for providing quality angling experiences. Big Trout and Little Trout Ponds also offer angling for native lake trout. The Bog River Flow, which generally includes the area above Lows Upper Dam, supports both a brook trout and largemouth bass population. Specific angler effort estimates are not available, but are believed to be nearly 20,000 trips per year (Pfeiffer 1979). Since 1990, the popularity of the bass fishery appears to have precipitated an increase in angler trips to the flow, and the frequency of occurrence of both float plane and motorboat use by anglers. In addition to individuals who come to the Flow just to fish, it is believed that many of the campers who use the flow’s canoe route, also fish while they are there.

Horseshoe Lake also supports a popular sport fishery. Based on use rates reported for other Adirondack Lakes by Pfeiffer (1979), annual use of Horseshoe Lake by anglers is estimated to be 3,200

trips. Like the other large lakes in the area, Horseshoe Lake is used by anglers for ice fishing as well as during the open water season. Reports of Horseshoe Lake ice anglers catching tiger muskellunge up to 16 pounds are not uncommon.

Stream fishing opportunities are limited in the area. The small size and remoteness of most of the area's streams, coupled with the small sizes of the brook trout which inhabit these waters, make them unattractive to anglers. Anglers use of the lower Bog River, which is stocked annually with brook trout, is believed to be at a higher rate than any of the other streams of the area. At less than 150 angler hours/acre, however, angler effort on the lower Bog River is considered very low in comparison to other stocked New York streams.

10. Hiking

Presently, one designated hiking trail exists on the unit: Mt. Arab. The Mt. Arab trail, approximately one mile in length, is located off the Mt. Arab Road. The trail crosses CE lands and ends at the fire tower on the summit. Public use on the Mt. Arab trail is prohibited from the beginning of rifle season for deer through December 31. This restriction will end December 31,2004.

Coney Mountain presently has a path to the summit from SH 30 that is not a designated trail, but receives significant use. The path is approximately .6 miles in length and is moderately steep.

The Trout Pond trail, though not a designated hiking trail presently, is used, and is permitted to be used, by hikers. Presently, this trail ends in an open wetland where it connects to the Sabattis Road and cannot be re-routed due to private lands. A trail located on private land adjacent to the Sabattis Road does connect to the Trout Pond trail. Also, the Department would be unable to propose a parking lot off the Sabattis Road. For these reasons the section of trail from Trout Pond south to the Sabattis Road, will not be designated a hiking trail, but the section of trail from the Lower Dam to Trout Pond will be designated a foot trail if an alternative snowmobile trail is approved.

11. Floatplanes and Motorboats

Motor craft use on Lows Lake can be categorized several ways.

Public floatplane use on Lows Lake, primarily by commercial operators, peaks at the beginning of bass season, approximately June 20 each year. Floatplane operators also bring other recreationists to this area that may not have the time to enter and return through Hitchins Pond, or don't want to put the effort into getting to Lows Lake.

Public motorboat use includes two primary groups. One group is those who paddle small boats and canoes with motors up through Hitchins Pond (closed to motorboat use) to the Upper Dam, and then use their motors on Lows Lake. The second group gains access from Bog Lake, a privately owned waterbed, which connects by a shallow waterway to Lows Lake. Riparian landowner motorized use of Lows Lake includes at least one landowner that has had a floatplane, and the Boy Scouts that use a motorboat or two in the summer associated with their programs. Motorboat use by the Boy Scouts was expressly reserved when they sold land to the State in the mid 1980's. DEC staff also uses motorboats on the lake for facilities maintenance, patrol, and emergencies.

An estimate of the amount and frequency of use by all motorized craft has not been made at this time, but staff believe motorboat use by riparian owners and their guests is at least as significant as use by the public. Most floatplane use appears to be by commercial pilots flying in clients.

F. Capacity of Resource to Withstand Use

Generally, use levels in the area are not enough to

significantly impact the capacity of the resource to withstand use. DEC's physical inspection of the area and user feedback has yielded the following results with regards to impacts on carrying capacity.

1. A sign-in register at the Lower Dam has been in existence for many years to gather recreational use information for this popular canoe route. Since 1989, 10 years of data indicate an average of 2400 users per year sign in on the Lower Dam register. The highest recorded number was over 3700 during the 1998 season followed by the 2001 season with 2982 users. During the year 2000, 2585 people were recorded at this registry. Projected use is expected to increase in future years but not at a rapid pace. Impacts to campsites and surrounding vegetation are expected to increase along the Bog River and Horseshoe Lake areas.

Public access also occurs by water from Tupper Lake and Bog Lake; by floatplane; by snowmobile from the Remsen-Lake Placid corridor and by foot from private inholdings. Some public use originates from the Five Ponds Wildreness Area via the canoe carries from the Oswegatchie River and Cranberry Lake.

2. Many users travel to this unit with the intent of camping for extended periods. Often individuals arrive the night before, expecting to camp at roadside campsites and enter the Bog River system the following day. If campsites are not available, the stage is set for illegal camping along the roads in the unit. Illegal camping poses additional problems such as poor sanitation, unsafe campfires, and intolerance by campers on designated sites.

3. Soil erosion in the vicinity of some campsites on Horseshoe Lake, particularly sites 1 & 4, has occurred due to heavy recreational use. This erosion is most frequently where trails head down high banks along the edge of the lake.

4. Currently, statewide angling regulations, which apply to all waters in the Bog River Area, coupled with annual stocking strategies, and possession of baitfish regulations which apply to the area's trout ponds, are adequate to protect area fish populations from over-harvest by anglers and the introduction of unwanted "new" species. If future surveys indicate fisheries declines in specific waters, special regulations will be instituted to further protect these fish populations. At this time, no water resources are thought to be over fished beyond their capacity to withstand use.

5. The quality of the wildlife resources in the Bog River Unit appear to be excellent. A variety of habitat is available for many species on Forest Preserve and easement lands. Hunting is not expected to impact overall numbers of any species populations. If populations of a protected species, such as loons, experience significant declines in overall numbers, all measures will be considered to reverse the declines. Road and trail access to lands within the unit plan are available to hunters and wildlife observers. Likewise, recreationists have remote and roadless tracts to view or hunt wildlife, if desired.

G. Carrying Capacity Concepts

A determinant of whether use levels of an area are appropriate depends greatly on how you define appropriate. A concept developed to begin to deal with this is carrying capacity. Carrying capacity is the level of use a resource can sustain without negatively impacting the many values of a resource. Managing the Forest Preserve focuses on protecting the resource primarily by managing recreational uses, since timber harvesting is not allowed and most wildlife management revolves around harvest limits as part of a recreational hunting, trapping and fishing program.

Carrying capacity in the context of recreational use is defined by both social conditions and ecological conditions, since the experience of users is often dependent on the impact of the presence of other

users, not just the impact of other users on the natural resources of the area. This effect of users on other users is especially important for areas meant to provide a remote, wilderness type experience, since even the sight of other users can detract from the experience of some.

In the context of the units covered by this plan, use levels are generally quite low. Reaching the limits of carrying capacity is not a foreseeable issue on the Wild Forest Areas, conservation easement area, or much of the Primitive Areas. The portion of the unit where carrying capacity limits are most likely to be nearing sustainable limits is along the canoe route from Hitchins Pond on up through Lows Lake. The specific carrying capacity for an area, though theoretically able to be determined, is actually difficult to determine in practice. It involves many subjective judgements as well as data and information about impacts, tradeoffs, and the interaction of different uses that just is not available. The discussion of carrying capacity that follows will therefore focus on how to begin dealing with the issue on a smaller scale than for the entire unit, though the principles can be applied for any area of the unit.

The canoe route within the Lows Lake and Hitchins Pond Primitive Areas within the Bog River Unit cannot sustain elevated impacts of visitor use indefinitely and still maintain Primitive Area qualities. These qualities need to be defined clearly, and measurable ecological and sociological parameters developed in order to systematically assure that the Primitive Area can endure, including protection of the resource and providing a satisfactory experience to users. A "Limits of Acceptable Change" process must be implemented in order to manage this area properly by developing a systematic rational for how to manage it and begin to deal with the carrying capacity question.

Limits of Acceptable Change (LAC)

LAC is a planning framework that establishes explicit measures of acceptable and appropriate resource and social conditions in recreation settings as well as appropriate management strategies for maintaining and or achieving those conditions.

Four steps must be taken to implement a program of managing under the LAC concept:

- The identification of acceptable resource and social conditions as defined by measurable indicators
- An analysis of existing conditions relative to desired conditions
- Identification of the necessary management actions needed to achieve desired conditions
- Development of a monitoring program to see if objectives are being met

Selecting appropriate parameters is the key to measuring and evaluating acceptable change. The appropriate parameters include:

- Diversity and distribution of plant and animal species
- Condition of vegetation in camping areas, and riparian areas near lakes and streams
- Air and water quality
- Extent of erosion on trails and campsites
- General campsite condition
- Campsite solitude - sight and sound characteristics
- Noise on trails and campsites
- Conflicts between differing user groups

Ecological standards can readily be set based on scientific data at hand. However, sociological standards, beyond those stated in the Master Plan,

require extensive data collection and analysis. Information obtained from the user feedback sheet at the Lower Dam registry and pictures taken of Primitive campsites over an extended period of years will provide valuable insight of existing recreational use during initial implementation of the Bog River UMP. Knowledge will be used to refine and revise management programs if monitoring shows that desired conditions are not attained.

An example of the kind of management action that DEC might take should some of the parameters above exceed acceptable levels for Primitive Areas follows:

> DEC prepares a course of action that follows an order of increasing control by: (1) education and information in proper primitive conditions for travel and camping, (2) indirect control methods; such as dispersing use, (3) the minimum degree of regulation required to meet management objectives. Where overuse is occurring, specific steps are needed to be taken to reduce impacts.

The Department will undertake a unit-wide visitor use survey during 2003-4 in the Bog River Unit. The data collected will focus on seasonality, modality and total level of use of public lands. Data regarding specific seasons and types of users will focus on trends in register sign-ins, programs and resources targeted by users and other specific data to be used in a Limits of Acceptable Change (LAC) planning process during 2003-4. This survey is intended to provide data not only for use in managing facilities and improvements, but also for decision making pertaining to management indicators, standards, and practices in an LAC approach. State of the art technology will be combined with traditional methods to inventory the type and extent of actual public use of the areas. The Bog River spring-summer-fall use inventory will include: (1) Watercraft on Bog River from upper dam to Tupper Lake; (2) Designated campsite use at 42 sites including Horseshoe Lake roadside camping; (3) Vehicle use on State Highway 421; and (4)Hiking on trail to Mt. Arab. Bog River winter use inventory will include: (1) Vehicle use on State Highway 421; and (2) Snowmobile trail use on Otterbrook Road. Appendix M explains how campsites will be monitored for impacts.

III. MANAGEMENT AND POLICY

A. Past Management

No overall management plan has previously been developed for these lands encompassed by this UMP. Management actions were generally based on responding to potential impacts such as fire, and to the needs and desires of past users.

Public use management of the original tracts acquired in 1918 and 1933 consisted of the gradual establishment of boundary lines and a long period of custodial management. The only identifiable project in those early years was the construction of the Mt. Arab Fire tower in 1918 and the establishment of the Bog River picnic area.

Management of the newer acquisitions has developed at a much more active pace. The most notable projects have been development of roadside campsites at Horseshoe Lake and canoe campsites on the Bog River Flow.

The original 21 campsites on Lows Lake and Hitchins Pond (which include sites within both the Five Ponds Wilderness Area and the Lows Lake and Hitchins Pond Primitive Areas) were established in 1986. The sites were established to accommodate an anticipated flood of public users (by identifying sites which were convenient and had received prior use), and simply to keep the users on state land. Seven of the 21 original sites were determined to be capable of absorbing group use (10 or more). The greatest change occurred in 1990 when the number of designated campsites increased from 21 to 41 as part of the FPWA UMP

amendment. This was done to encourage the dispersal of campers, reduce the impact on sites, and offer alternatives to illegal camping and trespassing on private lands.
Within the Horseshoe Lake area there were ten campsites, campsite 16 designated a group site.

On October 29, 1990, 6NYCRR Part 196.4 was amended to prohibit the operation of mechanically propelled vessels and aircraft on that portion of the Bog River situated between Lows Lower Dam and Lows Upper Dam.

During the summer of 1997, the NYSDOT rehabilitated the Bog River Bridge on SH 421. In conjunction with the road and bridge construction, DOT built a parking lot adjacent to the bridge. The APA had determined that the bridge work and parking area work did not require a freshwater wetlands permit. The agency also determined the parking lot work was the rehabilitation of an existing parking area and, pursuant to the APA/DEC Memorandum of Understanding, did not require authorization by a UMP or UMP amendment in order to be undertaken.

Past management of the area fisheries has included angling regulations, routine population and habitat surveys, and stocking of both warmwater and coldwater species.

B. Management Guidelines

1. Guiding Documents

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

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

The Master Plan provides guidance for the use and management of lands which it classifies as by establishing basic guidelines.

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

- Administrative Use of Motor Vehicles and Aircraft in the Forest Preserve (CP-17).
- Motor Vehicle Access to State Lands Under the Jurisdiction of DEC for People with Disabilities (CP-3).
- Standards and Procedures for Boundary Line Maintenance (NR-91-2; NR-95-1).
- Tree Cutting on Forest Preserve Land (O&D #84-06).
- Cutting and Removal of Trees in the Forest Preserve (LF-91-2).
- 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. ADA

The Americans with Disabilities Act (ADA) and Its Influence on Management Actions for Recreation and Related Facilities

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 public entities 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. Since recreation is an acknowledged public accommodation program of several of the State's agencies, and there are services and activities associated with that program, these agencies have 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. An assessment of current facilities will also establish the need for new ones or to upgrade the existing facilities. However, no public entity is required to make each of existing facilities and assets accessible .

The Americans with Disabilities Act Accessibility Guidelines

The Americans with Disabilities Act (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 a public entity is planning the construction of new recreational facilities, or 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 for modifications to trails, picnic areas, campgrounds (or sites) and beaches in order to obtain programmatic compliance with the ADA. In order to achieve programmatic compliance, ADAAG is a suggested reference, since no standards exist in the ADA. Further, proposed ADAAG does require all trail construction and alteration to comply unless one or more of the general conditions for exception exists or individual standards can be excepted or exempted. The other outdoor components in proposed ADAAG (campgrounds, beaches and picnic areas) do not require all elements to be accessible; a percentage of the total available must be compliant.

ADAAG Application

Current and proposed ADAAG can also 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 by a public entity for recreational facilities will be served well if developed 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 guidance documents. Until such time as the proposed ADAAG becomes an adopted rule of the Department of Justice, public entities are required to use the best information available to comply with the ADA; this direction does include the proposed guidelines.

C. Relationship of Management Unit to other Forest Preserve Lands

The Bog River Flow and Lows Lake provide canoe access to the heart of the adjacent Five Ponds Wilderness Area, where a 3½ mile carry at the western end of Lows Lake connects to the upper part of the Oswegatchie River. This canoe route thus links the Raquette River with the Oswegatchie River. A four mile foot trail, proposed in the FPWA UMP, would also provide canoe access from Grass Pond to Cranberry Lake.

The availability of the Massawepie Road for snowmobile use provides a link between trails in the CLWF and Emporium Easement lands to the west and to the Remsen-Lake Placid Travel Corridor. This corridor, which runs southwest to northeast through the unit, provides a snowmobile route from Remsen to Lake Placid.

When the hunting rights expire on the Otterbrook tract (part of the Lows Lake Primitive Area) and Conifer Easement lands, there will be the potential for additional public motor vehicle access on the adjacent easement lands.

The Upper Dam Road has been used to truck lime to a clearing on private land located west of the Lows Lake Primitive Area. From the clearing, the lime was transported by helicopter and delivered to Tamarack Pond located in the Five Ponds Wilderness Area. This occurred in 1980 and 1990. It is anticipated that Tamarack Pond will need liming again in the future, but this is not proposed as a management action in this plan.

This plan suggests the inclusion of a Center Pond loop snowmobile trail (off the Otterbrook Rd.) in the Cranberry Lake WF and closure of the Otterbrook Road west of that loop trail. These actions are not proposed for approval in this plan and will be discussed in an amended or revised CLWF UMP.

A segment of the proposed Hiking/Cross country

ski trail on the old Grass River Railroad "spur" is within the Cranberry Lake Wild forest. This section of trail, also on Yorkshire Easement lands, will be placed in the next revision for the Cranberry Lake Wild Forest UMP.

A parking lot will be proposed for the South Branch Grass River within the Cranberry Lake Wild Forest UMP. This parking lot will be discussed in the next revision for Cranberry Lake This lot will allow off road parking, for recreationists, including one accessible site. In order to fulfill commitments for pond liming of waters located within the eastern Five Ponds Wilderness Area, this parking lot may be used as a helicopter staging area.

D. Administration of Conservation Easements

Department Policy NR90-1 establishes responsibility and procedures necessary for the proper administration of conservation easement lands. This policy was instituted in response to the 1986 Bond Act which authorized the purchase of easements. The DEC is responsible for inspection of these lands. A copy of this policy and the first annual inspection report for the Conifer Easement lands is included in Appendix E.

E. Issues Affecting the Planning Area

The following issues must be addressed within this plan to provide adequate management of the area:

1. Removal of Abandoned Buildings

The removal of buildings at Horseshoe Station after state acquisition of the parcel in 1978 left a large area of cleared land which attracted large groups, to the detriment of the other users of the area as well as adjacent camp owners. In 1990 trees were planted and four designated campsites were established. The trees were planted between the sites for the privacy of users and adjacent camp owners and to reduce the size of the sites. These actions should enhance the camping experience and character of the area. Future inspections will determine if additional efforts will be needed to alleviate public overuse.

There existed 12 buildings at Hitchins Pond at the time of state acquisition in 1985 which were part of the famous turn-of-the-century Augustus Low complex at "Hitchins Park "(Wilson, 1995). Their location fell within the Hitchins Pond and Lows Lake Primitive Areas once the newly acquired areas were classified by the APA, which necessitated their removal to conform with the Master Plan. Most of these buildings had asbestos materials within them which complicated their removal. Prior to proceeding with the demolition of these structures, a review of their historical significance was completed as required by the New York State Historic Preservation Act of 1980. Due to the poor condition of the structures and considerable modification by prior owners, the structures were found to lack sufficient integrity to be eligible for inclusion in the State Register of Historic Places. Asbestos removal from buildings at the Upper Dam was completed in January 1999. All buildings were demolished by early February of 1999. All that is and will be left of these buildings are the remnants of difficult to remove foundations which do not qualify for maintenance under ECL §9-0109(4). The only structures left in place from the Augustus Low complex are the renovated Upper and Lower Dams.

Three buildings (the cabin and two out buildings) at the Sabattis Road Ranger Cabin complex in HLWF need to be removed as part of this plan. Although the Master Plan allows for retention of rustic buildings for administrative purposes on Wild Forest areas, it has been determined that these buildings are not necessary and should be removed.

DEC acquired the Mountain Camp property south of SH 421 by gift in the mid-'90's, and it contained several structures. These structures were demolished in March 1999 after they were found to lack sufficient integrity to be eligible for inclusion in the State Register of Historic Places, and were not

needed for program purposes.

2. Bridge Brook Pond - Storage of Boats

Private boats are currently being stored near the outlet of Bridge Brook Pond into Tupper Lake and other scattered locations. 6 NYCRR §190.4(c) prohibits storage of personal property on State lands. Boats will therefore need to be removed as part of this plan.

3. Motor Vehicle Access and Use

The Otterbrook Road between the Massawepie Road and the end of SH 421 presently needs extensive maintenance, especially in the spring when it becomes deeply rutted. The presence of numerous large stones in the road surface and base makes it difficult to maintain from year to year. Resurfacing will involve application of gravel within the traveled way to prevent wear of the base course, fill any excavations and repair washouts. The width of the road will not be increased. Generally, existing culverts will be replaced in the same size, length and in the same location. The Otterbrook Road will be gated just north of the Lower Dam Road at Horseshoe Lake, during the spring mud season to prevent damage. An additional problem with this route is some illegal motor vehicle use, including ATV's, which is occurring on old haul roads. It should also be noted that no roads in the unit are legally open to ATV use by the public. Reserved private rights (see section I. D. Access) complicates efforts to control illegal motor vehicle use. Old timber haul roads are occasionally used despite not being posted as open to motor vehicle use.

4. Survey Needs

Boundary lines in the Bog River Unit have not all been regularly maintained (surveyed and painted). Boundary maintenance is lacking in all classified preserve areas and the easement property.

5. Parking Lots, Hiking Trails, Lean-tos

The Department's efforts to make the public aware of this area, particularly the Lows Lake portion, have been successful. A lack of trail and lean-to facilities limits public access of portions of the unit and a lack of sufficient parking provides inconvenience and unsafe conditions for users.

With regards to parking, one of the primary access points or gateways into the Five Ponds Wilderness and Lows Lake from the east is the canoe route that begins at the Lower Dam. When a cluster of cars is parked haphazardly along a road potential hazards to motorists develop. This can result in the road being partially blocked, or it can make it difficult for motorists and emergency vehicles to turn around or just pass through. DEC staff has witnessed this situation at the Lows Dam parking area and along the Lower Dam Road. It is not uncommon to see over forty vehicles parked along the Lower Dam; Road and fifty-two were present on July 6^{h} of this year (Assistant Ranger Dawn Andrews, personal communication). People who park at the Lower Dam may be day hikers to Trout Pond, hunters, canoeists to Hitchins Pond or Lows Lake and possibly beyond to the Oswegatchie River. This is a health and safety issue that must be addressed.
By law it is illegal to pull off a state highway to park unless it is in a designated parking area. Parking areas are therefore proposed for all new trails beginning on state highways and will be sized at the minimum necessary to accommodate current and appropriate levels of use. NYS DOT will be consulted on locations for parking and driveway permits will be obtained.

6. Snowmobile Access

The Town of Long Lake is seeking to establish a snowmobile trail connection between the Hamlet of Long Lake and the Remsen/Lake Placid Travel Corridor, the latter being the primary north-south snowmobile corridor in the Adirondacks. Assuming that the Town of Long Lake can establish a trail

north from the hamlet of Long Lake and through lands south of the Horseshoe Lake Wild Forest (now owned by the Nature Conservancy and referred to as the Round Lake parcel), then one or more alternatives to complete the route could extend through the HLWF to connect existing trails and the Remsen/Lake Placid Travel Corridor, subject to Master Plan guidelines. Establishing this connection may require crossing the Bog River and Round Lake Outlet, both classified as Scenic Rivers.

The Trout Pond Trail from Lows Lower Dam to Trout Pond is part of a longer snowmobile trail which extends west of the pond. Maintenance of this trail for snowmobile use has been reduced in recent years primarily due to the documentation of illegal winter fishing on Trout Pond, because of the risk to snowmobilers of crossing the pond itself, and because there has been little interest in the route it provides. This trail should be fully closed if alternate snowmobile routes are identified in the unit which are more appropriate.

7. Mt. Arab Fire Tower and Trail

The abandonment of the Mt. Arab fire tower and adjacent observer's cabin in 1988 resulted in these facilities being severely vandalized. Two flights of stairs were then removed from the fire tower for safety purposes.

Most of the foot trail to this popular destination crosses CE lands on which public use is prohibited from the beginning of rifle season through December 31. This restriction will end on December 31, 2004. In spite of signs informing the public of this prohibition, conflicts between users and lessees have arisen.

Local organizational efforts began in 1996 to address rehabilitation and improvement of access to the fire tower for historical and educational purposes. The Friends of Mt. Arab has had broad support and it expects to procure all the materials necessary to restore the facilities (both tower and observers cabin) and supply voluntary support whenever that is needed, including possible weekend staffing. In June 1997, the DEC staff initiated assessment of fire tower integrity. Engineering tests showed the tower to be in good condition. Materials needed to renovate the tower were identified. During the summer of 1999, a helicopter was used to carry wood siding and other supplies to the summit. Much of the renovation has been completed since then by the Friends of Mt. Arab as well as DEC staff. Some work has been recommended to assure the structure remains usable well into the future.

Use levels have increased as work on the structures progressed. An intern staffed the tower for much of the summer of 2000, providing information and education to the public.

8. Motorized Boats and Floatplanes

Motorboat and floatplane use have increased dramatically on Lows Lake since the lake was opened to the public in 1986, causing significant conflicts with users expecting a wilderness experience generally undisturbed by motor vehicles. The increase in motorized use since the mid-1990's can be attributed to the recent introduction of bass into the Lake (probably by way of Bog Lake) and the resulting development and popularity of the bass fishery.

Public use of motorboats and floatplanes is currently allowed on Lows Lake, although the use of motorboats is prohibited on the Bog River between the Lower and Upper Dams. Public motorboat access to the lake involves either a two mile long carry over the Upper Dam Road, fly-in of a boat by floatplane, or paddling motorboats up the river from the Lower Dam followed by a short carry around the Upper Dam.

There are four private landowners on Lows Lake who have motor vehicle access via private road right-of-way rights to the shore of Lows Lake. These landowners use these private roads to bring

motorboats to the lake and use them under their riparian rights. There is also at least one private landowner that utilizes a floatplane to access the lake.

A large portion of Lows Lake is bounded by Forest Preserve lands classified Wilderness or Primitive. The entire lake is also fairly remote. This situation has led to a public expectation of a "wilderness experience" when paddling the Bog River Flow. Paddlers who encounter motorboats and floatplanes on Lows Lake are often frustrated and disappointed that their trip has not met their expectations. Questions have been raised as to whether wildlife populations may be impacted by motorboat and floatplane use. In addition to public expectations, the Master Plan establishes that both the Lows Lake and Hitchins Pond Primitive Areas are critical connections in the Lows Lake-Bog River-Oswegatchie wilderness canoe route. Further, the Master Plan established that the "preservation of the wild character of this canoe route without motorboat or airplane usage is the primary management goal" for these Primitive Areas.

The language in the Master Plan which envisions this canoe route as motorless does not apply to private landowners on the lake. The four riparian landowners will continue to have motor vehicle access via private roads and motorized access on Lows Lake.

9. Sanitation

The intensive use of certain campsites on this area has caused some sanitation problems. Privies are not uniformly available at all sites, and some campers don't bother to dig latrines. As use levels have increased so has this problem. Some steps have already been taken to address impacts including the establishment of pit privies at additional sites and a reduction in the number of sites at Horseshoe Station.

10. Bog River Falls Picnic Area

This heavily used scenic spot has experienced a long, sustained level of vandalism, due in large part to its isolated location yet easy access off a paved road. The local community has indicated it is averse to imposing any restrictions, such as a curfew on the use of this facility. The community would prefer to rely on their own efforts to observe and report any misuse of the area.

11. Trailered Boat Launching at Horseshoe Lake

The removal of a boulder between campsites 1 and 2 along the southeast shore of the lake and the illegal development of another site next to the concrete pier at Horseshoe Station on the lake's western shore has allowed boaters to launch trailered boats at these sites The Master Plan (p.40) only allows the establishment of trailered boat launching sites in Intensive Use Areas on lakes of approximately 1,000 acres or more. However, the Master Plan does allow for a fishing and waterway access site, which is defined as "a site for fishing or other water access with parking facilities which does not contain a ramp for, or otherwise permit, the launching of trailered boats."

12. Permitted Camping at Designated Campsites on Horseshoe Lake

Two public meetings were held in early 1997 to address the issue of continuous occupation of certain designated campsites on Horseshoe Lake by the same group of individuals. Typically, two-week camping permits have been obtained by various members of a group resulting in the same trailer occupying one campsite for multiple two-week periods. It also happens that this occurs on the half-dozen preferred sites on the lake.

13. Bridge Brook Pond Picnic Area

This area is currently lacking the full complement of fireplace, picnic table, and pit privy. Vandalism is common at this location.

14. Coney Mountain Trail

A moderately to heavily used unmarked hiking path exists east of SH 30 on the Hamilton-Franklin county line that ascends to Coney Mountain. Current parking consists of an informal pull-off which can accommodate two or three cars at most. Where steeper portions of the path have erosion problems, the use of Best Management Practices will be incorporated in the development of the trail and switch backs will be constructed where feasible. This path is now being highlighted in an extensive tourism program for Tupper Lake known as the Ten Rivers project. As a result, use of the path is likely to increase significantly though the site should be able to support such use.

15. Historical Interpretation of former "Lows Estate"

There is significant interest in more extensive historical interpretation of the Augustus Lows former estate at Hitchins Pond than has been currently been done. The Master Plan has some limits on interpretation within a Primitive Area, and permits "...interpretative signs of rustic materials and in limited numbers" (Master Plan page 22).

F. Management Principals, Goals and Objectives

This UMP contains Forest Preserve units with the Master Plan classifications of Primitive and Wild Forest. Conservation Easement lands are also present so overall principles, goals and objectives vary according to the area classification.

"Primitive Area" is defined on pages 26-27 of the Master Plan, in relevant part, as "land or water" that is:

1. Essentially Wilderness in character, but (a) contains structures, improvements, or uses that are inconsistent with wilderness, as defined, and whose removal, though a long term objective, cannot be provided for by a fixed deadline, and/or, (b) contains, or is contiguous to, private lands that are a size and influence to prevent wilderness designation. The primary Primitive area management guideline will be to achieve and maintain, in each designated Primitive area, a condition as close to Wilderness as possible, so as to perpetuate a natural plant and animal community where mans influence is relatively unapparent.

"Wild Forest" is defined, in relevant part, on page 32 of the Master Plan, as:

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

Wild Forests are generally less fragile than Wilderness or Primitive areas, and thus more human impact can be tolerated. But, the natural resources and natural forest setting must still be protected in a Wild Forest despite the expanded recreational opportunities that can be provided relative to a Primitive Area.

Management Principles

The following principles provide specific guidance for managing the Lows Lake and Hitchins Pond Primitive Areas.

- Allow natural processes to develop without interference. For example, a primary management guideline that can be derived from this principle is to achieve and perpetuate a natural plant community where man's influence is not apparent

- Attain a high level of wild character within existing constraints. Primitive Areas should remain as wild and natural as possible

- Preserve and enhance air and water quality

- Human use and enjoyment of these lands should be permitted and encouraged, so long as physical, biological, social and psychological aspects of the resource are not degraded
- Remove existing structures and terminate uses and activities not essential to Primitive management, except those in compliance with the Master Plan.

- Establish management objectives, with public involvement, in a management plan for each Primitive area.

The following are Master Plan requirements for the future management of the Lows Lake and Hitchins Pond Primitive Areas.

- Hitchins Pond PA: Preservation of the wild character of this canoe route without motorboat or airplane usage is the primary management goal for this primitive area.

- Low Lake PA: Preservation of the wild character of this canoe route without motorboat or airplane is the primary management goal for this primitive area.

The following principles provide specific management guidance for managing the Horseshoe Lake Wild Forest.

- Sustaining the existing environmental conditions and restoring areas of resources being degraded.

- Public use of motor vehicles will not be encouraged.

- Managing the unit as a composite resource and employing an interdisciplinary set of skills in recognition of the complexity of the in relationships between the unit's resources and the recreating public.

The following goals have been identified for this plan:

Goals

- Manage Wild Forest lands by protecting and enhancing the natural Wild Forest setting of this management area and providing a variety of outdoor recreation opportunities that will afford public enjoyment without impairing the Wild Forest atmosphere. These opportunities must be consistent with Master Plan guidelines and Forest Preserve policy.

- For Primitive areas, incorporate the management objectives contained in the unit description to achieve and maintain a condition as close to Wilderness as possible, so as to perpetuate a natural plant and animal community where man's influence is negligible.

- Manage easement lands cooperatively with landowner to optimize timber management and recreational opportunities according to easement agreements.

Objectives

Land Management Objectives

- Maintain boundary lines to clearly identify public ownership and discourage illegal use of Forest Preserve lands.

- Acquire additional lands, per "Open Space" plan provisions, which are contiguous to the Primitive lands, thereby consolidating the state's holdings, simplifying boundary lines, improving access, and otherwise enhancing State lands in the area.

- Protect unique and critical habitats

- Adequately protect the management area from wildland fire.

- Eliminate non-conforming facilities and incompatible uses which detract from the

character of the management area.

- Maintain and construct facilities (trails, parking areas, etc.) in response to need and in conformance with DEC regulations and policies and the Master Plan.

Wildlife Management Objectives

- Protect the habitat of rare, threatened, endangered or species of special concern.
- Maintain all native wildlife species at levels compatible with their natural environment.
- Maintain hunting, trapping, and other wildlife related recreational activities.
- Provide optimum opportunity for enjoyment and beneficial utilization of the wildlife resource by the user.

Fisheries Management Objectives

- Perpetuate fish as part of the Adirondack environment.
- Manage fish so that their numbers and occurrences are compatible with their habitat and the public interest.
- Maintain resource inventories for all waters.
- Provide optimum opportunity for enjoyment and beneficial utilization of the fish resource by the user.
- Continue to maintain sportfish populations (e.g. brook trout and tiger muskellunge) by annual stocking in suitable waters. Monitor stocking success and recommend changes based on results from periodic surveys.
- Maintain satisfactory pH levels of ponds as indicated for optimum fishery development, consistent with the Division of Fish & Wildlife and Marine Resources liming policy.
- Characterize anglers and assess magnitude of annual effort through periodic angler survey.

Public Use Management Objectives

- In recognition of its potential future consolidation with the Five Ponds Wilderness Area, limit the development of facilities within the LLPA to campsite development along the Bog River consistent with Master Plan requirements.
- Provide for a variety of recreational pursuits on the remaining areas that are compatible with the definition of the Wild Forest or Primitive Areas and consistent with the management guidelines contained in the Master Plan.
- Encourage increased public use of the HLWF while maintaining and protecting the natural wild forest setting. This will help compensate for the reduction in amenities in the adjacent Five Ponds Wilderness Area.
- Initiate an educational effort to keep the public informed of the values, limitations, and opportunities available in these management units.
- Make public use of this forest as safe, enjoyable, and nondestructive to the forest ecosystem as possible.
- Expand the designated campsite system where opportunity exists and quality camping experiences can be maintained.
- Maintain existing motor vehicle access to designated areas of Wild Forest lands.

Water Quality Management Objectives

- Improve user awareness of the impact of polluting activities by addressing the subject in appropriate communications, especially in personal contacts with Department

personnel.

- Reduce the impact of facility use and development on water quality by minimizing sedimentation caused by erosion.

G. Alternatives Statement

This UMP addresses two especially significant issues: floatplane and motorboat use on Lows Lake, and a Horseshoe Lake WF snowmobile trail connection.

1. Increased Floatplane/Motorboat Use on Lows Lake.

a. Description of Issue

Much of the lands now surrounding Lows Lake were acquired by NYS in the mid-1980's. The lands adjacent to Lows Lake were classified as Wilderness where they were adjacent to Five Ponds Wilderness, or Primitive on the lands adjacent to the Lower and Upper Dams and private holdings (Lows Lake Primitive Area and Hitchins Pond Primitive Area). Motorized craft were banned on Hitchins Pond in 1990, as DEC owned all the land around Hitchins Pond. No use restrictions on motorized craft were implemented at that time on Lows Lake, though there was some discussion of the possibility of doing this for at least a portion of Lows Lake (Grass Pond) which was essentially surrounded by Forest Preserve lands classified Wilderness. At least part of the reason for not implementing such restrictions was the belief that the riparian rights of the private landowners on the shore of the lake, included motorized access, could not be restricted. In addition, access to the lake by the public was difficult enough that there was little likelihood of the public bringing motorboats in and there seemed to be low interest in the area by anglers desiring to use motorboats or floatplanes on the lake.

Public access to Lows Lake following the acquisitions in the mid-1980's was provided primarily by establishment of an access point for canoes at the Lower Dam which forms Hitchins Pond. Through the late 1980's and most of the 1990's most users accessed Lows Lake via the Lower Dam, and most users were canoeists and kayakers that did not bring along motors. It wasn't until the mid to late 1990's that motorboat and floatplane use began to increase. The primary reason for this increase appears to be the development of a productive bass fishery. Historically, this area was an excellent brook trout fishery, though it did not attract much attention. Sometime prior to 1990, largemouth bass found their way into Lows Lake and became well established. The public awareness of the bass fishery gradually increased and floatplane and motorboat use increased concurrently.

Motorboat and floatplane use on Lows Lake can be categorized several ways. Public floatplane use on Lows Lake, primarily by commercial operators, peaks at the beginning of bass season, approximately June 20 each year. Floatplane operators also bring other recreationists to this area that may not have the time to enter and return through Hitchins Pond, or don't want to otherwise put the effort into getting to Lows Lake. Public motorboat use includes two primary groups. One group is those who paddle small boats and canoes with motors up through Hitchins Pond (closed to motorboat use) to the Upper Dam, and then into the section of the Bog River that is open to motorized use. The second group gains access from Bog Lake, a privately owned lake, which connects by a shallow waterway to Lows Lake.

Riparian landowner use includes floatplane use by at least one landowner and Boy Scout motorboat use pursuant to their deeded reserved rights.

The final category of motorized user is the Department (DEC), which occasionally uses motorboats for maintenance, patrol, and emergencies.

An estimate of the amount and frequency of use by all motorized craft has not been made at this time, but staff believe the use of motorboats by riparian owners and their guests is at least as significant as the amount of motorboat use by the public. However, most floatplane use on the lake appears

to be by commercial pilots flying in recreationists.

The primary issue that has arisen from the increase in motorized use does not involve violations of current rules and regulations, for the most part (though some floatplane operators have illegally occupied campsites and left canoes on site throughout the season). Rather, the primary issue is that because such a large portion of Lows Lake is bounded by Forest Preserve lands classified Wilderness or Primitive, and because of the lake's remote location, many of the recreating public have a reasonable expectation of a "wilderness experience" on Hitchins Pond and Lows Lake. Paddlers who encounter motorboats and floatplanes on Lows Lake are often frustrated and disappointed that their trip has not met their expectations. Even some who fly in are disappointed that there are motorboats on the lake. The continued allowance of motorized use also conflicts with the Master Plan, which directs in the classification description of the Lows Lake Primitive Area that the "preservation of the wild character of this canoe route without motorboats or floatplane usage" should be the primary management goal. In addition, some concerns have also been raised about the impact on wildlife, loons in particular. Although data is lacking to support or refute impacts to wildlife by motorized (and other) recreationists the potential for impacts exists.

b. Alternatives Discussion

Alternative A (Preferred Alternative). The DEC, through the promulgation of regulations, will prohibit the public use of motorboats on Lows Lake. The DEC will also eliminate the public use of floatplanes on the Lake within five years of the date of plan adoption. During the five year time period, the DEC will attempt to identify additional, appropriate lakes where motorized access may be limited to floatplanes only, through the current Unit Management Planning Initiative and other open space projects the State undertakes. The number and location of additional floatplane opportunities identified through the Initiative will affect whether or not the Department decides to control the time, frequency, and location of allowable floatplane use on Lows Lake through the end of the five year period.

Riparian owners and their guests will be allowed to continue to use motorboats and floatplanes for personal use on the lake, and the level of such use will be monitored by the Department. However, riparian owners and their guests will not be allowed to use motorboats or floatplanes for commercial purposes unless they acquire appropriate permits from the APA. Such use is presumed by the Agency to be a non-compatible use in Resource Management areas (the classification by the APA of the private land situated on the shore of the lake).

This alternative is preferred for several reasons. The acquisitions in the mid-1980's that provided thousands of feet of additional Forest Preserve frontage on Lows Lake and thousands of acres of upland were envisioned from the start to be extending the Wilderness that already existed in the Five Pond Wilderness Area. The classification of nearly all those lands as Wilderness, except for those lands that were classified as Primitive due to the presence of the Adirondack RR and the dams creating Hitchins Pond and Lows Lake, reinforced the public vision of how the area should be managed. Due to private ownerships bordering the lake, most of the lake itself could not be considered within a Wilderness Area that would otherwise require an immediate ban on motorized use. The Boy Scouts also had deeded rights which could not be eliminated by regulation. At that time there was very little motorized use, so there was not a significant issue of disturbance of the wilderness quality of the lake from motorized use. In the mid '90's there was a substantial increase in motorized use that made motorized use an issue which could not be ignored. The increased motorized use had resulted in a disruption of the wilderness qualities of the lake, and created significant conflicts between motorized users and non-motorized users that had come to frequent this area since its acquisition. The resulting conflicts and increased disturbance contradicted the original vision for the area, and contradicted with the direction provided in the SLMP regarding management of the Low's Lake and Hitchins Pond Primitive areas. Both areas

have as their primary management goal the "Preservation of the wild character of this canoe route without motorboat or airplane usage . . . "(Master Plan, p. 79). Increased motorized use has also increased the number of visitors to the area, the effects of the increased impacts on the areas fish and wildlife resources is being examined. This alternative addresses all of these concerns, recognizes the continuing presence of the private owners and the deeded rights of the Boy Scouts, and provides for a phase out of floatplane use and proposes to attempt to find alternatives to lessen the economic impact on commercial floatplane operators.

The advantage of this alternative is that public floatplane and motorboat use on the lake will, over time, be totally eliminated, thereby providing a more wilderness-type of recreational experience on the Lake and greatly reducing user group conflicts. Although this option could adversely impact commercial floatplane operators, such impacts are expected to be minimized because of the five year phase out period, during which time alternative locations for such activity can be identified.

The DEC will monitor the use of motorboats and floatplanes by riparian owners to ensure that it does not unduly impair the wilderness experience of the public.

Alternative B. The DEC could work with floatplane operators and riparian landowners to develop voluntary guidelines on the use of motorboats and floatplanes on the lake. These guidelines might include a maximum horsepower for motors, limiting floatplane use to a portion of the lake and/or limiting the time or season of use in an effort to reduce user and wildlife conflicts. In effect, everyone would still be allowed to use motor craft.

Although this alternative would likely reduce user group conflicts to some unknown degree, it was rejected as not sufficiently addressing the problem. Furthermore, compliance with the guidelines would be dependent on everyone's good will, and the Department would have no ability to enforce against those who ignored the voluntary guidelines. In addition, this alternative also has the potential to allow continued impacts to wildlife, if there are currently any impacts.

Alternative C. The DEC could "zone," through regulations, sections of the Lows Lake and/or Bog River Flow to prohibit use of motorboats and floatplanes. Riparian owners would not be affected by zoning.

This alternative is preferable to Alternative B because the Department would be able to enforce against those who violated the regulatory requirements. However, enforcement might be difficult in a given situation because of difficulty in determining precisely where given floatplane or motorboat activity has occurred. Although user group conflicts would likely be reduced to some degree, such conflicts would continue as the public use of motorboats and floatplanes on other areas of the Lake would likely interfere with the ability to have a wilderness experience on the lake. Conflicts might also occur over whether floatplane or motorboat use occurred in a prohibited area. Some impacts to wildlife, if there are any, could continue.

Alternative D. Purchase inholding properties in accordance with the "Open Space Plan"and then prohibit all motorized uses.

This alternative would eliminate all potential impacts discussed above. However, the 1998 Open Space Plan provides for acquisition of lands only from willing sellers. This is reinforced by language in both the Environmental Protection Fund (ECL §§54-0303(6) and 49-0203(3)) and in the Clean Water/Clean Air Bond Act of 1998 (ECL §56-0307(1)). At this point in time the riparian owners are not willing to sell their property to the State. Therefore, acquisition does not appear to be a viable option at this point in time.

Also, State acquisition may not be necessary to resolve the problem. As noted above, the preferred alternative should greatly reduce user group conflicts by nearly eliminating floatplane use and cutting motorboat use by approximately one-half.

Furthermore, the Department will continue to monitor the situation to see if additional action is necessary.

Alternative E. No Action Alternative. If no action is taken, motorized use and associated impacts discussed above will likely continue.

2. Horseshoe Lake Snowmobile Trail Connection

a. Description of Issue

The Town of Long Lake has sought to establish a snowmobile trail connection between the hamlet of Long Lake and the Remsen-Lake Placid Travel Corridor, the latter being the primary north-south snowmobile corridor in the Adirondacks which connects one end of the Adirondacks to the other. Specifically, assuming that the Town of Long Lake can establish a trail north from the hamlet of Long Lake along NYS Rt. 30 (subject to APA permitting) and through lands just south of Horseshoe Lake WF (now owned by TNC), then it would be appropriate to establish a new snowmobile route through a portion of HLWF to connect into existing trails and the Remsen-Lake Placid Travel Corridor, subject to Master Plan guidelines.

The Master Plan provides on page 33 that the use of snowmobiles on DEC designated snowmobile trails is allowed in Wild Forest units provided there is no material increase in the mileage of snowmobile trials open to public use in wild forest areas that conformed to the Master Plan at the time of its original adoption in 1972. The Master Plan, on page 36, specifies that snowmobile trails should be designed and located in a manner that will not adversely affect adjoining private landowners or the wild forest environment, and that deer wintering yards and other important wildlife and resource areas should be avoided by such trails. The Master Plan further provides, on page 36, that appropriate opportunities to improve the snowmobile trail system may be pursued where the impact on the Wild Forest environment will be minimized.

In order to balance the mileage of an new snowmobile trail by eliminating another trail, the existing snowmobile route on HLWF that extends to and across Trout Pond from the dam at Hitchins Pond would be closed. Closing this route was considered even before the Long Lake snowmobile trail proposal because a trail across a lake is a public health and safety issue, and snowmobile use to Trout Pond has resulted in significant illegal winter trout fishing. The closing of the Trout Pond trail will remove a snowmobile trail from a more remote and environmentally sensitive part of the unit than the part of the unit where the new section is proposed be located.

The siting of this trail is complicated somewhat because two Scenic Rivers are located in the area: the Bog River [designated by ECL §§15-2714(2)(b)]; and the Round Lake Outlet [designated by ECL §§15-2714(2)(w)]. The DEC has not yet established final boundaries for either of these river segments. Consequently, under 6 NYCRR §666.6(f) the interim boundaries of the rivers are one-half mile from each river bank, and the requirements of 6 NYCRR Part 666 are applicable within these interim river corridors. Table E (Roads, Trails, Bridges and Motorized Access) of 6 NYCRR §666.13 does not specifically discuss snowmobile trails or existing bridges within Scenic River corridors.

b. Alternatives Discussion

Alternative A. This alternative involves crossing The Nature Conservancy's Round Lake parcel beginning at SH 30 just west of Sperry Pond. It would continue northwest, possibly on existing forest roads, to cross the existing bridge over Round Lake Outlet into HLWF and across the Bog River at the existing Winding Falls bridge. This alternative would result in the least amount of trail mileage within the HLWF, but would be less consistent with the draft goals of the Comprehensive Snowmobile Plan for the Adirondacks (see Appendix J) due to the interior location of the proposed trail. In addition, the trail would cross two designated Scenic Rivers (Round Lake Outlet and Bog River, though it would cross on existing bridges) and would go through lands likely to be acquired as Forest Preserve in the near

future that would need to be classified.

From the Winding Falls bridge three possible trail options exist.

1. This option heads northwest away from the Bog River Scenic River Corridor to connect to SH 421 near the southeastern end of Horshoe Lake. This proposed trail involves the least amount of new trail mileage on Forest Preserve among alternatives A or B, and follows some old skid trails for part of the way through the Forest Preserve. However, it would require NYS Dept. of Transportation to close a section of SH 421 during the winter months.

2. A second option uses an existing old logging road which heads north-north east to an old log landing and follows a former timber haul road out to SH 421. This trail also follows some old skid trails and logging roads for a portion of its route through Forest Preserve. In addition, it would require less of SH 421 to be closed than Option 1. However, it entails more miles of trail in Forest Preserve than Option 1.

3. The third option heads directly west, parallel to the Bog River, and connects to the Lower Dam Road. Construction would involve the greatest amount of mileage on Forest Preserve lands of the three options under Alt. A. Also, certain sections of this trail may be within the Bog River Scenic Corridor, contrary to intent of 6 NYCRR Part 666. A positive aspect of this trail proposal is that none of SH 421 would have to be closed during the winter months.

Each of the above trail options connect to existing designated snowmobile routes, including the Otterbrook Road, and eventually to the Remsen-Lake Placid Travel Corridor.

Alternative B. This alternative involves the trail from Long Lake continuing further north, paralleling SH 30, to approximately the intersection of SH 421. The trail system must diverge from SH 30 west of Sperry Pond (same spot as in Alt. A) due to steep terrain and wetlands immediately adjacent to SH 30 south of the Hamilton County line. It would head north along higher terrain on an old logging road, across the St. Lawrence - Hamilton County line, then proceed north along SH 30 to the Goodman Bridge of SH 421. A parking lot would also be located here for snowmobile parking. The advantages of this route include not having to cross more remote portions of two Scenic rivers as well as minimizing the portion of the route that crosses TNC lands. In addition the route would stay fairly close to existing travel corridors so comply closely with the draft goals of the Comprehensive Snowmobile Plan for the Adirondacks. Disadvantages of this route include creation of several miles of new trail on TNC lands and Forest Preserve, and potential problems with terrain, wetlands and stream crossings.

Once across the bridge there are two trail options through HLWF.

1. The first option once the bridge would involve constructing a trail north, staying east of hilly terrain for approximately a mile and then heading west to converge with the old logging road that runs south from SH 421. Total distance would be approximately 1.5 miles. This route minimizes the amount of new trail needed on Forest Preserve under this alternative. The disadvantage of this route is requiring closure of a portion of SH 421, as well as having to parallel the Bog River within the Scenic River corridor for a short distance.

2. The second option would require a trail to be constructed west from the bridge to the Lower Dam Road approximately 2.5 miles on Wild Forest lands. This route would not require closure of any of SH 421. However, it would require more trail on Forest Preserve than the first alternative under Alt. B and would potentially require more trail within the Scenic River corridor than any option within Alt. A or B.

Alternative C. No Action Alternative. With this alternative, an important link in the trail system will be absent. Snowmobile use in existing use presently in this planning area.

One final section of trail through the Horseshoe Lake WF may be necessary if SH 421 cannot be

closed. If that is the case then the preferred route would head west from the Winding Falls Trail and skirt the large wetland that extends off the southeast corner of Horseshoe Lake before paralleling SH 421 more closely. There is no room to fit a trail between either Horseshoe Lake and SH 421 or SH 421 and the wetland without significant fill, so this departure from following SH 421 more closely would be necessary.

Once an alternative is established, the existing Trout Pond snowmobile trail from Lows Lower Dam to Trout Pond and the Sabattis Road would be eliminated. Maintenance of this trail for snowmobile use has been reduced in recent years primarily due to the documentation of illegal winter fishing on Trout Pond, the risk posed to snowmobilers by crossing the pond itself, and the lack of interest in the route it provides.

This trail connection cannot be established until the Long Lake trail project from Long Lake to Horseshoe Lake has been approved by APA and an agreement with the Nature Conservancy to locate this trail on their property has been completed.

As a result, the preferred alternative is not selected at this time because of the incomplete plan for the Long Lake Trail. An amendment to this plan will be required before any new trail is designated.

IV. PROJECTED USE AND MANAGEMENT PROPOSED

No specific information exists as to absolute numbers of recreationists using this management area yearly. Certainly trail register tallies, camping permits, and complaints have increased substantially from 10 years ago. The Forest Ranger believes that almost a 100% occupancy of campsites on weekends from Memorial day to Labor day exists today in the Primitive areas. Overall, recreational use and associated impacts are expected to increase in this management area.

A. Facilities Development and/or Removal

Before any of the projects proposed below are initiated consultation with the APA will occur along with consultation with any other agency which may have jurisdiction.

1. Roads

Make existing motorized access to programs safe by resurfacing the following roads.

Otterbrook Road	3.2 mi.
Lower Dam Road	0.7 mi.
Total	3.9 mi.

In addition, where noticeable impacts are observed to old haul roads being used illegally by motor vehicles, boulders will be placed as barricades. Where resource damage has occurred remediation will take place.

2. Parking Lots

Within this plan, the proposed parking lot size is the minimum necessary to accommodate existing use or are reflective of use in a similar situation elsewhere.

Construct a new parking lot to redirect existing parking away from the Lower Dam area and off the roadside.

- Lows Lower Dam - A new parking lot (200' by 55', 40 cars, 2 of which will be universally accessible) will be established approximately 2500 feet from the existing parking lot in the vicinity of the only campsite on the Lower Dam Road (see map in Appendix N). This parking lot is needed primarily for health and safety reasons due to the problems caused by vehicles parking on both sides of the road down to the Lower Dam, making it difficult for cars to use the road and potentially blocking emergency vehicles. The number of parking spaces identified as needed was based on trying to balance health and safety considerations and typical use levels, while not providing for higher use. The parking lot size was based partly on the fact there are

thirty-six campsites available for recreationists on the canoe route, and there is often a number of day users that access the area here. The proposed parking lot size (40 cars) also represents a significant reduction from numbers of vehicles observed parking along this road during typical busy periods in previous seasons. It is not uncommon to see over forty vehicles parked along the Lower Dam Road. For example, fifty-two were present on July 6th of this year (Assistant Ranger Dawn Andrews, personal communication). To further limit the numbers that can park, the current parking lot near the dam will be designated for turning around for trailers, dropping off gear and parking spaces (2) for people with disabilities, and the remainder of the Lower Dam Road will be posted against parking. In addition, the new parking lot will be lined with barriers where existing terrain or trees do not limit where cars can park, and current pulloff areas along the Lower Dam Road will also be blocked if the "No Parking" signs do not prevent their use. It is felt these controls will keep parking numbers about the same or slightly less than they are today. If use continues to grow on this area, controls other than limiting parking area size will have to be employed since, as pointed out under "Capacity of Resource to Withstand Use" there are several places people can access the Lows Lake/Hitchins Pond area. With regards to the location of the proposed lot, APA regulated wetlands and topography limit other locations from consideration.

Construct the following parking lots to provide access to the new and existing trail opportunities:

- Bridge Brook Pond Trailhead (90' x 20', 9 car, 1 of which will be universally accessible) - on the north side of SH 421, the placement of a parking lot adjacent to the developed trail will enhance the use of this area.

- Coney Mt. Trailhead, SH 30 (90' x 20',9 car, 1 of which will be universally accessible) - This parking lot will provide parking for increased use of this trail anticipated as a result of it's inclusion in recent tourism material. One accessible site will be included in the parking lot.

- Twin Mountain Trailhead, SH 421 (90'x20', 9 car, 1 of which will be universally accessible) on the south side of SH 421 near Mountain Camp. This will allow parking for the proposed trail and a lean-to.

Specific to the Galusha Consent Decree, signed on July 2000, a new accessible parking lot will be constructed at Horseshoe Lake for the fishing access site and the proposed accessible pier.

- Horseshoe Lake (40' x 20', 4 car, 2 of which will be universally accessible) - an accessible parking lot to be constructed at the DOT pulloff area on the South side of Horseshoe Lake.

The following are tree removal tallies for each proposed parking lot:

Lows Lower Dam:

Species	DBH	# to be removed
Sugar Maple	6	4
Sugar Maple	7	1
Sugar Maple	8	8
Sugar Maple	9	2
Sugar Maple	10	5
Sugar Maple	11	6
Sugar Maple	12	2
Sugar Maple	13	3
Sugar Maple	14	2
Sugar Maple	15	4
Sugar Maple	19	1
Beech	3	2
Beech	6	1
Red Spruce	18	1
Balsam	9	1

Bridge Brook Pond

Species	DBH	# to be removed
Sugar Maple	4	1
Sugar Maple	20	1
Black Cherry	5	2
Black Cherry	8	1
Black Cherry	10	1
Black Cherry	17	1

Black Cherry	18	1
Red Maple	6	1
Red Maple	9	1
Balsam	4	1
Beech	6	1
Beech	7	1
Beech	8	1

Coney Mountain:

Species	DBH	# to be removed
No Trees		

Horseshoe Lake:

Species	DBH	# to be removed
No trees		

Twin Mtn. Trail:

Species	DBH	# to be removed
No trees		

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

- Locating improvements to minimize necessary cut and fill
- Locating improvements away from streams, wetlands, and unstable slopes
- Use of proper drainage devices such as water bars and broad-based dips
- Siting to minimize tree cutting
- Gravel surface to avoid erosion

Cooperation will be requested from NYS DOT and local governments to have parking lots at Goodman Bridge and Mt. Arab Road plowed during the winter months to accommodate winter users.

3. Sanitation

Guideline 11 under "Guidelines for Management and Use" in Wild Forest areas on page 33 of the Master Plan states "all pit privies, seepage pits or leach fields will be located a minimum of 150 feet from any lake, pond, river or stream." Guideline 10 under "Guidelines for Management and Use" in Primitive Areas, on page 28 of the Master Plan includes wetlands in the 150 foot setback. The Master Plan guideline preempts the Freshwater Wetlands Act, which only call for a setback of at least 100 feet from a jurisdictional wetland.

Privies will be placed in the following locations to improve sanitation and minimize environmental impacts of frequent use of the sites.

a. Establish pit privies at Bog River Flow campsites 2, 3, 4, 5, 8, 9,12 and Horseshoe Lake campsites 1, 4 and 9.

b. Erect accessible privies at the following locations: Bog River Falls picnic area (SH 421), one site along Horseshoe Lake (site 16) and at two proposed campsite locations along the Otterbrook Road.

4. Removal of Dams & Bridges

The "Goodman" dam located on former Mountain Camp property off SH 421 is a concrete structure approximately 180 feet in length and is in poor condition. This plan proposes removal of this existing structure.

The Winding Falls and Goodman Bridges span sections of the Bog River presently classified scenic. Both of these bridges are on former roads that are the two main corridor snowmobile trail options in this plan. Another bridge on the Round Lake Outlet, classified scenic, is on TNC property, and would be part of the same alternative snowmobile trail as the Winding Falls crossing. Removal of unnecessary bridges will be considered in subsequent revisions.

5. Camping

a. Guideline 2 (d) under "Guidelines for Management and Use" on page 33 of the Master Plan states "Primitive tent sites in Wild Forest that do not conform to the separation distance guidelines will be brought into compliance on a

phased basis and in any case by the third year following adoption of the UMP. That separation distance is generally one quarter mile out of sight and sound from any other campsite. To fulfill requirements of the Master Plan the following sites on Horseshoe Lake will be closed: 2,5,6,7,8,10,14, 15. These sites will be closed by the third year following adoption of this plan. Site 5 will be immediately closed but will be opened and rotated with site 4 when the LAC process determines over use on that site. Sites 6 and 7 will be immediately closed due to over use. Site 12 will have bolders placed at two locations to prevent a large number of vehicles to overrun the site, while enhancing revegetation of the existing site. The Galusha Consent Decree specifies more than one campsite on Horseshoe Lake to have accessibility requirements. Site 13 will be a self contained accessible campsite and Site 16 will be made accessible.

All campsites on Horseshoe Lake will be rehabilitated without substantially increasing their size. Fire-rings and picnic tables will be installed. One Horseshoe Lake campsite (site 16) will have an accessible privy . Illegal campsites adjacent to Horseshoe Lake will be removed or otherwise not allowed to be used. Campsite 17 on the Lower Dam Road is proposed to be removed for placement of the new 40 car parking lot.

b. Develop 6 roadside campsites along the Otterbrook Road and two along SH 421 on the Mountain Camp lot (two of the roadside campsites will incorporate American Disabilities Act guidelines for campsites). These will provide camping opportunities for hunters and for those who have used the sites along Horseshoe Lake, Bog River Falls and the Lower Dam road. Construct three campsites on the Raquette Pond state lands. Campsite locations will be selected on certain physical criterial. Level, well drained soils, with limited conifer overstory are preferred situations to place campsites. Where possible, campsites will be located some distance from roads and water.

c. Due to poor site conditions and maintenance difficulties, remove the one campsite at the Bog River Falls Picnic Area on the east (Tupper Lake) side of SH 421.

d. Two lean-to's are proposed for construction in the unit. The Goodman lean-to is proposed at the Twin Mtn. trail. Another lean-to is proposed at Trout Pond. This will help compensate for any loss of lean-tos in the FPWA, as identified in the UMP of 1994, p. 52 (lean-tos in Five Ponds Wilderness Area to be removed include Cage Lake Springhole, Griffin Rapids, and two at High Falls). The construction of lean-tos will comply with requirements of the Master Plan. Lean-tos will be constructed in locations out of sight and at least one quarter mile from one another. Any proposed lean-tos will be located more than 100 ft. from roads or water and will be out of sight from other campsites. Additional Best Management Practices, not specifically set forth in the Master Plan, will be considered, including but not limited to:

- Locating lean-tos to minimize cut and fill
- Locating lean-tos to minimize tree cutting
- Locating lean-tos away from wetlands, streams, and unstable slopes
- Use of drainage structures on trails leading to lean-tos, to prevent water flowing into site
- Locating lean-to's on flat, stable, well drained sites
- Limiting construction to periods of low normal rainfall

e. Information kiosks at all trailheads leading into this area's two Primitive areas should clearly inform users that group camping permits are not issued for these areas.

f. Starting in the year 2003, campsite inspections and photographs will be taken of each campsite in the Primitive areas and at Horseshoe Lake in order to document campsite conditions over an extended period. Procedures for campsite inspections will follow the monitoring manual in Appendix M. Photographs will be taken every two years. This

program will be evaluated after 5 years.

g. The Department is proposing to have a user feedback information sheet at the Lower Dam registry to be completed with regards to resource impacts and user experiences.

6. Picnic Areas

a. It has been difficult to maintain such structures and improvements as a fireplace, picnic table, and pit privy at the Bridge Brook picnic area. Consequently, this area will no longer be designated a picnic area.

b. Provide program accessibility to people with disabilities at Bog River Picnic Area. The Department will make a pad, table, and privy accessible.

c. Two picnic areas, one on the Bog River in the LLPA and the other at Hitchens Pond in the HPPA, are non-conforming facilities and will be eliminated by the end of the third year after approval of this UMP. They will be allowed to start reverting to a wild forest condition immediately and will not be mowed or otherwise maintained by motorized equipment.

7. Hiking/Cross Country Skiing

a. Develop the following foot trails in compliance with the Final Report developed by the Outdoor Developed Areas Regulatory Negotiations Committee, dated September 30, 1999. These trails will be designated Class II trails as specified by Forest Preserve Policy (See Appendix N).

- Convert the section of the Big Trout Pond snowmobile trail from the Lower Dam to Trout Pond to a Class I hiking trail, if and when a snowmobile corridor trail is developed linking Newcomb and Long Lake via SH 30 to the Remsen-Lake Placid Travel Corridor. The remainder of the Trout Pond trail from Trout Pond to the Sabattis Road will be closed.

- Bridge Brook Pond (1.8 miles) from SH 421. This trail would begin on SH 421, 2.0 miles west of the Mountain Camp Road and SH 421 intersection. This trail is proposed to be a Class I trail.

- Hitchins Pond Overlook above Upper Dam, (0.5 miles) This trail will be located north from the Upper Dam and will be a Class II trail.

- Twin Mtn. Trail (0.7 miles) this trail will be located south of SH 421 near Mountain Camp. It will be a Class II trail.

- The Coney Mountain path off SH 30 is approximately .6 miles in length and has moderate steepness. This existing herd path will be designated a foot trail, by Class I standards and have an identification sign and register placed at the base of the mountain.

- Trout Pond Lean-to Trail (0.3 miles) - will connect to existing Trout Pond Trail.

Best management practices for location of trails will incorporate the following practices:

- To avoid erosion, grade of trail should be less than 15%

- Avoid extended sections of low, flat terrain

- Use stream crossings with low, stable banks, firm stream bottom and gentle approach slopes

- Construct stream crossings at right angles to the stream
- Limit stream crossing construction to periods of low or normal flow

- Avoid wetlands where possible and obtain permits where wetlands cannot be avoided
- Avoid or minimize tree cutting

- Reduce or eliminate multiple paths

- Herd paths that do not meet these standards wholly or in part will be brought into

compliance

b. Attempt to obtain permission from the fee owner of the CE lands to extend the time in the autumn when the public can access the Mt. Arab foot trail. If unsuccessful, insure that signage and information kiosk alert public to this prohibition.

c. On the Yorkshire Easement lands, just south of intersection of the old Grass River railroad grade and the Massawepie Road, an abandoned spur of the original Grass River railroad line exists. This spur cris crosses the Massawepie Road. The woods trail will be marked as a hiking/cross country ski trail under Class I standards and will have historical interpretation under an Adopt-A-Natural-Resource agreement.

d. To help inform and educate the public users trailhead information booths, kiosk trail maps and brochures, similar to the DEC's "Trails of the Cranberry Lake Region,"will be provided as necessary at all trailheads. In addition, an kiosk will be constructed at the accessible parking lot at Horseshoe Lake.

e. An Adopt-A-Natural resource agreement was approved during the year 2000 for the Mt. Arab trail, fire tower and observers cabin. This agreement between DEC and The Friends of Mt. Arab will preserve, maintain and enhance this state owned resource. A nature "interpretive trail" is also proposed for this popular trail.

8. Canoeing and Boating

a. Replace boulders at Horseshoe Lake to prevent access to Lake by trailered boats.

b. The Galusha/ADA consent decree was signed by the Department and the APA in July 2000. This decree specifies an accessible parking area and accessible fishing pier will be constructed at Horseshoe Lake. A detailed work plan for this proposal will be developed in consultation with the APA at a later date.

c. Develop a hiking trail to Bridge Brook Pond from SH 421. Presently an unmarked path exists to Black Pond and beyond to Bridge Brook Pond. Fishing and boating opportunities will also be provided by designating a trail here.

d. Rehabilitation of the Tupper Lake Boat Launch (TLBL) has just been completed. Modernization and repair of the TLBL began before this UMP was finalized as the existing launch suffered from serious siltation problems coupled with dangerous deterioration of the launch ramp and bulkheads. Required permits to reconstruct the launch were acquired from the APA, Army Corps of Engineers, NYSDOT and NYSDEC in the fall of 2001. Construction activities began in late 2001 and were completed in June 2002. The modernization plans include a reduction in parking capacity for trailered boats from 35 to 27 sites, with the addition of 10 parking sites for cars without trailers. The TLBL complies with ADAAG standards and includes a separate docking area for persons with disabilities and canoeists. Mitigation for wetland losses resulting from dredging activities included plantings of willows and wetland shrubs along the western shoreline. That effort will help stabilize banks and should reduce the necessity for future dredging.

9. Bicycling

a. Bicycling is presently permitted on the following routes: the Otterbrook Road from Horseshoe Lake where SH 421 ends through and including the Massawepie Road, and the Trout Pond trail extending from Lower Dam to Trout Pond.

New opportunities proposed in the plan for bicycle use include the proposed Bridge Brook Pond trail and the Upper Dam Road. Bicycle use on the Upper Dam Road will be allowed to a specific location near the Hitchins Pond overlook trail. From this location bicycle users will be required to walk to the upper dam. The Department will monitor bicycle use for compliance.

Trails that allow mountain bike use incorporate the use of best management practices including but not limited to consideration as:

Look for and identify control points (i.e wetlands, rocks outcrops, scenic vistas).

- Avoid sensitive areas; wetlands and wherever water collects. Keep trails below 2,000 ft.

- Use existing roadways where possible that do not exceed grades of 10%.

- Clear new trails to a maximum width of 4 feet to establish a single track route.

- Keep tread width less than 18" along a rolling grade.

- Texture the tread-this is the act of placing natural features, such as small rocks and logs in the trail to help control speed.

- Remove vegetation at the root level, not at ground level.

- Keep routes close to the contour and avoid fall lines where water is likely to flow downhill.

- On side slopes, following the contour, cut full benches to construct the tread. Outsloping in this manner helps to remove water from the trail. Vegetate backslopes.

- Build flow into the trail with open and flowing designs with broad sweeping turns.

- Streams should be crossed at ninety-degree angles preferably across rock or gravel.

- Bridges may be used where steep banks prevent normal stream crossings. The latter may require an APA Wetlands Permit.
- Do not construct skid berms or extensive banked turns that may accelerate erosion.

- Avoid acute, sharp angle turns.

- Plan trails for beginners to intermediate levels of riders. Maintain an overall grade of 10% or less.

- Allow short changes in grade to avoid obstacles.

- Design grade dips to break up long, straight linear sections, and to help divert runoff from the tread.

- Monitor and inspect all trails semi-annually. Address water problems immediately.

10. History of Augustus Lows Empire

As mentioned previously in this plan, there is significant interest in further historical interpretation of Lows Estate, particularly in the form of an “Interpretive Trail”. The master plan specifies that directional informational and interpretive signs of rustic materials and in limited numbers can be applied to primitive areas. The Department will provide an opportunity for recreationists to understand the history of “Hitchins Park” by providing a kiosk with historical information at the Upper Dam. A map portraying historic building sites will be located in the kiosk along with brochures providing a self-guided tour.

11. Snowmobiles

Page 15 of the Master Plan defines “snowmobile trail” as “a marked trail of essentially the same character as a foot trail designated by the Department of Environmental Conservation on which, when covered by snow and ice, snowmobiles are allowed to travel and which may double as a foot trail at other times of year.”

In the Forest Preserve, snowmobile trails are allowed only in those areas classified as Wild Forest and Intensive Use.

a. Immediate improvements to snowmobile trails shall include the placement of appropriate signs and removal of hazards along the more highly used trails. All improvements will adhere to the Interm Guidelines for Snowmobile Trail Maintenance and current policy. Signs will be

placed as follows:

- Stop signs at highway crossings
- Signs at locations where ice accumulations normally exist
- Signs marking bridges and washouts
- Caution signs along sections where low speed limits are appropriate
- Signs along sections where by-pass trails are temporarily in place

b. A concern that may be a potential problem for future seasons on the Remsen-Lake Placid RR when used as a snowmobile trail is beaver flooding. Beaver activity along the trail can raise water levels on the railroad track banks thus creating a potentially dangerous travel zone along the banks. Snowmobiles could break through the ice along a ponded section of the trail. Unplugging culverts, removing beaver dams, and controlling beaver through trapping seasons will be methods employed to solve beaver problems.

c. This plan suggests inclusion of a Center Pond Loop snowmobile trail (off Otterbrook Rd.) in the Cranberry Lake WF and closure of the Otterbrook Road west of that loop trail. These actions are not proposed for approval in this plan and will be discussed in an amended or revised CLWF UMP.

d. The most important consideration in the UMP with regards to snowmobile trails is identifying a trail on the Horseshoe Lake WF which could link a trail from the hamlet of Long Lake to the Remsen-Lake Placid Travel Corridor and the Otterbrook/Massawepie snowmobile trail. A detailed discussion of this situation and the alternatives considered to deal with it can be found in section III. G. Presently, the preferred alternative for this corridor trail from Long Lake to the Remsen-Lake Placid travel corridor on the Bog River Unit has not been selected. This corridor connection will not be established through the Bog River Unit until the UMP is amended to reflect a preferred alternative, including SEQR review and consideration of issues related to the Comprehensive Snowmobile Plan to be developed for the Adirondacks.

Once the route is established, the existing Trout Pond snowmobile trail from Lows Lower Dam to Trout Pond and the Sabattis Road would be eliminated. Maintenance of this trail for snowmobile use has been reduced in recent years primarily due to the documentation of illegal winter fishing on Trout Pond, the risk posed to snowmobilers by crossing the pond itself, and the lack of interest in the route it provides.

This trail connection cannot be established until the snowmobile trail project from Long Lake to Horseshoe Lake WF has been approved by APA. At that time an amendment to this UMP/EIS will be completed.

12. Gravel Mines

Two gravel mines permitted to and operated by the Department are located within the Lows Lake Primitive Area (See Appendix G for copies of permits). The permits allow for a specific amount of sand and gravel to be removed. Once that acceptable amount is removed for each mine, the mined areas will be closed and vegetation will eventually reclaim the areas.

The Otterbrook Timber Company has reserved rights on a gravel pit just north of Pine Pond.

B. Maintenance and Rehabilitation of Facilities

Maintenance and development of facilities on this management unit is more difficult than on many units due to the long travel time to the area for the DEC trail crew at Cranberry Lake and the DEC construction crews at Trout Lake and Brasher Falls. Consequently, major jobs often necessitate ten-hour workdays to be feasible. Efforts by the Town of Piercefield to upgrade Massawepie Road and the DEC's upgrading of Otterbrook Road will help shorten the travel time to the southern part of the planning area.

Because much of the road system is built on old railroad grades, it is in need of constant maintenance. Poor drainage and inadequate base material make these roads vulnerable to severe deterioration in the early spring.

The establishment of a major capital project will be required to address these and related needs in the second year of this plan. Annual maintenance will be performed on the following existing and proposed facilities:

1. Boundary Lines	**Existing**	**New**
Big Tupper East	2.5	
Hancock Easement	31.0	
Horseshoe West	32.0	
Lows/Hitch. Prim Area	17.0	
Otterbrook	22.0	

2. Bridges	**Existing**	**New**
Goodman 76'	1	
Lower Bog River 250'	1	
Upper Dam 55'	1	
Winding Falls 35'	1	

3. Dams	**Existing**	**New**
Lows Lower Dam 250' long	1	
Lows Upper Dam 37' long	1	

4. Day Use Area	**Existing**	**New**
Bog River Falls	1	

5. Designated Campsites	**Existing**	**New**
Bog River Flow	11	
Bridge Brook Pond	4	
Horseshoe Lake	16	
Mtn. Camp Lot		2
Otterbrook Rd.		6
Lower Dam Rd.	1	
Sabattis Rd.	3 (Rg.5)	
Tupper Lake	7	3
Mt. Arab	1	

6. Foot Trails	**Existing**	**New**
Bridge Brook Pond		1.8 mi.
Twin Mtn.		0.7 mi.
Coney Mtn. Trail		0.6 mi.
Hitchins Pond Overlook		0.5 mi.
Mt. Arab Trail	1.0 mi.	
Trout Pond Lean-to Trail		0.3 mi.

7. Gates	**Existing**	**New**

	13	

8. Lean-to	**Existing**	**New**
Goodman		1
Tupper Lake	1	
Trout Pond		1

9. Mt. Arab	**Existing**	**New**
Fire tower	1	
Observers cabin	1	

10. Parking Areas	**Existing**	**New**
Bridge Brook Pond		1
Goodman Bridge (for snowmobile trail)		1
Horseshoe Lake		1
Lower Dam	1	1
Lower Dam (disabled)	1	
Coney Mtn. Trail		1
Railroad St. (Sabattis)	1	
Twin Mtn. Trail		1

11. Picnic Areas	**Existing**	**New**
Bog River Falls	1	

12. Pit Privies	**Existing**	**New**
Bog River Flow Campsites	6,7,10	2,3,4, 5,8,9, 12
Bog River Falls	2	
Horseshoe Lake Campsites	3,6	1,4,9, 16
Mt. Arab	1	

13. Roads Administrative Only	**Existing**	**New**
Goodman's Bridge Rd. SH	0.1 mi.	
Otterbrook (west of SBGR)	3.5 mi.	
Pine Pond	1.0 mi.	
Upper Dam Rd.	2.0 mi.	
Public Use		
Lower Dam Rd.	0.7 mi.	
Massawepie Rd. (north end)	1.3 mi.	
Otterbrook Rd. (east of SBGR)	3.2 mi.	

14. Signs	**Existing**	**New**
Area	16	
Trailhead Info.	2	

15. Snowmobile Trail	**Existing**	**New**
Long Lake to Remsen/LP RR connector	1 (1.5-3mi.)	
Otterbrook to Five Ponds Wilderness Boundary	1 (4.5 mi.)	
SH 421 to Massawepie Rd.	1 (8.2 mi.)	

Trout Pond Trail	1 (3.7 mi. unless closed)
Lower Dam Rd.	.7 mi.

16. Trailhead Registers	**Existing**	**New**
Bridge Brook Pond Trail		1
Coney Mtn. Trail		1
Twin Mtn. Trail		1
Lower Dam	1	
Mt. Arab	1	
Upper Dam	1	

17. Tupper Lake Boat Launch Site	**Existing**	**New**
	1	

18. Fishing Access Site	**Existing**	**New**
Accessible fishing pier		1

C. Public Use Management

1. Public Use Survey

As mentioned previously in the carrying capacity section (II.G.) A Bog River Unit visitor use survey will be undertaken. This survey will include season specific data collection. This use data when correlated with data on conditions of the natural resources in an LAC approach will guide decisions on public use management.

2. Camping

Due to the lack of appropriate facilities, no camping permits for designated sites will be issued within the planning area for groups of 10 persons or more. Also, because of the popularity of lean-to's, permits to stay in them for more than three nights will not be issued.

3. Picnic Areas

In an attempt to stem vandalism at the Bog River Falls picnic area the DEC and the community will work cooperatively to insure that enforcement authorities are alerted in a timely and thorough manner in order to address acts of vandalism as they arise.

A specific list of allowable structures and improvements for Wilderness Areas is on page 21 and 22 of the Master Plan. This list is the same for Primitive Areas and does not include picnic areas. On page 22 of the Master Plan under number two it specifies that all other structures and improvement not mentioned will be considered non-conforming. On page 25 of the Master Plan under the Boundary Structures and improvements and boundary marking heading it states "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, trailhead, parking areas, fishing and waterway access site, picnic areas, ranger stations or other facilities for peripheral control of public use, and is limited instances, snowmobile trails." The picnic area on Hitchins Pond and Lows Lake are not within 500 feet of a public highway and therefore must be removed by the end of the third year following adoption of this UMP.

4. Camping at Designated Sites on Horseshoe Lake

A series of public meetings was held specifically to address the issue of permitted camping at Horseshoe Lake. At those meetings it was agreed that only one- week camping permits be issued at Horseshoe Lake and that after one week, the permittee be required to remove all

vehicles, trailers, and other equipment from the site, thus freeing the site for the next camping group.

If it is determined that one-week camping permits do not succeed in resolving this issue, it was also agreed that the next step would be for DEC to designate certain campsites as being unavailable for permit camping. These sites would only be available on a first-come-first-served basis and could open only individuals camping for three nights or less.

5. Canoes and Boats

All canoes and boats will be removed from state lands within the management complex when left unattended for more than 24 hours.

6. Motorboat/ Floatplane use on the Bog River Flow and Lows Lake

The use of motorboats and floatplanes on Lows Lake has increased dramatically since the mid 1990's; this can be attributed to the recent introduction of bass into the Lake and the resulting development and popularity of the bass fishery. This has spawned user conflicts between those users who came to expect to see and hear few motorboats and floatplanes before the mid-'90's and the more recent anglers and others using such craft to gain access to the lake.

A detailed discussion of this situation and the alternatives considered to deal with it can be found in section III. G. Alternatives Statement. The preferred alternative is:

The DEC, through the promulgation of regulations, will prohibit the public use of motorboats on Lows Lake. The DEC will also eliminate the public use of floatplanes on the Lake within five years of the date of plan adoption. During the five year time period, the DEC will identify additional, appropriate lakes where motorized access may be limited to floatplanes only, through the current Unit Management Planning Initiative. The number and location of additional floatplane opportunities identified through the Initiative will affect whether or not the Department decides to control the time, frequency, and location of allowable floatplane use on Lows Lake through the end of the five year period.

Riparian owners and their guests will be allowed to continue to use motorboats and floatplanes for personal use on the lake, and the level of such use will be monitored by the Department. However, riparian owners and their guests will not be allowed to use motorboats or floatplanes for commercial purposes unless they acquire appropriate permits from the Adirondack Park Agency. Such use is presumed by the Agency to be a non-compatible use in Resource Management areas (the classification by the Adirondack Park Agency of the private land situated on the shore of the lake).

7. Brochure Distribution

The Lands and Forest Division will continue production of the Bog River Flow brochure to distribute to recreationists on a yearly basis.

D. Fish and Wildlife

1. Fish

Below is a brief description of the Bog River Area's fisheries resources, grouped according to management classifications developed by Pfeifer (1979). Their current and proposed future management is discussed.

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.

Relative to the Bog River Unit, Trout, Little Trout, High, Bridge Brook and Black Ponds support stocking maintained brook trout

populations. Black and High Ponds are only know to contain brook trout, while the other ponds support populations of white sucker, pumpkinseed sunfish, brown bullhead and other native Adirondack fish species. Trout and Little Trout Ponds also support naturally lake trout populations.

Most of these ponds were last surveyed in the mid-1990's. To maintain adequate resource inventories data, biological, physically and chemical aspects of these ponds will be re-surveyed within the next five years. If re-survey data documents the presence of non-native species in any particular water at densities that present a negative impact on native fish communities, reclamation may be recommended. Post reclamation objectives will be to restore and enhance native fish communities. When a reclamation is determined to be necessary, the Bog River Unit plan will be amended to include it in the schedule of implementation.

The existing man-made barrier below Bridge Brook Pond, as well as a natural barrier below Little Trout-Trout Ponds system, should be maintained and inspected yearly to protect them from unwanted immigration of unwanted fish species (such as yellow perch) from downstream waters.

Depressed pH levels have been documented for both High and Black Ponds. Of these two, High Pond has been designated a liming candidate. Although stocked brook trout survive in the lake, its ecosystem is considered acid impacted, as evidenced by summer pH levels of less than 5.0. Liming High Pond will lower acid levels, mitigate some of the impacts of acidification and enhance its potential as a brook trout fishery. Its flush rate (0.3/yr), oxygen levels (>5.0 ppm) and minimal shoreline sphagnum accumulation are within the limits established by the Division of Fish, Wildlife and Marine Resources pond liming policy. High Pond is scheduled for lime treatment within the next five years. Prior to treatment, the pond area will be re-surveyed by the DEC and inspected by the APA to determine wetland jurisdiction. A wetland permit will be obtained prior to treatment, if required. The lime treatment will be in compliance with the Final Generic Environmental Statement of the New York State Department of Environmental Conservation Program of Liming Selected Acidified Waters (Simonin 1990).

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

The Bog River Unit contains four warmwater lakes and ponds. Piercefield Flow, Horseshoe Lake, Hitchins and Pine Ponds: Piercefield, Horseshoe, and Hitchins support diverse fish populations, including a wide variety of both native and non-native warmwater species such as small and largemouth bass, northern pike, pumpkinseed, yellow perch , brown bullhead, white sucker and associated minnow species. In contrast, only native brown bullhead have been detected in Pine Pond. Besides routine monitoring and annual stocking of tiger muskellunge in Horseshoe Lake, no additional management actions are proposed for these waters at this time.

Two-Story Lakes- Larger lakes which simultaneously support and are managed for populations of both coldwater and warmwater species.

Tupper Lake and Raquette Pond are two Bog River Unit waters managed under a two-story strategy. These relatively large waters, which are contiguous with each other, lie in the course of the Raquette River. Their fisheries are comprised of self-sustaining populations of warmwater species such as northern pike, walleye, small and largemouth bass, yellow perch, rock bass, pumpkinseed and white sucker. Coldwater species present in the lake include naturally-sustaining populations of cisco (lake herring) and rainbow smelt, and a stocking maintained lake trout population.

Proposed management in the near future

includes: routine fish population and water chemistry, and sport fishery monitoring, and annual stocking of lake trout.

Lows Lake is another two-story water within the Bog River Unit. Its currently supports a relatively new largemouth bass population. Brook trout and non-sport fish such as white sucker and pumpkinseed area are also present, but at a low densities. Proposed management for Lows Lake over the next five years includes both an index netting and an electrofishing survey of fish stocks to confirm the status of the lake's largemouth bass and forage fish populations. In addition water chemistry will be monitored. Based on future survey results, brook trout may be stocked in the flow.

Warm Ponds - Ponds too warm to support salmonids.

There is only one pond classified as a Warm Pond in the Bog River Area, Little Pine Pond. In 1984, when this pond was last surveyed, no fish were sampled. At the same time it was also found to be severely acid impacted. Since this pond's potential for fishery development is very low, no management action is proposed at this time.

Unknown (Unclassified) Waters - Waters which could not be assigned a management category due to a paucity or complete lack of survey information.

Sardine Pond is the unit's only named lake or pond in this category. An inventory survey of this water will be scheduled within the next five years. In addition, there are also a couple of small unnamed ponds and a number of small streams in the unit which fall in this management category. These will also be surveyed.

2. Wildlife

a. Initiate a comprehensive study of the effects of public use of the Bog River Flow on the loon population.

Management Recommendations:
The following recommendations should be considered, given appropriate funding and staffing, for future management efforts on the Bog River Flow:

1. DEC continue to work with ACLP to monitor the population of loons on Lows Lake and Hitchins Pond to determine the number of non-breeding and breeding adults, and the reproductive success of the breeding birds on an annual basis (DEC's seasonal ranger currently assists ACLPS's field assistants in regular observations each summer).

2. If the annual censuses conducted by ACLP/DEC indicate that the loon population on the Bog River Flow is declining, then the effects of public use of the Bog River Flow on the loon population should be evaluated through a comprehensive study to determine if there is a need for management to decrease human-related impacts on the birds or their nest sites.

3. If the annual censuses conducted by ACLP/DEC indicate that the loon population on the Bog River Flow is declining, then the effects of natural impacts, such as wildlife predators, should be determined through a comprehensive study, and the management efforts, such as avian guards over nest sites, implemented if indicated.

4. DEC continue to work with ACLP to increase public education of human impacts on loon (and other wildlife) populations through the use of signs at boat launches. Such signage will be initiated throughout the Adirondack Park during the summer of 2002, and will discuss human disturbance, lead sinker toxicity, and fishing line entanglement.

b. Post signs to educate users as to the importance of protecting loons.

c. Conduct a Natural Heritage Survey of the unit to more completely and thoroughly categorize the plant communities and identify the rare, endangered and threatened species.

E. Fire Management

Fire prevention activities will consist of public education by the integration of fire safety awareness in appropriate public communications, the maintenance of fire rings, and active patrol during periods of high fire danger. Continued enforcement of Regulations 6 NYCRR Part 190 of the Environmental Conservation Law regarding State Lands will be extremely important in diminishing numbers of damaging fires. Use restrictions may be imposed on Forest Preserve lands during periods of high fire danger. Suppression activities will be enhanced by the improved access provided by this plan.

F. Administration

1. Staffing

An additional maintenance item is needed based on added workload caused by the acquisition of new lands in this area as well as facilities and maintenance called for in this plan. This proposed item is a Conservation Operations I title and will be stationed at the Cranberry Lake office.

An additional assistant Forest Ranger, to be available during the camping season (from May to October), would be beneficial in handling complaint calls and patrolling lands in the management complex.

G. Land Acquisition

Future acquisition efforts should be directed toward acquisition recommendations identified in the NYS Open Space Plan. Small private inholdings would also be advantageous to acquire (covered by the "Small Projects" category in the Open Space Plan), such as several small lots at Horseshoe Station. Purchase of these properties will consolidate ownership, reducing user conflicts and making administration more efficient.

H. SEQR Requirements

This document constitutes an Environmental Impact Statement (EIS). A Positive Declaration was declared through a press release/ Notice of Intent document (Appendix E).

I. Proposed Rules and Regulations

1. Amend the DEC's rules and regulations to prohibit: use of the Bog River Falls Picnic Area between the hours of 9:00 PM to 6:00 am. Numerous complaints have been lodged against groups of individuals using the site for late night parties.

2. Amend the DEC's rules and regulations to prohibit the public use of motorboats immediately, regulate floatplane use on Lows Lake during a five year period, and then prohibit such use at the end of five years.

V. SCHEDULE OF IMPLEMENTATION

The following schedule is included as a general guide. It should be noted that factors such as budget constraints and unforeseen developments will necessitate deviations in the schedule. This schedule is subsequent to management decisions made in Section IV Projected Use and Management Proposed and discussed in Section III Management and Policy.

ANNUAL MAINTENANCE OF FACILITIES

COMPONENT	INVENTORY		MD/Y
Trails (snowmobile, foot, X-C)	20 mi.		40
Lean-tos	4		16
Parking Areas	9		15
Roads	12 mi.		
Grade			3
Rake			3
Mow			6
Misc. (culverts, gravel, other repairs)			15
Boundary	125 mi.		50
Gates	7		10
Trail Registers	3		1
Signs	18		6
Designated Campsites	46		20
Privies	24		12
Policing			26
Dams	2		15
Picnic Areas	2		5
Gravel Pits	2		0
Storage Buildings	1		1
		TOTAL	246

F**ISHERIES**

Conduct biological, chemical and physical surveys of selected waters to assess management needs and to determine progress towards the objectives stated in this plan.

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).

Annually
Stock trout (by air or truck) and tiger muskellunge (by truck) as outlined under section IV. D above.

ADDITIONAL PROJECTS

Year	Project (with referenced page number)	Estimated Cost
2003	Road, Trail and Facility Maintenance (p50)	$25,400

	Mt. Arab Fire Tower Restoration (p36)	$5,000
	Establish Boulder Barricades at both non-conforming boat launch sites(Horseshoe Lake) (p37)	$1,000
	Remove private boats from Bridge Brook Pond (p35)	$500
	Bog River Flow Brochure distribution (p57)	$500
	Assistant Forest Ranger salary	$8,800
	Natural Heritage Resource Inventory	$40,000
	User Survey (p55)	$40,000
	TOTAL	$121,200
2004	Road, Trail and Facility Maintenance (p50)	$25,400
	Establish an accessible pad, table, and privy at Bog River Falls (p49)	$10,000
	Establish seven additional pit privies along Bog River (p48)	$3,000
	Construct Twin Mtn. Trail and Goodman lean-to (p49)	$15,000
	Road Rehabilitation and Parking Lot Construction (p46)	$200,000
	Bog River Flow Brochure distribution (p57)	$500
	Assistant Forest Ranger salary	$8,800
	TOTAL	$262,700
2005	Road, Trail and Facility Maintenance (p50)	$25,400
	Boundary Line Maintenance and Records (p35)	$15,000
	Construct Bridge Brook Pond Foot Trail (p50)	$5,000
	High Pond Liming Project (p57)	$20,000
	Construct Hitchins Pond Overlook Trail (p50)	$500
	Construct an accessible privy at a Horseshoe Lake campsite and at two roadside campsites (p48)	$15,000
	Kiosk construction - trailhead of Bridge Brook Pond, Horseshoe Lake, Twin Mtn. (p46)	$2,500
	Bog River Flow Brochure distribution (p57)	$500
	Construct parking lot and accessible pier on Horseshoe Lake (p47)	$100,000
	Assistant Forest Ranger salary	$ 8,800
	TOTAL	$192,700
2006	Road, Trail and Facility Maintenance (p50)	$25,400
	Develop 6 roadside campsites along Otterbrook Road (p48)	$50,000
	Bog River Flow Brochure distribution (p57)	$500
	Assistant Forest Ranger salary	$8,800
	TOTAL	$84,700
2007		
	Road, Trail and Facility Maintenance (p50)	$25,400
	Assistant Forest Ranger salary	$8,800
	Bog River Flow Brochure distribution (p57)	$500
	TOTAL	$34,700

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APPENDICES

APPENDIX A

HISTORIC VISIT ACCOUNT BOG RIVER TRIP

HISTORIC VISIT ACCOUNT BOG RIVER TRIP
June 10-11, 1922
(Marshall, 1923)

Early Saturday afternoon I got started along the Chair Rock Creek trail with my pack basket, having a rather indefinite plan of climbing Graves' mountain and visiting the Bog River country. As the trail of the Creek was good, and from there to Darning Needle Pond was a first rate road, though perhaps a bit confusing due to many other branching lumber roads. I was soon at the foot of Darning Needle. Almost directly beyond the head of this pond my first objective seemed to rise but I was soon to relearn the fact that no distance is short through a slash.

An old lumber road led to the east of Darning Needle for half its length and then followed up a brook to Little Fishpond, one of the ugliest bodies of water it has ever been my misfortune to see. I had been told there was a good trail around this slashy waterhole. I guess the trail was good enough but the water came well above my knees. Beyond the pond lay a number of burned, rolling hills, the highest of which gave a good view toward Cranberry to the north and Scott Pond and Graves Mountain immediately to the south. Unfortunately, somewhere on this hill I lost my map. I did not notice this until I had gotten all the way to the other side of the pond. This was decidedly inconvenient but could not be remedied without a big waste of time.

The ascent of Graves Mountain from Scott Pond was neither steep nor difficult, even though the brush was thick and the pack was beginning to feel heavy. I had chosen a good route, striking for a rocky ledge which led to the summit. Suddenly, about three quarters of the way up, I noticed that my camera was missing. I recalled that at the base of the mountain I had rested and tightened my belt. It must have been here that I left the camera. Leaving my pack on the ledge, I tried to retrace my trail less journey, feeling that I did not have one chance in a hundred to find what I lost. Luck was with me as I noticed a mountain ash in blossom which appeared to be the same as one I had admired while resting. Taking my bearing from it, I soon found the missing camera.

As I reascended, I noticed heavy clouds were rolling up from the southwest. I hastened upward and by 5:30, I was standing on the peak whose rocky summit had so attracted the early explorers.

What a wild view lay spread out before me! Vast areas of low land stretched on all sides, partly covered by virgin forest, but mostly by second growth and open spaces with only grass and ferns. Southeast lies a great barrier of water stretching for miles, the Bog River. Due to the construction of a dam, the river overflows much of the lowland around and is really much broader than the map indicates. Under the influence of the heavy clouds and the approaching evening, it was not hard to understand why the early writers called this the gloomiest region in the Adirondacks. There is not a sign of a house or road in the entire prospect, except miles away at Long Lake West. But what is that moving column of smoke over there to the east? A railroad train as sure I live. It is no use trying to dream of the olden days, for that train has blotted them out.

After 40 minutes, I commenced the descent of the steep south side. I was amazed at two things. First, I saw many ripe strawberries under the shade of the ferns which formed the principal vegetation of the mountains. This was the earliest I had ever seen the delicious fruit in the Adirondacks. Second, I found white pine reproduction high upon the steep mountain, where the soil was very shallow, and no seed trees were in sight. I came out at the foot of Graves Pond and followed down the outlet until I came to a place which was suitable for camping. Darkness was rapidly approaching and before I had entirely finished supper, night had entirely set in. This wild spot, ten miles from the nearest occupied house, with

the cold brook close at hand and the soft bed of ferns under the open sky, make a pleasant camp site. It was not long before I wrapped myself in my blankets and fell to sleep.

I was awakened around two in the morning by rain, which was not unexpected. So I ducked my head under the covers and fell to sleep again, hoping that the blankets would not wet through before morning.

It was not yet five when, after a light breakfast hastily gotten in the rain, that I recommenced my journey. Following down the right bank of the brook I soon came upon a very large buck taking a drink. He stared at me for some time as if wondering why anyone should want to enter his private slash.

Soon I reached the slough of the Third Pond where the brook enters into Bog River. Beyond was a plateau, about 50 feet above the surrounding lowland, treeless, and covered mainly by ferns. It was strange, open country, different from any I had ever seen before and looked to be an ideal place for game. I walked over to the southern edge of the flat to get a look over the Bog River Country and was greatly delighted to see three deer calmly feeding at the pond below. Two were on the opposite shore, while one was standing on a very peculiar island consisting merely of a complete outer ring about 25 feet wide surrounding a pool of water perhaps 200 feet in diameter. I was intensely watching this interesting display of wild life when I was startled by a loud snort almost directly in back of me. I wheeled around to see a doe within 50 feet of me stamping her foot as if in great danger at my intrusion. While I was looking at her, I heard a snort on the other side which caused me to turn around in time to see another doe go plunging through high ferns. I waited around more than half an hour at this interesting deer resort and saw two more appear on the opposite shore. Finally, with considerable reluctance, I set out through the ferns for Spruce Grouse Pond seeing two more deer on the way. The country was, literally speaking, all out by runways. I now began to comprehend why some of my Saranac Lake friends regarded this burned, barren country as a “hunter’s paradise.”

My next objective was Grass Pond and as I had lost my map and was not sure just where it lay, I calculated that the best and most interesting way to reach it would be to go right over the top of Grass Pond Mountain. The climb was only about 700 feet, but it was quite steep, very slashy, and my pack with the rainsoaked blanket was heavy, so despite the cold, damp morning, I perspired considerably before reaching the bare summit.

The view was superb. The low, fast moving clouds added an element of wildness lacking on a perfect day. The entire length of Bog River could be seen from Grass Pond to Hitchins. While the view toward Cranberry was not as good as from Grave’s Mountain, the prospect toward Mud Lake, Grass Pond, and the virgin woods to the southwest more than made up for this shortcoming. Neither the cold or a sudden, violent hailstorm could drive me away and it was a most delightful hour I spent enjoying, for the first time, the finest mountain view in the Cranberry region.

When I finally left, the sun had broken through the clouds. I made a steep descent to Grass Pond and frogged the shoreline to the houses on the upper end. The houses were deserted, but not so the lake. Two loons made the bare side of the mountain vibrate with their shrill cry and indicated why the pond was called, by some, Echo Pond. A beaver was swimming about two hundred yards away, while slightly further a deer was feeding. It was certainly a pleasant spot and I resolved to return before long.

I took the low road back to Fishpole Pond. This is the poorer and harder to follow of the two old tote roads leading between the two ponds. The big swamp, I am told, is a favorite place for hunters to get lost. Certainly there are enough side roads and trails to confuse anyone.

Fishpole is a low pond but it has a shoreline unmarred by fire or axe, which makes it prettier than most of the other ponds in the region. I followed along the shore until I came to the road which leads to Bushee's deserted camp, a few hundred feet away, and from there right down the west side of the Fishpole outlet to the Darning Needle trail. From here I had a leisurely and uneventful hour's journey to camp.

APPENDIX B

CONSERVATION EASEMENT AND RESERVED RIGHTS SUMMARY

SUMMARY OF YORKSHIRE TIMBER COMPANY EASEMENT

PROJECT: AFP St. Lawrence

TRACT NAME: Various Tracts

DEED REFERENCE: Conservation Easement deed from Yorkshire Timber Company to the People of the State of New York dated December 19, 1990 and recorded January 14, 1991 at Liber 1046 of Deeds, page 666 in the St. Lawrence County Clerk's Office.

ACQUIRED: Conservation Easement on 19,500 ± acres of lands south of New York State SH 3 in the Towns of Piercefield, Colton and Clifton. Also a conservation easement on a strip of land along the north side of SH 3 in the Town of Clifton.

CONVEYED TO THE STATE OF NEW YORK: Recreation rights, development rights and mineral rights. Also includes the right to use motor vehicles on the main north/south haul road leading southerly from the southerly terminus of the Massawepie Road to the southerly edge of the property, a road to be constructed by either party form the DOT parking lot on SH 3 easterly over the old Grass River Railroad bed to its intersection of the main haul road leading south from Shurtleff thence over that main haul road in a southerly and southeasterly direction to a point midway between Brandy Brook and Roaring Brook. Also the road leading westerly from the Massawepie town road to the bridge crossing the south branch of the Grass River. Snowmobiles may be used on all existing roads which provide access to or which cross the property except those roads which are plowed by Yorkshire and being used as logging roads.

RIGHTS RETAINED BY YORKSHIRE:

23. Hunting Rights - from September 1 to December 31 of each year up to and including the year 2004.

24. Exclusive use of the property from the opening of rifle season for white tail deer to December 31 of each year and up to and including the year 2004.

25. Fee title and timber rights.

26. Right to use gravel for onsight road maintenance and construction.

27. The right to maintain and lease all existing structures plus the right to build five new structures for a 15 year period ending December of the year 2005. At the end of that reservation Yorkshire will remove all remaining buildings.

OTTERBROOK FEE PARCEL SUMMARY OF RESERVED RIGHTS

PROJECT: AFP St. Lawrence 130.1

TRACT NAME: Otterbrook Tract

DEED REFERENCE: Warranty Deed from Otterbrook Timber Company to the People of the State of New York dated April 29, 1991 and recorded April 29, 1991 at Liber 1048 of Deeds, page 1043.

ACQUIRED: Fee Title to 7,573 acres of land of which 6,714 are located in the Town of Colton and 859 are located in the Town of Piercefield.

RIGHTS RESERVED BY OTTERBROOK:

1. Permanent right-of-way to provide access to a 265 acre parcel reserved by Otterbrook in the northeast corner of the tract. See page 1043 of Liber 1048.

2. The right in common with others to remove gravel from existing gravel pit near Pine Pond.

3. The right to lease two tracts of land for a 15 year period ending December 31, 2005 plus the right to lease the balance of the premises in four separate parcels for a five year period ending December 31, 1995.

4. The right to exclusive occupation of those premises from October 15 to December 31 of each year.

5. The exclusive right to use and occupy the buildings on a year-round basis and to build no more than 15,500 square foot cabins on the premises.

6. The right to remove dead and down trees for firewood within a one acre radius of any of the cabins or within 33 feet of the centerline of specified roads.

7. At the end of the lease periods Otterbrook is responsible to remove or destroy all building structures on the property.

APPENDIX C

FISHERIES

Appendix C - Fisheries

BOG RIVER UNIT PLAN FISH SPECIES

COMMON NAME	SCIENTIFIC NAME	ABBREVIATION
Blacknose dace	*Rhinichthys atratulus*	BND
Brook trout	*Salvelinus fontinalis*	ST
Brown bullhead	*Ameriurus nebulosus*	BB
Cisco	*Coregonus artedi*	CCO
Common shiner	*Luxilus cornutus*	CS
Creek chub	*Semotilus atromaculatus*	CC
Golden shiner	*Notemigonus crysoleucas*	GS
Lake trout	*Salvelinus namaycush*	LT
Largemouth bass	*Micropterus salmoides*	LMB
Northern pike	*Esox lucius*	NP
Pumpkinseed	*Lepomis gibbosus*	PS
Rainbow smelt	*Osmerus mordax*	RS
Redbreasted sunfish	*Lepomis auritus*	RBS
Smallmouth bass	*Micropterus dolomieu*	SMB
Tessellated darter	*Etheostomaolmstedi*	TD
Tiger muskellunge	*Esox lucius XE masquinongy*	TGRM
Walleye	*Stizostedion vitreum*	WE
White sucker	*Catostomus commersoni*	WS
Yellow perch	*Perca flavescens*	YP

Appendix C - Fisheries

Bog River UMP - Ponded Water Inventory Data (All St Lawrence River Watershed)

Name	P #	County	USGS Quad (7.5')	Management Class	Area (acres)
Pine Pond	p84	St Lawrence	Piercefield	Warmwater	13
Piercefield Flow	p85	St Lawrence	Piercefield	Warmwater	368
Raquette Pond	p89	Franklin	Tupper Lake	Two-Story	1024
Tupper Lake	p109	St Lawrence/ Franklin	Tupper Lake / Piercefield	Two-Story	3782
Horseshoe Lake	p143	St Lawrence	Long Tom Mountain	Warmwater	399
Hitchins Pond	p144	St Lawrence	Sabattis	Warmwater	147
Little Trout Pond	p145	St Lawrence	Sabattis	Adirondack Brook Trout	45
Trout Pond	p146	St Lawrence	Sabattis	Adirondack Brook Trout	157
High Pond	p147	Hamilton	Sabattis	Adirondack Brook Trout	39
Little Pine Pond	p148	St Lawrence	Sabattis	Warm Pond	8
Lows Lake	p156	St Lawrence	Sabattis	Two-Story	2845
Bridge Brook Pond	p178	St Lawrence	Piercefield	Adirondack Brook Trout	167
Black Pond	p179	St Lawrence	Piercefield	Adirondack Brook Trout	19
Sardine Pond	p376b	St Lawrence	Long Tom Mountain	Unknown	?

Appendix C - Fisheries

Bog River UMP - Ponded Water Chemical and Fisheries Data (All St Lawrence River Watershed)

Name	Most Recent Chemical Survey					Most Recent Biological Survey		
	Year	Source	ANC (Feq/1)	pH	Cond. (Fmhos/cm)	Year	Source	Fish Species Present and Number Caught
Pine Pond	1985	ALSC	21	5.8	9	1985	ALSC	BB (1131)
Piercefield Flow	1994	DEC	89	7.2	32	1995	DEC	WE (53), SMB (30), NP (1), RB (14), PS (26), RBS (4), YP (61), WS (7), GS (4), BB (7)
Raquette Pond	1980	DEC		6.9		2001	DEC	See Tupper Lake
Tupper Lake	1982	DEC		6.8		2001	DEC	LT (28), RS (21), CCO (19), WE (32), YP (68), SM B (7), NP (71), LMB (2), RB (5), WS (2), GS (5), BB (175) (Tupper Lake and Raquette Pond combined)
Horseshoe Lake	1986	ALSC	75	6.7	24	1994	DEC	SMB (16), YP (10), PS (1), WS (31), BB (20)
Hitchins Pond	1986	ALSC	81	6.4	20	1986	ALSC	YP (99), PS (125), BB (100), WS (51), GS (126), CC (3)
Little Trout Pond	1994	DEC	24	6.5	19	1994	DEC	ST (9), LT (1), PS (2), WS (22), BB (15)
Trout Pond	1986	DEC	56	6.9	21	1994	DEC	ST (14), LT (7), PS (6), WS (30), BB (14)
High Pond	1984	ALSC	-5	4.95	17	1984	ALSC	ST (6)
Little Pine Pond	1985	ALSC	-12	4.75	16	1985	ALSC	None
Lows Lake	2001	DEC	55	6.6	19	2001	DEC	LMB (114), PS (11), TD (1)
Bridge Brook Pond	1994	DEC	45	6.7	22	1994	DEC	ST (14), WS (49), BB (8), CS (1)
Black Pond	1992	DEC	5	5.3	15	1992	DEC	ST (15)
Sardine Pond	–	–	–	–	–	–	–	Unknown

Source: DEC - Department of Environmental Conservation - Reg. 6 Fisheries;
ALSC - Adirondack Lakes Survey Corporation

CHRONOLOGY OF BOG RIVER FLOW FISHERY

Early
1900's Lows Upper Dam developed, creating 2,895 acre impoundment. The flooding inundated several lakes, including Lows Lake, and Mud, Grass, and Tomar Ponds. The impounding also created First, Second, and Third Ponds along the Bog River channel just above the dam.

Brook trout and other fish species native to the river and ponds expanded into the impoundment. The brook trout fishery generally maintained itself, but some stocking did occur. Some other species became particularly abundant. It was reported that thousands of pounds of white suckers and shiners were trapped and removed from the flow annually to reduce their numbers.

1985 Access to the flow was acquired by New York State as part of the purchase of 2,000 plus acres of forest preserve.

ALSC surveyed First, Second, Tomar, and Grass Ponds. Except for Tomar Pond, all contained brook trout, with Grass Pond yielding the highest catches. White sucker were extra abundant in all waters, with a total of 535 sampled by 13 nets. Common shiner, brown bullhead, and pumpkinseed were also very common.

1987 Additional survey effort, focusing on the main impounded area of Lows Lake, led to the conclusion that brook trout inhabit the entire flow at moderate to low densities.

1990 Increased levels of angler effort reported in the flow due to recent public access. Fifteen thousand fall fingerling brook trout (Little Tupper strain) were stocked in both 1988 and 1990 to supplement the low density native stocks.

Largemouth bass reported and confirmed in the flow. A few bass were observed on nests during June near Parker's Island.

1991 High densities of nesting largemouth bass observed.

1998 Largemouth bass fishery appears to have fully developed and has become very popular. High catch rates of larger-sized bass reported by anglers.

2000 Angler reports of "poor" conditioned and fewer larger-sized bass suggest quality of the largemouth bass sport fishery is declining.

2001 June electrofishing survey (pre-bass season) results indicate largemouth bass are still abundant. Age and length distributions of the sample suggests older, larger fish are lacking. The survey also detected a substantial imbalance between the densities of bass and forage

fish species. It appears bass may have over-exploited their food supplies. If true, bass stocks and sport fish quality will continue to decline. A follow-up survey to confirm these observations is planned for 2002.

APPENDIX D

WILDLIFE

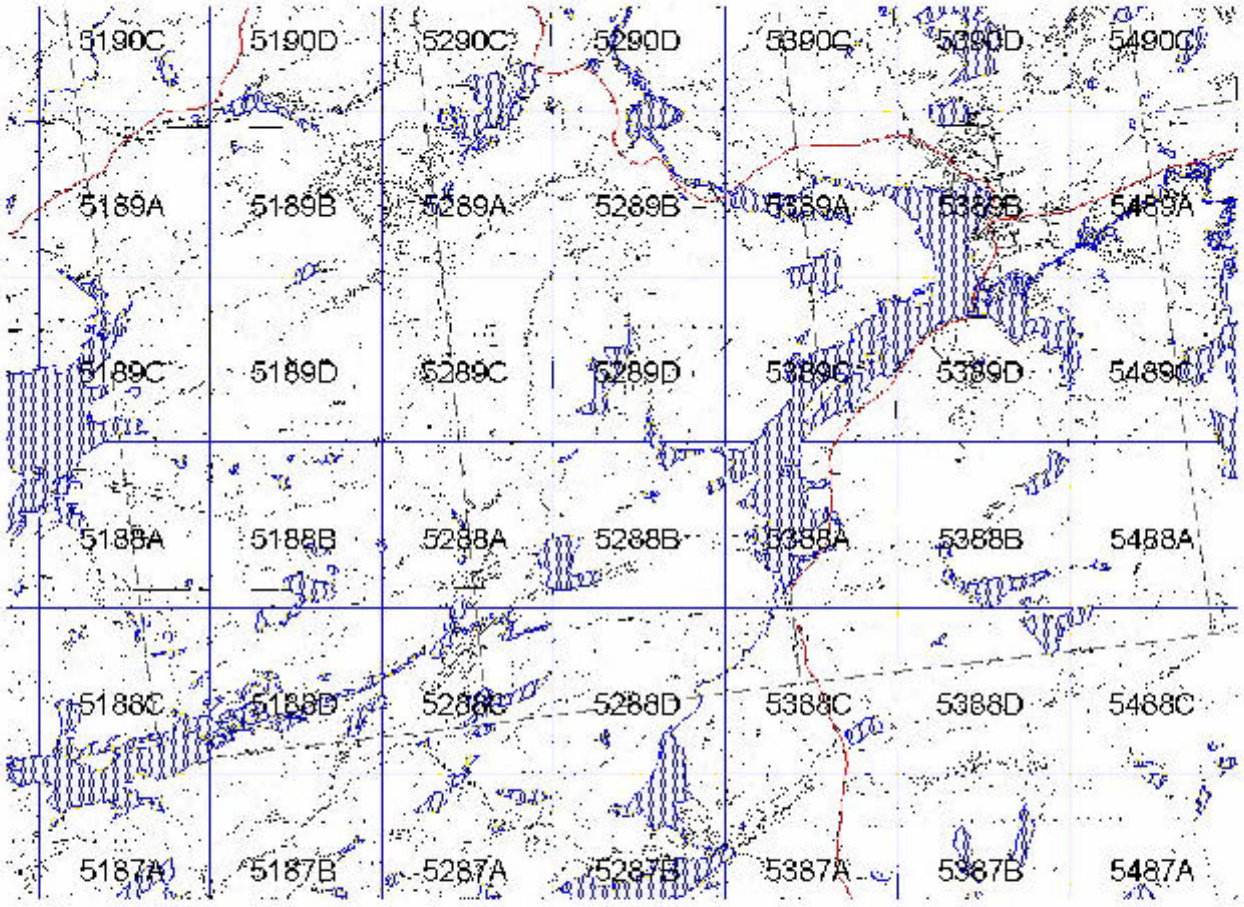
Appendix D

The Horseshoe Lake Wild Forest Unit contains potential habitat for 40 species of mammals, 136 species of birds, 8 species of reptiles and 16 species of amphibians. Major species include:

MAMMALS	Scientific Name	Status		
Big Game:				
White Tailed Deer	*Odocoileus virgininanus*	P	G	R
Black Bear	*Ursus americanus*	P	G	R
Moose	*Alces alces*		P	GTr
Furbearers:				
Eastern Coyote	*Canis latrans*	P	G	R
Bobcat	*Lynx rufus*	P	G	R
Beaver	*Castor canadeni*		P	GR
Muskrat	*Ondatra zibethica*	P	G	R
Fisher	*Martes pennanti*		P	GR
River Otter	*Lutra candensis*	P	G	R
Mink	*Mustela vison*	P	G	R
Raccoon	*Procyon lotor*	P	G	R
Red Fox	*Vulpes vulpes*	P	G	R
Gray Fox	*Urocyon cinereoargentus*	P	G	Oc
Ermine	*Mustela erminea*		P	GOc
Long-tailed Weasel	*Mustela frenata*	P	G	Oc
Striped Skunk	*Mephitis mephitis*	P	G	Oc
Virginia Opossum	*Didelphis virginiana*	P	G	Oc
Marten	*Martes americana*	P	G	Oc
Small Game:				
Varying Hare	*Lepus americanus*	P	G	R
Woodchuck	*Mamota monax*	Un	Un	Oc
Other:				
Porcupine	*Erethizon dorsatum*	Un	Un	R
Chipmunk	*Tamias striatus*	Un	Un	R
Red Squirrel	*Tamiasciurus*	Un	Un	R
Nn. Flying Squirrel	*Glaucomys sabrinus*	Un	Un	R
Masked Shrew	*Sorex cinereus*	Un	Un	R
Water Shrew	*Sorex palustris*	Un	Un	R
Smokey Shrew	*Sorex fumeus*	Un	Un	R
Pigmy Shrew	*Sorex hoyi*	Un	Un	R
Short-tailed Shrew	*Sorex brevicauda*	Un	Un	R
Hairy-tailed Mole	*Parascalops breweri* Un	Un	R	
Little Brown Bat	*Myotis lucifigus*	Un	Un	R
Deer Mouse	*Peromyscus maniculatus*	Un	Un	R
White-footed Mouse	*Peromyscus leucopus*	Un	Un	R
Sn. Red-backed Vole	*Clethrionomys gapperi*	Un	Un	R
Meadow Vole	*Micotus pennsylvanicus*	Un	Un	R
Rock Vole	*Micotus chrotorrhinus*	Un	Un	R
Sn. Bog Lemming	*Synaptomys cooperi*	Un	Un	R
Nn. Bog Lemming	*Synaptomys borealis*	Un	Un	R
Meadow Jumping Mouse	*Zapus hudsonius*		Un	UnR
Woodland Jumping Mouse	*Napaeozapus insignis*	Un	Un	R

Un = Unprotected G = Game R = Resident Tr = Transient Oc = Occasional P = Protected

Bog River Flow Management Complex
Unit Management Plan
Breeding Bird Atlas Key



NEW YORK STATE BREEDING BIRD ATLAS
BREEDING SPECIES OF BOG RIVER AREA
1980-1985 - Alphabetical Order by Scientific Name

Common Name	Scientific Name	Conf	Blocks Prob.	Poss	Total Blocks
Swamp Sparrow	*Melospiza georgiana*	3	3	1	7
Lincoln's Sparrow	*Melospiza lincolnii*	1	2	2	5
Song Sparrow	*Melospiza melodia*	6	3	4	13
Common Merganser	*Mergus merganser*	6	0	1	7
Northern Goshawk	*Accipiter gentilis*	0	0	1	1
Sharp-shinned Hawk	*Accipiter striatus*	1	0	3	4
Spotted Sandpiper	*Actitis macularia*	0	0	2	2
Northern Saw-whet Owl	*Aegolius acadicus*	1	0	0	1
Red-winged Blackbird	*Agelaius phoeniceus*	5	3	3	11
Wood Duck	*Aix sponsa*	0	1	4	5
Mallard	*Anas platyrhynchos*	0	1	6	7
American Black Duck	*Anas rubripes*	2	1	2	5
Ruby-throated Hummingbird	*Archilochus colubris*	2	4	4	10
Great Blue Heron	*Ardea herodias*	1	2	9	12
Cedar Waxwing	*Bombycilla cedrorum*	4	5	4	13
Ruffed Grouse	*Bonasa umbellus*	6	1	4	11
American Bittern	*Botaurus lentiginosus*	0	0	4	4
Canada Goose	*Branta canadensis*	1	0	1	2
Great Horned Owl	*Bubo virginianus*	0	0	3	3
Common Goldeneye	*Buchephala clangula*	1	0	1	2
Red tailed Hawk	*Buteo jamaicensis*	1	1	5	7
Broad-winged Hawk	*Bueto platypterus*	2	1	7	10
Green-backed Heron	*Butorides striatus*	0	0	1	1
Whip-poor-will	*Caprimulgus vociferus*	0	0	2	2
Pine Siskin	*Carduelis pinus*	0	1	1	2
American Goldfinch	*Carduelis tristis*	1	4	4	9
House Finch	*Carpodacus mexicanus*	0	0	1	1
Turkey Vulture	*Cathartes aura*	0	2	5	7

Veery	*Catharus fuscenscens*	1	6	5	12

Common Name	Scientific Name	Conf	Blocks Prob.	Poss	Total Blocks
Hermit Thrush	*Catharus guttatus*	3	5	4	12
Swainson's Thrush	*Catharus ustulatus*	2	4	6	12
Brown Creeper	*Certhia americana*	2	4	3	9
Belted Kingfisher	*Ceeryle alcyon*	1	3	6	10
Chimney Swift	*Chaetura pelagica*	0	1	9	10
Killdeer	*Charadrius vociferus*	1	0	2	3
Northern Harrier	*Circus Cyaneus*	0	0	1	1
Evening Grosbeak	*Coccothraustes vespertinus*	2	1	2	5
Yellow-billed Cuckoo	*Coccyzus americanus*	0	0	1	1
Black-billed Cuckoo	*Coccyzus ertyhropthalmus*	0	1	0	1
Northern Flicker	*Colaptes auratus*	3	0	6	9
Rock Dove	*Columba livia*	0	0	2	2
Olive-sided Flycatcher	*Contopus borealis*	2	2	6	10
Eastern Wood-Pewee	*Contopus virens*	2	5	5	12
American Crow	*Corvus brachyrhynchos*	3	0	9	12
Common Raven	*Corvus corax*	1	1	5	7
Blue Jay	*cyanocitta cristata*	6	1	7	14
Spruce Grouse	*Dendragapus canadensis*	1	0	0	1
Black-throated Blue Warbler	*Dendroica caerulescens*	4	4	5	13
Bay-breasted Warbler	*Dendroica castanea*	0	0	1	1
Yellow-rumped Warbler	*Dendroica coronata*	4	4	5	13
Blackburnian Warbler	*Dendroica fusca*	3	2	7	12
Magnolia Warbler	*Dendroica magnolia*	3	2	6	11
Yellow Warbler	*Dendroica petechia*	1	1	3	5
Pine Warbler	*Dendroica pinus*	0	0	1	1
Blackpoll Warbler	*Dendroica striata*	0	1	1	2
Black-throated Green Warbler	*Dendroica virens*	6	3	5	14
Gray Catbird	*Dumetella carolinensis*	1	2	5	8
Alder Flycatcher	*Empidonax alnorum*	2	3	2	7

Yellow-bellied Flycatcher	*Empidonax flaviventris*	1	0	3	4

Common Name	Scientific Name	Conf	Blocks Prob.	Poss	Total Blocks
Least Flycatcher	*Empidonax minimus*	2	5	5	12
Rusty Blackbird	*Euphagus carolinus*	2	0	1	3
American Kestrel	*Falco sparverius*	0	0	1	1
Common Snipe	*Gallinago gallinago*	1	0	3	4
Common Loon	*Gavia immer*	10	0	1	11
Common Yellowthroat	*Geothlypis trichas*	5	4	5	14
Bald Eagle (2002 update)	*Haliaeetus leucocephalus*	1	0	0	1
Cliff Swallow	*Hirundo pyrrhonota*	2	0	0	2
Barn Swallow	*Hirundo rustica*	8	1	1	10
Wood Thrush	*Hylocichla mustelina*	1	3	6	10
Northern Oriole	*Icterus galbula*	1	1	2	4
Dark-eyed Junco	*Junco hyemalis*	5	3	5	13
Herring Gull	*Larus argentatus*	1	0	4	5
Hooded Merganser	*Lophodytes cucullatus*	1	0	2	3
Black-and-white Warbler	*Mniotilta varia*	1	7	5	13
Brown-headed Cowbird	*Molothrus ater*	0	4	4	8
Great Crested Flycatcher	*Myiarchus crinitus*	0	4	6	10
Mourning Warbler	*Oporornis philadelphia*	1	2	6	9
Osprey	*Pandion haliaetus*	0	0	2	2
Northern Parula	*Parula americana*	0	4	5	9
Black-capped Chickadee	*Parus atricapillus*	6	1	6	13
Boreal Chickadee	*Parus hudsonicus*	0	0	2	2
House Sparrow	*Passer domesticus*	0	0	1	1
Indigo Bunting	*Passerina cyanea*	2	4	3	9
Gray Jay	*Perisoreus canadensis*	1	0	1	2
Ring-necked Pheasant	*Phasianus colchicus*	0	0	1	1
Rose-breasted Grosbeak	*Pheucticus ludovicianus*	5	2	7	14
Black-backed Woodpecker	*Picoides arcticus*	1	1	2	4
Downy Woodpecker	*Picoides pubescens*	4	2	6	12

Common Name	Scientific Name	Conf	Blocks Prob.	Poss	Total Blocks
Scarlet Tanager	*Piranga olivacea*	1	5	7	13
Common Grackle	*Quiscalus quiscula*	7	1	4	12
Ruby-crowned Kinglet	*Regulus calendula*	0	0	1	1
Golden-crowned Kinglet	*Regulus satrapa*	0	2	3	5
Eastern phoebe	*Sayonis phoebe*	6	0	3	9
American Woodcock	*Scolopax minor*	0	0	3	3
Ovenbird	*Seiurus aurocapillus*	2	2	9	13
Northern Waterthrush	*Seiurus noveboracensis*	0	0	4	4
American Redstart	*Setophaga ruticilla*	4	6	4	14
Eastern Bluebird	*Sialia sialis*	1	0	1	2
Red-breasted Nuthatch	*Sitta canadensis*	3	0	5	8
White-breasted Nuthatch	*Sitta carolinensis*	4	4	1	9
Yellow-bellied Sapsucker	*Sphyrapicus varius*	7	2	4	13
Chipping Sparrow	*Spizella passerina*	5	3	4	12
Northern Rough-winged Swallow	*Stelgidopteryx serripennis*	1	0	1	2
Barred Owl	*Strix varia*	0	3	5	8
Eastern Meadowlark	*Sturnella magna*	1	0	0	1
European Starling	*Sturnus vulgaris*	4	0	2	6
Tree Swallow	*Tachycineta bicolor*	7	2	4	13
House Wren	*Troglodytes aedon*	1	0	2	3
Winter Wren	*Troglodytes troglodytes*	2	3	6	11
American Robin	*Turdus migratorius*	7	2	4	13
Eastern Kingbird	*Tyrannus tyrannus*	2	2	5	9
Warbling Vireo	*Vireo gilvus*	0	1	1	2
Red-eyed Vireo	*Vireo olivaceus*	5	7	2	14
Philadelphia Vireo	*Vireo philadelphicus*	0	1	0	1
Solitary Vireo	*Vireo solitarius*	4	4	4	12
Canada Warbler	*Wilsonia canadensis*	3	0	6	9
Mourning Dove	*Zenaida macroura*	0	1	4	5
White-throated Sparrow	*Zonotrichia albicollis*	8	3	3	14

REPTILES AND AMPHIBIANS

COMMON NAME	SCIENTIFIC NAME
Bull frog	*Rana catesbeiana*
Common Garter Snake	*Thamnophis sirtalis*
Common Snapping Turtle	*Chelydra s. serpentina*
Eastern American Toad	*Bufo a. americanus*
Gray Treefrog	*Hyla versicolor*
Green Frog	*Rana clamitans melanota*
Mink Frog	*Rana septentrionalis*
Northern Dusky Salamander	*Desmognathus fuscus*
Northern Redbelly Snake	*Storeria o. occiptomaculata*
Northern Spring Peeper	*Pseudacris c. crucifer*
Northern Two-lined Salamander	*Eurycea bislineata*
Painted Turtle	*Chrysemys picta*
Pickerel Frog	*Rana palustris*
Spotted Salamander	*Ambystoma maculatum*
Wood Frog	*Rana sylvatica*

BLACK BEAR HARVEST-TOWN OF PIERCEFIELD

1970---19	1980---12	1990---12
1971---12	1981---9	1991---8
1972---9	1982---12	1992---6
1973---14	1983---7	1993---2
1974---8	1984---9	1994---8
1975---10	1985---3	1995---15
1976---8	1986---10	1996---7
1977---7	1987---7	1997---0
1978---15	1988---15	1998---4
1979---7	1989---8	

Source: NYS DEC Black Bear Harvest 1970-1998

CALCULATED DEER KILL FOR BOG RIVER COMPLEX

YEAR	ADULT MALE	FAWN MALE	ADULT FEMALE	FAWN FEMALE	TOTAL	AD MALE/ SQ MI
1970	30	4	20	4	58	0.7
1971	29	0	0	0	29	0.6
1972	40	0	0	0	40	0.9
1973	44	0	0	0	44	1.0
1974	48	0	0	0	48	1.0
1975	55	0	0	0	55	1.2
1976	66	0	0	0	66	1.4
1977	52	0	0	0	52	1.1
1978	34	0	0	0	34	0.7
1979	23	0	0	0	23	0.5
1980	39	0	0	0	39	0.8
1981	50	0	1	0	51	1.1
1982	47	1	0	1	49	1.0
1983	53	1	1	1	56	1.2
1984	53	0	0	0	53	1.2
1985	51	1	1	1	54	1.1
1986	48	1	2	1	52	1.0
1987	53	1	1	1	56	1.2
1988	59	1	2	1	63	1.3
1989	49	1	2	1	53	1.1
1990	43	1	3	1	48	0.9
1991	53	2	11	2	68	1.2
1992	52	2	12	1	67	1.1
1993	46	2	11	1	60	1.0
1994	28	0	0	0	28	0.6
1995	47	0	1	0	48	1.0
1996	39	1	6	1	47	0.9
1997	37	0	1	0	38	0.8
1998	33	1	5	1	40	0.7

Source: NYS DEC Interactive Deer Calculation Proportioned from Township Harvest Data

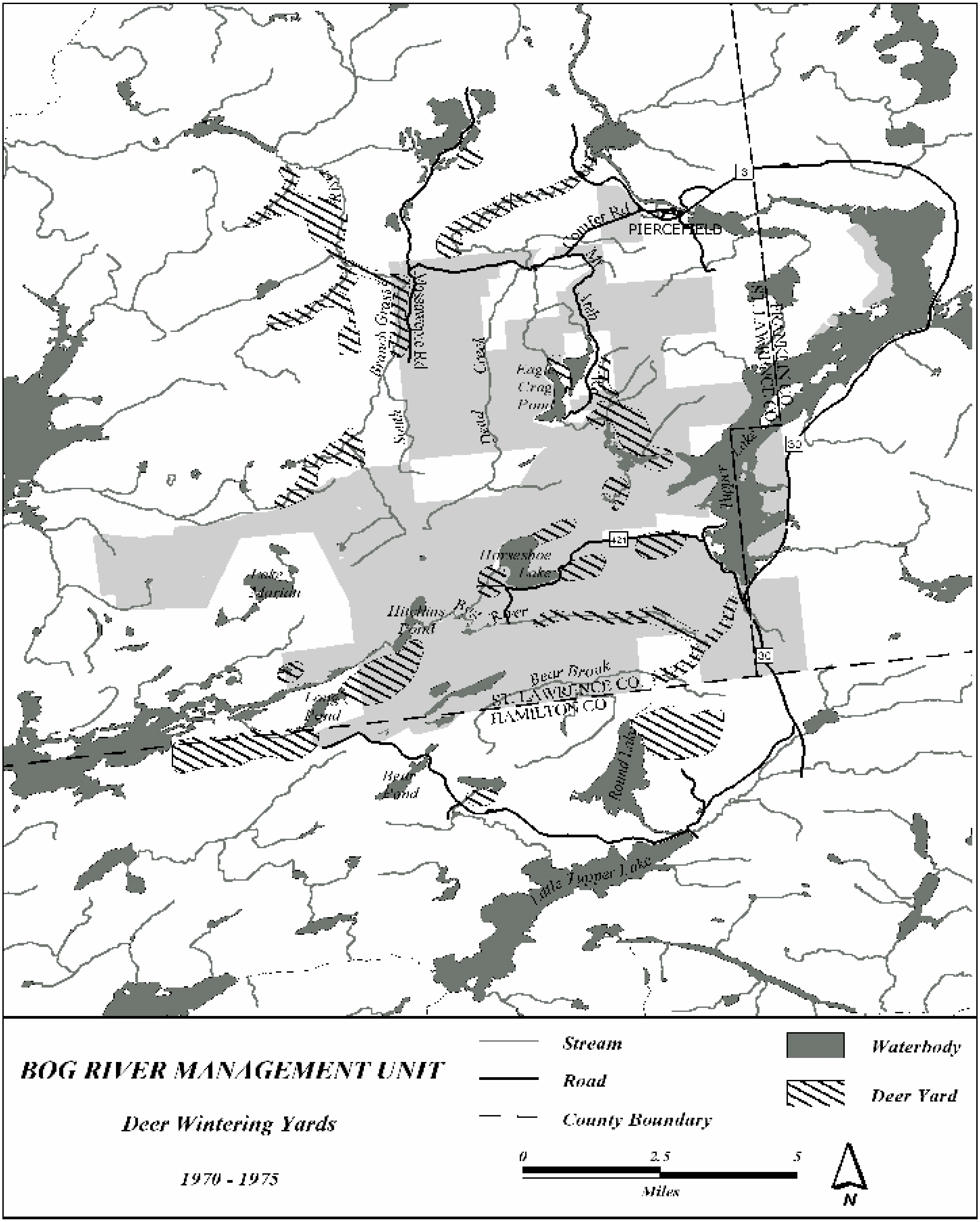
REPORTED FURBEARER TAKE FOR BOG RIVER UNIT AREA (SQUARE MILES): 45.9Approximate Reported Take

YEAR	BEAVER	BOBCAT	COYOTE	FISHER	OTTER
1958	33	0	0	1	1
1959	0	0	0	3	1
1960	0	0	0	0	3
1961	0	0	0	5	0
1962	0	0	0	3	3
1963	0	0	0	1	1
1964	0	0	0	2	4
1965	3	0	0	1	0
1966	26	0	0	1	2
1967	30	0	0	1	1
1968	30	0	0	1	3
1969	10	0	0	2	1
1970	20	0	0	5	2
1971	15	0	0	3	0
1972	41	0	0	8	4
1973	23	0	0	8	3
1974	29	0	0	3	3
1975	31	0	0	8	3
1976	31	0	0	3	3
1977	19	0	0	0	3
1978	23	0	0	5	3
1979	34	1	7	8	3
1980	36	1	3	8	3
1981	28	2	3	6	6
1982	26	0	4	5	2
1983	14	0	3	0	7
1984	14	1	2	0	2
1985	26	1	2	7	2
1986	27	1	1	3	3
1987	39	1	3	2	3
1988	29	1	1	3	3
1989	30	8	0	5	3
1990	17	0	1	3	3
1991	15	0	1	2	5
1992	8	1	2	1	2
1993	20	0	1	2	3
1994	36	0	3	4	4
1995	13	1	1	2	1
1996	34	1	2	1	4
1997	24	0	3	9	2

Source: NYS DEC Interactive Furbearer Calculation Proportioned from Township Harvest Data

SIGNIFICANT HABITATS:

Bog River (mouth)	Warm water fish spawning
Bridge Brook Pond	Waterfowl nesting
Hitchins Pond	Waterfowl Nesting Area
Trout Pond	Waterfowl Nesting Area
Lows Lake-Bog River Flow	Waterfowl Nesting Area
Horseshoe Lake	Winter-Stratified Monomictic Lake
Raquette Pond	Medium Fen
Raquette Pond	Deep emergent marsh


PIERCEFIELD
Conifer Rd
Eagle Crag Pond
Dead Creek
South Branch Grass River
Horseshoe Lake
Lake Marian
Hitchins Pond
Bog River
Bear Brook
ST. LAWRENCE CO.
HAMILTON CO.
Bear Pond
Round Lake
Little Tupper Lake
Tupper Lake
3
30
421
BOG RIVER MANAGEMENT UNIT
Deer Wintering Yards
1970 - 1975
Stream
Road
County Boundary
Waterbody
Deer Yard
0
2.5
5
Miles
N

ECOLOGICAL ZONE: Central Adirondacks

Elevation:	1300-4000 ft. Average 2000 ft.
Soil Productivity:	LOW
Annual Snowfall:	80-140 inches
Growing Season:	90-150 days — short
Land Ownership:	75% Forest Preserve
Access:	2,427 Acres served per mile of road
Human Population Density:	8 People per square mile

Land Use: %

- Agriculture: 0
- Forest: 89.9% — Climax Forest: spruce, fir, northern hardwoods
- Brush: 2.1%
- Wetlands: 6.6%
- Other: 1.4%

Natural Heritage Ranking

Global Rank		Species
G5	S2	Spruce Grouse
G4	S2,S3	Bald Eagle
G5	S3,S4	Common Loon
G5	S2	Bog Aster (*Aster nemoralis*)
G5	S1	Mare's tail (*Hippuris vulgaris*)
G4	S1	Winter-stratified Monomictic Lake
G3, G4	S2, S3	Medium Fen
G5	S3	Deep Emergent Marsh

APPENDIX E

CONSERVATION EASEMENTS

New York State Department of Environmental Conservation
30 Court Street
Canton, NY 13617-1137
(315)386-4546

Langdon Marsh, Commissioner

CONSERVATION EASEMENT
INSPECTION REPORT

1994

Property: Yorkshire

Date of Inspection: 9/1/94

Inspectors: Joe Kennedy, John Kramer, John Gibbs, and Dave Smith

1) Structures: All camps inventoried in original report were inspected. The following were in violation of the easement.

#3 - addition of a 12 x 15 structure
#6 - addition of an outhouse and porch
#8 - addition of a covered walkway outhouse
#22 - addition of a porch

2) Property Identification: No problems noted.

3) Roads: New gate on Grass River Railroad.

4) Other: Trail up Mt. Arab continues to cause problems during deer season. Trespassing problems on unleased portions do occur.

E-2

MEMORANDUM FROM HERBERT E. DOIG, *Assistant Commissioner Fish, Wildlife and Marine Resources*, New York State Department of Environmental Conservation

TO: Ken Wich, Gordon Colvin, Gregory Sovas, Robert Bathrick, Gil Burns & Regional Supervisors of Natural Resources

SUBJECT: NR 90-1, Policy for the Administration of Conservation Easements

FINAL POLICY

BACKGROUND

Conservation easements are a viable option for use by the State to acquire interests in real property. They are used when a fee purchase is not desired, not feasible, or not negotiable.

Each easement is negotiated between the landowner and the State and subsequently each one is different in its own right. The 1986 Bond Act authorizes the purchase of easements and since its passage has resulted in 40,000 acres plus of conservation/development easements being purchased by the DEC.

POLICY

Natural Resource Supervisors are responsible for the annual inspection of all lands under DEC jurisdiction over which DEC owns an easement. These inspections may be field inspections, aerial inspections or via other means deemed appropriate to record the land use at that point in time. More frequent inspections are authorized as needed.

Immediate local action must be taken on violations and the appropriate program Division Director must be simultaneously notified of the issue.

IMPLEMENTATION

Administrative procedures are attached as a supplement to this policy guideline.

_____

Assistant Commissioner for Fish, Wildlife & Marine Resources

Attachment

E-3

Procedure for the Administration of Conservation and Scenic Easements

1. The Director of the Division of Lands and Forests shall by January 31 of each year notify each landowner, upon whose lands the Department is the grantee of a conservation easement, that the regional staff will be contacting him/her to arrange for an easement inspection.

2. Copy of each notification will direct the Regional Supervisor of Natural Resources or his/her designee to cause an inspection to be performed of each property encumbered by a conservation or scenic easement.

3. Inspections to determine grantor adherence to affirmative rights, grantor compliance with declared restrictions and grantor activities that do not exceed the scope of his/her reserved rights, should generally be carried out by the Forest Ranger within whose district the encumbered property (ies) lie(s). The Regional land manager will provide the ranger with copies of the easement, original inspection with photos, and with the name, address, and phone number of the landowner contact.

4. Properties that are encumbered by easements calling for specific natural resource management activities shall be inspected for compliance by the Regional Forestry/Wildlife Manger or other appropriate person.

   In the case of a tidal wetlands, such inspection shall be performed by a person designated by the Division of Marine Resources.

5. The Regional Supervisor of Natural Resources shall prepare a report which summarizes the results of the easement inspection(s) and shall transmit said report to the Director of the Division of Lands and Forests no later than December 31 of the same year.

APPENDIX F

GRAVEL MINE PERMITS

95-20-6 (1/96)--25c R6 NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

DEC PERMIT NUMBER		EFFECTIVE DATE
FACILITY/PROGRAM NUMBER(s)	**PERMIT** Under the Environmental Conservation Law (ECL)	EXPIRATION DATE

TYPE OF PERMIT (Check All Applicable Boxes)
9 New 9 Renewal 9 Modification 9 Permit to Construct 9 Permit to Operate

[ ] Article 15, Title 5: Protection of Water	[ ] Article 17, Titles 7, 8: SPDES	[ ] Article 27, Title 9; 6NYCRR 373: Hazardous Waste Management
[ ] Article 15, Title 15: Water Supply	[ ] Article 19: Air Pollution Control	[ ] Article 34: Coastal Erosion Management
[ ] Article 15, Title 15: Water Transport	[X] Article 23, Title 27: Mined Land Reclamation	[ ] Articles 1, 3, 17, 19, 27, 37; 6NYCRR 380: Radiation Control
[ ] Article 15, Title 15: Long Island Wells	[ ] Article 24: Freshwater Wetlands	[ ] Other: _____
[ ] Article 15, Title 27: Wild, Scenic and Recreational Rivers	[ ] Article 25: Tidal Wetlands	
[ ] 6NYCRR 608: Water Quality Certification	[ ] Article 27, Title 7; 6NYCRR 360: Solid Waste Management	

PERMIT ISSUED TO New York State Department of Environmental Conservation			TELEPHONE NUMBER (315) 265-3090
ADDRESS OF PERMITTEE 6739 US Hwy. 11, Potsdam, NY 13676			
CONTACT PERSON FOR PERMITTED WORK John Gibbs			TELEPHONE NUMBER (315)265-3090
NAME AND ADDRESS OF PROJECT/FACILITY			
LOCATION OF PROJECT/FACILITY 50 feet West of Lows Lake Road, 1800 feet South of Long Pond Road.			
COUNTY St. Lawrence	TOWN/CITY/VILLAGE Colton (T)	WATERCOURSE/WETLAND NO.	NYTM COORDINATES E:525 . 9 N:4883 . 7

DESCRIPTION OF AUTHORIZED ACTIVITY

The mining of sand and gravel from the lands owned by the permittee. Approved operations involve a total of 0.9 acres of affected land during the permit term. This affected acreage is also the limits of a "major" mining activity, with a life of mine area of 1.2 acres, identified in the approved mined land use plan. The permit provides for mineral processing operations to take place at the site.

By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with the ECL, all applicable regulations, the General Conditions specified (See Page 2) and any Special Conditions included as part of this permit.

PERMIT ADMINISTRATOR	ADDRESS
C. Randy Vaas	317 Washington Street, Watertown, New York 13601-3787

AUTHORIZED SIGNATURE	DATE	
		Page 1 of 4

DCS1:PERMITP1 4/97

95-20-6 (1/96)--25c R6 NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

DEC PERMIT NUMBER		EFFECTIVE DATE
FACILITY/PROGRAM NUMBER(s)	**PERMIT** Under the Environmental Conservation Law (ECL)	EXPIRATION DATE

TYPE OF PERMIT (Check All Applicable Boxes)
9 New 9 Renewal 9 Modification 9 Permit to Construct 9 Permit to Operate

[ ] Article 15, Title 5: Protection of Water	[ ] Article 17, Titles 7, 8: SPDES	[ ] Article 27, Title 9; 6NYCRR 373: Hazardous Waste Management
[ ] Article 15, Title 15: Water Supply	[ ] Article 19: Air Pollution Control	[ ] Article 34: Coastal Erosion Management
[ ] Article 15, Title 15: Water Transport	[X] Article 23, Title 27: Mined Land Reclamation	[ ] Articles 1, 3, 17, 19, 27, 37; 6NYCRR 380: Radiation Control
[ ] Article 15, Title 15: Long Island Wells	[ ] Article 24: Freshwater Wetlands	[ ] Other: _____
[ ] Article 15, Title 27: Wild, Scenic and Recreational Rivers	[ ] Article 25: Tidal Wetlands	
[ ] 6NYCRR 608: Water Quality Certification	[ ] Article 27, Title 7; 6NYCRR 360: Solid Waste Management	

PERMIT ISSUED TO New York State Department of Environmental Conservation	TELEPHONE NUMBER (315) 265-3090
ADDRESS OF PERMITTEE 6739 US Hwy. 11, Potsdam, NY 13676	
CONTACT PERSON FOR PERMITTED WORK John Gibbs	TELEPHONE NUMBER (315)265-3090
NAME AND ADDRESS OF PROJECT/FACILITY	

LOCATION OF PROJECT/FACILITY
50 feet West of Lows Lake Road, 1000 feet South of Little Pine Road.

COUNTY	TOWN/CITY/VILLAGE	WATERCOURSE/WETLAND NO.	NYTM COORDINATES
St. Lawrence	Colton (T)		E:527 . 3 N:4 886 . 1

DESCRIPTION OF AUTHORIZED ACTIVITY

The mining of sand and gravel from the lands owned by the permittee. Approved operations involve a total of 1.4 acres

of affected land during the permit term. This affected acreage is also the limits of a "major" mining activity, with a life of

mine area of 4.0 acres, identified in the approved mined land use plan. The permit provides for mineral processing

operations to take place at the site.

By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with the ECL, all applicable regulations, the General Conditions specified (See Page 2) and any Special Conditions included as part of this permit.

PERMIT ADMINISTRATOR	ADDRESS
C. Randy Vaas	317 Washington Street, Watertown, New York 13601-3787

APPENDIX G

DESCRIPTIONS OF PRIMITIVE AREAS FROM THE MASTER PLAN

APPENDIX G

DESCRIPTIONS OF PRIMITIVE AREAS FROM THE MASTER PLAN

Hitchins Pond Primitive Area

This area lies in the Towns of Piercefield and Colton, St Lawrence County. It includes Lows Upper and Lower Dams and the intervening waters, and adjacent state lands to the southern edge of Otter Brook Road on the north, the western edge of the extension of NYS Route 421 to the Otter Brook Road on the east, the western edge of the road to Lows Lower Dam on the southeast, and to a distance of 1,000 feet south from the Bog River and the railroad tracks. This area encompasses the eastern access to a wilderness canoe route which leads from the Bog River at Lows Lower Dam through Hitchins Pond past Lows Upper Dam and across Lows Lake to the western shore in the Five Ponds Wilderness. The route is then connected by a carry to the upper reaches of the Oswegatchie River. The Primitive area contains extensive wetlands adjacent to the Bog River and Hitchins Pond and important wildlife habitat, including nesting loons, eagle and osprey habitat. Preservation of the wild character of this canoe route, through the HPPA, without motorboat or floatplane usage (and with only limited access by motor vehicles as noted below) is the primary management goal for this Primitive area.

The area is classified Primitive because of the essentially permanent nature of certain major non- conforming uses which preclude Wilderness classification, including two large dams and the Remsen- Lake Placid railroad line.

The two large dams, referred to as Lows Upper Dam and Lows Lower Dam, are of a scale and character incompatible with Wilderness designation. The dams are essential to preserving the canoe route and important wetland habitat and should be maintained for that purpose indefinitely. Maintenance of the dams will require periodic use of motor vehicles and heavy equipment, such as bulldozers and cranes, which means that the existing road to the Upper Dam must also be maintained for administrative purposes. The road to the Upper Dam will be gated at the eastern edge of the Primitive area. The owners of the large inholding lying between the Lows Lake Primitive Area and the Five Ponds Wilderness will be allowed to exercise their deeded access rights until such time as that inholding may be acquired by the state (see Lows Lake Primitive Area). While such private motor vehicle access continues, administrative access by motor vehicles by the state will be permitted as may be necessary for appropriate administration of the state lands in the area. After such private rights of access are extinguished, administrative access by motor vehicles will be limited to dam inspection and repair.

In addition to the dams and the road, the area is bisected by the Remsen- Lake Placid railroad line which is currently used for limited rail or usage as a winter snowmobile trail. This rail travel corridor, unless permanently abandoned and the rails removed, would also preclude Wilderness classification for this area even if the dams were not there. The area is, therefore, considered to be an essentially permanent Primitive area unlikely to be reclassified as Wilderness.

Lows Lake Primitive Area

This area is located in the Town of Colton, St. Lawrence County. It is bounded on the east by the road to Lows upper dam and the upstream edge of the dam, on the south by Bog River Flow, and the west and north by private land.

This area is an integral part of the Lows Lake - Bog River - Oswegatchie wilderness canoe route, and continues the water access to the wester portion of the Five Ponds Wilderness Area which begins in the Hitchins Pond Primitive Area immediately downstream. The area shares numerous important wildlife habitats with the Five Ponds Wilderness Area which begins in the Hitchins Pond Primitive Area immediately downstream. The area shares numerous important wildlife habitats with the Five Ponds to the west and the Hitchins Pond Primitive Area to the east. Preservation of the wild character of this canoe route without motorboat or airplane usage (and with only limited access by motor vehicles as noted below) is the primary management goal for this primitive area.

The area is classified as primitive in part because of its relatively small size but especially due to the impact of a large inholding of private land on the north shore, which separates the area from the Five Ponds Wilderness. A road providing

deeded access to this inholding also runs through this primitive area. If this inholding should be acquired by the State (which should be given highest priority), the road will be closed, and the intervening area classified as wilderness, and this primitive area will then become part of the expanded Five Ponds Wilderness Area.

In addition there are two detached areas located in the Town of Colton, St. Lawrence County and the Town of Long Lake, Hamilton County consisting of private rights-of-way. The first is 1.6 miles in length and provides access (the legal nature of which is unclear) to a five-acre inholding on the north shore of Lows Lake. This primitive corridor and the inholding are surrounded by the Five Ponds Wilderness Area. Should the inholding be acquired (which should be given he highest priority) or the access rights extinguished, the area will become part of the Five Ponds Wilderness Area.

The second detached area is 1.3 miles in length and is a retained deeded right of access across lots 12 and 13, Township 37, Totten and Crossfield's Purchase to private lands north of Bog Lake. Should the private land served by this access be acquired or the deeded rights otherwise extinguished, the area will become part of the Five Ponds Wilderness Area.

APPENDIX H

PUBLIC COMMENTS RESPONSIVENESS SUMMARY

APPENDIX H
Public Comments

The following information represents answers to specific comments from all forms of public communication pertaining to this draft plan that need further clarification beyond that which could be incorporated into the text.

Land Purchase

Comment: Prefers Alternative D relative to the floatplane/motorboat use issue which states purchase of inholding properties in accordance with "open space" policies.

Reply: At this time, riparian owners are not willing to sell their land holdings to the state.

Floatplane/Motorboat Use

Comment: Floatplane ban is in direct conflict with Mgt. Principle #4 Human use and Enjoyment.

Reply: This management principle specifies human use and enjoyment of these lands should be permitted and encouraged so long as all aspects of resources are not degraded. The State Land Master Plan defines the overall management goal for the Lows Lake Primitive Area as preservation of the canoe route without motorboat or floatplane usage. The primary goal must be maintained.

Comment: The Department should perform more research on Lows Lake concerning motorboats and floatplanes before a decision is rendered.

Reply: The State Land Master Plan established preservation of the wild character of this canoe route without motorized usage as the primary management goal for the Primitive Areas. The Department understands most of Lows Lake is not within the Primitive Areas but for purposes of consistency has chosen to ban motorboats and phase out floatplanes.

Comment: Floatplane ban discriminates against people with disabilities.

Reply: This option does not discriminate against any one group of people. All individuals, except riparian owners, will be denied the opportunity to use motorboats and floatplanes.

Comment: Many letters were in support of an immediate ban on floatplane use on Lows Lake once the UMP is finalized.

Reply: The Master Plan (p27) states non-conforming uses resulting from newly classified primitive areas will be removed as rapidly as possible and in any case by the end of the third year following classification. Users of floatplanes will have sufficient time to adjust to a total ban. During the three year period, the Department will review potential lakes and make recommendations where floatplanes may be used elsewhere.

Comment: Individual felt the Department might bow to groups favoring motorized use for financial/ economic gains.

Reply: The Department has not changed its decisions stated in the draft plan concerning proposed bans on motorized use.

Comment: Many responses from floatplane operators or users of floatplanes who are in disagreement with the Departments recommendation to ban floatplanes/ motorized uses.

Reply: The Departments recommendation to ban floatplanes and motorized uses is in direct response to language in the State Land Master Plan that states preservation of the wild character of the Primitive areas without motorized uses as the primary management goal.

Comment: Boy Scout organization on Lows Lake should reconsider their motorboat policy use on Lows Lake.

Reply: The Boy Scouts have riparian rights and therefore the right to use motorboats. They believe their use of motorboats is minimal but necessary.

Comment: Additional reasons not to impose restriction of floatplanes included needs such as Search and Rescue, Fires, and Campsite cleanup.

Reply: In the event of an emergency, Forest Rangers have the authority to use such resources and the Department has the authority to use aircraft on a limited basis for maintenance purposes.

Comment: Objects to floatplane operators taking over campsites for extended periods.

Reply: Floatplane operators have the right to request a permit to stay at a campsite over three nights as with all other recreationist using the same area. Storage of personal items on campsites between periods of occupancy is illegal. Specific complaints will be referred to Law Enforcement

Comment: Some individuals commented that motorized equipment, including floatplanes, should not be allowed on Lows Lake because it is a Wilderness area.

Reply: Currently, the main portion of Lows Lake is not classified Wilderness.

Comment: Allow floatplanes on Lows Lake but restrict to portions of lake and/or to specific times of the year.

Reply: This option was considered but the Department feels that adopting any such proposal would not reduce user conflicts and complicate enforcement.

Comment: Restrict size and types of outboard motors on Lows Lake.

Reply: This option was considered by the Department. Compliance on outboard restrictions would be difficult to be enforced by the Department. For consistency, the Department feels that all of Lows Lake should be included in the ban.

Comment: A task force should be formed to consider options with the floatplane/ motorboat issue.

Reply: The Department feels this will not produce a preferred alternative than is currently recommended, and that the phase in period and effort to locate alternative float plane only lakes will help ease the economic impact to the commercial floatplane pilots.

Snowmobiles

Comment: Supports trail Option A in the snowmobile plan

Reply: This snowmobile trail route would follow an existing road system on The Nature Conservancy's Round Lake parcel. The Nature Conservancy would have to approve this route. Although this route would require the least amount of new trail on Forest Preserve, it would not be consistent with the draft goals of the Adirondack Park Comprehensive Snowmobile Planning process.

Comment: Supports trail Option B in the snowmobile plan

Reply: This snowmobile route represents approximately 6 miles of new trail that will have to be constructed on Wild Forest and Nature Conservancy lands near State Highway 30. This alternative is most consistent with the draft goals of the Adirondack Park Comprehensive Snowmobile Planning process by limiting interior trails.

Comment: Do not use Option A in the snowmobile section due to eminent state purchase and therefore placing the trail on

unclassified lands.

Reply: If Alternative A is deemed the preferred snowmobile trail route, no trail will be constructed before classification of land under eminent purchase for Forest Preserve.

Comment: Keep snowmobile trail use close to main roads.

Reply: Alternative B is one alternative trail system that is close to SH 30 and 421.

Comment: The Bog River plan should discuss snowmobile trespass on state and private lands.

Reply: As with any recreational uses, trespass issues may surface. The Department will investigate violations when they are brought to our attention and cooperate with local police. This issue should be addressed in the Comprehensive Snowmobile Plan.

Comment: Snowmobile trail terminology is incorrect in plan. This trail should not be on state land at all.

Reply: The draft vision and goals of the Adirondack Park Comprehensive Snowmobile Planning process do state that corridor trail systems should be on non-state lands where possible. There is no alternative trail system in this instance that the Department could propose that would exist on private lands only.

Comment: APA should increase trail mileage for snowmobile routes for development of plans.

Reply: This comment has to be addressed in the State Land Master Plan.

Comment: That DEC is purposely allowing for "segmentation" of an environmental review process by approving only a portion of the proposed snowmobile connection between Long Lake and the Remsen- Lake Placid corridor.

Reply: This section of trail has to be discussed in the plan. As the UMP states, no construction of a new snowmobile trail will take place until the APA approves the whole route.

Comment: Research on snowmobile use shows that it can cause significant adverse impacts to the public and to fish and wildlife.

Reply: The EPA banned all lead in automobile gasoline in late 1995. This fact, combined with the newer technology, means engines burn cleaner lessening traditional impacts from this source. All newer 2 cycle engines used in snowmobiles today use oil injection rather than the "old mix". The increase in efficiency translates to a substantial reduction in unburned hydrocarbons released via exhaust. Research on snowmobile engine technology is ongoing and less pollution from these engines will result from improved technology. Data from research in other states has shown that snowmobile emissions may be a problem at heavy use locations. New York is focusing on a snowmobile plan to develop an extensive trail system that disperses use and has multi-access points thereby eliminating "concentrated" locations. Also trail systems are usually located away from lakes and ponds, thereby limiting site specific pollutants to fish. Either alternative proposed for the corridor snowmobile trail would cross the Bog River where deer wintering areas exist. The core deer wintering area is along the Bog River corridor where thick cover protects the deer form harsh weather conditions. Either alternative crosses the Bog River corridor for a short distance but does not parallel it. The Department believes adverse impacts to wintering deer populations will not result from placement of the trail in either location. The Department is also recommending placement of signs to slow snowmobile traffic in core deer wintering areas.

Comment: The Sabattis Road should be reconsidered for snowmobile trail option in plan.

Reply: The Sabattis Road cannot be closed off to allow only snowmobile use during the winter months due to several year around residences on the road. Topography and the presence of wetlands also prevent the use of lands adjacent to the

road. The decision to allow the use of the Sabattis Road is beyond the Departments control.

Carrying Capacity

Comment: The carrying capacity of plan, needs to be examined in further detail! The department may need to recommend more parking lots, campsites etc.

Reply: The Department has recommended construction of additional parking lots, most notably at the Lower Dam, and at all new trailheads. Photographs will be taken at Primitive Area campsites to document potential deterioration of campsite areas such as loss of vegetation. The Department is recommending additional facilities and believes there will not be significant environmental impacts from increased recreational use of these facilities. New parking lots are intended to alleviate existing safety problems associated with parking in poor locations.

Comment: UMP is contrary to carrying capacity concepts as ban on floatplane use will lead to increase in canoe use and associated impacts.

Reply: The Department recognizes that recreational use will continue to increase on this popular canoe route and therefore impacts associated with those uses will also increase. The Department will monitor campsite, wildlife, and other associated natural resource impacts.

Wildlife

Comment: The loon population and other wildlife species are experiencing declines due to all user groups.

Reply: No research to date has proven that loons have declined on this unit at all, let alone due to any specific user group including floatplanes and motorized boats. Water fluctuations on impoundments may inhibit loon nesting success and so cause some annual fluctuation. Observations from DEC staff and others indicate eagles may be preying on both adult and young loons. Additional cooperators, including the Adirondack Cooperative Loon Program, will be contacted for additional help.

Comment: More information is needed for wildlife species

Reply: To date, recovery plans have not been formalized for species listed as endangered that migrate or breed within the unit. As new information becomes available, the Department will recommend recovery programs. The breeding bird surveys are presently an ongoing statewide project. Other studies on wildlife populations lack funding at this time and have historically not been funded on a unit basis.

Tupper Lake

Comment: Individual wants to see more campsites on Tupper Lake.

Reply: The Department will designate additional campsites on Tupper Lake to provide site for those traveling the Raquette River canoe route.

Comment: Need to address the old lean-to on the north shore of Tupper Lake that is located on state land.

Reply: The property that the lean-to is presently on is not state land.

Comment: The boat launch site on Tupper Lake is in need of repair.

Reply: Repair of the TL Boat Launch site began in the fall of 2001 after all environmental permits were obtained. Repair on this site is expected to be completed by July 2002.

Other Issues

Comment: Money is not being spent equally for all recreational uses in this plan.

Reply: The majority of the money is allocated to facilities which provide access and benefits to all recreational users.

Comment: Opposes proposal for construction of lean-tos close to roads.

Reply: Lean-tos are proposed at two locations. The minimum distance from a road for either lean-to is approximately 1 mile. The Department feels this is an adequate distance to prevent vandalism that might occur to a lean-to adjacent to a main road.

Comment: Draft plan hearings need to be held outside the Adirondack Region.

Reply: Where feasible, additional meetings may be held outside the general location of the proposed management plan. One was held in Albany on November 13 th for the Bog River Unit.

Comment: The Department should stop personal storage of boats on state land.

Reply: The Department has stressed in the Bog River plan that storage of boats on state land is illegal, and law enforcement will pursue the violations.

Comment: The Adirondack State Land Master Plan is not law.

Reply: The classification system and guidelines set forth in the Master Plan are designed to guide the preservation and use of these lands by all state agencies now and in the future. The legislative mandate of the Adirondack Park Agency was originally contained in Section 807 of the Adirondack Park Agency Act.

Comment: Suggest that the Department mark “carry routes”around rapids on the Bog River down river of the Lower Dam.

Reply: Due to the Master Plan requirements and lack of use information presently, the Department will not recommend carry routes on this river section.

Comment: The Department should allow bicycle use on the Upper Dam Road and other trail systems.

Reply: The Department will allow bicycle use on the Upper Dam Road.

Comment: Need better interpretation of the history of the former Lows estate.

Reply: The Department has recommend additional interpretation that is in compliance with the Master Plan.

Comment: Open fires should be prohibited on the Bog River and Lows Lake campsites.

Reply: The Department does not feel a general ban is necessary at this time, though the assessment and monitoring of campsites called for in the plan is intended to identify when significant problems or impacts arise from various public use activities. The Department does prohibit open fires when fire danger is extreme.

Comment: Place the old Grass River Railroad “spur” in the plan and designate it a cross country/ hiking trail. This old “spur” line is located near the Massawepie Four Corners and is entirely on easement lands.

Reply: The Department is recommending placement of this old “spur” trail in the final Bog River plan. A portion of the trail will be recommended for approval in the revision of the Cranberry Lake Wild Forest plan.

Comment: The Friends of Mt Arab would like to designate an interpretive trail near the summit of Mt Arab.

Reply: The Department has recommended an interpretive trail on the summit of Mt Arab in this plan. The State Land Master Plan does not prohibit interpretive trails on lands classified Wild Forest.

APPENDIX I

POSITIVE DECLARATION

POSITIVE DECLARATION

NOTICE OF INTENT TO PREPARE A DRAFT EIS
DETERMINATION OF SIGNIFICANCE

POSITIVE DECLARATION

St. Lawrence County, Hamilton County, Franklin County-The New York State Department of Environmental Conservation, as lead agency has determined that management actions proposed in the Bog River Management Complex, Horseshoe Lake Wild Forest, Lows Lake Primitive Area, Hitchins Pond Primitive Area and Conifer Easement Lands may have significant adverse impacts on the environment and a Primitive Area and Conifer Easement Lands may have significant adverse impacts on the environment and a draft Environmental Impact Statement must be prepared. Proposed actions may include, construction of recreational trails which may require crossing wetlands, construction of additional campsites and parking lots and restriction of floatplane use on portions of the unit. Possible adverse impacts from implementation of the Unit Management Plan may include temporary minor erosion; temporary increased siltation and stream bottom disturbance, increased recreational usage in certain areas and minor noise impacts during the construction new facilities within the unit. The project is located in St. Lawrence County, Towns of Colton, Piercefield; Hamilton County, Town of Long Lake and Franklin County, Town of Altamont.

Contact:

Stewart Brown
NYS Department of Environmental Conservation
6739 US Hwy. 11
Potsdam, NY 13676
Phone: (315)265-3090

APPENDIX J

ADIRONDACK PARK COMPREHENSIVE SNOWMOBILE PLANNING VISIONS AND GOALS

NEW YORK STATE
DEPARTMENT OF

ENVIRONMENTAL
CONSERVATION

FACT SHEET

Comprehensive Snowmobile Plan for the Adirondack Park

February, 2001

New York State Agency Contacts:

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Victor Wood, Snowmobile Program Coordinator, Bureau of Marine and Recreational Vehicles, OPRHP, Agency Building 1, ESP
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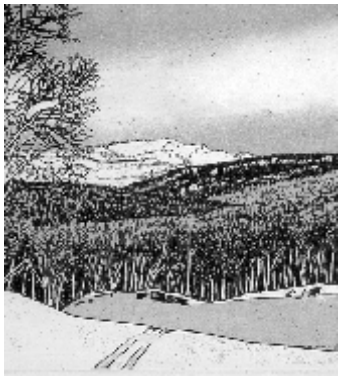


Comprehensive Park-Wide Snowmobiling Planning Underway

• • •

A partnership has been formed between the New York State Department of Environmental Conservation (DEC) the State Office of Parks, Recreation and Historic Preservation (OPRHP) and the Adirondack Park Agency (APA) to develop a comprehensive snowmobile plan for the Adirondack Park which recognizes the importance of snowmobiling to communities within the Adirondack Park and the need to create a manageable system to protect the Park and the State Constitution.

What is the Goal for this Planned Effort?

To develop and maintain an integrated snowmobile trail system on public and, increasingly, on private land in the Adirondack Park that will provide snowmobilers with an experience that is consistent with the spirit and letter of Article XIV of the State Constitution while also striving to enhance the economic vitality of the Park's citizens by providing trail linkages between local communities within the Park.

What is Happening Right Now?

28. The network of existing snowmobile trails in the Adirondack Park is being identified.

29. Existing laws, regulations, authorities, policies and related guidelines governing the use and management of snowmobiles in the Adirondack Park are being identified.

3. Public Information Sessions and other appropriate public involvement activities are being conducted to identify issues/ideas/concerns related to snowmobiles in the Adirondack Park.

What the Plan Hopes to Achieve: Planning Goals

- **Supplement and amend the (ORPHP) Statewide Snowmobiles Trails Plan as it relates to the Adirondack Park.**
- **Provide intelligent and resource protective trail system planning in an overall way rather than dealing with each trail segment individually.**
- **Develop a community connection system that would: connect major points of interest; connect the trail systems from outside the Adirondacks; focus corridor trail system on non-state lands; encourage long term commitment of corridor trail systems on private lands; utilize to the maximum extent possible routes parallel and near to travel/transportation corridors for new trail development; consider underutilized trails for abandonment; and recognize the importance of minimizing the dependency on lake and road crossings and otherwise avoiding unsafe trail conditions.**
- **Protect natural and cultural resources and the character of the Adirondacks.**
- **Protect the principles of Article XIV of the State Constitution.**
- **Develop a secondary trails system that would be linked to the corridor system and connect to necessary support services (gas, food, lodging, maintenance, trailheads, etc.).**
- **Promote tourism and economic opportunities for the local communities.**
- **Provide an appropriate and enjoyable snowmobile experience.**
- **Encourage partnerships with the private sector, not-for-profit organizations, state and local governments that will provide, maintain and operate snowmobile trails.**
- **Establish a clear set of standards for snowmobile trails and snowmobile related activities consistent with the State Land Master Plan and applicable DEC policies and regulations.**

A Draft Comprehensive Snowmobile Plan will include the following Information:

1. **Executive Summary**
2. **Review of Action, Planning Process and Involved Public and Agencies**
3. **Outline of Planning and Environmental Review process and relationship to other plans**
4. **Overview of Environmental Setting (Area Description/Inventory of Trails)**
5. **Vision and Goals for Plan**
6. **Analysis of Issues and Alternatives**
7. **Compliance and Enforcement**
8. **Proposed Management**
9. **Recommendations (Trail System/ Standards for Construction, Maintenance and Grooming)**
10. **Environmental Review**
11. **Proposed Schedule for Implementation and Budgeting**

The Plan will be developed in cooperation with local government officials, recreationists, environmental interests, the snowmobiling community, private landowners and the public.

COMPREHENSIVE SNOWMOBILE PLANNING PUBLIC INFORMATION INVITATION

Monday, February 26 *- Town of Webb Park Avenue Offices (Gymnasium) in Old Forge, Herkimer County, 4-7 p.m., (315) 369-3121*

Thursday, March 8 *- Colton Pierpont High School, Colton, St. Lawrence County, 4-7 p.m., (315) 262-2100*

Wednesday, March 14 *- Town of Queensbury Town Hall, Glens Falls, Warren County, 4-7 p.m., (518) 761-8224*

Thursday, March 15 *- Sanford Library/Town of Colonie Library, Albany County, 3-6 p.m., (518) 485-9274*

Monday, March 19 *- Rochester Museum & Science Center (Auditorium), Rochester, 4-7 p.m., (716) 755-7997; and*

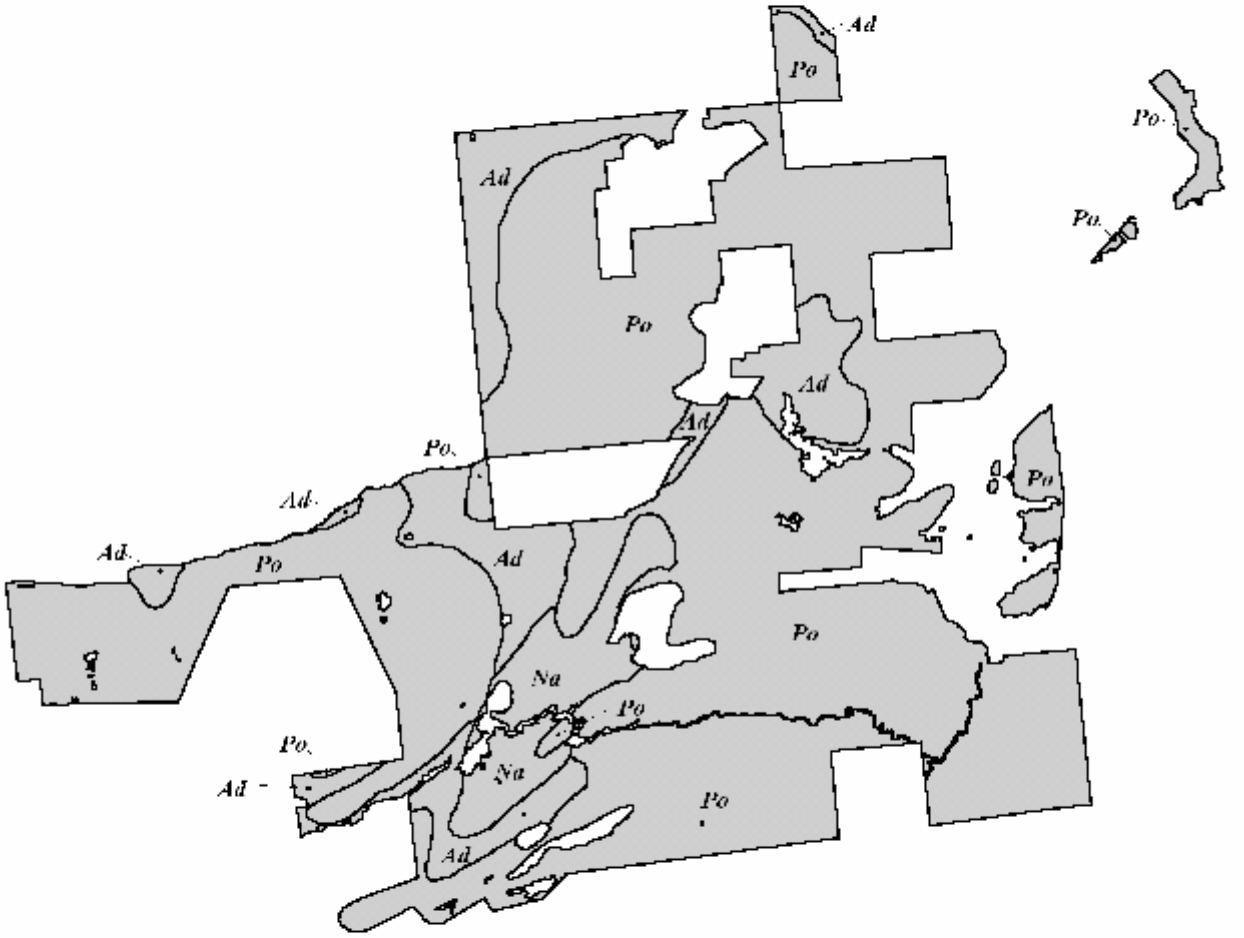
Tuesday, March 20 *- Raddison Hotel (Ball Room), Utica,*

In addition to these sessions, information about this effort will be presented at the Association of Towns Annual Meeting in New York City, during a presentation scheduled to take place on Tuesday, February 20 at 2 p.m. at the Hilton Hotel. There will also be a presentation at "Local Government Day," scheduled for March 23 at the Hotel Saranac in Saranac Lake, Essex County

APPENDIX K

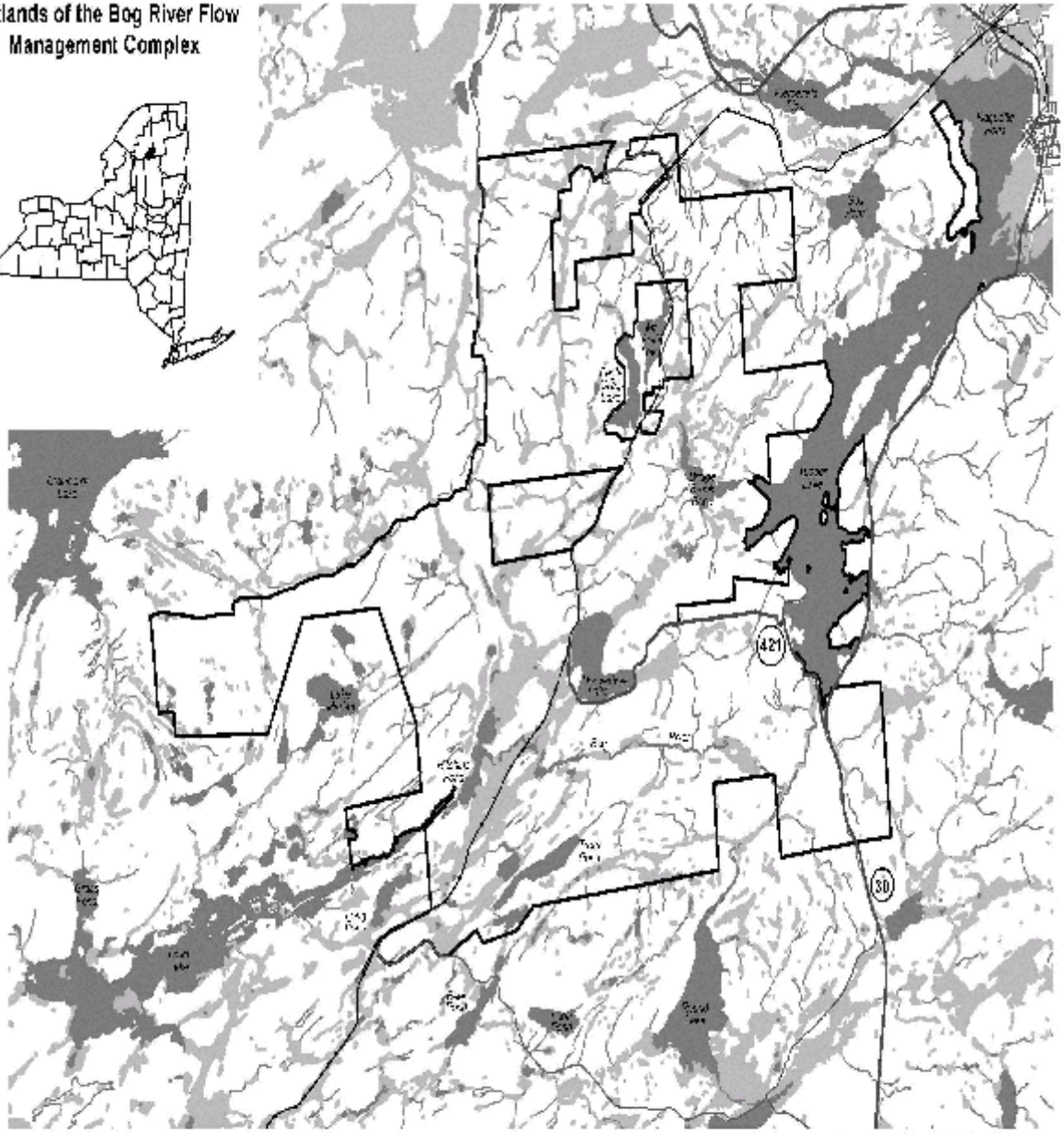
SOILS - MAP OF UNIT

SOIL TYPES OF THE UNIT



APPENDIX L
REGULATED WETLANDS MAP AND COVER TYPE CHART

Wetlands of the Bog River Flow Management Complex



Major Road
Minor Road
Railroad
Stream/River

Bog River Complex Boundary
Wetland
Pond/Lake

N

0 1 2 3 Kilometers
0 1 2 3 Miles
1:22000

Adirondack Park Agency 2002

Wetlands of the Bog River Flow Management Complex

Cover type	Common species	Number of wetlands	Acres	Hectares
AB3 - rooted vascular aquatic bed	submerged aquatic vegetation	1	2.46	1.00
EM1-persistent leaved emergent	cattails, grasses, sedges	113	346.24	140.12
FO1-forested broad-leaved deciduous	red maple, silver maple, black/green ash	21	20.52	8.30
FO4-forested needle-leaved evergreen	balsam fir, red and black spruce	386	1477.77	598.04
FO5-forested dead	standing dead trees	34	80.86	32.72
OW-open water	pondweed, milfoil, eelgrass, or no vegetation	242	1427.91	577.86
SS1-scrub shrub broad-leaved deciduous	speckled alder, willow	216	1058.34	428.30
SS3-scrub shrub broad-leaved evergreen	leatherleaf	52	595.34	240.93
SS4-scrub shrub needle-leaved evergreen	stunted or young black spruce or balsam fir	120	332.08	134.39

The most common cover types, based on area and also number of wetlands, are SS1 and FO4. The SS1 wetlands mostly occur along river courses. Large SS3 (leatherleaf dominated peatlands) areas can be seen on the north end and southeastern shore of Hitchins Pond. These SS3 areas may serve as important habitat connections with the large peatlands to the north around Massawepie Lake and those to the south by Round Lake, for species such as the spruce grouse, three-toed woodpecker, black-backed woodpecker, boreal chickadee, and palm warbler.

APPENDIX M

CAMPSITE MONITORING MANUAL

MONITORING FORM A

1)Old Site Number:_____ 1a) New Site Number_____

2) Inventoried By:_____ 3)Date:____/____/____

INVENTORY PARAMETERS

4) Substrate of site area: (B=bedrock C=cobble S=sand O=soil) _____
5) Number of Other Recreational Sites Visible: _____
6) Fire Ring Present: (y or n) _____
Construction:(stone or metal) _____
Condition: (1=good, 2=poor, 3=replace) _____
7) Privy Present:(y or n) _____
Condition: (1= good, 2=poor, 3=replace) _____
8) Picnic Table Present: (y or n) _____
Condition: (1=good, 2=poor, 3=replace) _____
9) Tree Canopy Cover:(1=0-25%,2=26-50%,3=51-75%,4=76-100%) _____

IMPACT PARAMETERS (Begin with Site Boundary Determination)

10) Condition Class: (3,4 or 5) _____
11) Vegetative Ground Cover Onsite:(Use categories below) _____
(1=0-5%, 2=6-25%, 4=51-75% 5=76-95%, 6=96-100%)
12) Vegetative Ground Cover Offsite:(Use categories above) _____
13) Soil exposure: (use categories above) _____
14) Tree Damage: None/Slight____, Moderate____, Severe_____
15) Root Exposure: None/Slight____, Moderate_____, Severe_____
16) Number of Tree Stumps: _____
17) Number of Trails: _____
18) Number of Fire Sites: _____
19) Litter/Trash: (N=None, S=Some, M=Much) _____
20) Human Waste: (N=none, S=Some, M=Much) _____
21)Comments/Recommendations:_____
_____
_____
22) Take Center point and Site Photographs:

<u>Site Center point References</u>

1)
2)
3)
4)

<u>Satellite Site Dimensions</u>

<u>Island Site Dimensions</u>

Site area from Program:_____
+Satellite Area _____

-Island Area _____=
Total Site Area _____(sq ft)

Transect Data
AzimuthDistance (ft)

1)
2)
3)
4)
5)
6)
7)
8)
9)
10)
11)
12)
13)
14)
15)
16)
17)
18)
19)
20)
21)
22)
23)
24)
25)

MONITORING FORM B

1)Old Site Number:_____ 1a) New Site Number:_____

2)Fire Ring Present:_____ Condition:_____.

3) Privy Present:_____ Condition:_____

4) Picnic Table Present:_____ Condition:_____

5) Condition Class (1 or 2)_____ Site Size:_____(ft^2)

DESIGNATED CAMPSITE MONITORING MANUAL

DESCRIPTION OF PROCEDURES
FEBRUARY 2001

For the purpose of this manual, designated campsites are defined as those areas either designated by the Department with a yellow DEC designated campsite marker, or shown on an area brochure. In areas with multiple sites there may not always be undisturbed areas separating sites, and an arbitrary decision may be necessary to define separate sites. For each site, monitoring begins with an assessment of Condition Class:

CONDITION CLASS DEFINITIONS

Class 1: Recreation site barely distinguishable; slight loss of vegetation cover and/ or minimal disturbance of organic litter.
Class 2: Recreation site obvious; vegetation cover lost and/ or organic litter pulverized in primary use area.
Class 3: Vegetation cover lost and/ or organic litter pulverized on much of the site, some bare soil exposed in primary use areas.
Class 4: Nearly complete or total loss of vegetation cover and organic litter, bare soil widespread.
Class 5: Soil erosion obvious, as indicated by exposed tree roots and rocks and/or gullying.

For sites rated Condition Class 1 or 2, complete Form B; for sites rated Class 3, 4 or 5, complete Form A. Form B is an abbreviated version of Form A and greatly reduces the amount of field time. The rationale for this approach is that detailed information on lightly impacted sites is not as critical to management.

During subsequent surveys an attempt should be made to relocate and reassess all sites from the proceeding survey. Former designated sites that have been closed, and are still being used, should be noted as illegal sites. Always note information regarding the history of site use under the comment parameter.

Materials:
Compass, peephole or mirror type(not corrected for declination)
GPS data recorder (GPS point will be taken at each sites center point)
Tape measure, 100-foot (marked in tenths)
Flagged wire pins (25 min), one large steel center point stake.
Digital camera
Clipboard, pencil, field forms, field procedures
Steel nails (5 inch)

Form A Procedures

Inventory Parameters

1. Site Number: All sites will be assigned an old site number as well as a new site number. Old site numbers will use the existing site numbering system, while new site numbers will be assigned following completion of the mapping of all sites.
2. Inventoried By: List the names of field personnel involved in data collection.
3. Date: Month, day and year the site was evaluated (e.g., June 12, 1999 = 06/12/99)
4. Substrate of site area: Record the predominant substrate for the area of human disturbance for each site using the coded categories below.
B=bedrock - shelf bedrock
C=cobble - includes gravel size stone and up
S=sand - includes sandy soils that do not form a surface crust in trampled areas
O=soil - includes clays to loamy sands
5. Number of other sites visible: Record the number of other campsites, which if occupied, would be visible from this site.
6. Fire ring : if present or not (y or n)
   a. Construction: stone/ masonry or metal
   b. Condition: good=intact, functional for cooking
      Poor= missing stones, broken , not functional for cooking but will contain open fire.
7. Privy: if present or not (y or n)

a. Condition: good= functional, has door, wood not deteriorated(would you use it?)
Poor= nonfunctional, door missing, wood rotten,

8. Picnic table: if present or not (y or n)
a. Condition: good= usable, no broken boards, table is solid
Poor=not usable, broken/rotten boards, not sturdy

9. Tree canopy cover: Estimate the percentage of tree canopy cover directly over the campsite.
1=0-25%, 2=26-50%, 3=51-75%, 4=76-100%

Impact Parameters

The first step is to establish the sites boundaries and measure its size. The following procedures describe use of the variable radial transect method for determining the sizes of recreational sites. This is accomplished by measuring the lengths of linear transects from a permanently defined center point to the recreation site boundary.

Step 1. Identify Recreation Site Boundaries and Flag Transect Endpoints. Walk the recreation site boundary and place flagged wire pins at locations which, when connected with straight lines, will define a polygon whose area approximates the recreation site area. Use as few pins as necessary, typical sites can be adequately flagged with 10-15 pins. Look both directions along site boundaries as you place the flags and try to balance areas of the site that fall outside the lines with offsite(undisturbed) areas that fall inside the lines. Pins do not have to be placed on the site boundaries, as demonstrated in the diagram following these procedures. Project site boundaries straight across areas where trails enter the site. Identify site boundaries by pronounced changes in vegetation cover, vegetation height/disturbance, vegetation composition, surface organic litter, and topography. Many sites with dense forest over stories will have very little vegetation and it will be necessary to identify boundaries by examining changes in organic litter, i.e. leaves that are untrampled and intact versus leaves that are pulverized or absent. In defining the site boundaries, be careful to include only those areas that appear to have been disturbed from human trampling. Natural factors such as dense shade and flooding can create areas lacking vegetative cover. Do not include these areas if they appear "natural" to you. When in doubt, it may also be helpful to speculate on which areas typical visitors might use based on factors such as slope or rockiness**.**

Step 2. Select and Reference Site Center point. Select a site center point that is preferably a) visible from all site boundary pins, b) easily referenced by distinctive permanent features such as larger trees or boulders, and c) approximately 5 feet from a steel fire ring if present. Embed a 5 inch nail in the soil at the center point location so that the head is 3-4 inches below the surface. During future sight assessments a magnetic pin locator can be used to locate the center point. Next, insert a large steel stake at the center point and reference it to at least three features. Try to select reference features in three opposing directions, as this will enable future workers to triangulate the center point location. For each feature, take a compass azimuth reading and measure the distance (nearest 1/10 foot) from the center point to the center of trees or the highest point of boulders. Also measure the approximate diameter of reference trees at 4.5 feet above ground (dbh). Be extremely careful in taking these azimuths and measurements, as they are critical to relocating the center point in the future. Record this information on the back of the form.

Take a digital photograph that clearly shows the center point location in relation to nearby trees or other reference features, such as the fire ring, trees or boulders. Record a photo description, such as" center point location site 23 ", in the photo log.
Options: Some sites may lack the necessary permanent reference features enabling the center point to be accurately relocated. If only one or two permanent reference features are available, use these and take additional photographs from several angles. If permanent features are unavailable, simply proceed with the remaining steps without permanently referencing the center point. This option will introduce more error in comparisons with future measurements, particularly if the site boundaries are not pronounced. Note your actions regarding use of these options in the comment section.

Step 3. Record Transect Azimuths and Lengths. Standing directly over the center point, identify and record the compass bearing(azimuth) of each site boundary pin working in a clockwise direction, starting with the first pin clockwise of north. Be careful not to miss any pins hidden behind vegetation or trees. Be extremely careful in identifying the correct compass bearings to these pins as error in these bearings will bias current and **future** measurements of site size. Next, anchor the end of your tape to the center point stake, measure and record the length of each transect(nearest 1/10 foot), starting with the same boundary pin and in the same clockwise direction as before. Be absolutely certain that the appropriate pin distances are recorded adjacent to their respective compass bearing.

Step 4. Measure island and satellite areas. Identify any undisturbed islands of vegetation inside the site boundaries (often due to the clumping of trees and shrubs) and disturbed satellite use areas outside the site boundaries (often due to tent sites or cooking sites). Use site boundary definitions for determining the boundaries

of these areas. Use the geographic figure method to determine the areas of these islands and satellites (refer to the diagrams following these procedures). This method involves superimposing one or more imaginary geometric figures (rectangles, circles or right triangles) on island or satellite boundaries and measuring appropriate dimensions to calculate their areas. Record the types of figures used and their dimensions on the back of the form; the size of these areas should be computed in the office using a calculator.

Site Remeasurement: During site remeasurement use the data from the last monitoring period to reestablish the center point and all site boundary pins. If steel nails were embedded in the ground, a magnetic pin locator can assist in this process. Place flagged wire pins at each transect boundary point. Boundary locations based on the following procedures:

12. Keep the same transect length if that length still seems appropriate, i.e., there is no compelling reason to alter the initial boundary determination.
13. Record a new transect length if the prior length is inappropriate ,i.e., there is compelling evidence that the present boundary does not coincide with the pin and the pin should be relocated either closer to or further away from the center point along the prescribed compass bearing. Use different colored flags to distinguish these current boundary points from the former boundaries.
14. Repeat steps 1 and 3 from above to establish additional transects where necessary to accommodate any changes in the shape of recreation site boundaries (diagram below). Also repeat step 4.
15. Leave all pins in place until all procedures are completed. Pins identifying the former site boundaries are necessary for tree damage and root exposure assessments.

These additional procedures are designed to eliminate much of the measurement error associated with different individuals making subjective judgements on those sites or portions of sites where boundaries are not pronounced. These procedures may only be used for sites whose center points can be relocated.

10. Condition class: Record the condition class you assessed for the site using the categories described earlier.
11. Vegetative ground cover on site: An estimate of the percentage of live non-woody vegetative ground cover (including herbs, grasses, and mosses and excluding tree seedlings, saplings, and shrubs) within the flagged campsite boundary using the coded categories listed next. Include any disturbed satellite use areas and exclude any undisturbed Island areas of vegetation. For this and the following two parameters, it is often helpful to narrow your decision to two categories and concentrate on the boundary that separates them. For example, if the vegetation cover is either category 2 (6-25%) or category 3 (26-50%), you can simplify your decision by focusing on whether vegetative cover is greater than 25%.

1=0-5%, 2=6-25%, 3=26-50%, 4=51-75%, 5=76-95%,6=96-100%

12. Vegetative ground cover offsite: An estimate of the percentage of vegetative ground cover in an adjacent but largely undisturbed "control" area. Use the codes and categories listed earlier. The control site should be similar to the campsite in slope, tree canopy cover (amount of sunlight penetrating to the forest floor), and other environmental conditions. The intent is to locate an area that would closely resemble the campsite area had the site never been used. In instances where you cannot decide between two categories, select the category with less vegetative cover. The rationale for this is simply that, all other factors being equal, the first campers would have selected a site with the least amount of vegetation cover.

13. Soil exposure: An estimate of the percentage of soil exposure, defined as ground with very little or no organic litter (partially decomposed leaf, needle, or twig litter) or vegetation cover, within the campsite boundaries and satellite areas. Dark organic soil, which typically covers lighter colored mineral soil, should be assessed as bare soil. Assessments of soil exposure may be difficult when organic litter becomes highly decomposed and forms a patchwork with areas of bare soil. If patches of organic material are relatively thin and few in number, the entire area should be assessed as bare soil. Otherwise, the patches of organic litter should be mentally combined and excluded from assessments. Code as for vegetative cover.

14. Tree damage: Tally the number of live trees (> 1 in, diameter at 4.5 ft.) Within the campsite boundaries, including trees in undisturbed islands and excluding trees in satellite areas, into one of the rating classes described below. Assessments are restricted to trees within the flagged campsite boundaries in order to ensure consistency with future measurements. Multiple tree stems from the same species that are joined at or above ground level should be counted as one tree when assessing damage to any of its stems. Assess a cut stem on a multiple-stemmed tree as tree damage, not as a stump. Do not count tree stumps as tree damage. Take into account tree size. For example, damage for a small tree would be considerably less in size than damage for a large tree. Omit scars that are clearly not human-caused (e.g., lightning strikes).
During site remeasurement, begin by assessing tree damage on all trees within the site boundaries identified in the last measurement period. Tally the number of trees in areas where the boundary has moved closer to the center

point, i.e., former site areas that are not currently judged to be part of the site separately. Place a box around this number. Next, assess tree damage in areas where boundaries have moved further from the center point, i.e. expanded site areas that are newly impacted since the last measurement period. Circle these tallies. These additional procedures are necessary in order to accurately analyze changes in tree damage over time.

None/Slight- No or slight damage such as broken or cut smaller branches, one nail, or a few superficial trunk scars.
Moderate- Numerous small trunk scars and/or nails or one moderate-sized scar.
Severe- Trunk scars numerous with many that are large and have penetrated to the inner wood; any complete girdling of trees (cut through tree bark all the way around tree).

15. Root exposure: Tally the number of live trees (> 1 in, diameter at 4.5 ft.) Within the campsite boundaries, including trees in undisturbed islands and excluding trees in satellite areas, into one of the rating classes described below. Assessments are restricted to trees within the flagged campsite boundaries in order to ensure consistency with future measurements. Where obvious, omit exposed roots that are clearly not human-caused (e.g., stream/river flooding).
During site remeasurement, begin by assessing root exposure on all trees within the site boundaries identified in the last measurement period. Tally the number of trees in areas where the boundary has moved closer to the center point, i.e., former site areas that are not currently judged to be part of the site separately. Place a box around this number. Next, assess root exposure in areas where boundaries have moved further from the center point, i.e. expanded site areas that are newly impacted since the last measurement period. Circle these tallies. These additional procedures are necessary in order to accurately analyze changes in root exposure over time.

None/Slight- No or slight root exposure such as is typical in adjacent offsite areas.
Moderate- Top half of many major roots exposed more than one foot from base of tree.
Severe- Three-quarters or more of major roots exposed more than one foot from base of tree; soil erosion obvious.

16. Number of tree stumps: A count of the number of tree stumps (> 1 in. Diameter) within the campsite boundaries. Include trees within undisturbed islands and exclude trees in disturbed satellite areas. Do not include cut stems from a multiple-stemmed tree.
During site remeasurement, begin by assessing stumps on all trees within the site boundaries identified in the last measurement period. Tally the number of trees in areas where the boundary has moved closer to the center point, i.e., former site areas that are not currently judged to be part of the site separately. Place a box around this number. Next, assess stumps in areas where boundaries have moved further from the center point, i.e. expanded site areas that are newly impacted since the last measurement period. Circle these tallies. These additional procedures are necessary in order to accurately analyze changes in stumps over time.

17.Number of trails: A count of all trails leading away from the outer campsite boundaries. Do not count extremely faint trails that have untrampled tall herbs present in their tread or trails leading out to any satellite sites.

18. Number of fire sites: A count of each fire site within campsite boundaries, including satellite areas. Include old inactive fire sites as exhibited by blackened rocks, charcoal, or ashes. Do not include areas where ashes or charcoal have been dumped. However, if it is not clear whether or not a fire was built on the site, always count questionable sites that are within site boundaries and exclude those that are outside site boundaries.

19. Litter/trash: Evaluate the amount of litter/trash on the site: n=None or less than a handful, S=some-a handful up to enough to fill a 2-1/2-gallon bucket, M=Much- more than a 2-1/2-gallon bucket.

20. Human waste: Follow all trails connected to the site to conduct a quick search of likely "toilet" areas, typically areas just out of sight of the campsite. Count the number of individual human waste sites, defined as separate locations exhibiting toilet paper and/or human feces. The intent is to identify the extent to which improperly disposed human feces is a problem. Use the following code categories: N=None, S=Some-1-3 sites, M=Much-4 or more sites evident.

21.Comments/Recommendations: An informal list of comments concerning the site: note any assessments you felt were particularly difficult or subjective, problems with monitoring procedures or their application to this particular campsite, or any other comment.

22.Campsite photograph: Select a good vantage point for viewing the entire campsite, preferably one of the site boundary pins, and take a digital picture of the campsite. Note the azimuth and distance from the center point to the photo point and record on the form. The intent is to obtain a photograph that includes as much of the site as

possible to provide a photographic record of site condition. The photo will also allow future workers to make a positive identification of the site. Label disks with date, and site number.

23.Total campsite area: Calculate the campsite area based on the recorded transect measurements. Add the area of any satellite sites and subtract the area of any undisturbed islands to obtain the Total Campsite Area. Record campsite area to nearest square foot (ft^2).

Form B Procedures

Refer to the procedures described earlier, all procedures are the same with the exception of campsite size. Measure campsite size using the geometric figure method. Typically, class 1 and 2 campsites are quite small in size and this method should be both efficient and accurate. Be sure to record on form B the types of figures used (rectangle, square, triangles...etc.) And all necessary dimensions. Record campsite area to nearest square foot (ft^2).

Campsite Inventory and Impact Assessment Field Data Form

1. Site Number	___ ___ ___
2. Site Name:	___ ___
3. Site Designation:	___
4. UTM Coordinates (NAD 83):	**E**
	N
5. Distance from nearest marked trail (ft):	___ ___ ___
6. Distance to nearest water source (ft):	___ ___ ___
7. Length of shoreline disturbance (ft):	___ ___ ___
8. Number of other sites visible from	___ ___
******* DO CAMPSITE MAP BEFORE PROCEEDING ******	
9. Number of 8x10 ft tent pads:	___ ___
10. Vegetative ground cover *onsite:*	___
11. Vegetative ground cover *offsite:*	___
12. Type of ground cover *onsite*:	___
13. Type of ground cover *offsite*:	___
14. Tree canopy over site:	___
15. Number of trees within and on site boundaries:	___ ___ ___
16. Number of trees with moderate-severe damage:	___ ___
17. Number of stumps within and on site boundaries:	___ ___
18. Total number of social trails:	___
Site Number / Site Name	_____/_____
19. Type of fire site:	___
20. Number of fire sites:	___
21. Toilet present:	___
22. Number of garbage bags of litter present:	___ ___ . ___
23. Number of human waste sites:	___
24. Coded By (Names):	
25. Comments:	

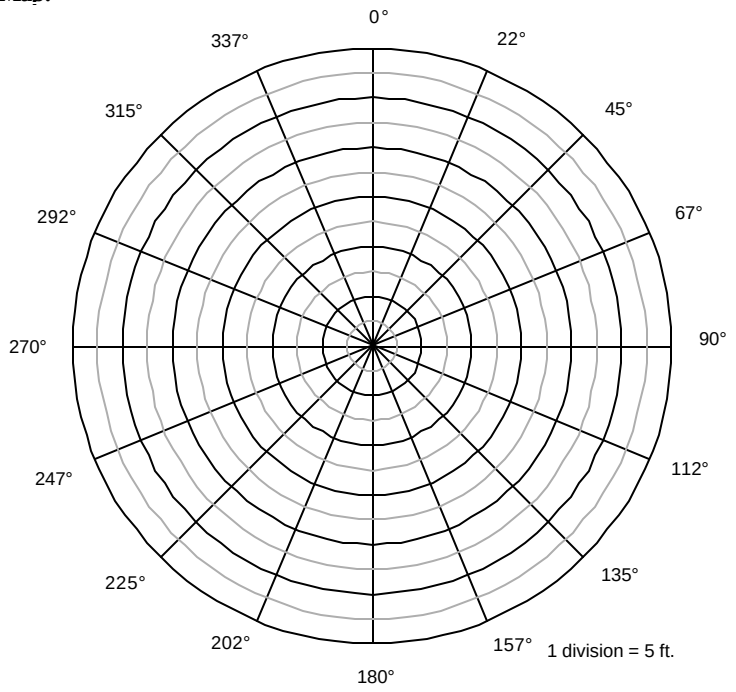
Photo Point Reference:	**Campsite Center witnessed by:**

Site Number / Site Name	_____/_____

Compass Bearing:

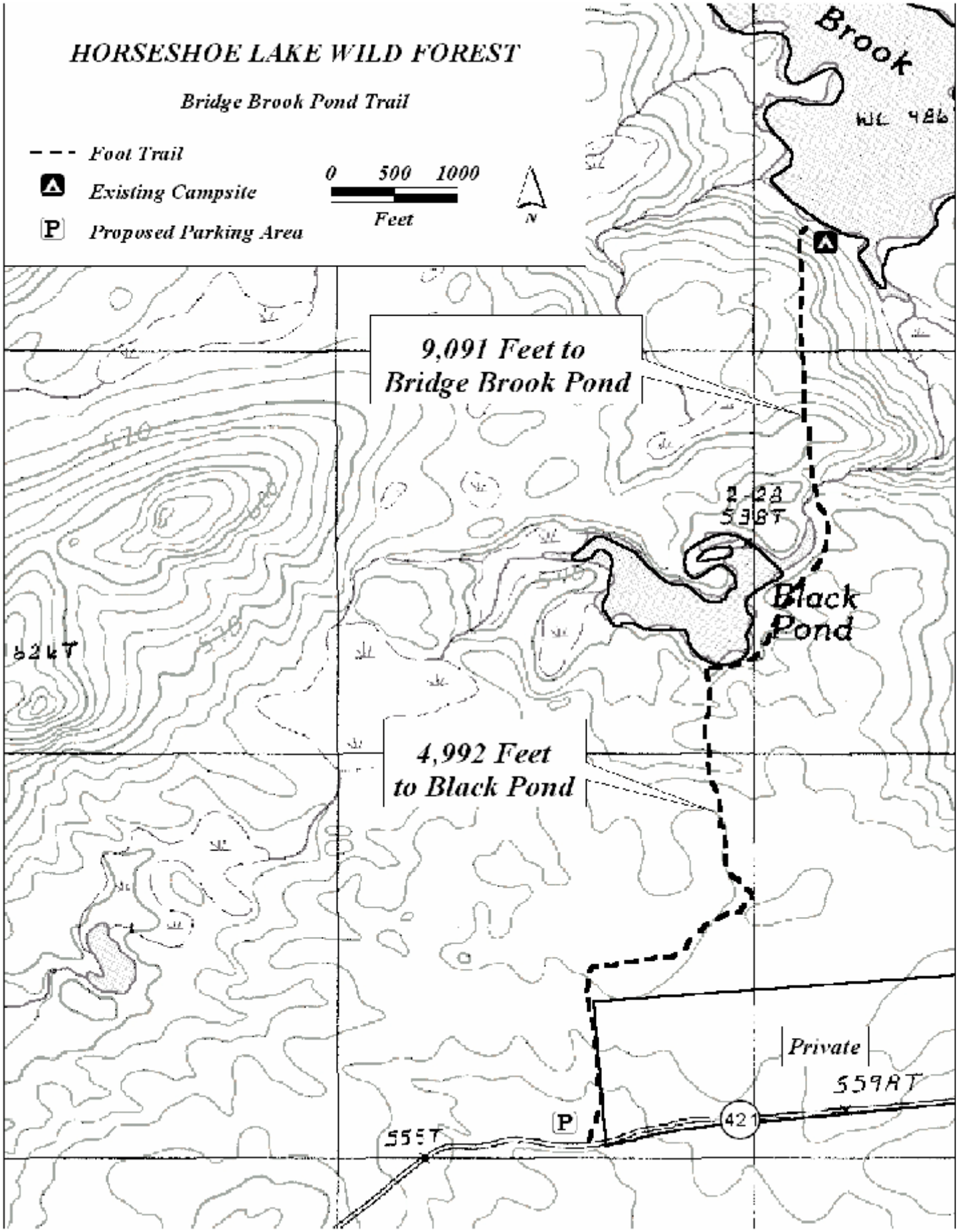
	0	22	45	67	90	112	135	157	180	202	225	247	270	292	315	337
X																
O																

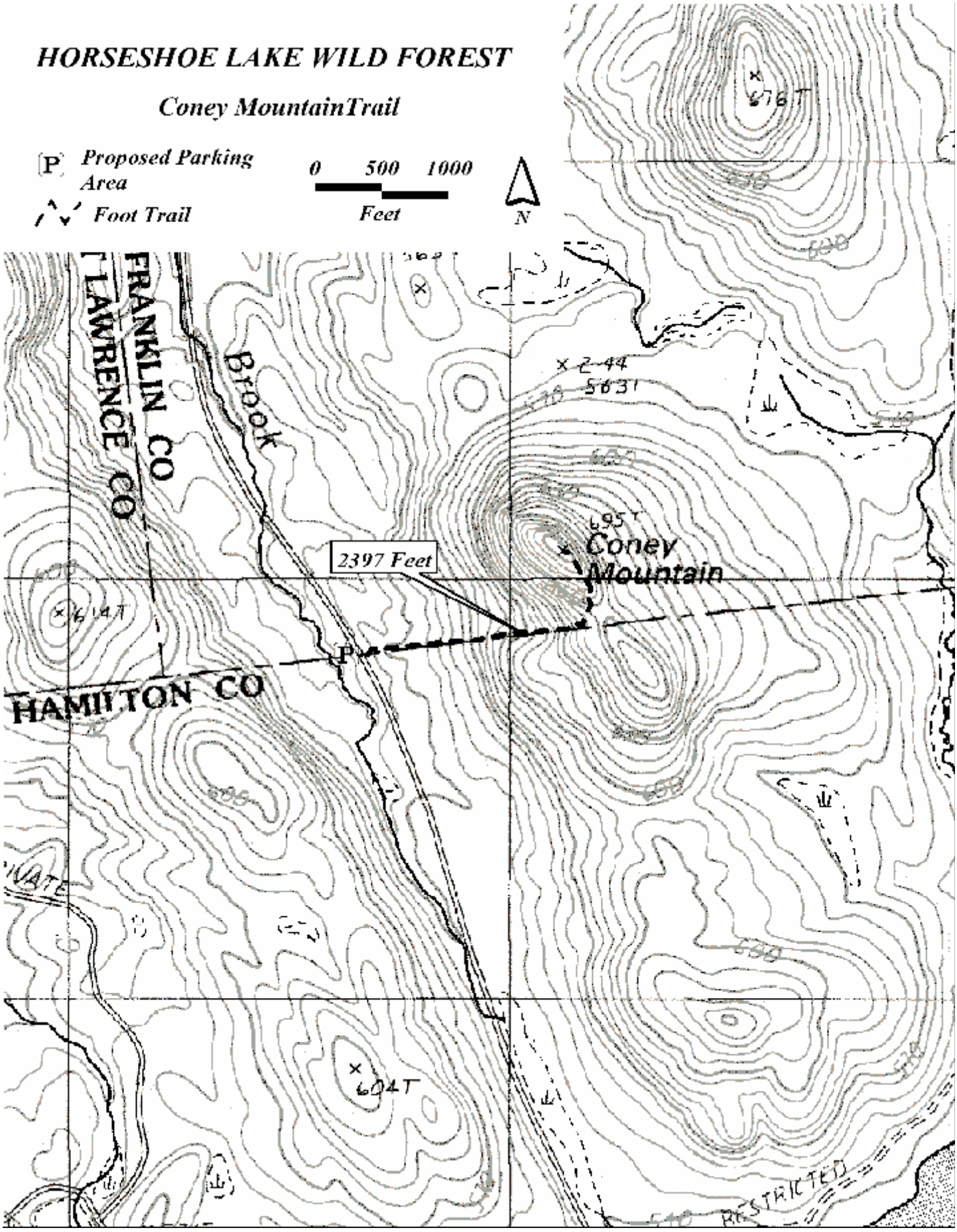
Campsite Map:

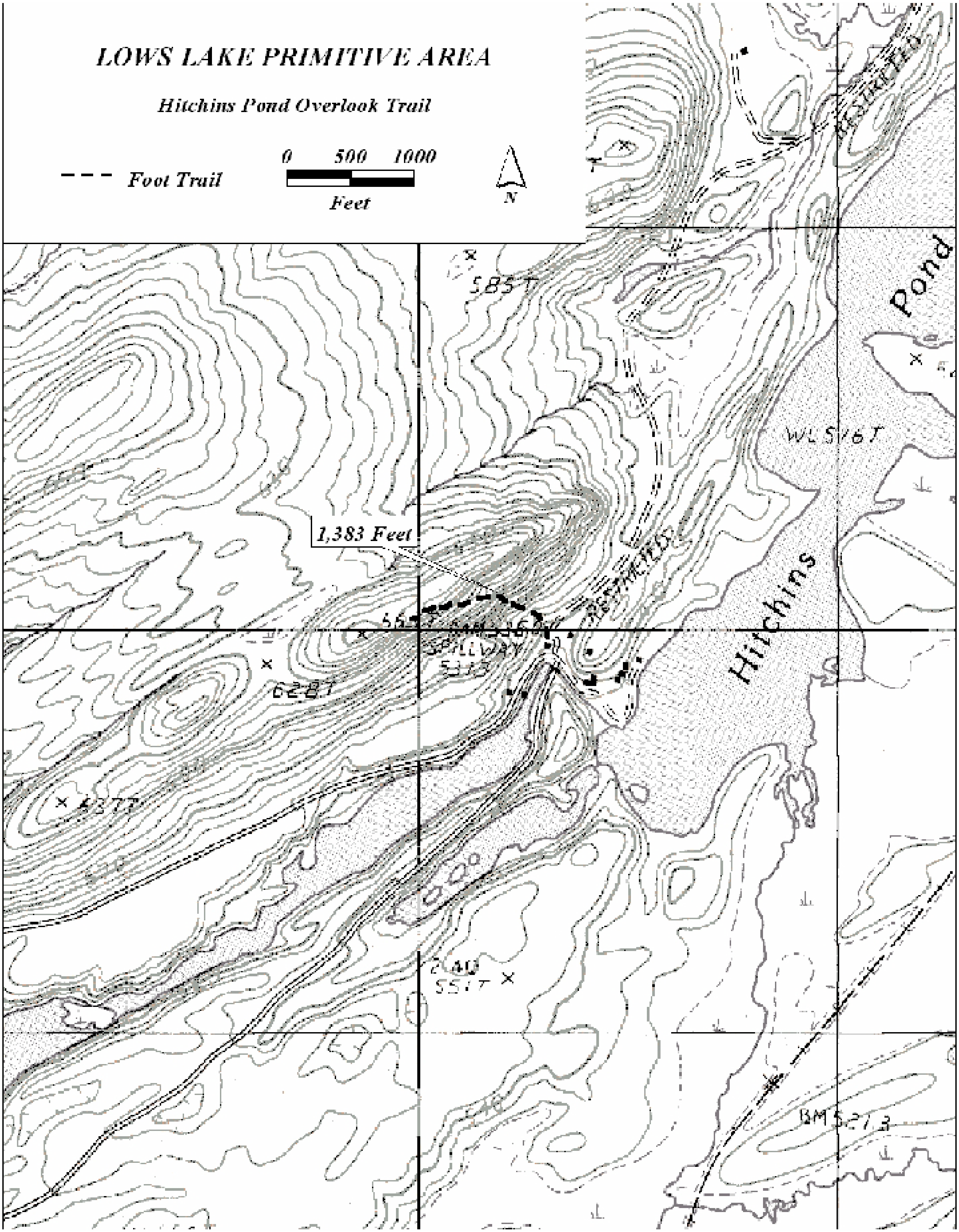


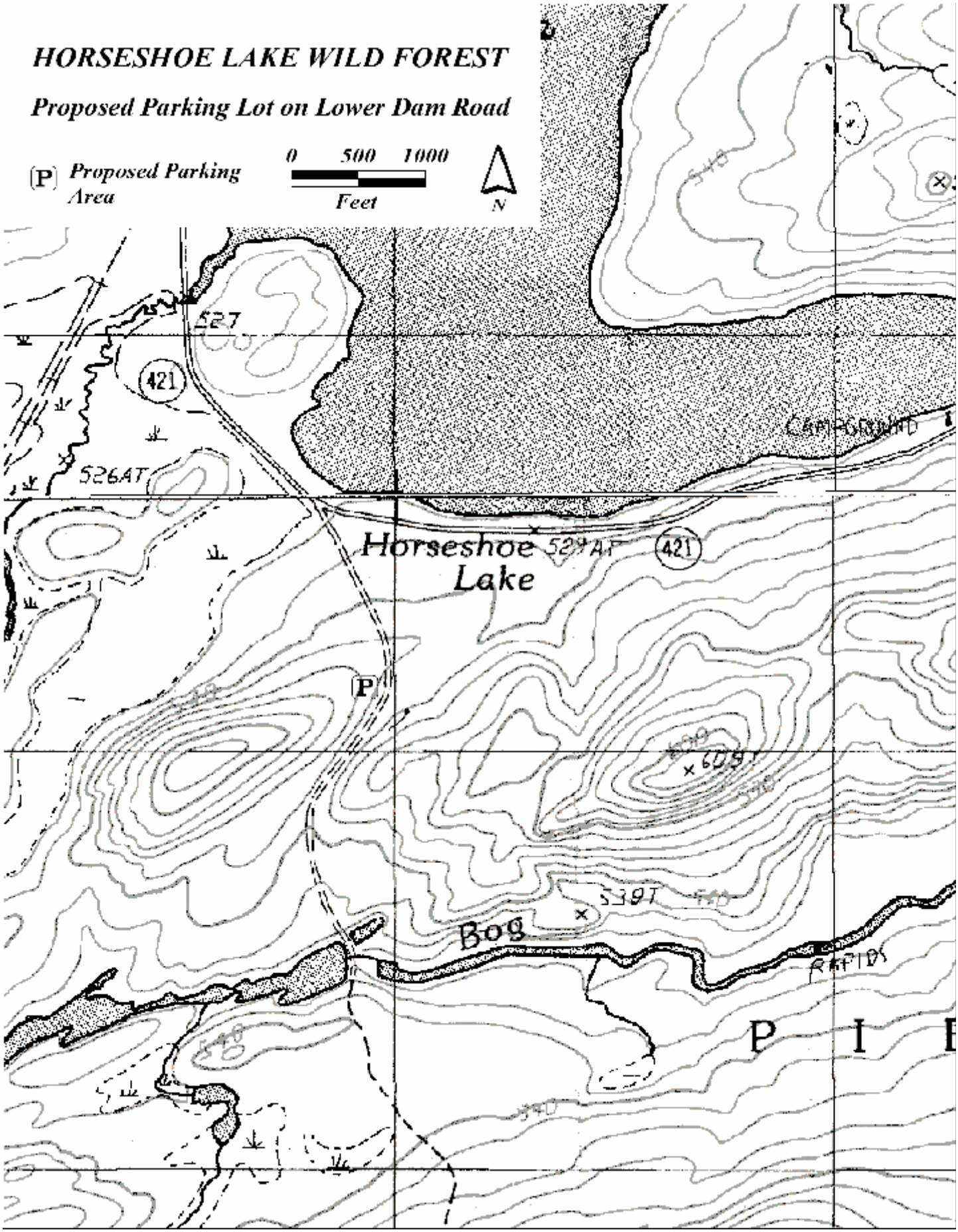
APPENDIX N

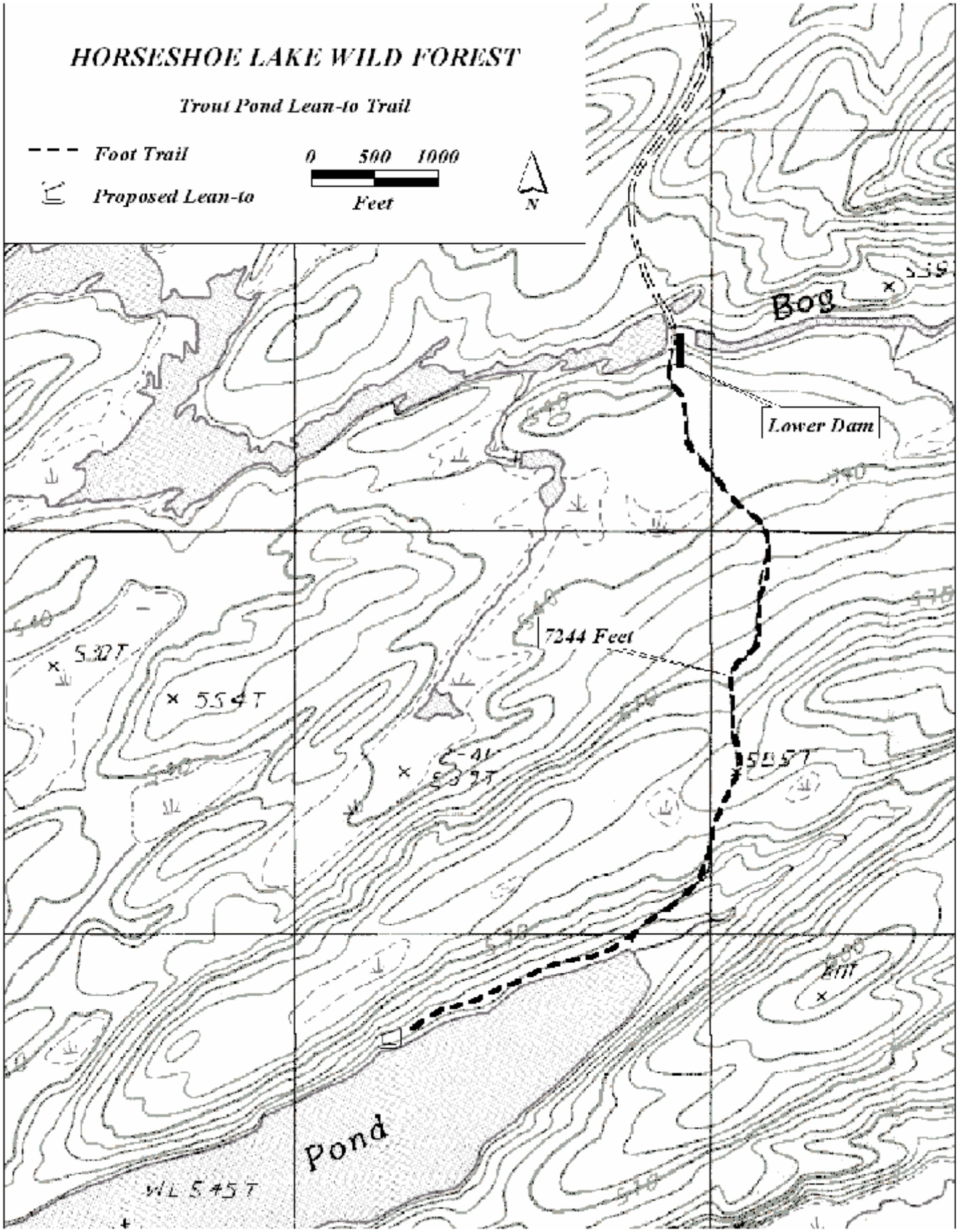
PROJECT MAPS

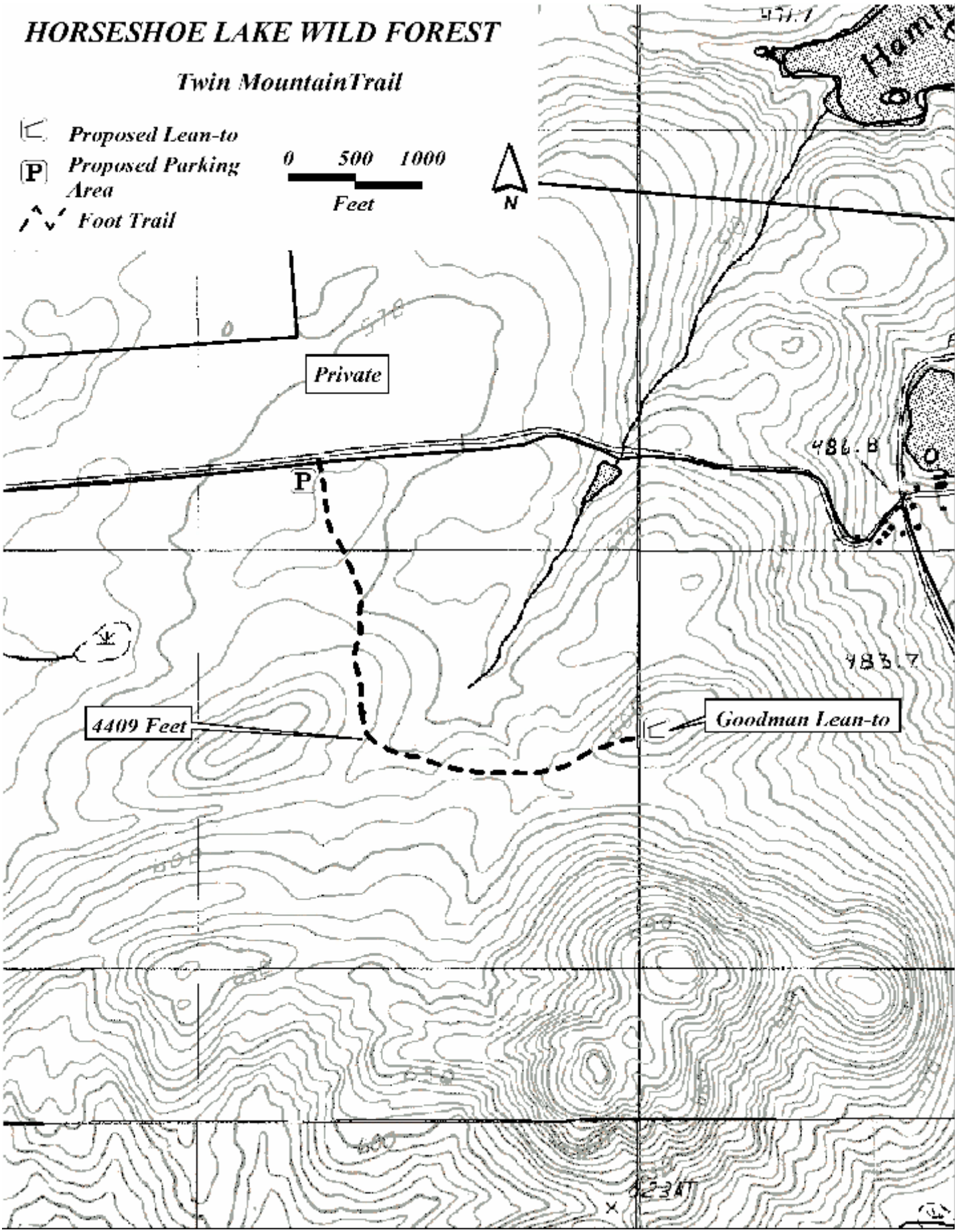

HORSESHOE LAKE WILD FOREST
Bridge Brook Pond Trail
Foot Trail
Existing Campsite
Proposed Parking Area
0 500 1000
Feet
N
Brook
9,091 Feet to
Bridge Brook Pond
Black
Pond
4,992 Feet
to Black Pond
Private
559RT
555T
824T
P
421

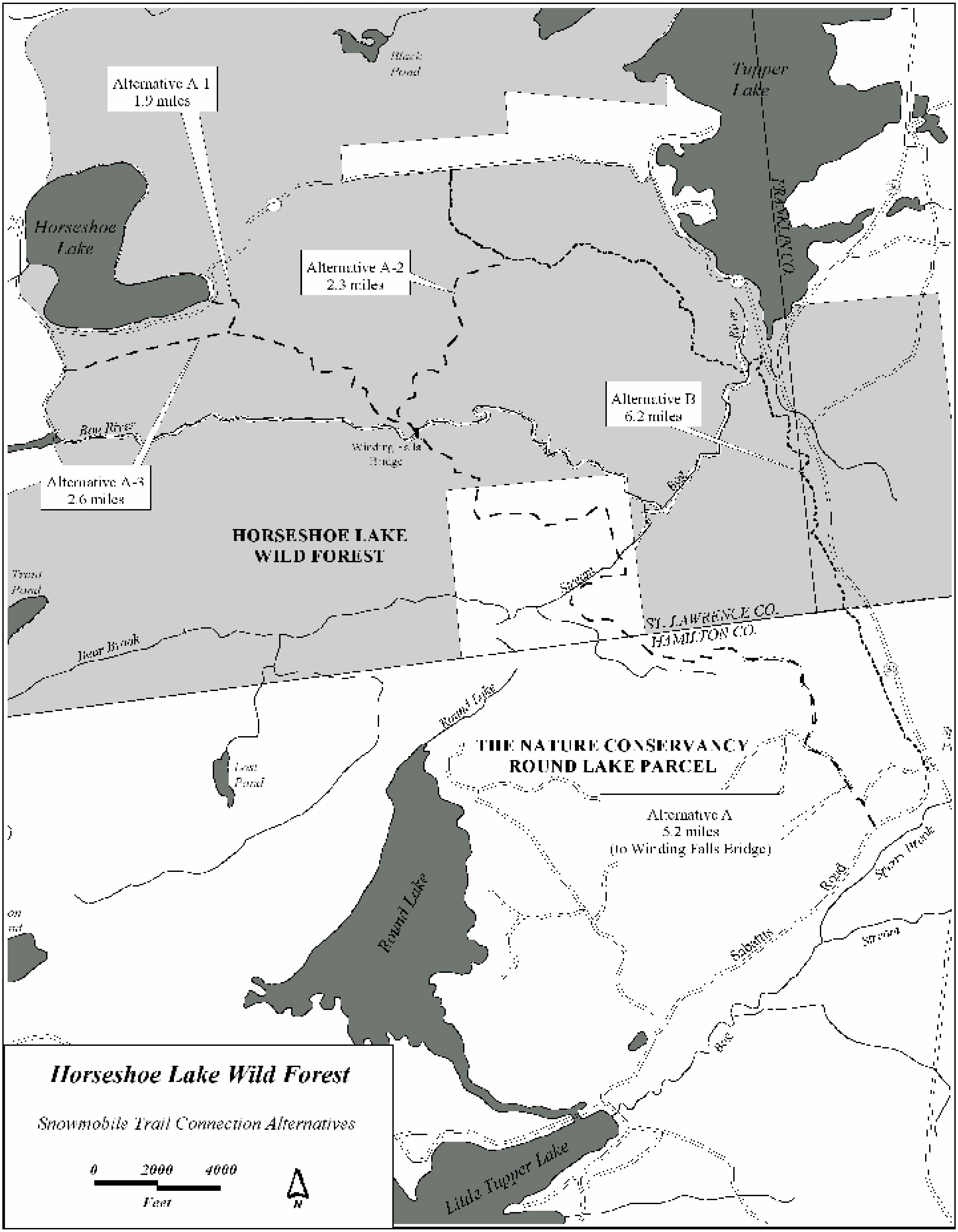

HORSESHOE LAKE WILD FOREST
Coney MountainTrail
P Proposed Parking Area
Foot Trail
0 500 1000
Feet
N
FRANKLIN CO
LAWRENCE CO
Brook
2397 Feet
Coney Mountain
HAMILTON CO
P
RESTRICTED


LOWS LAKE PRIMITIVE AREA
Hitchins Pond Overlook Trail
Foot Trail
0 500 1000
Feet
N
1,383 Feet
RESTRICTED
SPILLWAY
Hitchins
Pond
BM 527.3


HORSESHOE LAKE WILD FOREST
Proposed Parking Lot on Lower Dam Road
(P) Proposed Parking Area
0 500 1000
Feet
N
527
421
526AT
Horseshoe Lake
529AT
421
(P)
609T
539T
Bog
RAPIDS


HORSESHOE LAKE WILD FOREST
Trout Pond Lean-to Trail
Foot Trail
Proposed Lean-to
0 500 1000
Feet
N
Bog
Lower Dam
7244 Feet
Pond


HORSESHOE LAKE WILD FOREST
Twin MountainTrail
Proposed Lean-to
Proposed Parking Area
Foot Trail
0 500 1000
Feet
N
Private
P
4409 Feet
Goodman Lean-to
486.8
483.7


Alternative A-1
1.9 miles
Black
Pond
Tupper
Lake
Horseshoe
Lake
Alternative A-2
2.3 miles
FRANKLIN CO.
River
Alternative B
6.2 miles
Bog River
Winding Falls
Bridge
Alternative A-3
2.6 miles
Bog
HORSESHOE LAKE
WILD FOREST
Trout
Pond
Stream
ST. LAWRENCE CO.
HAMILTON CO.
Bear Brook
Round Lake
THE NATURE CONSERVANCY
ROUND LAKE PARCEL
Lost
Pond
Alternative A
5.2 miles
(to Winding Falls Bridge)
Round Lake
Road
Sabattis
Stream
Bog
Little Tupper Lake
Horseshoe Lake Wild Forest
Snowmobile Trail Connection Alternatives
0
2000
4000
Feet
N

APPENDIX O

UNIT MAPS

APPENDIX O

UNIT MAP

BOG RIVER FLOW
MANAGEMENT COMPLEX